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B O O K  
O F  
**VETERINARY DOSES**

THERAPEUTIC TERMS  
AND  
PRESCRIPTION WRITING

B Y

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FOURTH EDITION  
REVISED AND ENLARGED

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## PREFACE TO THE FOURTH EDITION.

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The desire of the writer to place before the veterinary students and profession a convenient and ready reference to information concerned with dosage, prescription writing, incompatibility and antidotes for poisons, etc., has apparently been fulfilled by the call for a fourth edition.

In the present edition a few tables and points of physiologic interest have been added, which, it is hoped, will increase the value of the work.

Care has been taken to minimize errors as far as possible. Wherever they have crept in, the writer would be grateful for any information to that effect and furthermore would welcome any suggestions for improvement.

Jan. 1912.

P. A. F.

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## DOSAGE OR POSOLOGY

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The most accurate system of dosage is to administer a given weight of medicine per kilogram or pound weight of the animal. Although this is frequently done in experimental work, the practice is attended with so much inconvenience when applied to the routine of the practitioner that the system is, for ordinary purposes, regarded as impracticable. A more or less arbitrary method is adopted by fixing the amount to be given to the different animals. Except, perhaps, in the case of powerful medicines or poisons, there is considerable latitude allowed in the amount of the doses. In veterinary practice the dose for the horse is commonly taken as the standard and the doses of the other domestic animals may be reckoned from this. As for example:

|                               |                |                       |
|-------------------------------|----------------|-----------------------|
| If the dose for the horse is  | 1              | (Say 2 ounces)        |
| the dose for the cow would be | $1\frac{1}{2}$ | ( " 3 " )             |
| Sheep and goat                | $\frac{1}{3}$  | ( " 3 drams)          |
| Swine                         | $\frac{1}{8}$  | ( " 2 " )             |
| Dog                           | $\frac{1}{16}$ | ( " 1 " )             |
| Cat                           | $\frac{1}{32}$ | ( " $\frac{1}{2}$ " ) |

In general the dose for the dog is about the same as the human dose, but the size of the dog must be considered. Reckoning from the dose for the dog or man as the standard; the pig would take twice as much, the sheep and goat three times as much, the horse sixteen times as much and the cow twenty-four times as much. The dose for the cat is usually one-half as much as for the dog. In many cases the dose for the horse and cow would be the same; the higher dose for the cow is usually recommended on the

ground of a slower rate of absorption because of the compound stomach and a larger mass of food with which the medicines mix before absorption may occur.

In the list of doses which follows, the horse and cow have been placed in the same group, and the sheep and the swine have been placed in a group by themselves. The dose given in either case is the average dose, but from the explanation just given, the dose, in most instances, may be increased somewhat for either the cow or the sheep.

In a general way the doses of different preparations of drugs for the horse may be given upon the following basis. If there is error in this classification, it is upon the safe and conservative side of too little rather than too much. Poisons and powerful medicines are, of course, an exception.

|                               |                 |
|-------------------------------|-----------------|
| Fluidextracts .....           | one fluidram    |
| Powders (not alkaloids) ..... | one dram        |
| Tinctures .....               | one fluid ounce |

Hypodermics of alkaloids are given usually at one-half the dose by mouth. Intravenous doses one-half or two-thirds of the hypodermic dose. Rectal doses should be the same as those given by the mouth. In the following tables the doses are intended for administration by mouth unless otherwise stated.

On account of idiosyncrasy or individual susceptibility, it is safer in the case of new or powerful drugs, to try the minimum doses first and if the physiologic effects are not produced, gradually lead up to the maximum doses.

Some of the more important changes in the eighth revision of the Pharmacopoeia 1905, as compared with the seventh revision, 1890.

|                           | U. S. P., 7th Revision, 1890                              | U. S. P. 8th Revision, 1905 |                         |
|---------------------------|-----------------------------------------------------------|-----------------------------|-------------------------|
| <b>DRUGS</b>              |                                                           |                             |                         |
| <i>Crude and Powdered</i> |                                                           |                             |                         |
| Aconite                   | No standard*                                              | 0.5 %                       | Aconitine               |
| Belladonna Leaves         | No standard                                               | 0.35 %                      | Alkaloids               |
| Belladonna Root           | No standard                                               | 0.5 %                       | Alkaloids               |
| Cinchona Bark             | 2.5 % Quinine                                             | 4. %                        | Ether-soluble-alkaloids |
| Coca Leaves               | No standard                                               | 0.5 %                       | Ether-soluble-alkaloids |
| Colchicum Root            | No standard                                               | 0.35 %                      | Colchicine              |
| Colchicum Seed            | No standard                                               | 0.55 %                      | Colchicine              |
| Conium                    | No standard                                               | 0.5 %                       | Coniine                 |
| Guarana                   | No standard                                               | 3.5 %                       | Alkaloids               |
| Hydrastis                 | No standard                                               | 2.5 %                       | Hydrastine              |
| Hyoscyamus                | No standard                                               | 0.8 %                       | Alkaloids               |
| Ipecac                    | No standard                                               | 2.0 %                       | Alkaloids               |
| Jalap                     | Alcohol-soluble resin, 12 %<br>Ether-soluble resin, 1.2 % | 8.0 %                       | **                      |
|                           |                                                           | 1.5 %                       | —                       |
|                           |                                                           |                             | +                       |

\*No alkaloidal standard.

\*\*The — and + signs stand for the raising or lowering of the standard.

|                   |                 |                               |   |
|-------------------|-----------------|-------------------------------|---|
| Nux Vomica        | No standard     | 1.25% Strychnine              | — |
| Opium, Powd.      | 13-15% Morphine | 12-12.5% Morphine             | — |
| Opium, Deod.      | 13-15% Morphine | 12-12.5% Morphine             | — |
| Physostigma       | No standard     | 0.15% Ether-soluble-alkaloids |   |
| Pilocarpus        | No standard     | 0.5 % Alkaloids               |   |
| Stramonium Leaves | No standard     | 0.35% Alkaloids               |   |

## EXTRACTS

|                |                     |                               |   |
|----------------|---------------------|-------------------------------|---|
| Belladonna     | No standard         | 1.4 % Alkaloids               |   |
| Colchicum Root | No standard         | 1.4 % Colchicine              | ∞ |
| Hyoscyamus     | No standard         | 0.3 % Alkaloids               |   |
| Nux Vomica     | 15% total Alkaloids | 5.0 % Strychnine              | — |
| Opium          | 18% Morphine        | 20.0 % Morphine               | + |
| Physostigma    | No standard         | 2.0 % Ether-soluble-alkaloids |   |
| Stramonium     | No standard         | 1.4 % Alkaloids               |   |

## FLUIDEXTRACTS

|                 |             |                               |  |
|-----------------|-------------|-------------------------------|--|
| Aconite         | No standard | 0.4 % Aconitine               |  |
| Belladonna Root | No standard | 0.5 % Alkaloids               |  |
| Cinchona        | No standard | 4.0 % Ether-soluble-alkaloids |  |

|                |                       |                                  |   |
|----------------|-----------------------|----------------------------------|---|
| Coca           | No standard           | 0.5 % Ether-soluble<br>alkaloids |   |
| Colchicum Seed | No standard           | 1.5 % Colchicine                 |   |
| Conium         | No standard           | 0.45 % Coniine                   |   |
| Guarana        | No standard           | 3.5 % Alkaloids                  |   |
| Hydrastis      | No standard           | 2.0 % Hydrastine                 |   |
| Hyoscyamus     | No standard           | 0.075 % Alkaloids                |   |
| Ipecac         | No standard           | 1.75 % Alkaloids                 |   |
| Nux Vomica     | 1.5 % Total Alkaloids | 1.0 % Strychnine                 | + |
| Pilocarpus     | No standard           | 0.4 % Alkaloids                  |   |
| Stramonium     | No standard           | 0.35 % Alkaloids                 |   |

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## OINTMENTS

|                |                               |                                   |   |
|----------------|-------------------------------|-----------------------------------|---|
| Chrysarobin    | 5 %                           | 6 %                               | + |
| Phenol         | 6 %                           | 3 %                               | - |
| Sulphur        | 30 %                          | 15 %                              | - |
| Oleate Mercury | 20 % Yellow Mercuric<br>Oxide | 25 % Yellow Mercuric<br>Oxide     | + |
| Pancreatin     | No standard                   | 1 part digests 25 parts<br>starch |   |

## SOLUTIONS

|                    |                                           |                                                        |   |
|--------------------|-------------------------------------------|--------------------------------------------------------|---|
| Ferric Chloride    | 37.8 % Anhydrous Fe Cl <sub>3</sub>       | 29 % Anhydrous Fe Cl <sub>3</sub>                      | - |
| Ferric Tersulphate | 28.7 % Fe (SO <sub>4</sub> ) <sub>3</sub> | 36 % + Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> | + |

Iron and Ammonium 2cc. Tr. Ferric Chloride  
Acetate in 100 cc.

4cc. Ferric Chloride  
in 100 cc.

+

## SYRUP

Ferrous Iodide

10%

5%

—

## TINCTURES

Aconite

35%

10% 0.45% Aconitine

—

Belladonna Leaves

15%

10% 0.35% Alkaloids

—

Calumba

10%

20%

+

Cannabis Indica

15%

10%

—

Cantharides

5%

10%

+

Capsicum

5%

10%

+

Cardamom

10%

20%

+

Colchicum Seed

15%

10% 0.05% Colchicine

—

Digitalis

15%

10%

—

Ferri Chloridi

13.6%

13.28%

—

Gelsemium

15%

10%

—

Hydrastis

20%

20% 0.4% Hydrastine

—

Hyoscyamus

15%

10% 0.007% Alkaloids

—

Kino

10%

5%

—

Lobelia

20%

10%

—



|                   |                      |                      |   |
|-------------------|----------------------|----------------------|---|
| Nux Vomica        | 0.3% Total Alkaloids | 0.1% Strychnine      | — |
| Opium             | 1.3-1.5% Morphine    | 1.2-1.25% Morphine   | — |
| Opium, Deodorized | 1.3-1.5% Morphine    | 1.2-1.25% Morphine   | — |
| Physostigma       | 15%                  | 10% 0.014% Alkaloids | — |
| Quassia           | 10%                  | 20%                  | + |
| Rhubarb           | 10%                  | 20%                  | + |
| Sanguinaria       | 15%                  | 10%                  | — |
| Serpentaria       | 10%                  | 20%                  | + |
| Squill            | 15%                  | 10%                  | — |
| Stramonium        | 15%                  | 10% 0.03% Alkaloids  | — |
| Strophanthus      | 5%                   | 10%                  | + |
| Tolu              | 10%                  | 20%                  | + |
| Veratrum          | 40%                  | 10%                  | — |

## WINES

|                |     |     |   |
|----------------|-----|-----|---|
| Colchicum Seed | 15% | 10% | — |
| Ergot          | 15% | 20% | + |

The changes in favor of a definite alkaloidal strength in the various preparations represent a decided advance in therapeutic accuracy.

The tinctures, perhaps, show the most radical changes, the stronger ones being reduced to 10% and the weaker ones increased to 10% or 20% so that a greater uniformity exists and the work of the practitioner is facilitated.

From the veterinary standpoint, the tinctures are not so commonly used as the fluid extracts, and except in the case of the tinctures of aconite, veratrum and a few others the dosage is not materially affected.



# VETERINARY DOSES

## HORSE AND COW

## SHEEP AND SWINE

## DOG

|                              | Apoth.    | Metric. | Apoth.    | Metric. | Apoth.    | Metric. |
|------------------------------|-----------|---------|-----------|---------|-----------|---------|
| Acetanilid<br>(Antifebrin)   | 1-6 dr.   | 4       | ¼-½ dr.   | 1.      | 2-10 gr.  | 0.13    |
| Acetozone                    | 1-2 oz.   | 30.     | 1-2 dr.   | 4.      | 3-10 gr.  | 0.2     |
| Acid, Acetic Dil.            | 3-6 gr.   | 0.2     | ½-1 gr.   | 0.03    | ½-1 dr.   | 2.      |
| Arsenous                     | 2-8 dr.   | 8.      | ½-1 dr.   | 2.      | ¼-½ gr.   | 0.001   |
| Benzoic                      | 2-6 dr.   | 8.      | ½-1 dr.   | 2.      | 5-15 gr.  | 0.3     |
| Boric                        |           |         |           |         | 5-15 gr.  | 0.3     |
| (Boracic)                    |           |         |           |         |           |         |
| Carbolic                     | 15-30 gr. | 1.      | 5-10 gr.  | 0.3     | 1-2 gr.   | 0.06    |
| Citric                       | ½-1 oz.   | 15.     | ½-1 dr.   | 2.      | 10-20 gr. | 0.6     |
| Gallic                       | ½-2 dr.   | 2.      | 10-30 gr. | 0.6     | 5-15 gr.  | 0.3     |
| Hydrobromic<br>Dil.          | 2-6 dr.   | 8.      | 1-2 dr.   | 4.      | 20-60 m.  | 1.3     |
| Hydrochloric<br>Dil.         | ½-4 dr.   | 2.      | 10-30 m.  | 0.6     | 3-10 m.   | 0.2     |
| Hydrocyanic<br>Dil.          | 20-60 m.  | 1.3     | 2-10 m.   | 0.13    | 1-5 m.    | 0.06    |
| Lactic                       | 1-2 dr.   | 4.      | 10-40 m.  | 0.6     | 5-20 m.   | 0.3     |
| Nitric Dil.                  | 1-4 dr.   | 4.      | 5-30 m.   | 0.3     | 3-15 m.   | 0.2     |
| Nitro-hydro-<br>chloric Dil. | 1-2 dr.   | 4.      | 5-20 m.   | 0.3     | 2-10 m.   | 0.13    |

|                           |                |        |       |                |        |         |                |        |        |
|---------------------------|----------------|--------|-------|----------------|--------|---------|----------------|--------|--------|
| Phosphoric Dil.           | 1-6 dr.        | 4.     | -24.  | 10-40 m.       | 0.6    | - 2.6   | 5-30 m.        | 0.3    | -2.    |
| Salicylic Sulphuric Arom. | 1-6 dr.        | 4.     | -24.  | 15-30 gr.      | I.     | - 2.    | 5-15 gr.       | 0.3    | -1.    |
| Sulphuric Dil.            | 2-8 dr.        | 8.     | -30.  | 20-60 m.       | I.3    | - 4.    | 5-15 m.        | 0.3    | -1.    |
| Sulphurous                | 2-6 dr.        | 8.     | -24.  | 30-60 m.       | 2.     | - 4.    | 5-15 m.        | 0.3    | -1.    |
| Tannic                    | 2-8 dr.        | 8.     | -30.  | 20-60 m.       | I.3    | - 4.    | 5-15 m.        | 0.3    | -1.    |
| Tartaric                  | ½-4 dr.        | 2.     | -15.  | ½-2 dr.        | 2.     | - 8.    | 1-20 gr.       | 0.06   | -1.3   |
| Aconite Powd.             | 2-8 dr.        | 8.     | -30.  | 15-60 gr.      | I.     | - 4.    | 5-20 gr.       | 0.3    | -1.3   |
| Extract                   | 5-15 gr.       | 0.3    | - I.  | ½-2 gr.        | 0.013  | - 0.13  | 1/10-1 gr.     | 0.006  | -0.06  |
| Extr. Fld.                | 2-5 gr.        | 0.13   | - 0.3 | 1/10-½ gr.     | 0.006  | - 0.03  | 1/10-1/3 gr.   | 0.006  | -0.02  |
| Tinct. (1890)             | 5-15 m.        | 0.3    | - I.  | I-2 m          | 0.013  | - 0.13  | 1/10-1 m.      | 0.006  | -0.06  |
| Tinct. (1905)             | 10-30 m.       | 0.6    | - 2.  | I-4 m.         | 0.06   | - 0.25  | ½-2 m.         | 0.03   | -0.13  |
| Tinct. Flem-<br>ing's     | ½-1½ dr.       | 2.     | - 6.  | 4-15 m.        | 0.25   | - I.    | 2-8 m.         | 0.13   | -0.5   |
| Aconitine                 | 5-15 m.        | 0.3    | - I.  | ½-2 m.         | 0.03   | - 0.13  | ¼-1 m.         | 0.016  | -0.06  |
| Adrenalin Sol.            | 1/30-1/10 gr.  | 0.002- | 0.006 | 1/100-1/50 gr. | 0.0006 | - 0.001 | 1/200-1/50 gr. | 0.0003 | -0.001 |
| Alcohol                   | I-1000-I-4 dr. | 4.     | -15.  | ½-1 dr.        | 2.     | - 4.    | 10-30 m.       | 0.6    | -2.    |
| Aloes                     | I-2 oz.        | 30.    | -60.  | I-2 dr.        | 4.     | - 8.    | ½-1 dr.        | 2.     | -4.    |
|                           | 2-10 dr.       | 8.     | -40.  | I-4 dr.        | 4.     | -15.    | 2-60 gr.       | 0.13   | -4.    |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

## HORSE AND COW SHEEP AND SWINE DOG

|                                     | Apoth.   | Metric. | Apoth.    | Metric. | Apoth.    | Metric. | Apoth. | Metric. |
|-------------------------------------|----------|---------|-----------|---------|-----------|---------|--------|---------|
| Aloin                               | 2-3 dr.  | 8.      | 10-30 gr. | 0.6     | 1-5 gr.   | 0.06    | 0.06   | - 0.3   |
| Alum                                | 1-3 dr.  | 4.      | ½-1 dr.   | 2.      | 5-15 gr.  | 0.3     | 0.3    | - 1.    |
| Ammonia Water                       | 1-2 dr.  | 4.      | ½-1 dr.   | 2.      | 2-10 m.   | 0.13    | 0.13   | - 0.6   |
| Spirits                             | ½-1½ oz. | 15.     | 1-2 dr.   | 4.      | 5-30 m.   | 0.3     | 0.3    | - 2.    |
| Spt. Arom.                          | ½-1½ oz. | 15.     | 1-2 dr.   | 4.      | 5-60 m.   | 0.3     | 0.3    | - 4.    |
| Ammonium Acetate Sol.               |          |         |           |         |           |         |        |         |
| (Spt. Mindererus)                   | 2-6 oz.  | 60.     | ½-1 oz.   | 15.     | 1-4 dr.   | 4.      | 4.     | -15.    |
| Benzoate                            | ½-8 dr.  | 2.      | 10-60 gr. | 0.6     | 5-15 gr.  | 0.3     | 0.3    | - 1.    |
| Bromide                             | ½-2 oz.  | 15.     | ⅓-2 dr.   | 1.3     | 10-60 gr. | 0.6     | 0.6    | - 4.    |
| Carbonate                           | 1-3 dr.  | 4.      | 15-40 gr. | 1.      | 1-8 gr.   | 0.06    | 0.06   | - 0.5   |
| Chloride                            | 1-4 dr.  | 4.      | 30-60 gr. | 2.      | 2-15 gr.  | 0.13    | 0.13   | - 1.    |
| Iodide                              | 1-4 dr.  | 4.      | 30-60 gr. | 2.      | 2-10 gr.  | 0.13    | 0.13   | - 0.6   |
| Phosphate                           | 1-4 dr.  | 4.      | 30-60 gr. | 2.      | 2-20 gr.  | 0.13    | 0.13   | - 1.3   |
| Valerianate                         | ½-2 dr.  | 2.      | 10-20 gr. | 0.6     | 1-5 gr.   | 0.06    | 0.06   | - 0.3   |
| Amyl Nitrite                        | 5-15 m.  | 0.3     | 1-7 m.    | 0.06    | ½-3 m.    | 0.03    | 0.03   | - 0.2   |
| Amylum Iodatium<br>(Iodized starch) | ½-2 oz.  | 15.     | ½-2 dr.   | 2.      | 3-30 gr.  | 0.2     | 0.2    | - 2.    |
| Anise Seed                          | ½-1 oz.  | 15.     | 2-3 dr.   | 8.      | 20-50 gr. | 1.3     | 1.3    | - 3.3   |
| Spirit                              | ½-1 oz.  | 15.     | 2-4 dr.   | 8.      | 1-2 dr.   | 4.      | 4.     | - 8.    |
| Antimony Black                      | 1-3 dr.  | 4.      | 5-20 gr.  | 0.3     | ½-1½ gr.  | 0.01    | 0.01   | - 0.1   |

|                                                  |          |        |          |       |         |           |       |         |
|--------------------------------------------------|----------|--------|----------|-------|---------|-----------|-------|---------|
| Antimon. et Potass. Tartras (Tartar Emetic)      |          |        |          |       |         |           |       |         |
| Emetic                                           |          |        | 4-10 gr. | 0.25  | - 0.6   | 1-4 gr.   | 0.6   | - 0.25  |
| Expectorant                                      | ½-2 dr.  | 2.     | ½-3 gr.  | 0.03  | - 0.2   | ⅓-¼ gr.   | 0.006 | - 0.016 |
| Antipyrin                                        | 1-3 dr.  | 4.     | 5-20 gr. | 0.3   | - 1.3   | 1-8 gr.   | 0.06  | - 0.5   |
| Apomorphine Hydrochloride                        | ¼-½ gr.  | 0.016- | ⅓-⅓ gr.  | 0.004 | - 0.021 | ⅓-⅓ gr.   | 0.002 | - 0.013 |
| Areca Nut                                        | ½-1 oz.  | 15.    | ½-1½ dr. | 2.    | - 6.    | 15-60 gr. | 1.    | - 4.    |
| Arecoline Hydrobromide                           |          |        |          |       |         |           |       |         |
| (Hypodermic)                                     | ½-1½ gr. | 0.03   |          |       |         |           |       |         |
| Arnica Flowers                                   | ½-1 oz.  | 15.    | 1-2 dr.  | 4.    | - 8.    | 10-20 gr. | 0.6   | - 1.3   |
| Tincture                                         | ½-1 oz.  | 15.    | 1-2 dr.  | 4.    | - 8.    | 15-40 m.  | 1.    | - 2.6   |
| Root                                             | ½-1 oz.  | 15.    | 1-2 dr.  | 4.    | - 8.    | 10-20 gr. | 0.6   | - 1.3   |
| Fluid Ext.                                       | ¼-½ oz.  | 8.     | ½-1 dr.  | 2.    | - 4.    | 5-10 gr.  | 0.3   | - 0.6   |
| Tincture                                         | ½-1 oz.  | 15.    | 1-2 dr.  | 4.    | - 8.    | 10-20 m.  | 0.6   | - 1.3   |
| Arsenic                                          | 3-6 gr.  | 0.2    | ½-1 gr.  | 0.03  | - 0.06  | ⅓-⅓ gr.   | 0.001 | - 0.005 |
| Arsenic Iodide                                   | 2-6 gr.  | 0.13   | ½-¾ gr.  | 0.009 | - 0.045 | ⅓-⅓ gr.   | 0.001 | - 0.006 |
| Liq. Ac. Arsenosi (Sol. Arsen. Acid)             | 2-8 dr.  | 8.     | ½-1 dr.  | 2.    | - 4.    | 2-10 m.   | 0.13  | - 0.6   |
| Liq. Arseni et Hydrargyri Iodidi (Donovan's Sol) | 2-8 dr.  | 8.     | ½-1 dr.  | 2.    | - 4.    | 2-10 m.   | 0.13  | - 0.6   |
| Liq. Potass. Ars (Fowler's Sol.)                 | 2-8 dr.  | 8.     | ½-1 dr.  | 2.    | - 4.    | 2-10 m.   | 0.13  | - 0.6   |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

|                                         | HORSE AND COW |            | SHEEP AND SWINE |               | DOG            |                |
|-----------------------------------------|---------------|------------|-----------------|---------------|----------------|----------------|
|                                         | Apoth.        | Metric.    | Apoth.          | Metric.       | Apoth.         | Metric.        |
| <b>Arsenic</b>                          |               |            |                 |               |                |                |
| Liq. Sodii Arsenatis<br>(Pearson's Sol) | 2-8 dr.       | 8. - 30.   | ½-1 dr.         | 2.            | 2-10 m.        | 0.13 - 0.6     |
| Asafetida                               | ½-1 oz.       | 15. - 30.  | 1-2 dr.         | 4.            | 5-15 gr        | 0.3 - 1.       |
| Tincture                                | 2-4 oz.       | 60. - 120. | 2-4 dr.         | 8.            | ½-1 dr.        | 2. - 4.        |
| Asclepias<br>(Pleurisy Root)            | 3-4 dr.       | 12. - 15.  | 1-2 dr.         | 4.            | ½-1 dr.        | 2. - 4.        |
| Aspidium, F. E.                         | 3-6 dr.       | 12. - 24.  | 1-2 dr.         | 4.            | 15-60 m.       | 1. - 4.        |
| Oleoresin                               | 3-6 dr.       | 12. - 24.  | 1-2 dr.         | 4.            | 15-60 m.       | 1. - 4.        |
| Atropine Sulph.                         | ½-1 ½ gr.     | 0.03- 0.1  | ½-1 ½ gr.       | 0.004 - 0.005 | 1/100-2/10 gr. | 0.0006 - 0.003 |
| Balsam Copaiba                          | ½-2 oz.       | 15. - 60.  | 1-2 dr.         | 2.            | 1/6 - 1 dr.    | 0.6 - 4.       |
| Peru                                    | ½-2 oz.       | 15. - 60.  | 1-2 dr.         | 4.            | 1/6 - ½ dr.    | 0.6 - 2.       |
| Tolu                                    | ½-1 oz.       | 15. - 30.  | ½-1 dr.         | 2.            | 5-20 gr.       | 0.3 - 1.3      |
| Barium Chloride<br>(Intravenous)        | 1-2 dr.       | 4. - 8.    | 2-5 gr.         | 0.13 - 0.3    | 1/3-1 gr.      | 0.02 - 0.06    |
| Belladonna Leaves,                      | 10-30 gr.     | 0.6 - 2.   |                 |               |                |                |
| Powd.                                   | ¼-1 oz.       | 8. - 30.   | 10-20 gr.       | 0.6 - 1.3     | 2-5 gr.        | 0.13 - 0.3     |
| Ext. alc.                               | 10-20 gr.     | 0.6 - 1.3  | 2-4 gr.         | 0.13 - 0.25   | 1/8-½ gr.      | 0.008 - 0.03   |
| Tinct.                                  | ½-1 oz.       | 15. - 30.  | 1-2 dr.         | 4.            | 15-30 m.       | 1. - 2.        |
| Belladonna Root                         |               |            |                 |               |                |                |
| Fld. Ext.                               | 1-2 dr.       | 4. 8.      | 10-15 m.        | 0.6 - 1.      | 1-3 m.         | 0.06 - 0.2     |
| Benzoin, Tinct.                         | ½-1 oz.       | 15. - 30.  | 1-3 dr.         | 4.            | ½-1 dr.        | 2. - 4.        |



Bismuth

|                                          |       |     |        |      |      |       |        |       |     |      |       |     |       |   |       |
|------------------------------------------|-------|-----|--------|------|------|-------|--------|-------|-----|------|-------|-----|-------|---|-------|
| Subcarbonate                             | ½-4   | dr. | 2.     | -    | 15.  | ½-1   | dr.    | 2.    | -   | 4.   | 10-30 | gr. | 0.6   | - | 2.    |
| Subnitrate                               | ½-4   | dr. | 2.     | -    | 15.  | ½-1   | dr.    | 2.    | -   | 4.   | 10-30 | gr. | 0.6   | - | 2.    |
| Brandy                                   | 2-4   | oz. | 60.    | -    | 120. | 1-2   | oz.    | 30.   | -   | 60.  | 1-4   | dr. | 4.    | - | 15.   |
| Brucine                                  | 1-2   | gr. | 0.065- | 0.13 | ½-⅛  | gr.   | 0.002- | 0.008 | 1-4 | gr.  | 1-4   | gr. | 0.001 | - | 0.004 |
| Bryonia Tinct.                           | ½-1   | oz. | 15.    | -    | 30.  | ½-1   | dr.    | 2.    | -   | 4.   | 5-30  | m.  | 0.3   | - | 2.    |
| Buchu Leaves                             | 1-2   | oz. | 30.    | -    | 60.  | ½-1   | dr.    | 2.    | -   | 4.   | 10-30 | gr. | 0.6   | - | 2.    |
| Fld. Ext.                                | 1-2   | oz. | 30.    | -    | 60.  | ½-1   | dr.    | 2.    | -   | 4.   | 5-30  | m.  | 0.3   | - | 2.    |
| Buckthorn Syrup<br>(Rhamnus Catharticus) |       |     |        |      |      | 2-4   | oz.    | 60.   | -   | 120. | 1-2   | oz. | 30.   | - | 60.   |
| Caffeine Citrate                         | 15-30 | gr. | 1.     | -    | 2.   | 4-8   | gr.    | 0.25  | -   | 0.5  | 1-6   | gr. | 0.06  | - | 4.    |
| Cajuput, Oil                             | ½-2   | dr. | 2.     | -    | 8.   | 3-10  | m.     | 0.2   | -   | 0.6  | 1-5   | m.  | 0.06  | - | 0.3   |
| Calabar Bean.<br>(Physostigma)           | 5-15  | gr. | 0.3    | -    | 1.   | 2-4   | gr.    | 0.13  | -   | 0.25 | ½-1   | gr. | 0.03  | - | 0.06  |
| Calamus                                  | 1-2   | oz. | 30.    | -    | 60.  | 2-3   | dr.    | 8.    | -   | 12.  | 15-60 | gr. | 1.    | - | 4.    |
| Fld. Ext.                                | 1-2   | oz. | 30.    | -    | 60.  | 2-3   | dr.    | 8.    | -   | 12.  | 15-60 | m.  | 1.    | - | 4.    |
| Calcium Bromide                          | 2-4   | dr. | 8.     | -    | 15.  | ½-1   | dr.    | 2.    | -   | 4.   | 5-20  | gr. | 0.3   | - | 1.3   |
| Carb. Precip.                            | 1-2   | oz. | 30.    | -    | 60.  | 2-4   | dr.    | 8.    | -   | 15.  | 10-60 | gr. | 0.6   | - | 4.    |
| Chloride                                 | 1-2   | dr. | 4.     | -    | 8.   | 10-30 | gr.    | 0.6   | -   | 2.   | 1-10  | gr. | 0.06  | - | 0.6   |
| Hypophos-<br>phite                       | 1-3   | dr. | 4.     | -    | 12.  | 10-30 | gr.    | 0.6   | -   | 2.   | 2-5   | gr. | 0.13  | - | 0.3   |

In general a dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

## HORSE AND COW

## SHEEP AND SWINE

## DOG

|                               | Apoth.    | Metric.    | Apoth.    | Metric.    | Apoth.   | Metric.      |
|-------------------------------|-----------|------------|-----------|------------|----------|--------------|
| Calcium                       |           |            |           |            |          |              |
| Iodide                        | ½-1 dr.   | 2. - 4.    | 5-10 gr.  | 0.3 - 0.6  | 1-3 gr.  | 0.06 - 0.2   |
| Phosphate,                    |           |            |           |            |          |              |
| Precip.                       | 2-4 dr.   | 8. - 15.   | 1-2 dr.   | 4. - 8.    | 5-20 gr. | 0.3 - 1.3    |
| Sulphide                      | 10-60 gr. | 0.6 - 4.   | 1-10 gr.  | 0.06 - 0.6 | ½-2 gr.  | 0.03 - 0.13  |
| Calomel                       | ½-1 dr.   | 2. - 4.    | 2-10 gr.  | 0.13 - 0.6 | 1-5 gr.  | 0.06 - 0.3   |
| Calendula Tinct.              | ½-1 oz.   | 15. - 30.  | 1-2 dr.   | 4. - 8.    | 15-30 m. | 1. - 2.      |
| Calumba                       | ½-1 oz.   | 15. - 30.  | 1-2 dr.   | 4. - 8.    | 5-30 gr. | 0.3 - 2.     |
| Fld. Ext.                     | ½-1 oz.   | 15. - 30.  | 1-2 dr.   | 4. - 8.    | 5-30 m.  | 0.3 - 2.     |
| Tinct.                        | 2-4 oz.   | 60. - 120. | 3-6 dr.   | 12. - 24.  | 1-4 dr.  | 4. - 15.     |
| Calx Chlorata                 | ½-2 dr.   | 2. - 8.    | 5-10 gr.  | 0.3 - 0.6  | 1-3 gr.  | 0.06 - 0.2   |
| Camphor                       | 1-3 dr.   | 4. - 12.   | 15-60 gr. | 1. - 4.    | 3-10 gr. | 0.2 - 0.6    |
| Monobrom                      | 1-4 dr.   | 4. - 15.   | 5-20 gr.  | 0.3 - 1.3  | 2-10 gr. | 0.13 - 0.6   |
| Spirits                       | 1-2 oz.   | 30. - 60.  | 2-4 dr.   | 8. - 15.   | ½-1 dr.  | 2. - 4.      |
| Cannabis Indica (Indian Hemp) |           |            |           |            |          |              |
| Ext.                          | 1-2 dr.   | 4. - 8.    | 2-10 gr.  | 0.13 - 0.6 | ¼-1 gr.  | 0.016 - 0.06 |
| Fld. Ext.                     | 2-6 dr.   | 8. - 24.   | 15-60 m.  | 1. - 4.    | 3-10 m.  | 0.2 - 0.6    |
| Tinct.                        | 4-12 dr.  | 15. - 45.  | ½-1 dr.   | 2. - 4.    | 15-30 m. | 1. - 2.      |
| Cantharides                   | 5-20 gr.  | 0.3 - 1.3  | 4-8 gr.   | 0.25 - 0.5 | 1-2 gr.  | 0.06 - 0.13  |
| (Spanish Fly)                 |           |            |           |            |          |              |
| Tinct. (1890)                 | ½-1 dr.   | 2. - 4.    | 10-30 m.  | 0.6 - 2.   | 5-15 m.  | 0.3 - 1.     |
| Tinct. (1905)                 | 15-30 m.  | 1. - 2.    | 5-15 m.   | 0.3 - 1.   | 3-8 m.   | 0.2 - 0.5    |

|                                        |       |     |      |   |     |       |     |      |   |      |       |     |       |   |      |
|----------------------------------------|-------|-----|------|---|-----|-------|-----|------|---|------|-------|-----|-------|---|------|
| Capsicum                               | 20-60 | gr. | 1.3  | - | 4.  | 5-15  | m.  | 0.3  | - | 1.   | 1-8   | gr. | 0.06  | - | 0.5  |
| Fld. Ext.                              | 20-60 | m.  | 1.3  | - | 4.  | 5-15  | m.  | 0.3  | - | 1.   | 1-8   | m.  | 0.06  | - | 0.5  |
| Oleoresin                              | 10-30 | m.  | 0.6  | - | 2.  | 2-8   | m.  | 0.13 | - | 0.5  | ¼-1   | m.  | 0.016 | - | 0.06 |
| Tinct. (1890)                          | 2-4   | dr. | 8.   | - | 15. | 20-60 | m.  | 1.3  | - | 4.   | 5-30  | m.  | 0.3   | - | 2.   |
| Tinct. (1905)                          | 1-2   | dr. | 4.   | - | 8.  | 10-30 | m.  | 0.6  | - | 2.   | 3-15  | m.  | 0.2   | - | 1.   |
| Carbo Animalis                         | ½-2   | oz. | 15.  | - | 60. | 1-3   | dr. | 4.   | - | 12.  | 10-60 | gr. | 0.6   | - | 2.   |
| Ligni<br>(Charcoal)                    | ½-1   | oz. | 15.  | - | 30. | 1-2   | dr. | 4.   | - | 8.   | 10-40 | gr. | 0.6   | - | 2.6  |
| Carbon Bisulphide                      | 2-4   | dr. | 8.   | - | 15. | ½-1   | dr. | 2.   | - | 4.   |       |     |       |   |      |
| Cardamom                               | 1-2   | oz. | 30.  | - | 60. | 2-3   | dr. | 8.   | - | 12.  | 10-30 | gr. | 0.6   | - | 2.   |
| Fld. Ext.                              | 1-2   | oz. | 30.  | - | 60. | 2-3   | dr. | 8.   | - | 12.  | 10-30 | m.  | 0.6   | - | 2.   |
| Comp. Tinct.                           | 2-3   | oz. | 60.  | - | 90. | 3-6   | dr. | 12.  | - | 24.  | 1-2   | dr. | 4.    | - | 8.   |
| Tinct.                                 | 2-3   | oz. | 60.  | - | 90. | 3-6   | dr. | 12.  | - | 24.  | 1-2   | dr. | 4.    | - | 8.   |
| Cascara Sagrada                        | 2-12  | dr. | 8.   | - | 45. | 10-60 | gr. | 0.6  | - | 4.   | 5-30  | gr. | 0.3   | - | 2.   |
| Fld. Ext.                              | 2-12  | dr. | 8.   | - | 45. | 10-60 | m.  | 0.6  | - | 4.   | 5-30  | m.  | 0.3   | - | 2.   |
| Cascarilla Bark                        |       |     |      |   |     |       |     |      |   |      |       |     |       |   |      |
| Fld. Ext.                              | ½-1   | oz. | 15.  | - | 30. | 1-2   | dr. | 4.   | - | 8.   | 10-30 | gr. | 0.6   | - | 2.   |
| Castanea Fld. Ext.<br>(Horse Chestnut) | 1-2   | oz. | 30.  | - | 60. | 2-4   | dr. | 8.   | - | 15.  | ½-1   | dr. | 2.    | - | 4.   |
| Castor Oil                             | 1     | pt. | 500. |   |     | 2-4   | oz. | 60.  | - | 120. | 1-2   | dr. | 4.    | - | 8.   |

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|                                   | HORSE AND COW |           | SHEEP AND SWINE |            | DOG       |             |
|-----------------------------------|---------------|-----------|-----------------|------------|-----------|-------------|
|                                   | Apoth.        | Metric.   | Apoth.          | Metric.    | Apoth.    | Metric.     |
| Catechu                           | ½-1 oz.       | 15. - 30. | 1-2 dr.         | 4. - 8.    | 5-30 gr.  | 0.3 - 2.    |
| Fld. Ext.                         | ½-1 oz.       | 15. - 30. | 1-2 dr.         | 4. - 8.    | 5-30 m.   | 0.3 - 2.    |
| Comp. Tinct.                      | 1-2 oz.       | 30. - 60. | 2-4 dr.         | 8. - 15.   | ½-2 dr.   | 2. - 8.     |
| Caulophyllin<br>(Blue Cohosh)     | ½-1½ dr.      | 2. - 6.   | 4-8 gr.         | 0.25 - 0.5 | 1-4 gr.   | 0.06 - 0.25 |
| Cerium Oxalate                    | ½-1½ dr.      | 2. - 6.   | 5-10 gr.        | 0.3 - 0.6  | 2-5 gr.   | 0.13 - 0.3  |
| Chalk, Comp. Powd.<br>Prepared    | ½-2 oz.       | 15. - 60. | ½-2 dr.         | 2. - 8.    | 10-60 gr. | 0.6 - 4.    |
| Chamomile                         | 1-2 oz.       | 30. - 60. | 2-4 dr.         | 8. - 15.   | 10-60 gr. | 0.6 - 4.    |
| Charcoal                          | 1-2 oz.       | 30. - 60. | 1-2 dr.         | 4. - 8.    | 5-30 gr.  | 0.3 - 2.    |
| Chaulmoogra Oil                   | ½-1 oz.       | 15. - 30. | 1-2 dr.         | 4. - 8.    | 10-40 gr. | 0.6 - 2.6   |
| Chenopodium Oil                   | ½-3 dr.       | 2. - 12.  | 5-30 m.         | 0.3 - 2.   | 2-10 m.   | 0.13 - 0.6  |
| Chimaphila, F. E.<br>(Pipsissewa) | 1½-3 dr.      | 6. - 12.  | 10-20 m.        | 0.6 - 1.3  | 5-10 m.   | 0.3 - 0.6   |
| Chloral Hydrate                   | 1-2 oz.       | 30. - 60. | 1-4 dr.         | 4. - 15.   | ½-2 dr.   | 2. - 8.     |
| Chloral Hydrate                   | 1-2 oz.       | 30. - 60. | 1-2 dr.         | 4. - 8.    | 5-20 gr.  | 0.3 - 1.3   |
| Chloralamide                      | 1-2 oz.       | 30. - 60. | 1-2 dr.         | 4. - 8.    | 10-30 gr. | 0.6 - 2.    |
| Chlorodyne                        | 1-1½ oz.      | 30. - 45. | 1-2 dr.         | 4. - 8.    | 10-30 m.  | 0.6 - 2.    |
| Chloroform                        | 1-2 dr.       | 4. - 8.   | 20-30 m.        | 1.3 - 2.   | 2-20 m.   | 0.13 - 1.3  |
| Spirit                            | 1-2 oz.       | 30. - 60. | 2-4 dr.         | 8. - 15.   | ½-1 dr.   | 2. - 4.     |
| Cimicifuga, (Black Snake Root)    |               |           |                 |            |           |             |
| Fld. Ext.                         | 2 dr.-2 oz.   | 8. - 60.  | 1-3 dr.         | 4. - 12.   | 5-30 m.   | 0.3 - 2.    |

|                   |           |      |        |           |       |         |             |        |          |
|-------------------|-----------|------|--------|-----------|-------|---------|-------------|--------|----------|
| Tinct.            | 1-3 oz.   | 30.  | - 90.  | 2-4 dr.   | 8.    | - 15.   | 10-60 m.    | 0.6    | - 4.     |
| Cinchona Bark     | 2-6 dr.   | 8.   | - 24.  | 1-4 dr.   | 4.    | - 15.   | 10-60 gr.   | 0.6    | - 4.     |
| Extr.             | 1-2 dr.   | 4.   | - 8.   | ½-1 dr.   | 2.    | - 4.    | 5-30 gr.    | 0.3    | - 2.     |
| Fld. Ext.         | 2-6 dr.   | 8.   | - 24.  | 1-4 dr.   | 4.    | - 15.   | 10-60 m.    | 0.6    | - 4.     |
| Tinct. Comp.      | 2-4 oz.   | 60.  | - 120. | ½-1 oz.   | 15.   | - 30.   | ½-4 dr.     | 2.     | - 15.    |
| Cinchonine Sul-   |           |      |        |           |       |         |             |        |          |
| phate, Tonic      | 20-60 gr. | 1.3  | - 4.   | 6-15 gr.  | 0.4   | - 1.    | 1-3 gr.     | 0.06   | - 0.2    |
| Antipyretic       | 2-5 dr.   | 8.   | - 20.  | 40-50 gr. | 2.6   | - 3.3   | 7-15 gr.    | 0.5    | - 1.     |
| Cinchonidine Sul- |           |      |        |           |       |         |             |        |          |
| phate             | 20-60 gr. | 1.3  | - 4.   | 6-15 gr.  | 0.4   | - 1.    | 1-3 gr.     | 0.06   | - 0.2    |
| Cinnamon          | 4-8 dr.   | 15.  | - 30.  | 1-2 dr.   | 4.    | - 8.    | 5-20 gr.    | 0.3    | - 1.3    |
| Oil               | ½-1½ dr.  | 2.   | - 6.   | 5-10 m.   | 0.3   | - 0.6   | 1-5 m.      | 0.06   | - 0.3    |
| Coca. Fld. Ext.   | 1-4 oz.   | 30.  | - 120. | ½-1 oz.   | 15.   | - 30.   | 10 m.-2 dr. | 0.6    | - 8.     |
| Cocaine Hydro-    |           |      |        |           |       |         |             |        |          |
| chloride          | 5-10 gr.  | 0.3  | - 0.6  | ½-1½ gr.  | 0.03  | - 0.1   | ⅛-¾ gr.     | 0.008  | - 0.045  |
| Cod Liver Oil     | 2-4 oz.   | 60.  | - 120. | ½-1 oz.   | 15.   | - 30.   | 1-3 dr.     | 4.     | - 12.    |
| (Ol. Morrhuæ)     |           |      |        |           |       |         |             |        |          |
| Codeine           | 6-30 gr.  | 0.4  | - 2.   | ½-3 gr.   | 0.03  | - 0.2   | ¼-2 gr.     | 0.016  | - 0.13   |
| Colchicine        | ¼-½ gr.   | 0.01 | - 0.03 | ⅓-1 gr.   | 0.002 | - 0.004 | ⅓-1 gr.     | 0.0006 | - 0.0012 |
| Colchicum Root    | ½-2 dr.   | 2.   | - 8.   | 10-20 gr. | 0.6   | - 1.3   | ½-5 gr.     | 0.03   | - 0.3    |
| Fluid Ext.        | ½-2 dr.   | 2.   | - 8.   | 10-20 m.  | 0.6   | - 1.3   | ½-5 m.      | 0.03   | - 0.3    |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ⅓ the dose by mouth.

|                          | HORSE AND COW |             | SHEEP AND SWINE |         | DOG      |               |
|--------------------------|---------------|-------------|-----------------|---------|----------|---------------|
|                          | Apoth.        | Metric.     | Apoth.          | Metric. | Apoth.   | Metric.       |
| Colchicum Root           |               |             |                 |         |          |               |
| Tinct. (1890)            | 3-8 dr.       | 12.         | ½-1 dr.         | 2.      | 10-30 m. | 0.6 -2.       |
| Tinct. (1905)            | 4-12 dr.      | 15.         | 1-1½ dr.        | 4.      | 15-45 m. | 1. -3.        |
| Wine                     | 3-8 dr.       | 12.         | ½-1 dr.         | 2.      | 10-30 m. | 0.6 -2.       |
| Collargolum              |               |             |                 |         |          |               |
| Intravenous              | 7-20 gr.      | 0.5 - 1.3   | 2-4 gr.         | 0.13    | 1-2 gr.  | 0.06 -0.13    |
| Colocynthis              | 1-3 dr.       | 4.          | 6-15 gr.        | 0.4     | 3-8 gr.  | 0.2 -0.5      |
| Colocynthis              | ½-1 dr.       | 2.          | 5-10 gr.        | 0.3     | ¼-1 gr.  | 0.016 -0.06   |
| Condurango, F. E.        | ½-1½ oz.      | 15.         | ½-1 dr.         | 2.      | 10-30 m. | 1.3 -2.       |
| Comine Hydrobro-<br>mide | ¾-1½ gr.      | 0.045-0.1   | ½-¾ gr.         | 0.013   | ¼-½ gr.  | 0.001 -0.002  |
| Conium (Hemlock)         | 1-2 dr.       | 4.          | 10-20 gr.       | 0.6     | 2-5 gr.  | 0.13 -0.3     |
| Ext.                     | 12-24 gr.     | 0.72 - 1.5  | 2-4 gr.         | 0.13    | ¼-1 gr.  | 0.016 -0.06   |
| Fld. Ext.                | 1-2 dr.       | 4.          | 10-20 m.        | 0.6     | 2-5 m.   | 0.13 -0.3     |
| Convallamarin            | 10-30 gr.     | 0.6         | 2-5 gr.         | 0.13    | ⅛-¼ gr.  | 0.008 -0.01   |
| Convallaria, F. E.       | 1-2 dr.       | 4.          | 10-20 m.        | 0.6     | 5-10 m.  | 0.3 -0.6      |
| Copaiba                  | ½-3 oz.       | 15.         | 1-3 dr.         | 4.      | 5-30 m.  | 0.3 -2.       |
| Copper Acetate           | 1-2 dr.       | 4.          | 5-20 gr.        | 0.3     | ¼-2 gr.  | 0.016 -0.13   |
| Arsenite                 | 1-4 gr.       | 0.06 - 0.25 | ¼-½ gr.         | 0.001   | ¼-½ gr.  | 0.0003-0.0006 |
| Sulphate                 | 1-2 dr.       | 4.          | 3-20 gr.        | 0.3     | ¼-2 gr.  | 0.016 -0.13   |
| Cornus, Fld. Ext.        | ½-2 oz.       | 15.         | ½-2 dr.         | 2.      | 10-60 m. | 0.6 -1.       |

|                          |                                   |       |         |                                     |        |         |                                      |        |         |
|--------------------------|-----------------------------------|-------|---------|-------------------------------------|--------|---------|--------------------------------------|--------|---------|
| Corrosive Sublimate      | 5-8 gr.                           | 0.3   | - 0.5   | 1-2 gr.                             | 0.06   | - 0.13  | $\frac{1}{10}$ - $\frac{1}{8}$ gr.   | 0.002  | -0.005  |
| Cotton Root Bark         | $\frac{1}{2}$ -2 oz.              | 15.   | -60.    | 1-2 dr.                             | 4.     | - 8.    | $\frac{1}{2}$ -1 dr.                 | 2.     | -4.     |
| as ebolic                | 1-2 dr.                           | 4.    | - 8.    | 10-20 m.                            | 0.6    | - 1.3   | 1-5 m.                               | 0.06   | -0.3    |
| Creolin                  | $\frac{1}{2}$ -1 oz.              | 15.   | -30.    | $\frac{1}{2}$ -1 dr.                | 2.     | - 4.    | 10-20 m.                             | 0.6    | -1.3    |
| as anthelmintic          | 15-30 m.                          | 1.    | - 2.    | 5-15 m.                             | 0.3    | - 1.    | $\frac{1}{2}$ -2 m.                  | 0.03   | -0.13   |
| Creosote                 | 2-4 dr.                           | 8.    | -15.    | 15-30 gr.                           | 1.     | - 2.    | 5-10 gr.                             | 0.3    | -0.6    |
| Croton Chloral           | 15-30 m.                          | 1.    | - 2.    | 5-10 m.                             | 0.3    | - 0.6   | $\frac{1}{2}$ -3 m.                  | 0.03   | -2.     |
| Oil                      | 1-5 gr.                           | 0.06  | - 0.3   | $\frac{1}{8}$ - $\frac{1}{3}$ gr.   | 0.008  | - 0.02  | $\frac{1}{32}$ - $\frac{1}{8}$ gr.   | 0.002  | -0.01   |
| Curare                   | $\frac{1}{5}$ - $\frac{1}{2}$ gr. | 0.012 | - 0.03  | $\frac{1}{50}$ - $\frac{1}{20}$ gr. | 0.0012 | - 0.003 | $\frac{1}{100}$ - $\frac{1}{40}$ gr. | 0.0006 | -0.0015 |
| Curatripedium, Fld. Ext. |                                   |       |         |                                     |        |         |                                      |        |         |
| (Lady Slipper)           | 2-6 dr.                           | 8.    | -24.    | $\frac{1}{2}$ -1 dr.                | 2.     | - 4.    | 10-30 m.                             | 0.6    | -2.     |
| Damiana, Fld. Ext.       | $\frac{1}{2}$ -1 oz.              | 15.   | -30.    | 1-2 dr.                             | 4.     | - 8.    | 10-60 m.                             | 0.6    | -4.     |
| Daturine                 | $\frac{1}{2}$ -1 gr.              | 0.03  | - 0.06  | $\frac{1}{60}$ - $\frac{1}{10}$ gr. | 0.001  | - 0.006 | $\frac{1}{120}$ - $\frac{1}{20}$ gr. | 0.0005 | -0.003  |
| Diastase                 | 1-2 dr.                           | 4.    | - 8.    | 15-30 gr.                           | 1.     | - 2.    | 5-15 gr.                             | 0.3    | -1.     |
| Digitalein               | $\frac{1}{8}$ - $\frac{1}{4}$ gr. | 0.008 | - 0.016 | $\frac{1}{40}$ - $\frac{1}{20}$ gr. | .0015  | - 0.003 | $\frac{1}{100}$ - $\frac{1}{50}$ gr. | 0.001  | -0.0006 |
| Digitalin                | $\frac{1}{4}$ - $\frac{1}{2}$ gr. | 0.016 | - 0.03  | $\frac{1}{30}$ - $\frac{1}{10}$ gr. | 0.002  | - 0.006 | $\frac{1}{60}$ - $\frac{1}{30}$ gr.  | 0.001  | -0.002  |
| Digitalis                | 10-60 gr.                         | 0.6   | - 4.    | 5-15 gr.                            | 0.3    | - 1.    | $\frac{1}{2}$ -3 gr.                 | 0.03   | -0.2    |
| Ext.                     | 5-10 gr.                          | 0.3   | - 0.6   | 1-2 gr.                             | 0.06   | - 0.13  | $\frac{1}{8}$ - $\frac{1}{2}$ gr.    | 0.008  | -0.03   |

In general the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.

|                                   | HORSE AND COW |              | SHEEP AND SWINE |               | DOG       |                |
|-----------------------------------|---------------|--------------|-----------------|---------------|-----------|----------------|
|                                   | Apoth.        | Metric.      | Apoth.          | Metric.       | Apoth.    | Metric.        |
| Digitalis                         |               |              |                 |               |           |                |
| Fld..Ext.                         | 10-60 m.      | 0.6 - 4.     | 5-15 m.         | 0.3 - 1.      | ½- 3 m.   | 0.03 - 0.2     |
| Infusion                          | 2- 6 oz.      | 60. - 180.   | ½- 1 oz.        | 15. - 30.     | 1- 4 dr.  | 4. - 15.       |
| Tinct. (1890)                     | 2- 4 dr.      | 8. - 15.     | ½-1½ dr.        | 2. - 6.       | 5-30 m.   | 0.3 - 2.       |
| Tinct. (1905)                     | 3- 6 dr.      | 12. - 24.    | ¾-2½ dr.        | 3. - 10.      | 8-45 m.   | 0.5 - 3.       |
| Dioscorea, Fld. Ext<br>(Wild Yam) | 2- 6 dr.      | 8. - 24.     | ½- 1 dr.        | 2. - 4.       | 15-30 m.  | 1. - 2.        |
| Diuretin                          | 3- 5 dr.      | 12. - 20.    | 15-30 gr.       | 1. - 2.       | 10-15 gr. | 0.6 - 1.       |
| Donovan's Solution                | 2- 8 dr.      | 8. - 30.     | ½- 1 dr.        | 2. - 4.       | 2-10 m.   | 0.13 - 0.6     |
| Dovers Powder                     | ½- 1 oz.      | 15. - 30.    | ½- 1 dr.        | 2. - 4.       | 5-10 gr.  | 0.3 - 0.6      |
| Dracontium, F. E.                 | ½- 1 oz.      | 15. - 30.    | 1- 2 dr.        | 4. - 8.       | 30-60 m.  | 2. - 4.        |
| Duboisia, Tinct.                  | 2- 6 dr.      | 8. - 24.     | ½- 1 dr.        | 2. - 4.       | 5-20 m.   | 0.3 - 1.3      |
| Dulcamara, F. E.                  | 1- 2 oz.      | 30. - 60.    | 2- 3 dr.        | 8. - 12.      | 1- 2 dr.  | 4. - 8.        |
| Echinacea, Powd.                  | 1- 4 dr.      | 4. - 15.     | ½- 1 dr.        | 2. - 4.       | 5-30 gr.  | 0.3 - 2.       |
| Fld. Ext.                         | 1- 4 dr.      | 4. - 15.     | ½- 1 dr.        | 2. - 4.       | 5-30 m.   | 0.3 - 2.       |
| Elaterin                          | ½- 2 gr.      | 0.03 - 0.13  | 1- 1½ gr.       | 0.006 - 0.013 | 1- 1½ gr. | 0.003 - 0.015  |
| Emetine, Expect.<br>Emetic        | ¼- 2 gr.      | 0.015- 0.13  | 5- 20 gr.       | 0.0012- 0.003 | 1- 1½ gr. | 0.0006- 0.0015 |
| Epsom Salts (Lax)                 | 2- 4 oz.      | 60. - 120.   | 1- 2 gr.        | 0.065 - 0.13  | 1- 4 dr.  | 4. - 15.       |
| (Purg.) cow                       | 1- 2 lb.      | 500. - 1000. | ½- 1 oz         | 15. - 30.     |           |                |
| Ergot                             | ½- 1 oz.      | 15. - 30.    | 4- 6 oz.        | 120. - 180.   | sheep.    |                |
|                                   |               |              | 1- 2 dr.        | 4. - 8.       | ½- 1 dr.  | 2. - 4.        |



|                                |                       |      |   |      |                                    |       |   |       |                                     |        |   |       |
|--------------------------------|-----------------------|------|---|------|------------------------------------|-------|---|-------|-------------------------------------|--------|---|-------|
| Ext.                           | 20-60 gr.             | 1.3  | - | 4.   | 10-20 gr.                          | 0.6   | - | 1.3   | 2-10 gr.                            | 0.13   | - | 0.6   |
| Fld. Ext.                      | $\frac{1}{2}$ -1 oz.  | 15.  | - | 30.  | 1-2 dr.                            | 4.    | - | 8.    | $\frac{1}{2}$ -1 dr.                | 2.     | - | 4.    |
| Tinct.                         | $\frac{1}{2}$ -2 oz.  | 15.  | - | 60.  | 1-4 dr.                            | 4.    | - | 15.   | $\frac{1}{2}$ -2 dr.                | 2.     | - | 8.    |
| Ergotin (Hypo.)                | 2-4 gr.               | 0.13 | - | 0.25 | $\frac{1}{4}$ -1 gr.               | 0.03  | - | 0.06  | $\frac{1}{4}$ - $\frac{1}{2}$ gr.   | 0.015  | - | 0.03  |
| Eriodictyon, F. E.             | $\frac{1}{2}$ -2 oz.  | 15.  | - | 60.  | $\frac{1}{2}$ -2 dr.               | 2.    | - | 8.    | 15-60 m.                            | 1.     | - | 4.    |
| Eserine Sulphate or Salicylate |                       |      |   |      |                                    |       |   |       |                                     |        |   |       |
| (Hypodermic)                   | 1-1 $\frac{1}{2}$ gr. | 0.06 | - | 0.1  | $\frac{1}{15}$ - $\frac{1}{3}$ gr. | 0.004 | - | 0.013 | $\frac{1}{10}$ - $\frac{1}{30}$ gr. | 0.0006 | - | 0.002 |
| Ether                          | 1-2 oz.               | 30.  | - | 60.  | 2-4 dr.                            | 8.    | - | 15.   | 10-60 m.                            | 0.6    | - | 4.    |
| Spirit                         | 1-2 oz.               | 30.  | - | 60.  | 2-4 dr.                            | 8.    | - | 15.   | 10-60 m.                            | 0.6    | - | 4.    |
| Nitrous, Spirit                | 1-4 oz.               | 30.  | - | 120. | 2-4 dr.                            | 8.    | - | 15.   | 10-60 m.                            | 0.6    | - | 4.    |
| (Sweet Spt. Nitre)             |                       |      |   |      |                                    |       |   |       |                                     |        |   |       |
| Eucalyptus, F. E.              | 2-3 oz.               | 60.  | - | 90.  | 2-6 dr.                            | 8.    | - | 24.   | $\frac{1}{2}$ -2 dr.                | 2.     | - | 8.    |
| Oil                            | 2-4 dr.               | 8.   | - | 15.  | 20-50 m.                           | 1.3   | - | 3.3   | 5-20 m.                             | 0.3    | - | 1.3   |
| Eucalyptol                     | 1-3 dr.               | 4.   | - | 12.  | 15-40 m.                           | 1.    | - | 2.6   | 5-15 m.                             | 0.3    | - | 1.    |
| Eupatorium, F. E.              | $\frac{1}{2}$ -2 oz.  | 15.  | - | 60.  | $\frac{1}{2}$ -2 dr.               | 2.    | - | 8.    | 10-60 m.                            | 0.6    | - | 4.    |
| Exalgin                        | $\frac{1}{2}$ -2 dr.  | 2.   | - | 8.   | 5-15 gr.                           | 0.3   | - | 1.    | 1-6 gr.                             | 0.06   | - | 0.4   |
| Fel. Bovis (OxGall)            | 2-5 dr.               | 8.   | - | 20.  | 10-30 gr.                          | 0.6   | - | 2.    | 5-15 gr.                            | 0.3    | - | 1.    |
| Fennel                         | 1-2 oz.               | 30.  | - | 60.  | 2-3 dr.                            | 8.    | - | 12.   | 10-20 gr.                           | 0.6    | - | 1.3   |
| Fenugreek                      | 1-2 oz.               | 30.  | - | 60.  | 2-3 dr.                            | 8.    | - | 12.   | 10-30 gr.                           | 0.6    | - | 2.    |
| Filix Mas.                     |                       |      |   |      |                                    |       |   |       |                                     |        |   |       |
| (Male Fern)                    | 2 dr.-2 oz.           | 8.   | - | 60.  | 1-3 dr.                            | 4.    | - | 12.   | 5 m.-1 dr.                          | 0.3    | - | 4.    |

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HORSE AND COW SHEEP AND SWINE DOG

|                                  | HORSE AND COW |         | SHEEP AND SWINE                      |         | DOG                                   |         |
|----------------------------------|---------------|---------|--------------------------------------|---------|---------------------------------------|---------|
|                                  | Apoth.        | Metric. | Apoth.                               | Metric. | Apoth.                                | Metric. |
| Fowler's Solution                | 2-8 dr.       | 8.      | ½-1 dr.                              | 2.      | 2-10 m.                               | 0.13    |
| Frangula, Fld. Ext.              | ½-2 oz.       | 15.     | 1-2 dr.                              | 4.      | ½-1 dr.                               | 2.      |
| Gall Nuts, Powd.                 | 4-8 dr.       | 15.     | 30-60 gr.                            | 2.      | 5-10 gr.                              | 0.3     |
| Gamboge                          | ½-1 oz.       | 15.     | 20-60 gr.                            | 1.3     | 5-10 gr.                              | 0.3     |
| Gaultheria, Oil<br>(Wintergreen) | 2 dr.-1 oz.   | 8.      | ½-2 dr.                              | 2.      | 5-15 m.                               | 0.3     |
| Gelsemium                        | ¼-½ gr.       | 0.016-  | ½ <sub>10</sub> -1 <sub>12</sub> gr. | 0.003-  | ½ <sub>60</sub> -1 <sub>20</sub> gr.  | 0.001   |
| Gelsemium<br>Fld. Ext.           | 1-2 dr.       | 4.      | 10-20 gr.                            | 0.6     | 5-10 gr.                              | 0.3     |
| Tinct.                           | 1-2 dr.       | 4.      | 10-20 m.                             | 0.6     | 5-10 m.                               | 0.3     |
| Gentian                          | ½-2 oz.       | 15.     | 1-3 dr.                              | 4.      | 15-60 m.                              | 1.      |
| Fld. Ext.                        | ½-1 oz.       | 15.     | 1-2 dr.                              | 4.      | 5-30 gr.                              | 0.3     |
| Tinct. Comp.                     | ½-1 oz.       | 15.     | 1-2 dr.                              | 4.      | 5-30 m.                               | 0.3     |
| Geranium, Fld. Ext.              | 1-4 oz.       | 30.     | ½-1 oz.                              | 15.     | 1-4 dr.                               | 4.      |
| Ginger                           | 2-8 dr.       | 8.      | ½-1 dr.                              | 2.      | 15-30 m.                              | 1.      |
| Fld. Ext.                        | 2-8 dr.       | 8.      | 1-2 dr.                              | 4.      | 5-30 gr.                              | 0.3     |
| Oleoresin                        | 2-8 dr.       | 8.      | 1-2 dr.                              | 4.      | 5-30 m.                               | 0.3     |
| Tinct.                           | 10-20 m.      | 0.6     | 3-6 m.                               | 0.2     | ½-1 m.                                | 0.03    |
| Glauber's Salts(Horse)           | 1-2 oz.       | 30.     | 2-4 dr.                              | 8.      | 10-60 m.                              | 0.6     |
| (Cow)                            | ½-1 lb.       | 250.    |                                      |         |                                       |         |
| Glonoine                         | 1-1½ lb.      | 500.    | ½-2 oz.                              | 15.     | 1-4 dr.                               | 4.      |
| (Nitroglycerin)                  | ½-½ gr.       | 0.013-  | ½ <sub>60</sub> -½ <sub>36</sub> gr. | 0.001-  | ½ <sub>120</sub> -½ <sub>60</sub> gr. | 0.0005- |

|                                 |                                    |      |        |                                   |        |       |                                    |       |         |
|---------------------------------|------------------------------------|------|--------|-----------------------------------|--------|-------|------------------------------------|-------|---------|
| Glycerin                        | 1-2 oz.                            | 30.  | - 60.  | 2-4 dr.                           | 8.     | -15.  | $\frac{1}{2}$ -1 dr.               | 2.    | - 4.    |
| Glycyrrhiza<br>(Liquorice Root) | $\frac{1}{2}$ -1 oz.               | 15.  | - 60.  | 1-4 dr.                           | 4.     | -15.  | 10-60 gr.                          | 0.6   | - 4.    |
| Gossypium, F. E.                | 2-8 dr.                            | 8.   | - 30.  | $\frac{1}{2}$ -2 dr.              | 2.     | - 8.  | 15-45 m.                           | 1.    | - 3.    |
| Granatum, F. E.                 | $\frac{1}{2}$ -2 oz.               | 15.  | - 30.  | 1-3 dr.                           | 4.     | -12.  | $\frac{1}{2}$ -2 dr.               | 2.    | - 8.    |
| Guaiacol                        | 1-2 dr.                            | 4.   | - 8.   | 3-10 m.                           | 0.2    | - 0.6 | $\frac{1}{2}$ -2 m.                | 0.03  | - 0.13  |
| Guaiacum,                       |                                    |      |        |                                   |        |       |                                    |       |         |
| Tinct. Ammon.                   | 1-3 oz.                            | 30.  | - 90.  | 1-4 dr.                           | 4.     | -15.  | 3-30 m.                            | 0.2   | - 2.    |
| Guarana, Fld. Ext.              | 2-8 dr.                            | 8.   | - 30.  | $\frac{1}{2}$ -1 dr.              | 2.     | - 4.  | 10-30 m.                           | 0.6   | - 2.    |
| Gum Arabic.                     | 2-3 oz.                            | 60.  | - 90.  | $\frac{1}{2}$ -1 oz.              | 15.    | -30.  | 20-40 gr.                          | 1.3   | - 2.6   |
| Tragacanth                      | 2-3 oz.                            | 60.  | - 90.  | $\frac{1}{2}$ -1 oz.              | 15.    | -30.  | 20-40 gr.                          | 1.3   | - 2.6   |
| Hamamelis, F. E.                | 1-2 oz.                            | 30.  | - 60.  | 2-4 dr.                           | 8.     | -15.  | $\frac{1}{2}$ -2 dr.               | 2.    | - 8.    |
| Helleborus Niger,               |                                    |      |        |                                   |        |       |                                    |       |         |
| Fld. Ext.                       | 1-4 dr.                            | 4.   | - 15.  | 10-30 m.                          | 0.6    | - 2.  | 5-15 m.                            | 0.3   | - 1.    |
| Hematoxylin, Ext.               | $\frac{1}{2}$ -4 dr.               | 2.   | - 15.  | 20-60 gr.                         | 1.3    | - 4.  | 5-15 gr.                           | 0.3   | - 1.    |
| Fld. Ext.                       | $\frac{1}{2}$ -1 $\frac{1}{2}$ oz. | 15.  | - 45.  | 1 $\frac{1}{2}$ -3 dr.            | 6.     | -12.  | 15-45 m.                           | 1.    | - 3.    |
| Heroin                          | $\frac{1}{2}$ -2 gr.               | 0.03 | - 0.13 | $\frac{1}{8}$ - $\frac{1}{4}$ gr. | 0.008- | .016  | $\frac{1}{30}$ - $\frac{1}{8}$ gr. | 0.002 | - 0.008 |
| Homatropin                      | 3-6 gr.                            | 0.2  | - 0.4  | $\frac{2}{3}$ gr.                 | -      | 0.04  | $\frac{1}{3}$ gr.                  | -     | 0.02    |
| Humulus, F. E.                  | 1-4 dr.                            | 4.   | - 15.  | 15-30 m.                          | 1.     | - 2.  | 5-15 m.                            | 0.3   | - 1.    |
| Tinct.                          | 1-4 oz.                            | 30.  | -120.  | 1-4 dr.                           | 4.     | -15.  | $\frac{1}{2}$ -2 dr.               | 2.    | - 8.    |

In general the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.

## HORSE AND COW

## SHEEP AND SWINE

## DOG

|                                   | Apoth.                              | Metric.      | Apoth.                              | Metric.       | Apoth.                                | Metric.       |
|-----------------------------------|-------------------------------------|--------------|-------------------------------------|---------------|---------------------------------------|---------------|
| Hydrastin                         | 15-30 gr.                           | 1. - 2.      | 5-10 gr.                            | 0.3           | 3- 5 gr.                              | 0.2 - 0.3     |
| Hydrastine Hydrochloride          | 1- 2 gr.                            | 0.06 - 0.13  | $\frac{1}{6}$ - $\frac{1}{3}$ gr.   | 0.01          | $\frac{1}{12}$ - $\frac{1}{6}$ gr.    | 0.005 - 0.01  |
| Hydrastis<br>(Golden Seal)        | 2 dr.-1 oz.                         | 8. -30.      | 1- 2 dr.                            | 4.            | 5-60 gr.                              | 0.3 - 4.      |
| Fld. Ext.                         | 2 dr.-1 oz.                         | 8. -30.      | 1- 2 dr.                            | 4.            | 5-60 m.                               | 0.3 - 4.      |
| Glycerite                         | 2 dr.-1 oz.                         | 8. -30.      | 1- 4 dr.                            | 4.            | 5-60 m.                               | 0.3 - 4.      |
| Tinct.                            | 1- 2 oz.                            | 30. -60.     | 1- 4 dr.                            | 4.            | $\frac{1}{2}$ - 2 dr.                 | 2. - 8.       |
| Hydrogen Dioxide<br>or Peroxide   | $\frac{1}{2}$ - 2 oz.               | 15. -60.     | 1- 4 dr.                            | 4.            | 15 m. 2 dr.                           | 1. - 8.       |
| Hyoscine Hydrobromide             | $\frac{1}{20}$ - $\frac{1}{10}$ gr. | 0.003- 0.006 | $\frac{1}{60}$ - $\frac{1}{30}$ gr. | 0.001 - 0.002 | $\frac{1}{150}$ - $\frac{1}{100}$ gr. | .0004-0.0006  |
| Hyoscyamine Hydrobrom or Sulphate | 1- 2 gr.                            | 0.06 - 0.013 | $\frac{1}{20}$ - $\frac{1}{5}$ gr.  | 0.003 - 0.013 | $\frac{1}{60}$ - $\frac{1}{30}$ gr.   | 0.001 - 0.002 |
| Hyoscyamus.<br>(Henbane)          | $\frac{1}{2}$ - 1 oz.               | 15. -30.     | $\frac{1}{2}$ - 1 dr.               | 2. - 4.       | 5-15 gr.                              | 0.3 - 1.      |
| Ext.                              | 20-60 gr.                           | 1.3 - 4.     | 4- 8 gr.                            | 0.25          | $\frac{1}{2}$ - 2 gr.                 | 0.03 - 0.13   |
| Fld. Ext.                         | $\frac{1}{2}$ - 1 oz.               | 15. -30.     | $\frac{1}{2}$ - 1 dr.               | 2.            | 5-15 m.                               | 0.3 - 1.      |
| Tinct.                            | 1- 3 oz.                            | 30. -90.     | 2- 4 dr.                            | 8.            | 1- 2 dr.                              | 4. - 8.       |

|                    |                      |     |       |                            |      |        |                      |       |        |  |  |  |  |
|--------------------|----------------------|-----|-------|----------------------------|------|--------|----------------------|-------|--------|--|--|--|--|
| Hypophosphites,    |                      |     |       |                            |      |        |                      |       |        |  |  |  |  |
| Comp. Syr.         | 1-2 oz.              | 30. | - 60. | 2-3 dr.                    | 8.   | -12.   | 1 dr.                |       |        |  |  |  |  |
| Ichthyol           | 1-3 dr.              | 4.  | - 12. | 10-20 gr.                  | 0.6  | - 1.3  | 2-10 gr.             | 0.13  | - 0.6  |  |  |  |  |
| Ignatia, Fld. Ext. | $\frac{1}{2}$ -1 dr. | 2.  | - 4.  | 20-40 m.                   | 1.3  | - 2.6  | $\frac{1}{4}$ -5 m.  | 0.016 | - 0.3  |  |  |  |  |
| Iodine             | $\frac{1}{2}$ -1 dr. | 2.  | - 4.  | 10-20 gr.                  | 0.6  | - 1.3  | 2-5 gr.              | 0.13  | - 0.3  |  |  |  |  |
| Comp. Sol.         | 2-4 dr.              | 8.  | - 15. | 20-40 m.                   | 1.3  | - 2.6  | 2-10 m.              | 0.13  | - 0.6  |  |  |  |  |
| (Lugol's)          |                      |     |       |                            |      |        |                      |       |        |  |  |  |  |
| Tinct              | 2-4 dr.              | 8.  | - 15. | 20-40 m.                   | 1.3  | - 2.6  | 2-10 m.              | 0.13  | - 0.6  |  |  |  |  |
| Iodoform           | $\frac{1}{2}$ -1 dr. | 2.  | - 4.  | 10-20 gr.                  | 0.6  | - 1.3  | 2-8 gr.              | 0.13  | - 0.5  |  |  |  |  |
| Ipecac, Expect.    | 1-2 dr.              | 4.  | - 8.  | sheep $\frac{1}{2}$ -1 dr. | 2.   | - 4.   | $\frac{1}{2}$ -2 gr. | 0.03  | - 0.13 |  |  |  |  |
| Emetic             |                      |     |       | pig $\frac{1}{2}$ dr.      |      | - 2.   | 16-30 gr.            | 1.    | - 2.   |  |  |  |  |
| Fld. Ext           | 1-2 dr.              | 4.  | - 8.  | 15-30 m.                   | 1.   | - 2.   | $\frac{1}{2}$ -2 m.  | 0.03  | - 0.13 |  |  |  |  |
| Iron and Ammoni-   |                      |     |       |                            |      |        |                      |       |        |  |  |  |  |
| um Citrate         | 1-2 dr.              | 4.  | - 8.  | 10-20 gr.                  | 0.6  | - 1.3  | 5-10 gr.             | 0.3   | - 0.6  |  |  |  |  |
| Carb. Sacch.       | 1-2 dr.              | 4.  | - 8.  | 20-30 gr.                  | 1.3  | - 2.   | 1-5 gr.              | 0.06  | - 0.3  |  |  |  |  |
| Chloride, Sol.     | 2-4 dr.              | 8.  | - 15. | 10-20 m.                   | 0.6  | - 1.3  | 2-10 m.              | 0.13  | - 0.6  |  |  |  |  |
| Tinct.             | 1-2 oz.              | 30. | - 60. | 20-60 m.                   | 1.3  | - 4.   | 5-30 m.              | 0.3   | - 2.   |  |  |  |  |
| Iodide Syr.        | 1-4 dr.              | 4.  | - 15. | 10-30 m.                   | 0.6  | - 2.   | 5-10 m.              | 0.3   | - 0.6  |  |  |  |  |
| and Quinine Cit.   | 1-4 dr.              | 4.  | - 15. | 10-30 gr.                  | 0.6  | - 2.   | 3-10 gr.             | 0.3   | - 0.6  |  |  |  |  |
| Reduced            | 1-2 dr.              | 4.  | - 8.  | 20-30 gr.                  | 1.3  | - 2.   | 1-5 gr.              | 0.06  | - 0.3  |  |  |  |  |
| and Strych. Cit.   | 10-15 gr.            | 0.6 | - 1.  | 2-4 gr.                    | 0.13 | - 0.25 | 1-2 gr.              | 0.06  | - 0.13 |  |  |  |  |

In general the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.

|                  | Apoth.  | Metric.    | Apoth.        | Metric.   | Apoth.    | Metric.    |
|------------------|---------|------------|---------------|-----------|-----------|------------|
| Iron Sulphate    | 1-2 dr. | 4. - 8.    | 20-30 gr.     | 1.3 - 2.  | 1-5 gr.   | 0.06 - 0.3 |
| Jaborandi        | 2-4 dr. | 8. - 15.   | ½-1 dr.       | 2. - 4.   | 5-60 gr.  | 0.3 - 4.   |
| Fld. Ext.        | 2-4 dr. | 8. - 15.   | ½-1 dr.       | 2. - 4.   | 5-60 m.   | 0.3 - 4.   |
| Jalap            |         |            | (Pig) 2-4 dr. | 8. - 15.  | 1-2 dr.   | 4. - 8.    |
| Fld. Ext.        |         |            | 2-4 dr.       | 8. - 15.  | 1-2 dr.   | 4. - 8.    |
| Resin            |         |            | ½-1 dr.       | 2. - 4.   | 15-30 gr. | 1. - 2.    |
| Jambul           | 1-3 dr. | 4. - 12.   | 10-20 gr.     | 0.6 - 1.3 | 5-10 gr.  | 0.3 - 0.6  |
| Juniper Oil      | 1-2 dr. | 4. - 8.    | 10-30 m.      | 0.6 - 2.  | 2-10 m.   | 0.13 - 0.6 |
| Comp. Spt.       | 2-4 oz. | 60. - 120. | ½-1 oz.       | 15. - 30. | 1-4 dr.   | 4. - 15.   |
| Kamala           | ½-1 oz. | 15. - 30.  | 1-3 dr.       | 4. - 12.  | ½-2 dr.   | 2. - 8.    |
| Fld. Fxt.        | ½-1 oz. | 15. - 30.  | 1-3 dr.       | 4. - 12.  | ½-2 dr.   | 2. - 8.    |
| Kava-kava, F. E. | ½-1 oz. | 15. - 30.  | 1-3 dr.       | 4. - 12.  | 15-60 m.  | 1. - 4.    |
| Kino,            | ½-1 oz. | 15. - 30.  | 1-2 dr.       | 4. - 8.   | 5-30 gr.  | 0.3 - 2.   |
| Fld. Ext.        | ½-1 oz. | 15. - 30.  | 1-2 dr.       | 4. - 8.   | 5-30 m.   | 0.3 - 2.   |
| Tinct.           | 1-2 oz. | 30. - 60.  | 1-3 dr.       | 4. - 12.  | ½-2 dr.   | 2. - 8.    |
| Koussin          |         |            |               |           | 5-40 gr.  | 0.3 - 2.6  |
| Kousoo           | ½-2 oz. | 15. - 60.  | 1-3 dr.       | 4. - 12.  | ½-2 dr.   | 2. - 8.    |
| Fld. Ext.        | ½-2 oz. | 15. - 60.  | 1-3 dr.       | 4. - 12.  | ½-2 dr.   | 2. - 8.    |
| Krameria         | ½-1 oz. | 15. - 30.  | 1-2 dr.       | 4. - 8.   | 5-30 gr.  | 0.3 - 2.   |

|                    |           |      |       |           |      |        |          |       |        |
|--------------------|-----------|------|-------|-----------|------|--------|----------|-------|--------|
| Ext.               | 2-3 dr.   | 8.   | - 12. | 20-40 gr. | 1.3  | - 2.6  | 5-10 gr. | 0.3   | - 0.6  |
| Fld. Ext.          | ½- 1 oz.  | 15.  | - 30. | 1- 2 dr.  | 4.   | - 8.   | 5-30 gr. | 0.3   | - 2.   |
| Tinct.             | 1- 2 oz.  | 30.  | - 60. | 2- 6 dr.  | 8.   | - 24.  | ½- 2 dr. | 2.    | - 8.   |
| Lactopeptine       | 1- 2 dr.  | 4.   | - 8.  | 10-30 gr. | 0.6  | - 2.   | 5-15 gr. | 0.3   | - 1.   |
| Lactucarium, F. E. | 2- 8 dr.  | 8.   | - 30. | 15-60 m.  | 1.   | - 4.   | 8-30 m.  | 0.5   | - 2.   |
| Laudanum           | ½- 2 oz.  | 15.  | - 60. | 1- 4 dr.  | 4.   | - 15.  | 2-30 m.  | 0.13  | - 2.   |
| Lead Acetate       | ½- 1 dr.  | 2.   | - 4.  | 15-20 gr. | 1.   | - 1.3  | 1- 2 gr. | 0.06  | - 0.13 |
| Lemon Oil          | ½- 1 dr.  | 2.   | - 4.  | 2-10 m.   | 0.13 | - 0.6  | 1- 5 m.  | 0.06  | - 0.3  |
| Lime Chlorinated   | ½- 2 dr.  | 2.   | - 8.  | 5-20 gr.  | 0.3  | - 1.3  | 1- 3 gr. | 0.06  | - .2   |
| Sulphurated        | 10-40 gr. | 0.6  | - 2.6 | 3-10 gr.  | 0.2  | - 0.6  | ½- 2 gr. | 0.006 | - 0.13 |
| Water              | 4- 6 oz.  | 120. | -180. | 1- 2 oz.  | 30.  | - 60.  | 1- 8 dr. | 4.    | -30.   |
| Linseed Oil        | ½- 1 pt.  | 250. | -500. | 6-12 oz.  | 180. | -360.  | ½- 2 oz. | 15.   | -60.   |
| Lithium Bromide    | ½- 1 oz.  | 15.  | - 30. | ½- 2 dr.  | 2.   | - 8.   | 2-30 gr. | 0.13  | - 2.   |
| Carbonate          | 1- 4 dr.  | 4.   | - 30. | 15-60 gr. | 1.   | - 4.   | 3-10 gr. | 0.2   | - 0.6  |
| Citrate            | 1- 4 dr.  | 4.   | - 15. | 15-60 gr. | 1.   | - 4.   | 1-20 gr. | 0.06  | - 1.3  |
| Lobelia            | 1- 8 dr.  | 4.   | - 30. | ½- 2 dr.  | 2.   | - 8.   | ½-20 gr. | 0.03  | - 1.3  |
| Fld. Ext.          | 1- 8 dr.  | 4.   | - 30. | ½- 2 dr.  | 2.   | - 8.   | ½-20 m.  | 0.03  | - 1.3  |
| Tinct.             | 1- 2 oz.  | 30.  | - 60. | 1- 3 dr.  | 4    | - 12.  | 3-30 m.  | 0.2   | - 2.   |
| Lobelin            | 5-15 gr.  | 0.3  | - 1.  | 1- 2 gr.  | 0.06 | - 0.13 | ½- 1 gr. | 0.03  | - 0.06 |
| Lugol's Solution   | 2- 4 dr.  | 8.   | - 15. | 20-40 m.  | 1.3  | - 2.6  | 2-10 m.  | 0.13  | - 0.6  |
| Lupulin            | 1- 3 dr.  | 4.   | - 12. | 10-20 gr. | 0.6  | - 1.3  | 5-10 gr. | 0.3   | - 0.6  |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

## HORSE AND COW

## SHEEP AND SWINE

## DOG

|                                        | Apoth.    | Metric. | Apoth.    | Metric. | Apoth.   | Metric.    |
|----------------------------------------|-----------|---------|-----------|---------|----------|------------|
| Magnesia<br>(Foals & Calves)           | 1-2 dr.   | 4.      | 1-2 dr.   | 4.      | 5-60 gr. | 0.3 - 4.   |
| Magnesium Carb.                        | ½-2 oz.   | 15.     | 1-4 dr.   | 4.      | ½-2 dr.  | 2. - 8.    |
| Sulphate (Lax.)<br>(Purg.) cow         | 2-4 oz.   | 60.     | ½-1 oz.   | 15.     | 1-4 dr.  | 4. - 15.   |
| Male Fern.                             | 1-2 lb.   | 500.    | 4-6 oz.   | 120.    |          | -180 Sheep |
| Fld. Ext.                              | 3-6 dr.   | 12.     | 1-2 dr.   | 4.      | 15-60 m. | 1. - 4.    |
| Oleoresin                              | 3-6 dr.   | 12.     | 1-2 dr.   | 4.      | 15-60 m. | 1. - 4.    |
| Manganese Dioxide                      | ½-2 dr.   | 2.      | 5-10 gr.  | 0.3     | 2-5 gr.  | 0.13 - 0.3 |
| Massa Hydrargyri<br>(Blue Mass)        | ½-2 dr.   | 2.      | 5-20 gr.  | 0.3     | 1-10 gr. | 0.06 - 0.6 |
| Manna                                  |           |         |           |         | 1-2 oz.  | 30. - 60.  |
| Matico, Fld. Ext.                      | ½-1 oz.   | 15.     | 1-2 dr.   | 4.      | 30-60 m. | 2. - 4.    |
| Tinct.                                 | 1-2 oz.   | 30.     | 2-4 dr.   | 8.      | ½-2 dr.  | 2. - 8.    |
| Matricaria, Fld. Ext                   | 2-8 dr.   | 8.      | 15-60 m.  | 1.      | 8-30 m.  | 0.5 - 2.   |
| Menthae Piperitica, (Peppermint)       |           |         |           |         |          |            |
| Oil                                    | 15-30 m.  | 1.      | 5-10 m.   | 0.3     | 1-5 m.   | 0.06 - 0.3 |
| Spt.                                   | 2-4 dr.   | 8.      | ½-1 dr.   | 2.      | 1-30 m.  | 0.06 - 2.  |
| Menthol                                | 15-30 gr. | 1.      | 5-10 gr.  | 0.3     | 1-3 gr.  | 0.06 - 0.2 |
| Mercury with Chalk<br>(Foals & Calves) | 10-15 gr. | 0.6-    | 10-15 gr. | .6      | 1-10 gr. | 0.06 - 0.6 |



|                    |           |             |           |             |           |               |
|--------------------|-----------|-------------|-----------|-------------|-----------|---------------|
| Mercury, Bimiodide | 2-8 gr.   | 0.13 - 0.5  | ½-2 gr.   | 0.03 - 0.13 | ⅓-⅓ gr.   | 0.003 - 0.013 |
| Mercury, Chloride  | 5-8 gr.   | 0.3 - 0.5   | 1-2 gr.   | 0.06 - 0.13 | ⅓-⅓ gr.   | 0.002 - 0.008 |
| Corros.            |           |             |           |             |           |               |
| Corrosive sublim)  |           |             |           |             |           |               |
| Mild (Calomel)     | ½-1 dr.   | -4.         | 2-10 gr.  | 0.13 - 0.6  | 1-5 gr.   | 0.06 - 0.3    |
| Iodide Red         | 5-8 gr.   | 0.3 - 0.5   | 1-2 gr.   | 0.06 - 0.13 | ⅓-⅓ gr.   | 0.002 - 0.008 |
| Mass (Blue Pill)   | 1-3 dr.   | -12.        | 5-20 gr.  | 0.3 - 1.3   | 1-10 gr.  | 0.06 - 0.6    |
| Methyl Salicylate  | 2-8 dr.   | -30.        | 15-60 m.  | 1. - 4.     | 5-15 m.   | 0.3 - 1.      |
| Methylene Blue     | 15-60 gr. | -4.         | 3-8 gr.   | 0.2 - 0.5   | 1½-4 gr.  | 0.1 - 0.25    |
| Morphine & Salts   | 3-10 gr.  | 0.2 - 0.6   | ½-2 gr.   | 0.013-0.13  | ⅛-½ gr.   | 0.008 - 0.03  |
| Morrhuel           | ½-2 dr.   | -8.         | 2-10 gr.  | 0.13 - 0.6  | 1-5 gr.   | 0.06 - 0.3    |
| Muscarine Sulph.   | ⅓-½ gr.   | 0.013-0.03  | ⅓-⅓ gr.   | 0.003-0.006 | ⅓-⅓ gr.   | 0.002 - 0.004 |
| Mustard            | ½-1 oz.   | 15. -30.    | ½-2 dr.   | 2. - 8.     | 10-15 gr. | 0.6 - 1.      |
| Emetic             |           |             | ½-1 oz.   | 15. -30.    | ½ oz.     | -15.          |
| Myrrh, Powd.       | 2 dr.     | 8.          | ½-1 dr.   | 2. - 4.     | 10-20 gr. | 0.6 - 1.3     |
| Tinct.             | 2-4 dr.   | 8. -15.     | 1-2 dr.   | 4. - 8.     | 10-30 m.  | 0.6 - 2.      |
| Naphthalin         | 2-4 dr.   | 8. -15.     | 10-60 gr. | 0.6 - 4     | 1-20 gr.  | 0.06 - 1.3    |
| Naphthol           | 2-3 dr.   | 8. -12.     | 5-30 gr.  | 0.3 - 2.    | 1-10 gr.  | 0.06 - 0.6    |
| Nicotine           | ⅓-⅓ gr.   | 0.001-0.006 | ⅓-⅓ gr.   | 0.001-0.002 | ⅓-⅓ gr.   | 0.0006-0.001  |
| Nitroglycerin      | ⅓-½ gr.   | 0.013-0.03  | ⅓-⅓ gr.   | 0.001-0.002 | ⅓-⅓ gr.   | 0.0006-0.001  |
| 1% solution        | ½-1 dr.   | 2. - 4.     | 5-10 m.   | 0.3 - 0.6   | 1-2 m.    | 0.06 - 0.13   |

In general a dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

|                                              | HORSE AND COW |         | SHEEP AND SWINE |           | DOG      |              |
|----------------------------------------------|---------------|---------|-----------------|-----------|----------|--------------|
|                                              | Apoth.        | Metric. | Apoth.          | Metric.   | Apoth.   | Metric.      |
| Nitrous Ether, Spt.<br>(Sweet Spt. Nitre)    | 1-4 oz.       | 30.     | 2-4 dr.         | 8.        | 10-60 m. | 0.6 - 4.     |
| Nuclein                                      | 2-6 dr.       | 8.      | ½-2 dr.         | 2.        | 5-60 m.  | 0.3 - 4.     |
| Nux Vomica                                   | ½-2 dr.       | 2.      | 10-20 gr.       | 0.6 - 1.3 | 1-2 gr.  | 0.06 - 0.13  |
| Ext.                                         | 2-15 gr.      | 0.13-   | 1-3 gr.         | 0.06-     | ⅛-¼ gr.  | 0.008- 0.016 |
| Fld. Ext.                                    | ½-2 dr.       | 2.      | 10-20 m.        | 0.6 - 1.3 | 1-2 m.   | 0.06 - 0.13  |
| Tinct.                                       | 1-6 dr.       | 4.      | 20-40 m.        | 1.3 - 2.6 | 5-15 m.  | 0.3 - 1.     |
| Olive Oil                                    | 1-2 pt.       | 500.    | 4-8 oz.         | 120.      | 2-4 oz.  | 60. -120.    |
| Opium                                        | 1-2 dr.       | 4.      | 5-20 gr.        | 0.3 - 1.3 | ½-3 gr.  | 0.03 - 0.2   |
| Ext.                                         | ½-1 dr.       | 2.      | 2-10 gr.        | 0.13-     | ¼-½ gr.  | 0.01 - 0.03  |
| Tinct                                        | 1-2 oz.       | 30.     | 2-6 dr.         | 8.        | 3-30 m.  | 0.2 - 2.     |
| Tinct. Camph.<br>(Paregoric)                 | 2-4 oz.       | 60.     | 4-8 dr.         | 15.       | 1-4 dr.  | 4. - 15.     |
| Wine                                         | 1-2 oz.       | 30.     | 2-6 dr.         | 8.        | 3-30 m.  | 0.2 - 2.     |
| Orexine                                      | ½-3 dr.       | 2.      | 5-15 gr.        | 0.3 - 1.  | 3-9 gr.  | 0.2 - 0.55   |
| Ox Gall                                      | 2-5 dr.       | 8.      | 10-30 gr.       | 0.6 - 2.  | 5-15 gr. | 0.3 - 1.     |
| Pancreatin                                   | ½-1 dr.       | 2.      | 10-20 gr.       | 0.6 - 1.3 | 5-15 gr. | 0.3 - 1.     |
| Papain                                       | ½-1 dr.       | 2.      | 5-15 gr.        | 0.3 - 1.  | 2-10 gr. | 0.13 - 0.6   |
| Paraldehyde                                  | ½-2 oz.       | 15.     | 1-2 dr.         | 4.        | 30-60 m. | 2. - 4.      |
| Pareira, Fld. Ext.                           | ½-1 oz.       | 15.     | 1-2 dr.         | 4.        | 30-60 m. | 2. - 4.      |
| Pearson's Solution<br>(Liq. Sodii Arsenatis) | 2-8 dr.       | 8.      | ½-1 dr.         | 2.        | 2-10 m.  | 0.13 - 0.6   |

|                                                |           |       |      |                                                                    |           |       |   |        |                                                                    |         |       |      |
|------------------------------------------------|-----------|-------|------|--------------------------------------------------------------------|-----------|-------|---|--------|--------------------------------------------------------------------|---------|-------|------|
| Pelletierine Sulph.                            | 15-30 gr. | 1.    | -    | 2.                                                                 | 5-10 gr.  | 0.3   | - | 0.6    | 3-6 gr.                                                            | 0.2     | -     | 0.4  |
| Tannate                                        | ½-1 dr.   | 2.    | -    | 4.                                                                 | 15-30 gr. | 1.    | - | 2.     | 10-20 gr.                                                          | 0.6     | -     | 1.3  |
| Pepo (Pumpkin Seed)                            |           |       |      |                                                                    |           |       |   |        | ½-2 oz                                                             | 15.     | -     | 60.  |
| Pepper, Black                                  | 1-2 dr.   | 4.    | -    | 8.                                                                 | 20-60 gr. | 1.3   | - | 4.     | 5-10 gr.                                                           | 0.3     | -     | 0.6  |
| Peppermint, Oil                                | 15-30 m.  | 1.    | -    | 2.                                                                 | 5-10 m.   | 0.3   | - | 0.6    | 1-5 m.                                                             | 0.06    | -     | 0.3  |
| Spt.                                           | 2-4 dr.   | 8.    | -    | 15.                                                                | ½-1 dr.   | 2.    | - | 4.     | 15-30 m.                                                           | 1.      | -     | 2.   |
| Pepsin                                         | ¼-1 dr.   | 1.    | -    | 4.                                                                 | 5-20 gr.  | 0.3   | - | 1.3    | 2-10 gr.                                                           | 0.13    | -     | 0.6  |
| Saccharated                                    | ½-2 dr.   | 2.    | -    | 8.                                                                 | 10-40 gr. | 0.6   | - | 2.6    | 4-20 gr.                                                           | 0.25    | -     | 1.3  |
| Petrolatum                                     | 1-8 oz.   | 30.   | -    | 240.                                                               | 2-4 dr.   | 8.    | - | 15.    | 1-2 dr.                                                            | 4.      | -     | 8.   |
| Phenacetin                                     | 2-3 dr.   | 2.    | -    | 12.                                                                | 10-30 gr. | 0.6   | - | 2.     | 5-10 gr.                                                           | 0.3     | -     | 0.6  |
| Phloridzin                                     | 1-2 dr.   | 4.    | -    | 8.                                                                 | ½-1 dr.   | 2.    | - | 4.     | 15-30 gr.                                                          | 1.      | -     | 2.   |
| Phosphorated Oil                               | 2-3 dr.   | 8.    | -    | 12.                                                                | 10-30 m.  | 0.6   | - | 2.     | 1-3 m.                                                             | 0.06    | -     | 0.3  |
| Phosphorus                                     | 1-2 gr.   | 0.06- | 0.13 | 10 <sup>1</sup> / <sub>10</sub> - <sup>1</sup> / <sub>20</sub> gr. | 0.0006-   | 0.003 | - | 0.006- | 10 <sup>1</sup> / <sub>10</sub> - <sup>1</sup> / <sub>20</sub> gr. | 0.0006- | 0.003 | -    |
| Spt.                                           | 1-2 dr.   | 4.    | -    | 8.                                                                 | 10-30 m.  | 0.6   | - | 2.     | 7-20 m.                                                            | 0.5     | -     | 1.3  |
| Physostigma<br>(Calabar Bean)                  | 15-30 gr. | 1.    | -    | 2.                                                                 | 2-4 gr.   | 0.13  | - | 0.25   | ¼-1 gr.                                                            | 0.016   | -     | 0.06 |
| Fld. Ext.                                      | 15-30 m.  | 1.    | -    | 2.                                                                 | 2-4 m.    | 0.13  | - | 0.25   | ¼-1 m.                                                             | 0.016   | -     | 0.06 |
| Physostigmine Salicylate or Sulphate (Eserine) |           |       |      |                                                                    |           |       |   |        |                                                                    |         |       |      |
| (Hypodermic)                                   | 1-1½ gr.  | 0.06- | 0.1  | ½- <sup>1</sup> / <sub>3</sub> gr.                                 | 0.0013-   | 0.013 | - | 0.006- | 10 <sup>1</sup> / <sub>10</sub> - <sup>1</sup> / <sub>30</sub> gr. | 0.0006- | 0.002 | -    |
| Phytolacca, F. E.                              |           |       |      |                                                                    |           |       |   |        |                                                                    |         |       |      |
| (Poke-root)                                    | 1-2 dr.   | 4.    | -    | 8.                                                                 | 20-45 m.  | 1.3   | - | 3.     | 5-30 m.                                                            | 0.3     | -     | 2.   |
| Pichi, Fld. Ext.                               | 2-6 dr.   | 8.    | -    | 24.                                                                | ½-1 dr.   | 2.    | - | 4.     | 10-30 m.                                                           | 0.6     | -     | 2.   |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

## HORSE AND COW

## SHEEP AND SWINE

## DOG

|                            | Apoth.                            | Metric.     | Apoth.                              | Metric.      | Apoth.                               | Metric.      |
|----------------------------|-----------------------------------|-------------|-------------------------------------|--------------|--------------------------------------|--------------|
| Picrotoxin                 | $\frac{1}{6}$ - $\frac{1}{3}$ gr. | 0.01 - 0.02 | $\frac{1}{60}$ - $\frac{1}{30}$ gr. | 0.001- 0.002 | $\frac{1}{120}$ - $\frac{1}{60}$ gr. | 0.0005-0.001 |
| Pilocarpine & Salts        | 2- 5 gr.                          | 0.13 - 0.3  | $\frac{1}{16}$ - $\frac{1}{8}$ gr.  | 0.006- 0.04  | $\frac{1}{30}$ - $\frac{1}{15}$ gr.  | 0.002 -0.02  |
| Pilocarpus<br>(Jaborandi)  | 2- 4 dr.                          | 8. 15.      | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-60 gr.                             | 0.3 -4.      |
| Fld. Ext.                  | 2- 4 dr.                          | 8. -15.     | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-60 m.                              | 0.3 -4.      |
| Piperazin                  | 1- 2 dr.                          | 4. - 8.     | 15-30 gr.                           | 1. - 2.      | 15 gr.                               | -1.          |
| Podophyllin<br>(May Apple) | 1- 2 dr.                          | 4. - 8.     | 5-20 gr.                            | 0.3 - 1.3    | 1- 2 gr.                             | 0.06 -0.13   |
| Pomegranate                | 1- 2 oz.                          | 30. -60.    | 1- 3 dr.                            | 4. -12.      | $\frac{1}{2}$ - 2 dr.                | 2. -8.       |
| Polygonum, F. E.           | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | 1- 2 dr.                            | 4. - 8.      | 10-60 m.                             | 0.6 -4.      |
| Potassa, Solution          | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 m.                              | 0.3 -1.3     |
| Potassium Acetate          | $\frac{1}{2}$ - 1 oz.             | 15. 30.     | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |
| Bicarbonate                | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |
| Bitartrate                 | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ oz.                   | -15.         | $\frac{1}{2}$ - 1 dr.                | 2. -4.       |
| Bromide                    | 1- 2 oz.                          | 30. -60.    | 2- 4 dr.                            | 8. -15.      | 5-60 gr.                             | 0.3 -4.      |
| Carbonate                  | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |
| Chlorate                   | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |
| Citrate                    | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |
| Iodide                     | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | 10-30 gr.                           | 0.6 - 2.     | 2-15 gr.                             | 0.13 -1.     |
| Nitrate                    | $\frac{1}{2}$ - 1 oz.             | 15. -30.    | $\frac{1}{2}$ - 1 dr.               | 2. - 4.      | 5-20 gr.                             | 0.3 -1.3     |

|                                                  |                      |       |        |     |                                    |        |       |     |                                      |             |
|--------------------------------------------------|----------------------|-------|--------|-----|------------------------------------|--------|-------|-----|--------------------------------------|-------------|
| Permangan,<br>and Sodium<br>Tartrate             | $\frac{1}{2}$ -1 dr. | 2.    | -      | 4.  | 3-6 gr.                            | 0.2    | -     | 0.4 | $\frac{1}{2}$ -2 gr.                 | 0.03 - 0.2  |
| Prunus Virginiana,<br>Fld. Ext.<br>(Wild Cherry) | 1-2 lb.              | 500.  | -1000. |     | 2-4 oz.                            | 60.    | -120. |     | $\frac{1}{2}$ -1 oz.                 | 15. -30.    |
| Pulsatilla, F. E.                                | $\frac{1}{2}$ -2 oz. | 15.   | -      | 60. | 1-2 dr.                            | 4.     | -     | 8.  | 30-60 m.                             | 2. - 4.     |
| Pyrethrum                                        | $\frac{1}{2}$ -2 dr. | 2.    | -      | 8.  | 5-10 m.                            | 0.3    | -     | 0.6 | 2-5 m.                               | 0.13 - 0.3  |
| Quassia, Ext.                                    | 4-8 dr.              | 15.   | -      | 30. | $\frac{1}{2}$ -1 $\frac{1}{2}$ dr. | 2.     | -     | 6.  | 20-60 gr.                            | 1.3 - 4.    |
| Fld. Ext.                                        | 1-2 dr.              | 4.    | -      | 8.  | 5-10 gr.                           | 0.3    | -     | 0.6 | $\frac{1}{2}$ -3 gr.                 | 0.03 - 0.2  |
| Tinct. (1905)                                    | 1-2 oz.              | 30.   | -      | 60. | 2-4 dr.                            | 8.     | -     | 15. | 15-60 m.                             | 1. - 4.     |
| Quassin                                          | 1-8 oz.              | 30.   | -      | 60. | 1-3 dr.                            | 4.     | -     | 12. | $\frac{1}{4}$ -1 dr.                 | 1. - 4.     |
| Quebracho, F. E.                                 | 4-8 gr.              | 0.25- | 0.5    |     | $\frac{1}{4}$ - $\frac{1}{2}$ gr.  | 0.016- | 0.03  |     | $\frac{1}{8}$ - $\frac{1}{3}$ gr.    | 0.008-0.02  |
| Quercus Alba<br>Fld. Ext.                        | $\frac{1}{2}$ -2 oz. | 15.   | -      | 60. | 1-2 dr.                            | 4.     | -     | 8.  | 5-60 m.                              | 0.3 - 4.    |
| Quinidine (Tonic)<br>(Antipyretic)               | $\frac{1}{2}$ -1 oz. | 15.   | -      | 30. | 1-2 dr.                            | 4.     | -     | 8.  | 10-30 gr.                            | 0.6 - 2.    |
| Quinine & Salts<br>(Tonic)<br>(Antipyretic)      | $\frac{1}{2}$ -1 oz. | 15.   | -      | 30. | 1-2 dr.                            | 4.     | -     | 8.  | 10-30 m.                             | 0.6 - 2.    |
| Resorcin                                         | 20-60 gr.            | 1.3   | -      | 4.  | 6-15 gr.                           | 0.4    | -     | 1.  | 1 $\frac{1}{2}$ -2 $\frac{1}{2}$ gr. | 0.1 - 0.16  |
|                                                  | 2-5 dr.              | 8.    | -      | 20. | 20-40 gr.                          | 1.3    | -     | 2.6 | 7-15 gr.                             | 0.5 - 1.    |
|                                                  | 15-60 gr.            | 1.    | -      | 4.  | 5-10 gr.                           | 0.3    | -     | 0.6 | 1-2 gr.                              | 0.06 - 0.13 |
|                                                  | 2-4 dr.              | 8.    | -      | 15. | 20-40 gr.                          | 1.3    | -     | 2.6 | 5-10 gr.                             | 0.3 - 0.6   |
|                                                  | 1-2 dr.              | 4.    | -      | 8.  | 10-30 gr.                          | 0.6    | -     | 2.  | 2-5 gr.                              | 0.13 - 0.3  |

In general the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.

## HORSE AND COW      SHEEP AND SWINE      DOG

|                                | Apoth.   | Metric. | Apoth.    | Metric. | Apoth.   | Metric. |
|--------------------------------|----------|---------|-----------|---------|----------|---------|
| Reamnus Catharticus, Fld. Ext. | 1-2 oz.  | 30.     | 1-2 dr.   | 4.      | ½-1 dr.  | 2.      |
| Syrup                          |          |         |           |         |          |         |
| Rhubarb                        | 1-2 oz.  | 30.     | 1 dr.     | 4.      | 1-2 oz.  | 30.     |
| Fld. Ext.                      | 1-2 oz.  | 30.     | 1 dr.     | 4.      | 5-10 gr. | 0.3     |
| Rhus Glab. F. E.               | ½-1 oz.  | 15.     | 1-2 dr.   | 4.      | 5-10 m.  | 0.3     |
| Tox, Fld. Ext.                 | ½-2 dr.  | 2.      | 5-10 m.   | 0.3     | 30-60 m. | 2.      |
| Ricini, Oil                    | 1 pt.    | 500     | 2-4 oz.   | 60.     | 1-6 m.   | 0.6     |
| Rubus, Fld. Ext.               | 1-2 oz.  | 30.     | 1-2 dr.   | 4.      | 1-2 dr.  | 4.      |
| Rumex, Fld. Ext.               | 1-2 oz.  | 30.     | 1-2 dr.   | 4.      | 10-60 m. | 0.6     |
| Ruta, Fld. Ext.                | ½-1 oz.  | 15.     | ½-1 dr.   | 2.      | 15-60 m. | 1.      |
| Oil                            | ½-1 dr.  | 2.      | 2-10 m.   | 0.13    | 15-30 m. | 1.      |
| Sabina, Fld. Ext.              | 1-2 oz.  | 30.     | ½-1 dr.   | 2.      | 1-5 m.   | 0.06    |
| (Savin)                        |          |         |           |         | 5-15 m.  | 0.3     |
| Oil                            | 2-4 dr.  | 8.      | 7-15 m.   | 0.5     | 1-5 m.   | 0.06    |
| Saccharin                      | 5-10 gr. | 0.3     | ½-3 gr.   | 0.03    | ¼-2 gr.  | 0.016   |
| Salicin                        | 2-8 dr.  | 8.      | ½-2 dr.   | 2.      | 5-30 gr. | 0.3     |
| Salol                          | ¼-4 dr.  | 1.      | 10-30 gr. | 0.6     | 1-5 gr.  | 0.06    |
| Sanguinaria, F. E.             | 1-6 dr.  | 4.      | 10-30 m.  | 0.6     | 5-15 m.  | 0.3     |
| (Blood-root)                   |          |         |           |         |          |         |

|                     |              |       |        |              |       |        |               |        |        |
|---------------------|--------------|-------|--------|--------------|-------|--------|---------------|--------|--------|
| Santal, Fld. Ext.   | 1/2-2 oz.    | 15.   | -60.   | 2-3 dr.      | 8.    | -12.   | 1-2 dr.       | 4.     | -8.    |
| Oil                 | 1-3 dr.      | 4.    | -12.   | 10-15 m.     | 0.6   | -3.    | 5-30 m.       | 0.3    | -2.    |
| Santonin            | 1/2-1 oz.    | 15.   | -30.   | 1-2 dr.      | 4.    | -8.    | 2-20 gr.      | 0.13   | -1.3   |
| Sapo (Soap)         | 2-6 dr.      | 8.    | -24.   | 15-60 gr.    | 1.    | -4.    | 5-30 gr.      | 0.3    | -2.    |
| Saponin             | 1 1/2-4 gr.  | 0.1   | -0.25  | 1/4-1 gr.    | 0.016 | -0.06  | 1 1/2-1 gr.   | 0.006  | -0.013 |
| Sarsaparilla, F. E. | 1-2 oz.      | 30.   | -60.   | 1-2 dr.      | 4.    | -8.    | 1/2-1 dr.     | 2.     | -4.    |
| F. E. Comp.         | 1-2 oz.      | 30.   | -60.   | 1-2 dr.      | 4.    | -8.    | 1/2-1 dr.     | 2.     | -4.    |
| Sassafras, F. E.    | 1-2 oz.      | 30.   | -60.   | 1-2 dr.      | 4.    | -8.    | 1/2-2 dr.     | 2.     | -8.    |
| Oil                 | 1/2-2 dr.    | 2.    | -8.    | 5-10 m.      | 0.3   | -0.6   | 1-5 m.        | 0.06   | -0.3   |
| Savin (see Sabina)  |              |       |        |              |       |        |               |        |        |
| Scammony            | 2-6 dr.      | 8.    | -24.   | 1-3 dr.      | 4.    | -12.   | 1/2-2 dr.     | 2.     | -8.    |
| Resin               | 2-4 dr.      | 8.    | -15.   | 1-2 dr.      | 4.    | -8.    | 1/2-1 dr.     | 2.     | -4.    |
| Scilla              | 1/2-1 dr.    | 2.    | -4.    | 5-20 gr.     | 0.3   | -1.3   | 2-5 gr.       | 0.13   | -0.3   |
| Scoparine           | 5-15 gr.     | 0.3   | -1.    | 1-2 gr.      | 0.06  | -0.13  | 1/2-1 gr.     | 0.03   | -0.06  |
| Scoparius, F. E.    | 1/2-1 oz.    | 15.   | -30.   | 1-2 dr.      | 4.    | -8.    | 1/2-1 dr.     | 2.     | -4.    |
| Scopolamine         |              |       |        |              |       |        |               |        |        |
| Hydrobromide        |              |       |        |              |       |        |               |        |        |
| (Hypo)              | 1/2-1/10 gr. | 0.003 | -0.006 | 1/6-1/10 gr. | 0.001 | -0.002 | 1/20-1/10 gr. | .00025 | -.001  |
| Scutellaria, F. E.  | 1/2-1 oz.    | 15.   | -30.   | 1-3 dr.      | 4.    | -12.   | 1/2-2 dr.     | 2.     | -4.    |
| (Skull cap)         |              |       |        |              |       |        |               |        |        |
| Senega, Fld. Ext.   | 1-4 dr.      | 4.    | -15.   | 15-30 m.     | 1.    | -2.    | 5-15 m.       | 0.3    | -1.    |

In general the dose for the cat is 1/2 the dose for the dog. Hypodermics of alkaloids usually 1/2 the dose by mouth.

HORSE AND COW SHEEP AND SWINE DOG

|                       | HORSE AND COW         |            | SHEEP AND SWINE                  |             | DOG                                 |              |
|-----------------------|-----------------------|------------|----------------------------------|-------------|-------------------------------------|--------------|
|                       | Apoth.                | Metric.    | Apoth.                           | Metric.     | Apoth.                              | Metric.      |
| Senegin               | 5-20 gr.              | 0.3 - 1.3  | $\frac{1}{2}$ - 2 gr.            | 0.03 - 0.13 | $\frac{1}{4}$ - 1 gr.               | 0.016- 0.06  |
| Senna                 | 4- 5 oz.              | 120. -150. | 1- 2 oz.                         | 30. -60.    | 1- 4 dr.                            | 4. -15.      |
| Fld. Ext.             | 4- 5 oz.              | 120. -150. | 1- 2 oz.                         | 30. -60.    | 1- 4 dr.                            | 4. -15.      |
| Serpentaria, F. E.    | $\frac{1}{2}$ - 1 oz. | 15. - 30.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 10 30 m.                            | 0.6 - 2.     |
| (Virginia Snake Root) |                       |            |                                  |             |                                     |              |
| Tinct.                |                       |            |                                  |             |                                     |              |
| Silver Nitrate        | 5-10 gr.              | 0.3 - 0.6  | 1- 2 gr.                         | 0.06 - 0.13 | $\frac{1}{8}$ - 2 dr.               | 2. - 8.      |
| Sinapis, Oil, Vol.    | 2- 5 m.               | 0.13- 0.3  | $\frac{1}{4}$ - $\frac{1}{2}$ m. | 0.016- 0.03 | $\frac{1}{8}$ - $\frac{1}{4}$ m.    | 0.008- 0.03  |
| Soda, Solution        | $\frac{1}{2}$ - 1 oz. | 15. - 30.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 5-20 m.                             | 0.3 - 1.3    |
| Sodium Acetate        | $\frac{1}{2}$ - 1 oz. | 15. - 30.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 10-30 gr.                           | 0.6 - 2.     |
| Arsenate              | 3- 6 gr.              | 0.2 - 0.4  | $\frac{1}{2}$ - 1 gr.            | 0.03 - 0.06 | $\frac{1}{60}$ - $\frac{1}{10}$ gr. | 0.001- 0.005 |
| Benzoate              | $\frac{1}{2}$ - 8 dr. | 2. - 30.   | 10-60 gr.                        | 0.06 - 4.   | 3-10 gr.                            | 0.2 - 0.6    |
| Bicarbonate           | $\frac{1}{2}$ - 4 oz. | 15. -120.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 5-30 gr.                            | 0.5 - 2.     |
| Borate                | $\frac{1}{4}$ - 1 oz. | 8. - 30.   | 10-60 gr.                        | 0.6 - 4.    | 10-30 gr.                           | 0.6 - 2.     |
| Bromide               | 1- 2 oz.              | 30. - 60.  | 2- 4 dr.                         | 8. -15.     | 5-60 gr.                            | 0.3 - 4.     |
| Carbonate             | 2- 6 dr.              | 8. - 24.   | 20-40 gr.                        | 1.3 - 2.6   | 5-20 gr.                            | 0.3 - 1.3    |
| Chlorate              | 3- 6 dr.              | 12. - 24.  | 30-50 gr.                        | 2. - 3.3    | 6-12 gr.                            | 0.4 - 0.8    |
| Chloride              | $\frac{1}{2}$ - 2 oz. | 15. - 60.  | 2- 4 dr.                         | 8. -15.     | 5-20 gr.                            | 0.3 - 1.3    |
| Purg. (Cow)           | $\frac{1}{2}$ - 1 lb. | 250. -500. |                                  |             |                                     |              |
| Hypophos              | $\frac{1}{2}$ - 1 oz. | 15. - 30.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 10-30 gr.                           | 0.6 - 2.     |
| Hypo sulphite         | $\frac{1}{2}$ - 2 oz. | 15. - 60.  | $\frac{1}{2}$ - 1 dr.            | 2. - 4.     | 5-30 gr.                            | 0.3 - 2.     |



|                            |           |      |       |           |      |        |           |       |        |
|----------------------------|-----------|------|-------|-----------|------|--------|-----------|-------|--------|
| Iodide                     | 2-4 dr.   | 8.   | - 15. | 15-30 gr. | 1.   | - 2.   | 2-10 gr.  | 0.13  | - 0.6  |
| Nitrate                    | ½-2 oz.   | 15.  | - 60. | 1-2 dr.   | 4.   | - 8.   | ½-2 dr.   | 2.    | - 4.   |
| Nitrite                    | 10-30 gr. | 0.6  | - 2.  | 1-5 gr.   | 0.06 | - 0.3  | ½-3 gr.   | 0.03  | - 0.2  |
| Phosphate                  | ½-10 oz.  | 15.  | -300. | 3-8 dr.   | 12.  | -30.   | 1-4 dr.   | 4.    | -15.   |
| Salicylate                 | 2-8 dr.   | 8.   | - 30. | ½-2 dr.   | 2.   | - 8.   | 5-30 gr.  | 0.3   | - 2.   |
| Santoninate                | ½-2 dr.   | 2.   | - 4.  | 5-20 gr.  | 0.3  | - 1.3  | 2-10 gr.  | 0.13  | - 0.6  |
| Sulphate (Glauber's Salts) |           |      |       |           |      |        |           |       |        |
| (Cow)                      | 1-1½ lb.  | 500. | -750. | ½-2 oz.   | 15.  | -60.   | 1-4 dr.   | 4.    | -15.   |
| (Horse)                    | ½-1 lb.   | 250. | -500. |           |      |        |           |       |        |
| Sulphite                   | ½-1 oz.   | 15.  | - 60. | ½-1 dr.   | 2.   | - 4.   | 5-30 gr.  | 0.3   | - 2.   |
| Sulphocarb-<br>late        | 2-8 dr.   | 4.   | - 30. | 15-60 gr. | 1.   | - 4.   | 10-30 gr. | 0.6   | - 2.   |
| Sparteine Sulphate         | 5-30 gr.  | 0.3  | - 2.  | ½-4 gr.   | 0.03 | - 0.25 | ½-2 gr.   | 0.006 | - 0.13 |
| Spigelia, Fld. Ext.        | 2-8 dr.   | 4.   | - 30. | ½-2 dr.   | 2.   | - 4.   | 15-60 m.  | 1.    | - 4.   |
| Squill                     | 1-2 dr.   | 4.   | - 8.  | 5-20 gr.  | 0.3  | - 1.3  | 1-5 gr.   | 0.06  | - 0.3  |
| Fld. Ext.                  | 1-2 dr.   | 4.   | - 8.  | 5-20 m.   | 0.3  | - 1.3  | 1-5 m.    | 0.06  | - 0.3  |
| Syrup                      | ½ oz.     | 15.  |       | 1-2 dr.   | 4.   | - 8.   | ½-1 dr.   | 2.    | - 4.   |
| Tinct.                     | 6-12 dr.  | 24.  | - 48. | 1½-3 dr.  | 6.   | -12.   | 5-30 m.   | 0.3   | - 2.   |
| Stillingia, F. E.          | 2-8 dr.   | 4.   | - 30. | ½-2 dr.   | 2.   | - 8.   | 10-60 m.  | 0.6   | - 4.   |
| Tinct.                     | ½-1½ oz.  | 15.  | - 45. | 1-2 dr.   | 4.   | - 8.   | ½-1 dr.   | 2.    | - 4.   |

In general the dose for the cat is ½ the dose for the dog. Hypodermics of alkaloids usually ½ the dose by mouth.

HORSE AND COW                      SHEEP AND SWINE                      DOG

|                          | Apoth.     | Metric.     | Apoth.     | Metric.      | Apoth.     | Metric.       |
|--------------------------|------------|-------------|------------|--------------|------------|---------------|
| Stramonium, Ext.         | 5-10 gr.   | 0.3 - 0.6   | ¼- 1 gr.   | 0.015- 0.06  | ⅙- ½ gr.   | 0.01 - 0.03   |
| Fld. Ext.                | 20-60 m.   | 1.3 - 4.    | 5-10 m.    | 0.3 - 0.6    | 1- 5 m.    | 0.06 - 0.3    |
| Tinct.                   | 1- 2 dr.   | 4. - 8.     | 10-30 m.   | 0.6 - 2.     | 5-20 m.    | 0.3 - 1.3     |
| Strontium Brom.          | 1- 2 oz.   | 30. - 60.   | 2- 4 dr.   | 8. -15.      | 10-60 gr.  | 0.6 - 4.      |
| Iodide                   | ½- 1 oz.   | 15. - 30.   | 1- 2 dr.   | 4. - 8.      | 5-60 gr.   | 0.3 - 4.      |
| Strophanthin             | ½- ½ gr.   | 0.013- 0.03 | ⅓- 1 ⅓ gr. | 0.002- 0.004 | ⅓- 1 ⅓ gr. | 0.0006- 0.001 |
| Strophanthus,            |            |             |            |              |            |               |
| Tinct.                   | 1- 4 dr.   | 4. - 15.    | 5-20 m.    | 0.3 - 1.3    | 2-10 m.    | 0.13 - 0.6    |
| Strych. and Salts        | ½- 2 gr.   | 0.03 - 0.13 | ⅓- ⅓ gr.   | 0.002- 0.013 | ⅓- ⅓ gr.   | 0.0005- 0.002 |
| Sulphonal                | 1- 6 dr.   | 4. - 24.    | 10-45 gr.  | 0.6 - 3.     | 5-30 gr.   | 0.3 - 2.      |
| Sulphur                  | 2- 4 oz.   | 60. -120.   | 1- 2 oz.   | 30. -60      | ½- 4 dr.   | 2. -15.       |
| Sumbul, Fld. Ext.        | 2- 6 dr.   | 8. - 24.    | 15-60 m.   | 1. - 4.      | 5-30 m.    | 0.3 - 4.      |
| Tinct.                   | 4- 8 dr.   | 15. - 30.   | ½- 2 dr.   | 2. - 8.      | 10-60 m.   | 1.0 - 4.      |
| Suprarenalin             |            |             |            |              |            |               |
| Sol. 1-1000              | 1- 4 dr.   | 4. - 15     | ½- 1 dr.   | 2. - 4.      | 10-30 m.   | 0.6 - 2.      |
| Svapnia                  | 10-30 gr.  | 0.6 - 2.    | 1- 4 gr.   | 0.06 - .2    | ½- 2 gr.   | 0.03 - 0.13   |
| Sweet Spirit Nitre       | 1- 4 oz.   | 30. -120.   | 2- 4 dr.   | 8. -15.      | 10-60 m.   | 0.6 - 4.      |
| Tallianine (Intravenous) | 2½ dr. 10. |             | 5-15 m.    | 0.3 - 1.     | 2- 6 m.    | 0.13 - 0.4    |
| Tanacetum Ol (Tansy)     | 20-60 m.   | 1.3 - 4.    | 2- 6 m.    | 0.13 - 0.4   | 1- 3 m.    | 0.06 - 0.2    |
| Taraxacum                | 1- 2 oz.   | 30. - 60.   | 2- 4 dr.   | 8. -15.      | 1- 2 dr.   | 4. - 8.       |

|                     |           |     |        |           |           |           |             |
|---------------------|-----------|-----|--------|-----------|-----------|-----------|-------------|
| Ext.                | 1-4 dr.   | 4.  | - 15.  | 20-40 gr. | 1.3 - 2.6 | 5-30 g.   | 0.3 - 2.    |
| Fld. Ext.           | 1-2 oz.   | 30. | - 60.  | 2-4 dr.   | 8. - 15.  | 1-2 dr.   | 4. - 8.     |
| Terebene            | 2-6 dr.   | 8.  | - 24.  | ½-1 dr.   | 2. - 4.   | 5-15 m.   | 0.3 - 1.    |
| Terebinthine Ol.    | 1-2 oz.   | 30. | - 60.  | 1-4 dr.   | 4. - 15.  | 10-30 m.  | 0.6 - 2.    |
| Terpin Hydrate      | ½-2 dr.   | 2.  | - 8.   | 10-40 gr. | 0.6 - 2.6 | 5-20 gr.  | 0.3 - 1.3   |
| Thalline Sulphate   | 2-3 dr.   | 8.  | - 12.  | 15-30 gr. | 1. - 2.   | 3-8 gr.   | 0.2 - 0.5   |
| Thiosinamin         | ½-1 dr.   | 2.  | - 4.   | 8-15 gr.  | 0.5 - 1.  | 4-7 gr.   | 0.25 - 0.5  |
| Thymol              | ½-2 dr.   | 2.  | - 8.   | 5-30 gr.  | 0.3 - 2.  | 1-15 gr.  | 0.06 - 1.   |
| Tiglii, Ol.         | 15-30 m.  | 1.  | - 2.   | 5-10 m.   | 0.3 - 0.6 | ½-3 m.    | 0.03 - 0.2  |
| Tobacco             | 1-2 dr.   | 4.  | - 8.   | 10-30 gr. | 0.6 - 1.3 | 5-10 gr.  | 0.3 - 0.6   |
| Tonga, Fld. Ext.    | 2-8 dr.   | 8.  | - 30.  | ½-1 dr.   | 2 - 4.    | 30 m.     | 2.          |
| Tribromphenol       | 20-90 gr. | 1.3 | - 6.   | 1-8 gr.   | 0.06-0.5  | ½-4 gr.   | 0.03 - 0.25 |
| Trional             | 1-4 dr.   | 4.  | - 15.  | 15-45 gr. | 1. - 3.   | 10-30 gr. | 0.6 - 2.    |
| Triticum, Fld. Ext. | 1-2 oz.   | 30. | - 60.  | 2-6 dr.   | 8. - 24.  | 1-4 dr.   | 4. - 15.    |
| Trypsin             | 15-45 gr. | 1.  | - 3.   | 8-15 gr.  | 0.5 - 1.  | 5-10 gr.  | 0.3 - 0.6   |
| Turpentine Oil      |           |     |        |           |           |           |             |
| (Carminative)       | 1-2 oz.   | 30. | - 60.  | 1-4 dr.   | 4. - 15.  | 10-30 m.  | 0.6 - 2.    |
| (Anthelmin.)        | 2-4 oz.   | 60. | - 120. | ½-1 oz.   | 15. - 30. | ½-4 dr.   | 2. - 15.    |
| (Diuretic)          | 2-6 dr.   | 8.  | - 24.  |           |           |           |             |
| Ural. Uranium       | 2-4 dr.   | 8.  | - 15.  | ½-1 dr.   | 2. - 4.   | 15-45 gr. | 1. - 3.     |
| Uranium Nitrate     | 5-20 gr.  | 0.3 | - 1.3  | ½-2 gr.   | 0.02-0.13 | ½-1 gr.   | 0.01 - 0.06 |

In general the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.

|                                    | HORSE AND COW |            | SHEEP AND SWINE |             | DOG           |               |
|------------------------------------|---------------|------------|-----------------|-------------|---------------|---------------|
|                                    | Apoth.        | Metric.    | Apoth.          | Metric.     | Apoth.        | Metric.       |
| Urea                               | 1-4 dr.       | 4. - 15.   | 15-20 gr.       | 1. - 1.3    | 10 gr.        | 0.6           |
| Urethane                           | 1-4 dr.       | 4. - 15.   | 15-30 gr.       | 1. - 2.     | 10-15 gr.     | 0.6 - 1.      |
| Urotropin                          | 1-4 dr.       | 4. - 15.   | 10-45 gr.       | 0.6 - 3.    | 7-30 gr.      | 0.5 - 2.      |
| Ustilago, Fld. Ext.                | ½-2 oz.       | 15. - 60.  | ½-1 dr.         | 2. - 4.     | ½-1 dr.       | 2. - 4.       |
| Uva Ursi, Fld. Ext.<br>(Bearberry) | 2-4 oz.       | 60. - 120. | 2-4 dr.         | 8. - 15.    | 10-60 m.      | 0.6 - 4.      |
| Valerian                           | 1-2 oz.       | 30. - 60.  | 1-2 dr.         | 4. - 8.     | 10-60 gr.     | 0.6 - 4.      |
| Fld. Ext.                          | 1-2 oz.       | 30. - 60.  | 1-2 dr.         | 4. - 8.     | 10-60 m.      | 0.6 - 4.      |
| Tinct.                             |               |            | 1-3 dr.         | 4. - 12.    | ½-2 dr.       | 2. - 8.       |
| Tinct. Ammon.                      |               |            | 1-3 dr.         | 4. - 12.    | ½-2 dr.       | 2. - 8.       |
| Oil.                               | ½-1 dr.       | 2. - 4.    | 10-20 m.        | 0.6 - 1.3   | 2-5 m.        | 0.13 - 0.3    |
| Valer, Ammon.                      | 1-4 dr.       | 4. - 15.   | 5-10 gr.        | 0.3 - 0.6   | 2-5 gr.       | 0.13 - 0.3    |
| Iron                               | 1-3 dr.       | 4. - 12.   | 3-8 gr.         | 0.2 - 0.3   | 1-2 gr.       | 0.06 - 0.2    |
| Zinc                               | 1-3 dr.       | 4. - 12.   | 3-8 gr.         | 0.2 - 0.5   | 1-3 gr.       | 0.06 - 0.2    |
| Veratrine                          | ½-2 gr.       | 0.03- 0.13 | 10-1/3 gr.      | 0.006- 0.02 | 1/50-1/10 gr. | 0.0013- 0.006 |
| Veratrum Viride                    | ½-1 dr.       | 2. - 4.    | 20-30 gr.       | 1.3 - 2.    | 10-1 gr.      | 0.006 - 0.06  |
| Fld. Ext.                          | ½-1 dr.       | 2. - 4.    | 20-30 gr.       | 1.3 - 2.    | 10-1 m.       | 0.006 - 0.06  |
| Tinct. (1890)                      | 1-2 dr.       | 4. - 8.    | 20-40 m.        | 1.3 - 2.6   | ½-2 m.        | 0.03 - 0.13   |
| Tinct. (1905)                      | 2-3 dr.       | 8. - 12.   | 40-60 m.        | 2.6 - 4.    | 2-8 m.        | 0.13 - 0.5    |
| Viburnum Prun. (Black Haw)         |               |            |                 |             |               |               |
| Fld. Ext.                          | 1-4 oz.       | 30. - 120. | 2-4 dr.         | 8. - 15.    | 10-60 m.      | 0.6 - 4.      |

|                            |                      |      |       |                                   |       |        |                                     |        |        |
|----------------------------|----------------------|------|-------|-----------------------------------|-------|--------|-------------------------------------|--------|--------|
| Vinegar                    | 1-4 oz.              | 30.  | -120. | $\frac{1}{2}$ -4 dr.              | 2.    | -8.    | 15-60 m.                            | 1.     | -4.    |
| Whiskey                    | 2-4 oz.              | 60.  | -120. | 1-2 oz.                           | 30.   | -60.   | 1-4 dr.                             | 4.     | -15.   |
| Wild Cherry, Syrup         |                      |      |       | 2-6 dr.                           | 8.    | -24.   | 1-4 dr.                             | 4.     | -15.   |
| Wintergreen Oil            | 2 dr.-1 oz.          | 8.   | -30.  | $\frac{1}{2}$ -2 dr.              | 2.    | -8.    | 5-15 m.                             | 0.3    | -1.    |
| Xanthoxylum, (Prickly Ash) |                      |      |       |                                   |       |        |                                     |        |        |
| Fld. Ext.                  | $\frac{1}{2}$ -2 oz. | 15.  | -60.  | 1-3 dr.                           | 4.    | -12.   | 5-60 m.                             | 0.3    | -4.    |
| Zea, Fld. Ext.             | 1-2 oz.              | 30.  | -60.  | 2-4 dr.                           | 8.    | -15.   | 1-2 dr.                             | 4.     | -8.    |
| Zinc Acetate               | 1-2 dr.              | 4.   | -8.   | 10-20 gr.                         | 0.6   | -1.3   | $\frac{1}{2}$ -2 gr.                | 0.03   | -0.13  |
| Bromide                    | 1-2 dr.              | 4.   | -8.   | 10-20 gr.                         | 0.6   | -1.3   | $\frac{1}{2}$ -2 gr.                | 0.03   | -0.13  |
| Iodide                     | 1-2 dr.              | 4.   | -8.   | 10-20 gr.                         | 0.6   | -1.3   | $\frac{1}{2}$ -2 gr.                | 0.03   | -0.13  |
| Oxide                      | 1-2 dr.              | 4.   | -8.   | 10-20 gr.                         | 0.6   | -1.3   | 1-10 gr.                            | 0.06   | -0.6   |
| Phosphide                  | $\frac{1}{2}$ -2 gr. | 0.03 | -0.13 | $\frac{1}{2}$ - $\frac{1}{3}$ gr. | 0.003 | -0.013 | $\frac{1}{10}$ - $\frac{1}{10}$ gr. | 0.0015 | -0.006 |
| Sulphate                   | 1-2 dr.              | 4.   | -8.   | 10-20 gr.                         | 0.6   | -1.3   | 2-3 gr.                             | 0.13   | -0.2   |
| Valerianate                | 20-60 gr.            | 1.3  | -4.   | 3-6 gr.                           | 0.2   | -0.4   | 1-3 gr.                             | 0.06   | -0.2   |
| Zingiber                   | 2-8 dr.              | 8.   | -30.  | 1-2 dr.                           | 4.    | -8.    | 5-30 gr.                            | 0.3    | -2.    |
| Fld. Ext.                  | 2-8 dr.              | 8.   | -30.  | 1-2 dr.                           | 4.    | -8.    | 5-30 m.                             | 0.3    | -2.    |
| Oleoresin                  | 10-20 gr.            | 0.6  | -1.3  | 3-6 gr.                           | 0.2   | -0.4   | $\frac{1}{2}$ -1 gr.                | 0.03   | -0.06  |
| Syrup                      |                      |      |       | 1-4 dr.                           | 4.    | -15.   | $\frac{1}{2}$ -2 dr.                | 2.     | -8.    |
| Tinct.                     | 1-2 oz.              | 30.  | -60.  | 2-4 dr.                           | 8.    | -15.   | 10-60 m.                            | 0.6    | -4.    |

In general, the dose for the cat is  $\frac{1}{2}$  the dose for the dog. Hypodermics of alkaloids usually  $\frac{1}{2}$  the dose by mouth.



# THERAPEUTIC TERMS

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**ABLUENT.** A cleansing agent. (Soap and water.)

**ABORTIFACIENT.** An agent causing premature birth of young. (Ergot.)

**ABSORBENT.** An agent causing absorption of exudates or diseased tissues. (Iodine. Chalk.)

**ACRID.** A sharp, biting substance. (Pepper.)

**ADJUVANT.** A medicine that assists the action of another. (Calomel with Aloes.)

**ALIMENT.** A material which nourishes. (Food.)

**ALKALOID.** A term derived from the Arabic "Alkali" for Potash. The ending *oid* is from the Greek which means like, hence "Alkaloid" is a substance which reacts with litmus *like* an alkali and forms a salt with an acid. The prefix in "Alkali" is the Arabic "al" which is the definite article, "the," hence "alkali" literally means "the Potash." The modern use of the term alkaloid, however, has no reference to potash, but is used to designate a certain class of active principles obtained from plants. They are organic bases containing nitrogen and form salts with acids. (Atropine.)

**ALTERATIVE.** A medicine used to modify nutrition so as to overcome morbid processes. (Potassium Iodide.)

**ANALGESIC.** A medicine used to alleviate pain. (Opium.)

**ANAPHRODISIAC.** A medicine used to allay sexual excitement. (Potassium Bromide.)

**ANESTHETIC.** An agent used to produce insensibility to pain. (Chloroform.)



**ANHIDROTIC.** An agent which lessens the secretion of sweat. (Belladonna.)

**ANODYNE.** An agent which diminishes sensibility to pain. (Compound Spirit of Ether.)

**ANTACID.** A medicine used to neutralize acids in the stomach and intestines. (Liquor Potassae.)

**ANTAGONIST.** A medicine which opposes the action of another medicine in the system. (Potassium Bromide and Strychnine.)

**ANTHELMINTIC.** A remedy for destroying or expelling worms or to prevent their development. (Santonin.)

**ANTIDOTE.** A substance to counteract poisons. (Sulphates in Carbolic Acid poisoning.)

**ANTI-EMETIC.** An agent which allays vomiting. (Bismuth Subnitrate.)

**ANTIFEBRILE.** An agent for the reduction of fever. (Acetanilid.)

**ANTILITHIC.** An agent tending to dissolve or cure stone or gravel. (Potassium Citrate.)

**ANTIPARASITIC.** A substance that destroys or drives away insects. (Essential Oils.)

**ANTIPERIODIC.** A medicine which tends to prevent the periodic recurrence of disease. (Quinine.)

**ANTIPHLOGISTIC.** Any medicine or treatment which tends to check inflammation. (Aconite.)

**ANTIPYRETIC.** A medicine to reduce body temperature in fevers. (Salicylic Acid.)

**ANTISEPTIC.** An agent antagonizing sepsis or putrefaction. (Carbolic Acid.)

**ANTISPASMODIC.** A medicine for preventing or relieving spasms. (Valerian.)

**ANTITHERMIC.** An agent for the reduction of high temperature. (Antipyrin.)

**ANTIZYMOTIC.** A substance preventing fermentation. (Salicylic Acid.)

**APERIENT.** A mild agent for opening the bowels. (Rochelle Salts.)

**APHRODISIAC.** An agent for stimulating sexual power. (Damiana.)

**AROMATIC.** A medicine possessing a spicy or pungent taste and odor, and more or less stimulating to the mucosa of the alimentary tract. (Cardamom.)

**ASTRINGENT.** A medicine causing contraction or constriction of tissues. (Tannin.)

**AUXILIARY.** A medicine that assists another. (Chloral with Potassium Bromide.)

**BITTER.** A medicine with a bitter taste stimulating the gastro-intestinal mucosa without materially affecting the general system. (Gentian.)

**BLÉNORRHAGIC.** A remedy for increasing the secretion of mucus. (Balsam Tolu.)

**BLISTER.** An agent, which when applied to the skin, causes a local inflammatory exudation of serum under the epidermis. (Cantharides.)

**CACHEXIA.** A term used to designate any morbid tendency, dyscrasia, or depraved condition of general nutrition, etc., used particularly in connection with scrofula, syphilis, cancer, etc.

**CALEFACIENT.** A medicine applied externally to produce a sensation of warmth to the part to which it is applied. (Mustard.)

**CALMANT.** A medicine which lowers functional activity. (Aconite.)

**CALMATIVE.** A medicine which quiets. (Morphine.)

**CALORIFACIENT.** A substance which has the power of developing heat in the system. (Fats, Cod Liver Oil.)

**CALORIFIC.** Same as Calorifacient.

**CARDIAC DEPRESSANT.** A medicine to reduce the heart's action. (Veratrine.)

**CARDIAC STIMULANT.** A medicine used to increase the heart's action. (Digitalis.)

**CARMINATIVE.** A remedy which allays pain by causing the expulsion of flatus from the alimentary canal. (Asafetida.)

**CATALEPTIC.** An agent causing animals to lose power over their muscles. (Cannabis.)

**CATALYTIC.** A medicine counter-acting or destroying morbid agencies in the blood. (Calomel.)

**CATHARTIC.** A medicine which quickens or increases evacuations from the intestines. (Castor Oil.)

**CATHARTIC, CHOLAGOGUE.** An agent stimulating the stool and flow of bile at the same time. (Podophyllin.)

**CATHARTIC, DRASTIC.** A medicine producing violent action of the bowels with griping pain. (Jalap.)

**CATHARTIC, HYDRAGOGUE.** A remedy which causes copious watery stools. (Elaterium.)

**CATHARTIC, SALINE.** Neutral salts of metals of the alkalies or alkaline earths which increase the stools. (Magnesium Sulphate.)

**CATHARTIC, SIMPLE.** A substance which causes one or two actions of the bowels. (Senna.)

**CAUSTIC.** An agent used to destroy living tissue. (Silver Nitrate.)

**CAUTERY.** A substance used to corrode or destroy living tissues. (Nitric Acid.)

**CAUTERY, ACTUAL.** A heated metal or fire employed to destroy living flesh.

**CAUTERY, POTENTIAL.** A chemical used to destroy flesh. (Nitric Acid.)

**CHALYBEATE.** A tonic containing iron. (Tincture of Chloride of Iron.)

**CHOLAGOGUE.** A drug provoking the flow of bile. (Podophyllum.)

**CONDIMENT.** A substance used to improve the savor of food. (Salt, Pepper.)

**CONSERVATIVE.** A substance used for the preservation of others. (Honey.)

**CONSTRICTANT.** An agent producing constriction of organic tissue. (Oak Bark.)

**CONVULSANT.** A medicine causing convulsions. (Strychnine.)

**CORDIAL.** A medicine which increases the strength and raises the spirits when depressed. (Alcohol.)

**CORRECTIVE.** An agent used to correct or render more pleasant the action of other remedies, especially purgatives. (Coriander.)

**CORROSIVE.** A substance which disorganizes or destroys living tissue. (Nitric Acid.)

**COUNTER IRRITANT.** A remedy used to produce an irritation in one part to relieve a pain in another part. (Blister.)

**CUMULATIVE POISON.** A poison which finally acts with violence after several successive doses have been taken with little or no apparent effect. (Strychnine.)

**DEBILITANT.** An agent which diminishes the energy of organs. (Lobelia.)

DEFERVESCENT. An agent to reduce fever. (Aconite.)

DELIRIANT. A substance which produces delirium. (Stramonium.)

DELIRIFACIENT, (like deliriant). Tending to cause delirium. (Alcohol.)

DEMULCENT. A mucilaginous or oily substance to soothe and protect irritated mucous membranes. (Ulmus.)

DEOBSTRUENT. A medicine to remove functional obstructions in the system. (Aloes.)

DEODORANT. A substance to conceal or destroy foul odors. (Phenol.)

DEODORIZER (like deodorant) to hide or destroy foul odors. (Chlorine.)

DEPILATORY. A substance to remove hair. (Barium Sulphide.)

DEPLETIVE. A substance to reduce the vital power of the system. (Aconite.)

DEPLETORY. An agent to diminish the quantity of liquid in the body. (Potassium Nitrate.)

DEPRESSANT. An agent to lower the vital power. (Aconite.)

DEPRESSO-MOTOR. A medicine to lessen motor activity. (Bromides.)

DEPURANT. An agent to cleanse foul sores, etc. (Hydrogen Dioxide.)

DEPURATIVE. A medicine to act upon the emunctories so as to cause excretion and thereby purify the system. (Hot Drinks.)

DEPURATORY. An agent to purify the blood, etc. (Sulphur.)

DERMATIC. A remedy used in skin diseases. (Resorcin.)

**DERMIC.** A medicine acting through the skin. (Liniments.)

**DERIVATIVE.** An agent to draw the fluids from one part of the body to another to lessen or relieve a morbid process. (Mustard.)

**DESICCANT.** A medicine or application for drying up sores. (Boric Acid.)

**DESICCATIVE.** An application for drying up secretions. (Zinc Oxide.)

**DESICCATORY.** A remedy applied externally to dry up the moisture or fluids from a wound. (Starch.)

**DESQUAMATIC.** A remedy to remove scales from the skin or bones. (Potassium Iodide.)

**DETERGENT.** An agent to cleanse wounds and ulcers. (Soap and Water.)

**DIAPHORETIC.** A medicine to produce sweating. (Pilocarpine.)

**DIARRHETIC.** A remedy producing profuse stools. (Mandrake.)

**DIETETIC.** A nutritious remedy. (Arrow-Root.)

**DIGESTANT.** A substance to aid the solution of food in the mouth, stomach, or intestines. (Pepsin, Pancreatin.)

**DIGESTIVE.** A tonic which promotes digestive processes. (Quassia.)

**DILUENT.** A medicine to dilute secretions and excretions. (Gamboge.)

**DISCUTIENT.** A remedy to effect the absorption of tumors.

**DISINFECTANT.** A substance with the power of destroying disease germs or the noxious properties of decaying organic matter. (Formaldehyde.)

**DISSOLVENT.** A remedy promoting solution of tissue. (Iodides.)

**DIURETIC.** A drug to increase the secretion of urine. (Buchu.)

**DRASTIC.** An agent to cause violent action of the bowels. (Croton Oil.)

**ECBOLIC.** A drug to produce abortion. (Ergot.)

**ELECTUARY.** A composition of soft consistence taken internally to allay irritation or alleviate disease. (Honey, Molasses.)

**ELIMINATIVE.** An agent to remove material from the body. (Magnesium Sulphate.)

**EMETIC.** A medicine to produce vomiting. (Ipecac.)

**EMMENAGOGUE.** A drug to stimulate menstruation. (Potassium Permanganate.)

**EMOLLIENT.** A substance used externally to mechanically soften and protect tissues. (Flaxseed Poultice, Oils.)

**EPISPASTIC.** An agent to produce a blister. (Strong Ammonia.)

**ERRHINE.** An agent to increase the nasal secretions. (Formalin.)

**ESCHAROTIC.** A substance to destroy tissue. (Chromic Acid.)

**EVACUANT.** A medicine to expel substances from the body—chiefly with reference to the intestines. (Aloes.)

**EXCITANT.** An agent to arouse vital activity, or to produce increased action in an organism or any of its tissues. (Nux Vomica.)

**EXHILARANT.** An agent to stimulate the mind. (Alcohol.)

**EXPECTORANT.** A medicine to act upon the pulmonary mucous membrane to increase or alter its secretions. (Ammonium Chloride.)

**FEBRIFUGE.** An agent to decrease fever. (Aconite.)

**GALACTAGOGUE.** A medicine to increase the secretion of milk. (Pilocarpine.)

**GERMICIDE.** An agent to destroy parasites. (Carbolic Acid.)

**HEMATINIC.** A tonic for the blood. (Hemoglobin. Iron Preparations.)

**HEMOLYTIC.** An agent which impoverishes the blood. (Mineral acids.)

**HEMOSTATIC.** A remedy to check bleeding. (Iron Subsulphate. Monsell's Powder.)

**HEPATIC DEPRESSANT or Sedative.** A medicine to decrease the functions of the liver. (Opium.)

**HEPATIC STIMULANT.** A drug to increase the liver's functions. (Nitrohydrochloric Acid.)

**HYDRAGOGUE.** An agent causing full watery discharges from the bowels. (Gamboge.)

**HYDROTIC or HIDROTIC.** An agent to produce perspiration. (Spirit Nitrous Ether.)

**HYPERESTHETIC.** Increasing the sensitiveness of the skin.

**HYPNOTIC.** A drug producing sleep. (Chloral.)

**HYPOSTHENIC.** A debilitating medicine. (Lobelia.)

**INCITANT.** A remedy to excite functional activity. (Strychnine.)

**INSECTICIDE.** A remedy to destroy insects. (Benzine.)

**INTOXICANT.** An agent to excite or stupefy. (Alcohol.)



**IRRITANT.** A substance causing irritation, pain, inflammation and tension, either by mechanical or chemical action. (Heat, Mustard.)

**LACTAGOGUE.** An agent to increase the secretion of milk. (Malt.)

**LAXATIVE.** A medicine acting mildly in opening or loosening the bowels. (Sulphur.)

**LENITIVE.** An agent having the quality of easing pain or protecting tissues from the action of irritants. (Oils.)

**LIQUEFACIENT.** An agent promoting the liquifying processes of the system. (Iodine.)

**LITHAGOGUE.** An agent to expel calculi from bladder or kidney. (Benzoic Acid or Benzoates.)

**LITHOLYTIC.** An agent to dissolve gravel. (Ammonium Benzoate.)

**LITHONTRIPTIC.** An agent to dissolve gravel. (Potassium Carbonate.)

**LOCAL ANESTHETIC.** A medicine to destroy sensation, when applied locally. (Cocaine Hydrochloride.)

**LOCAL ASTRINGENT.** An agent to contract the tissues with which it comes in contact. (Lead Acetate.)

**LUBRICANT.** An agent to soothe irritation in the throat, fauces, etc. (Olive Oil. Honey.)

**MECHANICAL.** An agent acting on a physical basis. (Slippery Elm.)

**MEDICAMENT.** Any agent used for curing diseases or wounds. (Belladonna.)

**MEDICINE.** A substance administered in the treatment of disease. (Arsenic.)

**MYDRIATIC.** An agent causing dilatation of the pupil. (Atropine. Cocaine.)

**MYOTIC.** A drug causing contraction of the pupil. (Morphine.)

**NARCOTIC.** A powerful remedy causing stupor. (Opium.)

**NAUSEANT.** A substance causing sickness in the stomach. (Ipecac.)

**NEPHRITIC.** Medicine used in renal diseases. (Uva Ursi.)

**NERVINE.** Medicine to calm the nervous system. (Bromides.)

**NEUROTIC.** A medicine acting upon the nervous system. (Camphor Monobromide.)

**NUTRIENT.** A substance to build up the wasted tissues of the system. (Cod Liver Oil.)

**NUTRIMENT.** Any substance which promotes growth and repairs the waste of the tissues. (Food.)

**OBTUNDENT.** An agent which relieves irritation or reduces sensibility. (Opium.)

**ODONTALGIC.** An agent for the relief of toothache. (Oil of Cloves.)

**ODORANT.** A substance with a pronounced odor. (Musk.)

**OPIATE.** A medicine causing sleep. (Opium, Chloral.)

**OXYTOCIC.** An agent to aid or produce parturition. (Ergot. Cotton Root.)

**OXYURICIDE.** An agent destructive to parasitic (Oxyuris) worms. (Santonin.)

**PABULUM.** Any material which affords nourishment to the tissues. (Food.)

**PALLIATIVE.** A remedy for the relief but not necessarily the cure of a disease. (Morphine.)

**PANACEA.** A remedy pretending to cure all diseases. (Some Patent Medicines.)

**PARASITICIDE.** A remedy for the destruction of parasites. (Calcium Sulphide.)

**PARTURIENT** or Parturifacient. A medicine to aid in the birth of the young. (Ustilago.)

**PERISTALTIC.** A drug increasing the movement or contraction of the intestines. (Strychnine.)

**PLACEBO.** An inert substance given to satisfy a patient. (Sugar of Milk, Bread Pill.)

**POISON.** A substance which in sufficient amount is destructive to life. (Prussic Acid.)

**POTENTIAL.** A remedy which though powerful, is somewhat delayed in its action. (Arsenic.)

**PRESERVATIVE.** An agent to prevent deterioration of another substance. (Boric Acid.)

**PREVENTIVE.** Any measure or agent which retards or prevents disease. (Hygiene. Quinine as a preventive of malaria.)

**PROPHYLACTIC.** A medicine to prevent the taking or development of disease. (Vaccine.)

**PROTECTIVE.** An agent to protect the part to which it is applied. (Collodion.)

**PUNGENT.** An agent sharp and stimulating in its action. (Ammonia.)

**PURGATIVE.** A medicine to produce increased discharges from the bowels. (Aloes.)

**PUSTULANT.** An agent which, when applied externally, causes the formation of pus. (Croton Oil.)

**RECUPERATIVE.** A medicine to restore strength. (Cod Liver Oil.)

**REFRIGERANT.** An agent which produces the sensation of coolness. (Alcohol externally.)

**RELAXANT.** An agent that relieves contracted tissues, muscles, etc. (Chloroform.)

**REMEDY.** An agent used in the treatment of disease. (Medicine.)

**REPARATIVE.** A substance to restore debilitated tissues. (Food. Tonics.)

**RESOLVENT.** A remedy for the removal of hard tumors. (Iodine.)

**RESTORATIVE.** A medicine for causing a return of bodily vigor. (Arsenic. Strychnine.)

**REVULSANT or Revulsive.** An agent that by irritation, draws fluid from a distant diseased part. (Cantharides.)

**RUBEFACIENT.** An agent causing irritation and redness of the skin. (Mustard.)

• **SALINE.** A cooling salt. (Magnesium Sulphate.)

**SEDATIVE.** A medicine to decrease functional activity. (Potassium Bromide.)

**SEPTIC.** An agent that promotes putrefaction. (Bacteria.)

**SIALAGOGUE.** A medicine that promotes the flow of saliva. (Pyrethrum. Pilocarpus.)

**SIMPLE BITTER.** A drug with a bitter taste and tonic action. (Calumba. Quassia.)

**SOMNIFACIENT.** An agent to induce sleep. (Morphine.)

**SOPORIFIC.** A drug causing drowsiness and sleep. (Morphine.)

**SORBEFACIENT.** A medicine causing abortion. (Ergot.)

**SPECIFIC.** A remedy supposed to exert a special action in the prevention or cure of certain diseases. (Quinine in Malaria, Potassium Iodide in Actinomycosis.)

**STERNUTATORY.** An agent causing sneezing. (White Hellebore.)

**STIMULANT.** A medicine to increase or quicken functional activity. (Ammonium Carbonate.)

**STOMACHIC.** A drug to stimulate functional activity of the stomach. (Gentian.)

**STOMATIC.** A medicine used for diseases of the mouth. (Potassium Chlorate. Borax.)

**STUPEFACIENT.** A drug causing stupefaction. (Opium.)

**STYPTIC.** Agents causing contraction of blood vessels to check bleeding. (Alum.)

**SUCCEDANEUM.** A medicine that may be substituted for others possessing similar properties. (Chloral for Potassium Bromide.)

**SUDORIFIC.** A medicine or agent causing increased sweating. (Jaborandi.)

**SUPPURANT.** A substance causing the formation of pus. (Croton Oil.)

**SYNERGIST.** A drug which cooperates or assists the action of another. (Chloral with Bromides.)

**TAENICIDE.** A remedy for destroying tape worms. (Male Fern.)

**TAENIFUGE.** An agent to expel tape worms. (Areca Nut.)

**TETANIC.** A drug which increases the irritability of the cord or muscles producing spasms. (Strychnine.)

**TONIC.** A medicine promoting nutrition and giving tone to the system. (Arsenic.)

**TOPIC or Topical.** An external local remedy. (Liniment.)

**TOXIC.** A poisonous substance. (Phosphorus.)

TRICOPHYIA. Remedies promoting the growth of the hair. (Pilocarpine.)

UTERINE. An agent acting upon the uterus. (Ustilago.)

VEHICLE. A substance used as a medium for the administration of medicines. (Syrups.)

VERMICIDE. An agent to destroy parasitic worms. (Creosote.)

VERMIFUGE. An agent to expel parasitic worms. (Arecoline Hydrobromide. Purgatives.)

VESICANT. A blistering agent. (Cantharides.)

VIRUS. A poison causing a morbid process or disease; a pathogenic organism. (Cowpox. Virus of Rabies.)

VULNERARY. Any remedy or agent for healing wounds. (Ointments, etc.)

ZOIATRICA. Veterinary Medicines.

#### TERMINATION OF MEDICAL TERMS \*

AE-RE-SIS (*airesis*, a taking of anything). Example (*dia*, throughout, Di-æ-re-sis, a breach of continuity).

A-GOGUE (*agogos*, one who leads), denoting substances which expel others. Example, cholagogues (*chole*, bile), purgatives expelling bile.

AG-RA (*agra*, seizure), denoting seizure or pain, generally applied to gout. Ex., Cheir-ag-ra (*cheir*) gout in the hand. Ment-ag-ra (*mentum*, chin), eruption on the chin.

AL-GI-A (*algos*, pain). Ex., Ceph-al-al-gi-a (*kephale*, the head). Neu-ral-gi-a, pain in a nerve.

CELE (*kele*, a tumor). Ex. (*bonbon*, the groin), Bu-bon-o-cele, a tumor in the groin.

\* Adapted from Hoblyn's Medical Dictionary.

CEPH-A-LUS (*kephale*, the head), denoting some affection of the head. Ex., A-ceph-a-lus, without a head.

CRA-NI-UM (*kranion*, the skull), denoting the head of anything; (*olene*, the ulna). O-le-cra-non, the head of the ulna.

DEM-IC, (*demos*, a people). En-dem-ic, diseases in or among, or peculiar to a people.

EN-TER-Y (*entera*, the bowels), denoting affections of the bowels. Ex. (*dus*, with difficulty). Dys-en-ter-y, inflammation of mucous membrane of large intestines.

FA-CI-ENT (*fa-ci-o*, to make), denoting the production of any particular effect. Ex., Ru-be-fa-ci-ent, a substance which makes the body red.

FORM (*forma*, likeness), denoting resemblance, Ex., A-e-ri-form, like air.

FUGE (*fugo*, I expel), denoting that which expels. Ex., *Feb-ri-fuge*, a substance which expels fever.

GEN—GEN-E-SIS—GEN-OUS (*genesis*, generation), denoting production or generation. Ex., Oxygen (*oxus*, acid), generating acid, as was supposed, Ex-o-ge-nous, outside growing, applied to plants growing by external increase.

GNO-SIS (*gnosis*, knowledge). Ex. (*dia*, through-out). Di-ag-no-sis, distinction of diseases.

GRAPH-Y (*graphe*, writing), a description of anything. Ex., Ad-e-no-graph-y, (*aden*, a gland), a description of the glands.

HEX-I-A (*exis*, a habit), denoting an habitual state. Cac-hex-i-a (*kakos*, bad), bad state of the body.

LEP-SY (*lepsis*, a taking), denoting the act of taking). Cat-a-lep-sy (*kata*, thoroughly), a spasmodic attack of the limbs retaining them in one position.

LO-GY (*logos*, an account), denoting a treatise on or description of anything. Ex., Os-te-ol-o-gy (*osteos*, a bone), a description of the bones.

LY-SIS (*lisis*, a loosening). Ex., A-nal-y-sis, the resolution of a compound body into its constituent parts.

MA-NIA (*mania*, madness). Ex., Mo-no-ma-ni-a (*monos*, alone), madness on one subject.

ME-TER (*metron*, a measure). Ex., Ther-mom-e-ter (*therme*, heat), a measurer of heat.

O-DYNE—O-DYN-IA (*odune* pain). Ex., An-o-dyne, without pain.

OID (*eidos*, likeness). Ex., Ad-en-oid (*aden-gland*), like a gland.

OPI-THAL-MOS (*ophthalmos*, the eye). Xer-oph-thal-mi-a (*xeros*, dry), dryness of the eye.

O-REX-IA (*orexis*, appetite or desire.) Ex., An-o-rex-i-a, want of appetite.

PATH-IA—PATHY (*pathos*, affection). Ex., Ho-moe-o-path-y (*omoios*, similar), the art of curing by inducing a similar disease.

PEP-SIA (*pepsis*, digestion). Dys-pep-si-a (*dus* with difficulty), difficult digestion.

PHA-GIA (*phago*, to eat). Ex., Dys-pha-gi-a, difficulty of swallowing.

PHO-BIA (*phobos*, fear). Ex., Hy-dro-pho-bi-a, (*udor*, water), dread of water.

PHO-NIA (*phone*, voice). Ex., A-pho-ni-a, loss of voice.

PHO-RUS (*phero*, I convey). Ex., Phos-phor-us (*phos*, light). conveying light.



PHY-SIS (*phusis*, nature), denoting production or existence. Ex., Sym-phy-sis (*sum*, with), the growing together of bones, as of ossa pubis.

PLE-GI-A (*plege*, a stroke). He-mi-ple-gi-a (*Hemismus*, half), a paralysis of one side of the body.

PNOEA (*pnoia*, breathing). Ex., Dys-pnoea, difficulty of breathing.

PTO-SIS (*ptosis*, a falling down).

PTY-SIS (*ptusis*, a spitting). Ex., Hæ-mo-pty-sis (*Haima*, blood), a spitting of blood.

RHA-GI-A (*rago*, I burst forth). Ex., Hæ-m-or-rha-gi-a, a bursting forth of blood.

RAPH-E (*raphe*, a seam). Ex., Staph-y-lor-rapn-y, a sewing up of fissures of the palate.

RHOEA (*reo*, I flow). Ex., Leu-cor-rhœa (*Leukos*, white), a white discharge.

SAR-CA or SAR-CI-A (*sarx*, flesh). Ex., Poly-sar-ci-a (*polus*, much), excess of flesh.

SCOPE—SCO-PY (*skopos*, an inspection. Ophthal-mo-scope, an instrument to inspect the eye.

STASIS (*istemi*, I stand), denoting a standing or position in a place. Ex., Met-a-sta-sis (*meta*, a preposition denoting change from one place to another), transference to another part.

STO-MA (*stoma*, the mouth). Di-sto-ma (*dis*, twice), two-mouthed.

THESIS (*thesis*, a position). Di-ath-e-sis, (*dia*, throughout.) The condition throughout, constitutional condition.

TOME—TO-MY (*tome*, a section). An-at-o-my, cutting up a dissection. Ker-a-tome, a knife for dividing the cornea.

TO-NI-A—TO-NOS (*toncs*, tension). Ex.

A-to-nia }  
 A-ton-ic } without tone.

TRO-PHY (*trophe*, nourishment). A-tro-phy, defective nutrition.

U-RE-SIS—U-RI-A (*ouresis*, the act of discharging urine). Ex., Dys-ur-i-a, difficulty of discharging the urine.

### PRESCRIPTION WRITING.

A prescription may be defined as a written order or formula of ingredients, with directions to the compounder and instructions for the guidance of the patient. The term is derived from the Latin *prae* "before" and *scriptum* "written."

It is generally conceded that Latin is the best language for prescriptions. It is a dead language and therefore not subject to the variations which modern languages are continually undergoing. It is unchangeable the world over and a prescription written in this country may be put up in a foreign country with equal facility. The Latin name of a drug is distinctive and as a rule means only a given drug and ambiguity is therefore avoided; in some of the modern languages a given drug may have a variety of names, and in some cases the same name is applied to different drugs. Finally there is an element of secrecy which is often desirable to prevent the patient or general public from knowing what has been prescribed and there is less likelihood of "self doctoring" or using the prescription for some disorder for which it is not applicable.

A true principle of a prescription as based upon a maxim of Asclepiades, *curare cito, tuto et jucunde*, is to *cure quickly, safely and pleasantly*. According to this rule the typical prescription should contain, in the first place, an ingredient which is expected to relieve or *cure* the patient and is therefore called the basis; second, an ingredient designed to assist the action of the basis so that it may do its work more *quickly*, designated as the adjuvant; third, a substance intended to correct or modify any undesirable or injurious effect of the basis or adjuvant, or to cause it to act more *safely* than if used alone, and on this account is referred to as a corrective; and fourth, a substance may be added, which will give such form and consistence to the preparation as to make it *pleasant* and at the same time dilute the whole preparation to the proper proportion for measuring out the intended doses, termed the vehicle. The following table will express the idea in a concrete form:

|                      |                   |
|----------------------|-------------------|
| Curare (Cure)        | with the (Basis). |
| Cito (Quickly)       | “ “ (Adjuvant).   |
| Tuto (Safely)        | “ “ (Corrective). |
| et                   |                   |
| Jucunde (Pleasantly) | “ “ (Vehicle).    |

In Veterinary practice *jucunde* is generally ignored as the patients do not take to the idea of medicines *pleasantly* as a rule, and the principal use of the vehicle is to dilute the ingredients to the proper dosage.

In addition to the ingredients other data are given, such as the date, name of patient, direc-

tions to the compounder and to the patient, and the signature of the physician. Taking the prescription in its entirety it may be divided as follows:

Superscription or heading includes the symbol

**R** (*Recipe*) the first direction, "take."

Inscription, the ingredients, or basis, adjuvant, corrective and vehicle.

Subscription, the directions to the compounder.

Transcription or Signature, the directions to the patient and the signature of the prescriber with the date.

In a simple prescription the basis may be the only ingredient. In a compound prescription (with two or more ingredients), the agents added may be neither adjuvant nor corrective and yet be a good prescription. It is desirable, however, to keep the consideration of a "typical" prescription in mind.

Unusual doses of a powerful drug may be refused by the pharmacist unless some indication is made that the dose is intended. This is usually done by underscoring the dose, or better yet writing after it the abbreviation *q. r.* (*Quantum Rectum.*)

Practice makes proficiency in prescription writing. The prescription needs study as much as any other subject and the student should practise the writing of it, independently of any demand, simply for the experience.

To the beginner the following general hints from Sollman should be of benefit: "When writing a prescription for a given condition, put down, first, the name of the best remedy. Ask

yourself whether there is any other drug which may be employed to aid this. Put this down also. Then consider in which form the medicine should be administered, whether as liquid, powder, salve, etc. This will usually determine which preparation of the ingredient is to be employed. Put this down also. Then ask yourself what may be added to render the mixture agreeable to the patient. When this is written down, all the ingredients will be represented. Now look over this carefully and see that there are no incompatibilities and that the constituents are soluble if the mixture is to be a liquid. Next insert the endings. Write the directions to the dispenser. Now consider the doses of the mixture, teaspoonful, tablespoonful, etc., the approximate number of doses, and from these calculate the size of the mixture. It should be considered how many doses are to be taken each day (on the basis of sixteen hours a day); this, multiplied by the number of days, gives approximately the size of the mixture. Then write the directions to the patient. Now consider how much of each ingredient is to be given at each dose, multiply by the number of doses, and write down the quantity. This finishes the prescription. Look over the result carefully in the same order."

A tonic prescription for the horse illustrating the points referred to may be given as follows:

Mr. G——. Bay Mare, Daisy.

Superscription, **R**

Inscription,

|                                         |                                | Apoth. | Met. |
|-----------------------------------------|--------------------------------|--------|------|
| (Basis) Nucis Vomicae pulv.,            | $3 \frac{\text{—}}{\text{vj}}$ | 24     |      |
| (Adjuvant) Ferri Sulphatis pulv.,       | $3 \frac{\text{—}}{\text{vj}}$ | 24     |      |
| (Corrective) Aloes Barbadosensis pulv., | $3 \frac{\text{—}}{\text{ij}}$ | 12     |      |
| (Vehicle) Syrupi Zingiberis, q. s.      |                                |        |      |

Subscription. Misce et fiant boli sex.

Transcription or signature.

Give one ball morning and night.

RICHARD ROE, D.V.M.,

JAN. 2, 1905.

148 Second Street.

The metric system is coming more and more into use so that a knowledge of it will in a few years be indispensable. The beginner should learn to write his prescriptions in both the apothecary and metric systems.

The ingredients of a prescription are frequently abbreviated and although writing out in full is better there is no special objection to the former practice if there is no ambiguity in the abbreviations. Grievous errors have occurred in this way and too much caution cannot be exercised in making the meaning clear, so that the most ignorant drug clerk may avoid error.

Numerous examples of ambiguous abbreviations might be given, but a few mentioned below will serve as examples:

*Acid hyd.* may mean either hydrobromic, hydrochloric, hydriodic, or hydrocyanic acid.

*Chlor.* may mean chlorine, chloroform, chloral hydrate, chlorate or chloride.

*Hydr. Chlor.* may mean calomel, corrosive sublimate, hydrate of chloral, or hydrastin hydrochloride.

The context may often assist in arriving at the correct meaning of the abbreviation but it is not safe in all cases to depend upon this.

A limited knowledge of Latin will serve to enable one to write prescriptions properly. The student becomes familiar with the Latin names of drugs if he has studied his *Materia Medica* faithfully. The principal difficulty that he encounters is in making the changes necessary for the correct grammatical wording to the dispenser and the grammatical ending of the ingredients and their quantities.

The following simple rules taken from Mann, will, it is believed, enable one not previously acquainted with Latin, to write proper prescriptions with correct endings.

RULE I. The noun expressing the name of the medicine is put in the genitive case, when the quantity of it to be used is expressed.

RULE II. If no quantity is expressed, but only a numeral adjective follows, the noun is put in the accusative.

RULE III. The quantity is put in the accusative case governed by the imperative *Recipe*.

RULE IV. Adjectives agree with these nouns in gender, number and case.

For every day practice the accusative of the

quantity is seldom written out but is usually expressed by the more convenient symbols. The principal difficulty is the formation of the genitive case. The following rules (Mann) will assist in overcoming the difficulty. They apply only to pharmacopœial nouns.

RULES FOR FORMATION OF GENITIVE CASE.

I. All nouns ending in *a* form the genitive in *a* as *quinina*, *quininæ*. Exception.—*Physostigma*, *Physostigmatis*. *Coca* is unchanged. *Folia* is plural, Genitive *Foliorum*.

II. All nouns ending in *us*, *um*, *os*, *on*, form the genitive in *i* as *Conium*, *Conii*. Exceptions—*Rhus*, gen. *Rhois*, *Flos*, gen. *Floris*, *Erigeron*, gen. *Erigerontis*, *Fructus*, *Cornus*, *Quercus*, *Spiritus*, do not change.

III. All other nouns of whatever termination make the genitive in *s*, or *is*, *chloral*, gen. *chloralis*. Some lengthen the termination thus:

|           |                         |                    |                      |
|-----------|-------------------------|--------------------|----------------------|
| <i>a</i>  | as genitive <i>atis</i> | as <i>Acetas</i> , | <i>Acetatis</i> .    |
| <i>is</i> | "                       | <i>idis</i>        | as <i>Anthemis</i> , |
|           |                         |                    | <i>Anthemidis</i> .  |
| <i>o</i>  | "                       | <i>onis</i>        | as <i>Pepo</i> ,     |
|           |                         |                    | <i>Peponis</i> .     |
| <i>x</i>  | "                       | <i>cis</i>         | as <i>Cortex</i> ,   |
|           |                         |                    | <i>Corticis</i> .    |

There are a few exceptions. *Asclepias*, gen. *Asclepiadis*; *Mas*, gen. *Maris*; *Phosphis*, *Sulphis*, etc. gen. *itis*; *Mucilago*, gen. *Mucilaginis*; *Solidago*, gen. *Solidaginis*, etc.

The following words do not change in their genitive.\* *Amyl*, *Azedarach*, *Berberis*, *Buchu*, *Cajuputi*, *Cannabis*, *Catechu*, *Condurango*, *Cor-*

\* Those in italics are indeclinable, those in *us* are of the fourth declension; the others are of the third. *Apiol* and *Sumbul* are given as indeclinable by some authorities, *Dunghison* gives *Apiolum*, *i*; *Sumbul*, *i*; *Amyl*, *Amylis* is also given.



nus, *Curare*, *Fructus*, *Digitalis*, *Hydrastis*, *Jaborandi*, *Kino*, *Matico*, *Quercus*, *Sassafras*, *Sago*, *Sinapis*, *Spiritus*.

It is seldom necessary to use the accusative of the nouns expressing the ingredients, only when the quantity is omitted, and a numeral adjective takes its place.

As before stated, the use of the appropriate symbols renders it unnecessary, as a rule, to write out in the accusative the words expressing quantity. Sometimes, however, it is desirable to do so, and the following simple rules for the formation of the accusative of these words are appended:

I. Nouns expressing quantity ending in *a*, are feminine and make the accusative singular in *am* and the plural in *as*. *Example*, *Drachma*, acc. sing. *Drachmam*, pl. *Drachmas*.

II. Those ending in *um* or *us* make the accusative singular in *um*. The accusative plural of those in *us* is *os*, and of those in *um* is *a*. Those in *us* are masculine, those in *um* are neuter.

*Congius*, acc. sing. *Congium*, acc. pl. *Congios*.  
*Granum*, " " *Granum*, acc. " *Grana*.

The adjectives are declined like the nouns. The numeral cardinal adjectives are indeclinable except *unus*, *duo* and *tres*.

They are thus declined.

|      | Masculine. | Feminine. | Neuter. |
|------|------------|-----------|---------|
| Nom. | unus,      | una,      | unum.   |
| Gen. | unius,     | unius,    | unius.  |
| Acc. | unum,      | unam,     | unum.   |

|      | Masculine. | Feminine. | Neuter. |
|------|------------|-----------|---------|
| Nom. | duo,       | duae,     | duo.    |
| Gen. | duorum,    | duarum,   | duorum. |
| Acc. | duos,      | duas,     | duo.    |
| Nom. | tres,      | tres,     | tria.   |
| Gen. | trium,     | trium,    | trium.  |
| Acc. | tres,      | tres,     | tria.   |

The following is a list of some of the more frequently used numeral adjectives:

|     | CARDINALS        | ORDINALS                            |
|-----|------------------|-------------------------------------|
| 1   | I Unus           | 1 <sup>st</sup> Primus              |
| 2   | II Duo           | 2 <sup>nd</sup> Secundus            |
| 3   | III Tres         | 3 <sup>rd</sup> Tertius             |
| 4   | IV Quatuor       | 4 <sup>th</sup> Quartus             |
| 5   | V Quinque        | 5 <sup>th</sup> Quintus             |
| 6   | VI Sex           | 6 <sup>th</sup> Sextus              |
| 7   | VII Septem       | 7 <sup>th</sup> Septimus            |
| 8   | VIII Octo        | 8 <sup>th</sup> Octavus             |
| 9   | IX Novem         | 9 <sup>th</sup> Nonus               |
| 10  | X Decem          | 10 <sup>th</sup> Decimus            |
| 11  | XI Undecim       | 11 <sup>th</sup> Undecimus          |
| 12  | XII Duodecim     | 12 <sup>th</sup> Duodecimus         |
| 13  | XIII Tredecim    | 13 <sup>th</sup> Tertius decimus    |
| 14  | XIV Quatuordecim | 14 <sup>th</sup> Quartus decimus    |
| 15  | XV Quindecim     | 15 <sup>th</sup> Quintus decimus    |
| 16  | XVI Sexdecim     | 16 <sup>th</sup> Sextus decimus     |
| 17  | XVII Septendecim | 17 <sup>th</sup> Septimus decimus   |
| 18  | XVIII Octodecim  | 18 <sup>th</sup> Octavus decimus    |
| 19  | XIX Nove. decim  | 19 <sup>th</sup> Nonus decimus      |
| 20  | XX Viginti       | 20 <sup>th</sup> Vicesimus          |
| 21  | XXI Viginti unus | 21 <sup>st</sup> Vicesimus primus   |
| 22  | XXII Viginti duo | 22 <sup>nd</sup> Vicesimus secundus |
| 30  | XXX Triginta     | 30 <sup>th</sup> Tricesimus         |
| 40  | XL Quadraginta   | 40 <sup>th</sup> Quadragesimus      |
| 50  | L Quinquaginta   | 50 <sup>th</sup> Quinquagesimus     |
| 60  | LX Sexaginta     | 60 <sup>th</sup> Sexagesimus        |
| 70  | LXX Septuaginta  | 70 <sup>th</sup> Septuagesimus      |
| 80  | LXXX Octaginta   | 80 <sup>th</sup> Octogesimus        |
| 90  | XC Nonaginta     | 90 <sup>th</sup> Nonagesimus        |
| 100 | C Centum         | 100 <sup>th</sup> Centesimus        |

The verbs are nearly all used in the imperative mood; being addressed to the compounder. The following are some of the more common examples: *Recipe*, take; *Misce*, mix; *Signa*, mark; *Divide*, divide; *Mitte*, send; *Pone*, put; *Extende*, spread.

A few verbs are, however, in the subjunctive mood of mild command, taking the subject referred to in the nominative case. e.g., *fiat*, plural *fiant*, let be made. *Detur*, plural *dentur*, let be given. *Sufficiat*, may suffice. *Repetatur*, let it be repeated.

Only a few prepositions are commonly used; they are *ad*, to; *ana* (*Greek*), abbrev.  $\bar{a}$   $\bar{a}$ , of each; *cum*, with; *in*, into; *ad* and *in* govern the accusative, *cum*, the ablative and *ana* the genitive cases.

The following phrases are used: *Fiat lotio*. Let a lotion be made. *Dividatur in partes æquales*. Let it be divided into equal parts. *Dentur tales doses*. Let such doses be given. *Quantum sufficiat*, abbrev. *q. s.*, as much as may suffice. *Ne repetatur*. Do not repeat.

The following abbreviated prescription may be used, when written out in full and rendered into Latin, to illustrate many of the points already referred to:

|    |                      |           |                          |
|----|----------------------|-----------|--------------------------|
| R  | Powd.                | Scammony, | ℥ ss                     |
|    | “                    | Jalap,    | gr v                     |
|    | Calomel,             |           | gr <sup>---</sup><br>IIj |
| M. | Fiat pulvis purgans. |           |                          |

The prescription is taken from Pereira and Griffiths and when put into Latin would appear and be explained as follows:

**R=Recipe** (Take) Active verb; imperative mood, second person singular, agreeing with *Tu* understood; from *Recipio, ere.*

**Pulveris** (of powder). Substantive, genitive singular; from *Pulvis, eris* gov. by *Scrupulum*.  
**Scammoniae** (of Scammony). Substantive, genitive singular; from *Scammonia, a*, governed by *i*, governed by *Recipe*.  
**Scrupulum** (a scruple). Substantive, accusative, singular; masculine, from *Dimidium, a, um*, Agreeing with *Scrupulum*.

**RULE.** One substantive governs another in their signifying a different thing in the genitive.

**RULE.** And the substance governed may govern others signifying a different thing.\*

**RULE.** Adjectives, participles and pronouns agree with the substantive in number, gender and case.

**R (Understood)** **Pulveris** (of powder) as above. Governed by *grana* Rule as above.

**Jalapae** (of Jalap). Substantive, genitive, singular; from *Jalapa, a*. Governed by *Recipe*. Rule as above.

**Grana** (grains) Substantive, accusative, plural, neuter; from *grana, i*, governed by *Recipe*. Rule as above.

**Quinque** (five) Adjective, Indclinable.

\* One substantive agrees with another which signifies the same thing in case—as *Sodii Citratis unciam*.

**R** (Understood) **Calomelanos** (of calomel). Substantive, genitive singular, from *Calomelas*, *Κάλλος* and *μελός* governed by *grana*.

**G r a n a** (grains). as above.

**M=Misce** (Mix active verb imperative mood, second person singular, agreeing with *Tu* understood; from *misceo, ere*.

**P u l v i s** (a powder) Substantive, nominative, singular, masculine. Agreeing with *pulvis*.

**F i a t** (Let be made). Verb, derivative, nominative, singular, masculine.

**F i a t** (Let be made). Verb, derivative, nominative, singular, masculine. Agreeing with *pulvis*.

**T r i a** (three.) Adjective, accusative, plural, neuter, from *Tres*, *tres, tria*. Agreeing with *grana*.

Rule as above.

A few drugs in a prescription are usually better than many. It is irrational to combine a number of agents (shot gun prescription) without especial attention to the specific action of each.

In constructing a prescription, it is first necessary to decide upon the proper remedial agents; then upon the size of the dose and lastly the number of doses to be given. The prescription on p. 72 written out to show these details would be as follows:

R  
 Nucis Vomicae, (single dose  $\bar{5}_j \times 6 =$ )  $\bar{5}_{vj}$   
 Ferri Sulphatis, ( " "  $\bar{5}_j \times 6 =$ )  $\bar{5}_{vj}$   
 Aloes Barb., ( " "  $\bar{3}_{ss} \times 6 =$ )  $\bar{3}_{\Pi j}$   
 Syrupi Zingiberis, q. s.

Mix and make into six balls.

In practice the multiplication of single doses is carried out mentally and the product only is written down.

The Roman numerals should always be used to designate the quantities; thus: i, ij, iij, iv, v; vj, vij, viij, ix, etc. Always dot each *i* to avoid mistakes; the last *i* is usually made in the form of a *j* to show that it is the last of a series.

AN EASY METHOD OF WRITING PRESCRIPTIONS IN  
 THE METRIC SYSTEM (AFTER LEONARD).

In a two ounce prescription a single dose, in grains or minims, is given in the same figures as

the total amount of the drug in the prescription expressed in grams or cubic centimeters, as for example:

**R** Fluidextracti Belladonnæ Radicis

(2 minims dose) = 2 cc.

Potassi Bromidi (8 grains dose) = 8 grams

Aquæ q. s. 2 fluid ounces = 60 cc.

In a two ounce prescription there would be fifteen doses. In a gram or 1 cc. there are approximately 15 grains or minims; the basis is therefore 15 to 1. In a one ounce mixture there would be one half the above amounts; in a four ounce prescription there would be twice the above amounts. Or the same amounts of the drugs may be used in a four, six or eight ounce mixture as for the two ounce mixture and the dose correspondingly doubled, trebled or quadrupled.

COLEMAN'S EASY METHOD OF WRITING  
PRESCRIPTIONS.

"It may be assumed for the purpose of writing prescriptions, that there are fifteen doses of a teaspoonful each in a 2 ounce mixture; 30 in a 4 ounce mixture; 60 in an 8 ounce mixture. Only in the case of dangerous drugs is a more accurate estimation necessary.

In a 4 ounce mixture, then, with a teaspoonful dose, each dose will contain 1-30 of the total amount of any drug which may be in solution or uniform suspension.

In the case of drugs with a usual dose of about 5 gr. or m., 1 dram may be taken as the basis of calculation.

If 1 dram of a drug be added to a four ounce

mixture, each teaspoonful will contain 1-30 of a dram, or 2 grains or minims.

Taking 2, then, as a unit, it is only necessary to find the multiple of 2 which will give the desired dose and this will represent the number of drams to be put into the prescription.

To take an example,

**R**

|                                             |                                                          |
|---------------------------------------------|----------------------------------------------------------|
| Tincturæ Opii Camphoratae, (dose 15 m.) ..  | $2 \times 7\frac{1}{2} = 3 \frac{\text{VIJ}}{\text{ss}}$ |
| Salol, (dose 5 gr.) $2 \times 2\frac{1}{2}$ | $= 3 \frac{\text{IJ}}{\text{ss}}$                        |
| Misturæ Cretæ, q. s.                        | ad $3 \frac{\text{IV}}{\text{ss}}$                       |

M. et Sig.

In a 2 ounce mixture, each teaspoonful will contain 1-15 of a dram, or 4 gr. or m.

In an 8 ounce mixture, each teaspoonful will contain 1-60 of a gr. or m.

From the above statements the following rule may be formulated:

Divide 60 (one dram) by the number of doses in the prescription and multiply the result by the numeral necessary to give the desired dose. This numeral will represent the number of drams to be used.

In the case of drugs with a maximum dose of less than a grain, 1 grain instead of 1 dram may be taken as the basis of calculation. Thus, if one grain be added to a 4 ounce mixture with a teaspoonful dose, each dose will contain 1-30 of a grain."

The above methods are applicable especially in human and canine practice.



LEONARD'S QUICK WAY OF REDUCING  
PERCENTAGES.

RULE I. Call the numerator of the fraction one grain.

RULE II. Double the first figure of the denominator and call this ounces. This will then give almost mathematically correct reductions.

Thus: 1 to 1,000 would be 1 grain to 2 ounces; 1 to 2,000 would be one grain to 4 ounces; 1 to 3,000 would be 1 grain to 6 ounces; 1 to 4,000 would be 1 grain to 8 ounces; 1 to 5,000 would be 1 grain to 10 ounces and so on. If you want 1 to 500, this would be 1 grain to 1 ounce—there being 480 (approximately 500) grains or minims to the ounce. One to 100 would be 5 grains to 1 ounce.

By committing these two simple rules to memory, an instantaneous reduction for any percentage mixture can be made to the apothecary's basis."

WEIGHTS AND MEASURES.

Those most generally used by the physicians and pharmacists in the United States are the Troy or Apothecaries' Weights, and the Wine or Apothecaries' Measures. The Metric System, however, has been recognized to such a great extent that it has become a necessity for physicians to become familiar with it.

TROY OR APOTHECARIES' WEIGHTS.

| Pound<br>( <i>Libra</i> ) | Ounce<br>( <i>Uncia</i> ) | Drachm<br>( <i>Drachma</i> ) | Scruple<br>( <i>Scrupulum</i> ) | Grain<br>( <i>Granum</i> ) |
|---------------------------|---------------------------|------------------------------|---------------------------------|----------------------------|
| ℔ 1                       | = 12                      | = 96                         | = 288                           | = 5760                     |
|                           | ℥ 1                       | = 8                          | = 24                            | = 480                      |
|                           |                           | ʒ 1                          | = 3                             | = 60                       |
|                           |                           |                              | ʒ 1                             | = gr. 20                   |

## WINE OR APOTHECARIES' MEASURES.

| Gallon<br>( <i>Congius</i> ) | Pint<br>( <i>Octarius</i> ) | Fluidounce<br>( <i>Fluiduncia</i> ) | Fluidrachm<br>( <i>Fluidrachma</i> ) | Minim<br>( <i>Minimum</i> ) |
|------------------------------|-----------------------------|-------------------------------------|--------------------------------------|-----------------------------|
| Cong. 1                      | = 8                         | = 128                               | = 1024                               | = 61440                     |
|                              | O 1                         | = 16                                | = 128                                | = 7680                      |
|                              |                             | f ̄5 1                              | = 8                                  | = 480                       |
|                              |                             |                                     | f ̄3 1                               | = M 60                      |

## AVOIRDUPOIS WEIGHTS.

| Pound<br>( <i>Libra</i> ) | Ounce<br>( <i>Uncia</i> ) | Grain<br>( <i>Granum</i> ) |
|---------------------------|---------------------------|----------------------------|
| lb. 1                     | = 16                      | = 7000                     |
|                           | oz. 1                     | = gr. 437½                 |

To avoid misapprehension in the use of the apothecary and avoirdupois systems, the symbols lb., ̄5, ̄3, ̄3, should be consistently used for the apothecary and the abbreviation lb., oz., gr., for the avoirdupois. The abbreviation for the Troy pound is characterized by the cross line drawn through the letters lb and should always mean twelve ounces, while the avoirdupois pound (lb.) stands for sixteen ounces. The symbol ̄5 means an apothecaries' ounce of 480 grains, while "oz." means an avoirdupois ounce of 437½ grains. The grain weight is the same for both systems and the abbreviation gr. will cause no confusion. The grain is therefore the unit in both systems and the term is derived from the old system of weighing, which required that there should be used a "grain of wheat, well dried and gathered out of the middle of the ear." The abbreviation gr., for grain, should be consistently used in the apothecary system, gm. for gram, in the metric system.

In using the metric system of weights the gram is ordinarily used as the standard and the other subdivisions are reckoned from it.

## METRIC WEIGHTS.

|                     |                         |
|---------------------|-------------------------|
| 10 milligrams (mg.) | make 1 centigram (cg.)  |
| 10 centigrams       | make 1 decigram (dg.)   |
| 10 decigrams        | make 1 gram (gm.)       |
| 1000 grams          | make 1 kilogram (kilo.) |

## METRIC MEASURES.

1000 Cubic centimeters (cc.) (Milliliters)  
make 1 liter (L.)

1 Gram equals the weight of 1 cc. of distilled water at a temperature of 4°C.

## TABLE OF APPROXIMATELY EQUIVALENT WEIGHTS.

|                          |                      |
|--------------------------|----------------------|
| 1 milligram .001         | = 1-64 grain         |
| 1 centigram .01          | = 1-6 grain          |
| 1 decigram .1            | = 1½ grains          |
| 1 gram                   | = 15½ grains         |
| 4 grams ( 3.9 gm.)       | = 1 dram             |
| 30 grams ( 31.1 gm.)     | = 1 ounce            |
| 500 grams (453.6 gm.)    | = 1 pound (av.)      |
| 1 kilogram               | = 2 1-5 pounds (av.) |
| 1-64 grain = 1 milligram | = .001 gram          |
| 1-6 grain = 1 centigram  | = .01 gram           |
| 1 grain                  | = .065 gram          |
| 15.43 grains             | = 1. gram            |
| 1 dram (apoth.)          | = 3.90 grams         |
| 1 ounce (apoth.)         | = 31.1 grams         |
| 1 minim                  | = .061 cc.           |
| 16 minims                | = 1. cc.             |
| 1 fluidram               | = 3.75 cc.           |
| 1 fluidounce             | = 30. cc.            |

|                 |                |
|-----------------|----------------|
| 1 cc.           | = 16 minims    |
| 4 cc. (3.7 cc.) | = 1 fluidram   |
| 30 cc.          | = 1 fluidounce |

To convert grains into centigrams, multiply by 6.5. Thus 3 grains multiplied by 6.5 equals 19.5 centigrams, or 10 grains equals 65 centigrams or .65 gram. To convert centigrams into grains divide by 6.5. Thus 26 centigrams divided by 6.5 equals 4 grains.

#### DOMESTIC MEASURES.

A drop, *gutta*, (gtt.) is usually reckoned at about one minim.

A tea-spoonful is about one fluidram.

A table-spoonful is about one-half fluidounce.

A wine-glassful is about two fluidounces.

A tea-cupful is about five fluidounces.

A breakfast-cupful is about eight fluidounces.

A tumblerful is about eight fluidounces.

Domestic measures vary considerably. There may be from 50 to 150 drops in a fluidram, a tea-spoon generally holds more than one dram, even as much as 2 drams or more. Cups and glasses also vary widely.

#### THE PRINCIPLES OF COMBINING DRUGS IN A PRESCRIPTION.

Although the tendency in modern therapeutics is toward simplicity rather than complexity in prescriptions, one may go to the extreme even in this direction. There is no doubt but that in very many cases a judicious combination of drugs will produce effects of a beneficial character which might be sought in vain from the use of a single remedy. A "shot gun" prescription,

containing a great number of remedies introduced with the idea that by some lucky chance one or more of the ingredients may *hit* the disorder, is thoroughly unscientific and not to be encouraged.

The rational combination of drugs was, perhaps first discussed fully by Dr. John Ayrton Paris (Paris Pharmacologia, 1822). His treatment of the question has been so clear and exhaustive, that there has been but little room for improvement. The following paragraphs are based principally upon his work:

I. THE ACTION OF A MEDICINE MAY BE AUGMENTED (ADJUVANT ACTION).

(a) *By combining different forms of the same substance.* An infusion is strengthened by the addition of the fluid extract or tincture of the same drug, in cases where all the active principles are not soluble in the same vehicle. Digitalis may be taken as an example, all of its active principles are not soluble in water.

(b) *By combining the medicine with others which produce similar effects.* A rule enunciated by Dr. Fordyce is to the effect that combination of similar remedies will produce a more certain, speedy, and considerable effect than an equivalent dose of any single one. A combination of chloral and bromide potassium is more certain for hypnotic effects than either one alone. From the standpoint of purgation the same would be true of a combination of aloes and calomel, or as an emetic a mixture of ipecac and tartar emetic is more reliable for its effects than either drug singly.

(c) *By combining with the basis substances of a different nature which can, in some unknown manner enhance its action.* The diuretic effect of squill is increased by calomel, and ipecac assists in the purgative action of jalap.

II. THE ACTION OF A MEDICINE MAY BE MODIFIED (CORRECTIVE ACTION) IN ORDER TO OVERCOME UNPLEASANT EFFECTS. The griping tendency of purgatives may be corrected by combination with aromatics or essential oils. Acrid substances may be more or less overcome by triturating with mucilage. The constipating effect of iron may be overcome by the addition of aloes. See prescription p. 72.

III. TO OBTAIN THE COMBINED OR JOINT ACTION OF TWO OR MORE MEDICINES.

(a) *Upon the same tissue.* Purgative medicines will serve as an illustration. Some act by increasing peristalsis, others by augmenting the secretion of the intestines, as in the case of eserine and pilocarpine. The combination of podophyllum with calomel, for their joint action upon the liver, may be cited as another example.

(b) *Upon different tissues or to combat different symptoms.* Probably the greatest number of prescriptions will come under this head. The desire to combat a number of different symptoms should not lead to excess in the combination of drugs. A well directed rifle ball will have a greater effect than a charge from a shot gun where only a few of the shot hit the mark. Some prescriptions have been reported which contained as many as 400 ingredients.

The more complicated a prescription, the greater are the chances for failure.

The symptoms of fever with cough may be treated with small doses of ipecac as a sedative expectorant, tincture of aconite to quiet the circulation and allay the fever, with potassium bromide to alleviate excessive coughing. Other cases will readily suggest themselves. It may be desirable, in a given instance to stimulate the heart with one drug and the kidney or bowels with others.

IV. TO FORM NEW COMPOUNDS THE EFFECTS OF WHICH DIFFER FROM ANY OF THE INDIVIDUAL CONSTITUENTS. Dover's Powder is a good illustration. This preparation has marked diaphoretic properties, while neither of its constituents, opium or ipecac, when taken separately exert any powerful action upon the skin. "White Lotion" made by dissolving lead acetate and zinc sulphate in water; "Black Lotion" by adding calomel to a solution of lime and "Yellow Lotion" by adding corrosive sublimate to a solution of lime, are also examples.

V. TO AFFORD A CONVENIENT AND AGREEABLE FORM OF ADMINISTRATION. Solids, such as pills, capsules and powders are oftentimes to be preferred. Liquid preparations are sometimes more desirable and they have the advantage of being more readily absorbed. The main thing, of course, is that the patient should get the proper remedy indicated by the symptoms; but, at the same time, it is the duty of the prescriber to see that it is no more obnoxious than need be. This fact is sometimes lost sight of in vet-

erinary practice, where the animal may be compelled to take the medicine, but nothing is lost to the patient or prescriber, if the medicine is prepared in as palatable a form as possible without sacrificing anything of its pharmacologic action.

Due care should be exercised in selecting a vehicle which has little or no medicinal action of its own, or if it has that it will assist or correct the action of the medicines prescribed, and, if practicable, one in which the other ingredients are soluble.

The taste of many bitter substances like quinine, and salty drugs like ammonium chloride, may be made more agreeable by the addition of any of the preparations of glycyrrhiza. Caustic or irritating medicines, whether liquid or solid, must be well diluted before being swallowed.

#### EXAMPLES OF PRESCRIPTIONS.

The following graded scheme for the beginner in prescription writing may be employed; 1st. a prescription written out in Latin is translated into English with the quantities of the ingredients expressed in both the apothecaries and metric systems. 2d. An abbreviated prescription is written out in English, apothecaries and metric. 3d. An abbreviated prescription is written out in Latin; apothecaries and metric. 4th. After a student has studied therapeutics a card is given him bearing the name of a disease, with the basis or principal remedy indicated from which he is to construct a compound prescription suitable for the disease mentioned.





(Take)

of Molasses, as much as suffices  
(sufficient quantity)

Mix.

Signature. Let a bolus be made.

**R**

(For dog)

|                      |                     |
|----------------------|---------------------|
| Olei Terebinthinæ    | unciæ semissem      |
| Olei Ricini,         | unciam cum semisse  |
| Ovum,                | unum                |
| Aquae Ferventis,     | uncias quatuordecim |
| Misce et fiat enema. |                     |

Take

of Oil of Turpentine, half of one ounce  
of Castor Oil, one and a half ounces 45  
One Egg,  
of hot water, fourteen ounces  
Mix and let be made into an enema.

**R**

|                        |                    |
|------------------------|--------------------|
| Vitellum Ovi,          | unius              |
| Olei Morrhuæ,          | uncias duas        |
| Spiritus Frumenti,     | unciam cum semisse |
| Acidi Phosphorici Di-  |                    |
| luti,                  | drachmas tres      |
| Syrupi,                | drachmas quinque   |
| Aquae Cinnamoni, quan- |                    |
| tum sufficiat ad       | uncias octo.       |
| Misce et fiat emulsio. |                    |

Take

Yolk of one egg.

(Take)

|                                                                     |                       |     |
|---------------------------------------------------------------------|-----------------------|-----|
| of Cod Liver Oil,                                                   | two ounces            | 60  |
| of Whisky,                                                          | one and a half ounces | 45  |
| of Dilute Phosphoric<br>Acid,                                       | three drams           | 12  |
| of Syrup,                                                           | five drams            | 20  |
| of Cinnamon Water, as much as may suffice<br>to (make) eight ounces |                       | 240 |

Mix and let an emulsion be made.

**R** (For Dog)

Morphinae Sulphatis, granum  
Camphorae,  
Pulveris Glycyrrhizae,  
Sacchari Lactis, ana grana decem  
Misc. Divide in chartulas sex.

Take

|                                      |     |
|--------------------------------------|-----|
| of Morphine Sulphate, one grain      | 065 |
| of Camphor,                          |     |
| of Powdered Liquorice Root,          |     |
| of Sugar of Milk, of each ten grains | 6   |
| Mix. Divide into six powders.        |     |

**R**  
Pepsinae, drachmas duas  
Vini albi, uncias septem  
Syrupi, unciam dimidiam  
Fluidextracti Zingiberis, guttas octo  
Misc. Fiat Elixir.

Take

|                               |               |     |
|-------------------------------|---------------|-----|
| of Pepsin,                    | two drams     | 8   |
| of White Wine,                | seven ounces  | 210 |
| of Syrup,                     | half an ounce | 15  |
| of Fluidextract of<br>Ginger, | eight drops   | 5   |
| Mix. Let an Elixir be made.   |               |     |

**R**

Extracti Nucis Vomicae, grani semissen  
 Pulveris Scammonii, granum  
 Pulveris Aloes,  
 Pulveris Rhei, ana grani tres quartas partes  
 Alcoholis, quantum sufficit.  
 Misce. Fac pilulas tales duodecim.

Take

|                                            |                                   |     |
|--------------------------------------------|-----------------------------------|-----|
| of Extract of Nux<br>Vomica,               | half of a grain                   | 032 |
| of Powdered Scammony,                      | one grain                         | 065 |
| of Powdered Aloes,<br>of Powdered Rhubarb, | of each                           |     |
|                                            | three-fourths parts<br>of a grain | 048 |
| of Alcohol, as much as suffices.           |                                   |     |
| Mix. Make twelve such pills.               |                                   |     |

EXAMPLES OF ABBREVIATED PRESCRIPTIONS  
 WRITTEN OUT IN ENGLISH IN THE APOTHECARY  
 AND METRIC SYSTEMS.

**R**

Ac. Carbol.,  
 Liq. Iodi. Comp., ā ā m xv  
 Aq. Chloroformi, q. s.  $\frac{3}{ii}$   
 M.

Take

|                                                           |           |    |
|-----------------------------------------------------------|-----------|----|
| Carbolic Acid,<br>Compound Solution of<br>Iodine, of each | 15 minims | 1  |
| Chloroform Water, sufficient quantity to (make)           | 2 ounceſ  | 60 |
| Mix.                                                      |           |    |

**R**

Ac. Sulph, Arom.,  
Tr. Opii.,

Spts. Camph.,

ā ā

$\frac{\text{̄}}{\text{̄VI}}$

M.

Take

|                             |          |     |
|-----------------------------|----------|-----|
| Aromatic Sulphuric Acid,    |          |     |
| Tincture of Opium,          |          |     |
| Spirits of Camphor, of each | 6 ounces | 180 |
| Mix.                        |          |     |

**R**

Quin. Sulph.,

$\frac{\text{̄}}{\text{̄J}}$

Pulv. Belladon. Fol.,

$\frac{\text{̄}}{\text{̄IJ}}$

Sod. Salicyl.,

Pulv. Cimicif.,

ā ā

$\frac{\text{̄}}{\text{̄III}}$

M.

Ft. pulv. No. XII.

Take

|                              |          |    |
|------------------------------|----------|----|
| Quinine Sulphate,            | 1 ounce  | 30 |
| Powdered Belladonna Leaves,  | 2 ounces | 60 |
| Sodium Salicylate,           |          |    |
| Powdered Cimicifuga, of each | 3 ounces | 90 |
| Mix. Make into 12 powders.   |          |    |

EXAMPLES OF ABBREVIATED PRESCRIPTIONS  
WRITTEN OUT IN LATIN IN THE APOTHECARY AND  
METRIC SYSTEMS.

**R**

|                   |                                  |
|-------------------|----------------------------------|
| Quin. Sulph.,     | $\overline{\overline{3}}_J$      |
| F. E. Nuc. Vom.,  | $\overline{\overline{3}}_J$      |
| Tr. Capsic.,      | $\overline{\overline{3}}_{IIJ}$  |
| Ac. Muriat. Dil., | $\overline{\overline{3}}_{IVSS}$ |
| M.                |                                  |

**R**

|                                 |                               |     |
|---------------------------------|-------------------------------|-----|
| Quininae Sulphatis,             | unciam                        | 30  |
| Fluidextracti Nucis<br>Vomicae, | unciam                        | 30  |
| Tincturae Capsici,              | uncias tres                   | 90  |
| Acidi Muriatici Diluti,         | uncias quatuor<br>cum semisse | 135 |
| Misce.                          |                               |     |

**R**

|                    |                                   |
|--------------------|-----------------------------------|
| Pot. Acet.,        | $\overline{\overline{3}}_{IJ}$    |
| Tr. Digital.,      | $\overline{\overline{3}}_x$       |
| Spts. Ether. Nit., | $\overline{\overline{3}}_v$       |
| Aquae,             | q. s. $\overline{\overline{0}}_J$ |
| M.                 |                                   |

**R**

|                           |                  |              |
|---------------------------|------------------|--------------|
| Potassii Acetatis,        | uncias duas      | 60           |
| Tincturae Digitalis,      | drachmas decem   | 40           |
| Spiritus Etheris Nitrosi, | uncias quinque   | 150          |
| Aquae,                    | quantum sufficit | Octarium 480 |

**R**Quin. Sulph.,  $\frac{3}{5} \overline{J}$ Pulv. Opii,  $\frac{3}{5} \overline{IJ}$ Pulv. Ammon. Carb.,  $\frac{3}{5} \overline{IJ}$ Pulv. Camph.,  $\frac{3}{5} \overline{J}$ 

M. Make 12 powders.

**R**

Quininae Sulphatis, unciam 30

Pulveris Opii, drachmas duas 8

Pulveris Ammonii Car-  
bonatis, uncias duas 60

Pulveris Camphorae, unciam 30

Misce. Fiant pulveres numero duodecim.

The next step in the series is the construction of the prescription according to its indication for a given disorder, the basis being mentioned and allowing the student to fill in the other ingredients. The writer has found the following list serviceable in this connection, due regard being given to incompatibility, form, case endings, etc. The prescriptions may be written out in the ordinary abbreviated form or in Latin in the Apothecary or Metric systems. Any variety of subjects or combinations are available and excellent drill is furnished to the student.

| INDICATION.            | BASIS.              |
|------------------------|---------------------|
| Gastric Tonic.         | Gentian.            |
| Diuretic.              | Potassium Nitrate.  |
| Cardiac Tonic.         | Digitalis.          |
| Influenza.             | Tr. Nux. Vomica.    |
| Irritable Stomach.     | Bismuth.            |
| Skin Disease.          | Fowler's Solution.  |
| Blister.               | Cantharides.        |
| Hepatic Congestion.    | Sodium Sulphate.    |
| Purgative.             | Barium Chloride.    |
| Diaphoresis.           | Tr. Arnica Root.    |
| Sedative.              | Chloral.            |
| Cathartic.             | Eserine Sulphate.   |
| Anodyne Liniment.      | Tr. Aconite.        |
| Round Worms.           | Santonin.           |
| Fever.                 | Acetanilid.         |
| Mange.                 | Sulphur.            |
| Cough.                 | Belladonna.         |
| Rickets.               | Oleum Phosphoratum. |
| Purgative.             | Aloes.              |
| Flat Worms.            | Male Fern.          |
| Indigestion.           | Pepsin.             |
| Diarrhoea.             | Tr. Opium.          |
| Anemia.                | Iron Sulphate.      |
| Rheumatism.            | Sodium Salicylate.  |
| Edema.                 | Potassium Acetate.  |
| Diabetes Insipidus.    | Iodine.             |
| Catarrhal Fever.       | Quinine.            |
| General Tonic.         | Nux Vomica.         |
| Counter Irritant.      | Aqua Ammonia.       |
| Intestinal Antiseptic. | Salol.              |
| Chorea.                | Arsenic.            |



TABLE OF THERMOMETRIC EQUIVALENTS  
FAHRENHEIT AND CENTIGRADE SCALES

*To reduce Centigrade degrees to those of Fahrenheit*

Multiply by 9, divide by 5, and add 32

*To reduce Fahrenheit degrees to those of Centigrade scale*

Subtract 32, multiply by 5, and divide by 9

TABLE OF EQUIVALENTS

| °Centi-<br>grade. | °Fahren-<br>heit. | °Centi-<br>grade. | °Fahren-<br>heit. | °Centi-<br>grade. | °Fahren-<br>heit. |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| —25               | —13.              | 0                 | 32.               | 25                | 77.               |
| —24               | —11.2             | 1                 | 33.8              | 26                | 78.8              |
| —23               | —9.4              | 2                 | 35.6              | 27                | 80.6              |
| —22               | —7.6              | 3                 | 37.4              | 28                | 82.4              |
| —21               | —5.8              | 4                 | 39.2              | 29                | 84.2              |
| —20               | —4.               | 5                 | 41.               | 30                | 86.               |
| —19               | —2.2              | 6                 | 42.8              | 31                | 87.8              |
| —18               | —0.4              | 7                 | 44.6              | 32                | 89.6              |
| —17               | 1.4               | 8                 | 46.4              | 33                | 91.4              |
| —16               | 3.2               | 9                 | 48.2              | 34                | 93.2              |
| —15               | 5.                | 10                | 50.               | 35                | 95.               |
| —14               | 6.8               | 11                | 51.8              | 36                | 96.8              |
| —13               | 8.6               | 12                | 53.6              | 37                | 98.6              |
| —12               | 10.4              | 13                | 55.4              | 38                | 100.4             |
| —11               | 12.2              | 14                | 57.2              | 39                | 102.2             |
| —10               | 14.               | 15                | 59.               | 40                | 104.              |
| —9                | 15.8              | 16                | 60.8              | 41                | 105.8             |
| —8                | 17.6              | 17                | 62.6              | 42                | 107.6             |
| —7                | 19.4              | 18                | 64.4              | 43                | 109.4             |
| —6                | 21.2              | 19                | 66.2              | 44                | 111.2             |
| —5                | 23.               | 20                | 68.               | 45                | 113.              |
| —4                | 24.8              | 21                | 69.8              | 46                | 114.8             |
| —3                | 26.6              | 22                | 71.6              | 47                | 116.6             |
| —2                | 28.4              | 23                | 73.4              | 48                | 118.4             |
| —1                | 30.2              | 24                | 75.2              | 49                | 120.2             |

| °Centi-<br>grade. | °Fahren-<br>heit. | °Centi-<br>grade. | °Fahren-<br>heit. | °Centi-<br>grade. | °Fahren-<br>heit. |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 50                | 122.              | 73                | 163.4             | 96                | 204.8             |
| 51                | 123.8             | 74                | 165.2             | 97                | 206.6             |
| 52                | 125.6             | 75                | 167.              | 98                | 208.4             |
| 53                | 127.4             | 76                | 168.8             | 99                | 210.2             |
| 54                | 129.2             | 77                | 170.6             | 100               | 212               |
| 55                | 131.              | 78                | 172.4             | 101               | 213.8             |
| 56                | 132.8             | 79                | 174.2             | 102               | 215.6             |
| 57                | 134.6             | 80                | 176.              | 103               | 217.4             |
| 58                | 136.4             | 81                | 177.8             | 104               | 219.2             |
| 59                | 138.2             | 82                | 179.6             | 105               | 221.              |
| 60                | 140.              | 83                | 181.4             | 106               | 222.8             |
| 61                | 141.8             | 84                | 183.2             | 107               | 224.6             |
| 62                | 143.6             | 85                | 185.              | 108               | 226.4             |
| 63                | 145.4             | 86                | 186.8             | 109               | 228.2             |
| 64                | 147.2             | 87                | 188.6             | 110               | 230.              |
| 65                | 149.              | 88                | 190.4             | 111               | 231.8             |
| 66                | 150.8             | 89                | 192.2             | 112               | 233.6             |
| 67                | 152.6             | 90                | 194.              | 113               | 235.4             |
| 68                | 154.4             | 91                | 195.8             | 114               | 237.2             |
| 69                | 156.2             | 92                | 197.6             | 115               | 239.              |
| 70                | 158.              | 93                | 199.4             | 116               | 240.8             |
| 71                | 159.8             | 94                | 201.2             | 117               | 242.6             |
| 72                | 161.6             | 95                | 203.              | 118               | 244.4             |

The following is a list of official deliquescent and efflorescent salts:

| DELIQUESCENT SALTS                   | EFFLORESCENT SALTS                    |
|--------------------------------------|---------------------------------------|
| Ammonii Iodidum                      | Alumen (slightly)                     |
| Nitras                               | Ammonii Carbonas                      |
| Valerianas                           | Phosphas                              |
| Auri Chloridum                       | Antim. et Potass. Tartras (slightly). |
| Calcii Chloridum                     | Cupri Acetas                          |
| Lithii Citras                        | Sulphas                               |
| Bromidum                             | Magnesii Sulphas                      |
| Salicylas                            | (slightly)                            |
| Magnesia Citras                      | Potassii et Sodii Tartras (slightly). |
| Potassa (caustic)                    | Ferrocyanidum                         |
| Cum Calce                            | (slightly)                            |
| Potassii Acetas                      | Quininae Bisulphas                    |
| Carbonas                             | Sulphas (after a                      |
| Citras                               | time)                                 |
| Cyanidum                             | Soda (caustic)                        |
| Hypophosphis                         | Sodii Acetas                          |
| Sulphis                              | Arsenas (slightly)                    |
| Tartras                              | Benzoas                               |
| Quinolin salts (except the Tartrate) | Boras (slightly)                      |
| Sodii Hypophosphis                   | Carbonas                              |
| Iodidum                              | Hyposulphis                           |
| Zinci Bromidum                       | Phosphas                              |
| Chloridum                            | Santoninas (slightly)                 |
| Iodidum                              | Sulphas                               |
|                                      | Sulphis                               |
|                                      | Strychninae Sulphas                   |
|                                      | Zinci Acetas                          |
|                                      | Sulphas                               |

For the various symbols, Latin words and phrases with their abbreviations see the following pages.

LATIN WORDS AND PHRASES WITH THEIR ABBREVIATIONS AND ENGLISH EQUIVALENTS.

| WORDS OR PHRASES                  | CONTRACTIONS   | ENG. EQUIVALENTS     |
|-----------------------------------|----------------|----------------------|
| <i>Abdomen</i> .....              | Abd. ....      | The belly.           |
| <i>Ad</i> .....                   | Ad. ....       | To, or up to.        |
| <i>Adde</i> .....                 | Add. ....      | Add.                 |
| <i>Addantur</i> .....             | Add. ....      | Let (them) be added  |
| <i>Addendus</i> .....             | Add. ....      | To be added.         |
| <i>Addendo</i> .....              | Add. ....      | By adding.           |
| <i>Adhibendus</i> .....           | Adhib. ....    | To be administered.  |
| <i>Adjacens</i> .....             | Adjac. ....    | Adjacent.            |
| <i>Ad libitum</i> .....           | Ad lib. ....   | At pleasure.         |
| <i>Admove</i> .....               | Admov. ....    | Apply.               |
| <i>Admoveatur</i> .....           | Admov. ....    | Let (it) be applied. |
| <i>Adversum</i> .....             | Adv. ....      | Against.             |
| <i>Aliquot</i> .....              | Aliq. ....     | Some.                |
| <i>Alter</i> .....                | Alt. ....      | The other.           |
| <i>Alternis horis</i> .....       | Alt. hor. .... | Every other hour.    |
| <i>Amplus</i> .....               | Amp. ....      | Large.               |
| <i>Ampulla</i> .....              | Ampul. ....    | A large bottle.      |
| <i>Ana</i> .....                  | A. or aa ....  | Of each.             |
| <i>Aqua</i> .....                 | Aq. ....       | Water.               |
| <i>Aqua bulliens</i> .....        | Aq. bull. .... | Boiling water.       |
| <i>Aqua communis</i> .....        | Aq. com. ....  | Common water.        |
| <i>Aqua fervens</i> .....         | Aq. ferv. .... | Hot water.           |
| <i>Aqua fluviatilis</i> .....     | Aq. fluv. .... | River water          |
| <i>Aqua fontalis</i> .....        | Aq. font. .... | Spring water.        |
| <i>Aqua marina</i> .....          | Aq. mar. ....  | Sea water.           |
| <i>Aqua nivalis</i> .....         | Aq. niv. ....  | Snow water.          |
| <i>Aqua pluvialis</i> .....       | Aq. pluv. .... | Rain water.          |
| <i>Aut.</i> .....                 | Aut. ....      | Or.                  |
| <i>Balneum vaporis</i> .....      | B. V. ....     | Vapor bath.          |
| <i>Balsamum</i> .....             | Bals. ....     | Balsam.              |
| <i>Bene</i> .....                 | Bene. ....     | Well                 |
| <i>Bibe</i> .....                 | Bib. ....      | Drink (thou).        |
| <i>Biduum</i> .....               | Bid. ....      | Two days.            |
| <i>Bis</i> .....                  | Bis. ....      | Twice.               |
| <i>Bis in die, or dies.</i> ..... | Bis. die ....  | Twice a day.         |
| <i>Bolus</i> .....                | Bol. ....      | A large pill.        |
| <i>Bulliat or Bulliant</i> .....  | Bull. ....     | Let boil.            |

|                                                            |               |                                   |
|------------------------------------------------------------|---------------|-----------------------------------|
| <i>Butyrum</i> . . . . .                                   | But.          | Butter.                           |
| <i>Cœruleus</i> . . . . .                                  | Cœrul.        | Blue.                             |
| <i>Calefactus</i> . . . . .                                | Calef.        | Warmed.                           |
| <i>Cape</i> . . . . .                                      | Cap.          | Take (thou).                      |
| <i>Capiat</i> . . . . .                                    | Cap.          | Let him take.                     |
| <i>Capsula</i> . . . . .                                   | Capsul.       | A capsule.                        |
| <i>Caute</i> . . . . .                                     | Caute         | Cautiously.                       |
| <i>Charta</i> . . . . .                                    | Chart.        | Paper.                            |
| <i>Chartula</i> . . . . .                                  | Chartul.      | A small paper.                    |
| <i>Cibus</i> . . . . .                                     | Cib.          | Food.                             |
| <i>Cochlear</i> or <i>Coch-</i><br><i>leare</i> . . . . .  | Coch.         | A spoonful.                       |
| <i>Cochleare</i> <i>im-</i><br><i>plum</i> . . . . .       | Coch. amp.    | A dessertspoonful.                |
| <i>Cochleare</i> <i>mag-</i><br><i>num</i> . . . . .       | Coch. mag.    | A tablespoonful.                  |
| <i>Cochlear parvum</i> . . . . .                           | Coch. parv.   | A teaspoonful.                    |
| <i>Cola</i> . . . . .                                      | Col.          | Strain.                           |
| <i>Colatus</i> . . . . .                                   | Colat.        | Strained.                         |
| <i>Collutorium</i> . . . . .                               | Collut.       | A mouth wash.                     |
| <i>Collyrium</i> . . . . .                                 | Collyr.       | An eye wash.                      |
| <i>Coloretur</i> . . . . .                                 |               | Let it be colored.                |
| <i>Compositus</i> . . . . .                                | Comp.         | Compounded.                       |
| <i>Concisus</i> . . . . .                                  | Concis.       | Cut.                              |
| <i>Congius</i> . . . . .                                   | Cong.         | A Gallon.                         |
| <i>Conserva</i> . . . . .                                  | Cons.         | A conserve, also.<br>Keep (thou). |
| <i>Contusus</i> . . . . .                                  | Contus.       | Bruised.                          |
| <i>Cor, Cordis</i> . . . . .                               | Cor.          | The heart.                        |
| <i>Cortex, corticis</i> . . . . .                          | Cort.         | The bark.                         |
| <i>Coxa</i> . . . . .                                      | Cox.          | The hip.                          |
| <i>Cras, crastinus</i> . . . . .                           | Crast.        | To-morrow.                        |
| <i>Cujus, cujus-libet</i> . . . . .                        | Cuj.          | Of which, of any.                 |
| <i>Cum</i> . . . . .                                       | C.            | With.                             |
| <i>Cyathus, vel Cya-</i><br><i>thus vinarius</i> . . . . . | Cyath, C. vin | A wine-glass.                     |
|                                                            | ar            |                                   |
| <i>Da, detur</i> . . . . .                                 | D., det.      | Give, let be given.               |
| <i>De</i> . . . . .                                        | De            | Of or from.                       |
| <i>Debitus</i> . . . . .                                   | Deb.          | Due, proper.                      |
| <i>Decanta</i> . . . . .                                   | Dec.          | Pour off.                         |
| <i>Decem, decimus</i> . . . . .                            | Decem.        | Ten, the tenth.                   |
| <i>Decoctum</i> . . . . .                                  | Decoct.       | A decoction.                      |
| <i>Decubitus</i> . . . . .                                 | Decub.        | Lying down.                       |

|                                         |                    |                                     |
|-----------------------------------------|--------------------|-------------------------------------|
| <i>De die in diem</i> ..                | De d. in d.        | From day to day.                    |
| <i>Dein vel Deinde</i> ..               | Dein. ....         | Thereupon.                          |
| <i>Deglutiatur</i> .....                | Deglut. ...        | Let be swallowed.                   |
| <i>Dentur tales doses</i> No. iv. ....  | D.t.d. No. iv.     | Let 4 such doses be given.          |
| <i>Dexter, Dextra</i> ..                | Dext. ....         | The right.                          |
| <i>Diebis alternis</i> ...              | Dieb. alt. ..      | Every other day.                    |
| <i>Dilue, Dilutus</i> ...               | Dil. ....          | Dilute (thou), Diluted.             |
| <i>Dimidius</i> .....                   | Dim. ....          | One-half.                           |
| <i>Dividatur in partes aequales</i> ... | D. in p. aeq.      | Let it be divided into equal parts. |
| <i>Dividendus-a-um</i> ..               | Divid. ....        | To be divided.                      |
| <i>Dolor</i> .....                      | Dolor .....        | Pain.                               |
| <i>Donec</i> .....                      | Donec. ....        | Until.                              |
| <i>Dosis</i> .....                      | D. ....            | A dose.                             |
| <i>Drachma</i> .....                    | Dr. or $\zeta$ ... | A dram (60grains)                   |
| <i>Eadem (fem.)</i> ...                 | Ead. ....          | The same.                           |
| <i>Ejusdem</i> .....                    | EjUSD. ....        | Of the same.                        |
| <i>Electuarium</i> .....                | Elect. ....        | An electuary.                       |
| <i>Emesis</i> .....                     | Emesis ....        | Vomiting.                           |
| <i>Enema</i> .....                      | En. ....           | A clyster or enema                  |
| <i>Et</i> .....                         | Et. ....           | And.                                |
| <i>Extende</i> .....                    | Ext. ....          | Spread.                             |
| <i>Extractum</i> .....                  | Extr. ....         | An extract.                         |
| <i>Extrahe</i> .....                    | Extrahe ...        | Extract thou.                       |
| <i>Fac</i> .....                        | F. ....            | Make.                               |
| <i>Fac pilulas duodecim</i> .....       | F. pil. XII.       | Make twelve pills.                  |
| <i>Farina</i> .....                     |                    | Flour.                              |
| <i>Febris</i> .....                     | Febr. ....         | Fever.                              |
| <i>Fervens</i> .....                    | Ferv. ....         | Boiling.                            |
| <i>Fiat</i> .....                       | Ft. ....           | Let be made (sing)                  |
| <i>Fiant</i> .....                      | Ft. ....           | Let be made (plu.)                  |
| <i>Filtra</i> .....                     | Filtra ....        | Filter (thou).                      |
| <i>Fluidus</i> .....                    | Fluid., Fl.        | Liquid.                             |
| <i>Formula</i> .....                    |                    | A prescription.                     |
| <i>Gargarysma</i> .....                 | Garg. ....         | A gargle.                           |
| <i>Gradation</i> .....                  | Grad. ....         | By degrees, gradually.              |
| <i>Granum, Grana</i> ..                 | Gr. ....           | Grain, Grains.                      |
| <i>Gratus</i> .....                     | Grat. ....         | Pleasant.                           |
| <i>Gutta, Guttae</i> ...                | Gtt. ....          | A drop. Drops.                      |

|                                               |               |                               |
|-----------------------------------------------|---------------|-------------------------------|
| <i>Guttatim</i> .....                         | Guttat. ....  | By drops.                     |
| <i>Haustus</i> .....                          | Haust. ....   | A draught.                    |
| <i>Hebdomada</i> .....                        | Hebdom. ..    | A week.                       |
| <i>Herbarum recen-</i><br><i>tium</i> .....   | Herb.recent.  | Of fresh herbs.               |
| <i>Hic, Haec, Hoc</i> ..                      | Hic,hæc,hoc   | This.                         |
| <i>Hirudo</i> .....                           | Hirudo ....   | A leech.                      |
| <i>Hora</i> .....                             | H. ....       | An hour.                      |
| <i>Idem</i> .....                             | Id. ....      | The same.                     |
| <i>Imprimis</i> .....                         | Impr. ....    | First.                        |
| <i>Incide, Incisus</i> ..                     | Inc. ....     | Cut (thou), Being<br>Cut.     |
| <i>In dies</i> .....                          | Ind. . . . .  | Daily, or from<br>day to day. |
| <i>Infunde</i> .....                          | Infun. ....   | Pour in.                      |
| <i>Infusum</i> .....                          | Infus. ....   | An infusion.                  |
| <i>Injection</i> .....                        |               | An injection.                 |
| <i>In Pulmento</i> .....                      |               | In gruel.                     |
| <i>Instar</i> .....                           | Instar ....   | As big as, the size<br>of.    |
| <i>Inter</i> .....                            | Inter ....    | Between.                      |
| <i>Internus,-a-um</i> ..                      | Int. ....     | Inner or internal.            |
| <i>Intus</i> .....                            | Intus ....    | Inwardly.                     |
| <i>Jam</i> .....                              | Jam ....      | Now.                          |
| <i>Juxta</i> .....                            | Juxta ....    | Near to.                      |
| <i>Lac, Lactis</i> .....                      | Lac. ....     | Milk, of Milk.                |
| <i>Lagena</i> .....                           | Lag. ....     | A flask or bottle.            |
| <i>Languor</i> .....                          | Lang. ....    | Faintness.                    |
| <i>Libra</i> .....                            | Lb., or lb... | A pound.                      |
| <i>Linimentum</i> ....                        | Linim. ....   | A liniment.                   |
| <i>Linteam</i> .....                          | Lint. ....    | Lint.                         |
| <i>Liquor</i> .....                           | Liq. ....     | A solution.                   |
| <i>Lotio</i> .....                            | Lot. ....     | A lotion.                     |
| <i>Macera</i> .....                           | Mac. ....     | Macerate.                     |
| <i>Magnus</i> .....                           | Mag. ....     | Large.                        |
| <i>Mane</i> .....                             | Mane ....     | In the morning.               |
| <i>Manipulus</i> .....                        | M. or Man.    | A handful.                    |
| <i>Manus</i> .....                            | Manus ....    | The hand.                     |
| <i>Massa, massa</i><br><i>pilularis</i> ..... |               | A mass,a pill-mass            |
| <i>Matutinis</i> .....                        | Matut ....    | In the morning.               |
| <i>Medium</i> .....                           | Med. ....     | Middle.                       |
| <i>Mensura</i> .....                          | Mensu. ....   | By Measure.                   |
| <i>Mica Panis</i> .....                       | Mic. pan. ..  | Crumb of bread.               |

|                                               |               |                                         |
|-----------------------------------------------|---------------|-----------------------------------------|
| <i>Minimum</i> .....                          | M. or min...  | A minim.                                |
| <i>Minutum</i> .....                          |               | A minute.                               |
| <i>Misce</i> .....                            | M. ....       | Mix.                                    |
| <i>Mistura</i> .....                          | Mist. ....    | A mixture.                              |
| <i>Mitte</i> .....                            | Mit. ....     | Send.                                   |
| <i>Modo præscripto</i> ..                     | Mod. præsc.   | In the manner pre-<br>scribed.          |
| <i>More dictu</i> .....                       | Mor. dictu .. | In the manner di-<br>rected.            |
| <i>More solito</i> .....                      | Mor. sol. ..  | In the usual man-<br>ner.               |
| <i>Mortarium, i</i> ....                      | Mort. ....    | A mortar.                               |
| <i>Necnon</i> .....                           | Necn. ....    | Also.                                   |
| <i>Ne trades sine</i> ..                      | Ne.tr.s.num   | Do not deliver<br><i>nummo</i> .....    |
|                                               |               | without the money                       |
| <i>Nisi</i> .....                             | Nisi ....     | Unless.                                 |
| <i>Non</i> .....                              | Non ....      | Not.                                    |
| <i>Non repetatur</i> ...                      | Noñ repetat.  | Let it not be re-<br>peated.            |
| <i>Nox. Noctis</i> .....                      | Noc. noct. .. | The night, of the<br>night.             |
| <i>Nucha</i> .....                            |               | The nape of the<br>neck.                |
| <i>Numero</i> .....                           | No. ....      | In number.                              |
| <i>Octarius</i> .....                         | O. Oct. ....  | A pint ( $\frac{7}{8}$ xvj)             |
| <i>Octavus</i> .....                          |               | Eight.                                  |
| <i>Octo</i> .....                             | Octo. ....    | Eight.                                  |
| <i>Omni hori</i> .....                        | Omn. hor. ..  | Every hour.                             |
| <i>Opus</i> .....                             | Opus. ....    | Need, or occasion.                      |
| <i>Ovum</i> .....                             | Ov. ....      | An egg.                                 |
| <i>Pars. Partis</i> .....                     | Par. Pt. ...  | A part, of a part.                      |
| <i>Partes æquales</i> ..                      | Pt. æq. ....  | Equal parts.                            |
| <i>Parvulus</i> .....                         | Parvul. ....  | An infant. A par-<br>vule.              |
| <i>Parvus</i> .....                           |               | Little.                                 |
| <i>Pastillus</i> .....                        | Pastil. ....  | A pastille.                             |
| <i>Pediluvium</i> .....                       |               | A foot-bath.                            |
| <i>Penicillum cam-</i><br><i>elinum</i> ..... | Pencil. cam.  | A camel's hair pen<br>cil or brush.     |
| <i>Per</i> .....                              | Per. ....     | Through, By.                            |
| <i>Phiala</i> .....                           | Phil. ....    | A vial or bottle.                       |
| <i>Phiala prius agi-</i><br><i>tate</i> ..... | P. P. A. ...  | The bottle having<br>been first shaken. |



|                                   |                  |                                           |
|-----------------------------------|------------------|-------------------------------------------|
| <i>Pilula</i> .....               | Pil. ....        | A pill.                                   |
| <i>Pocillum</i> .....             | Pocill. ....     | A little cup.                             |
| <i>Poculum</i> .....              | Pocul. ....      | A cup.                                    |
| <i>Pondere</i> .....              | P. ....          | By weight.                                |
| <i>Pondus civile</i> ....         | P. civ. ....     | Civil weight (avoirdupois).               |
| <i>Pondus medicinale</i> .....    |                  | Medicinal (apothecaries) Weight           |
| <i>Post cibo</i> .....            | Post cib. ..     | After eating.                             |
| <i>Potus</i> .....                | Potus ....       | Drink.                                    |
| <i>Præparata</i> .....            | Præp. ....       | Prepared.                                 |
| <i>Primus</i> .....               | Primus ....      | The first.                                |
| <i>Pro</i> .....                  | Pro. ....        | For.                                      |
| <i>Pro re nata</i> ....           | P. r. n. ....    | Occasionally, according to circumstances. |
| <i>Pulvis</i> .....               | Pulv. ....       | A powder.                                 |
| <i>Quadrans-antis</i> ..          | Quad. ....       | A quart.                                  |
| <i>Quantum libet</i> ...          | Q. lib. ....     | As much as you please.                    |
| <i>Quantum sufficiat</i>          | Q. s. ....       | As much as may suffice.                   |
| <i>Quaque</i> .....               | Qq. ....         | Each, or Every.                           |
| <i>Quartus</i> .....              | Quart. ....      | Fourth.                                   |
| <i>Quatuor</i> .....              | Quat. ....       | Four.                                     |
| <i>Quibus</i> .....               | Quibus ....      | From which.                               |
| <i>Quinque</i> .....              | Quinq. ....      | Five.                                     |
| <i>Quintus</i> .....              | Quint. ....      | The fifth.                                |
| <i>Quoque</i> .....               | Q. Q. ....       | Also.                                     |
| <i>Quorum</i> .....               | Quor. ....       | Of which.                                 |
| <i>Quotidie</i> .....             | Quotid. ....     | Daily.                                    |
| <i>Ratio</i> .....                |                  | Proportion.                               |
| <i>Recens,-entis</i> ...          | Rec. ....        | Fresh.                                    |
| <i>Recipe</i> .....               | <b>R</b> . . . . | Take.                                     |
| <i>Reductus in pulverem</i> ..... | Red.in pulv.     | Let it be reduced to powder.              |
| <i>Reliquum</i> .....             | Reliq. ....      | Remaining.                                |
| <i>Repetatur</i> .....            | Rept. ....       | Let it be repeated.                       |
| <i>Retinere</i> .....             | Retin. ....      | To keep.                                  |
| <i>Ruber, rubra, rubrum</i> ..... | Rub. ....        | Red, ruddy.                               |
| <i>Saltem</i> .....               | Saltem ....      | At least.                                 |

|                                         |                                |                                         |
|-----------------------------------------|--------------------------------|-----------------------------------------|
| <i>Saltim</i> .....                     | <i>Saltim</i> .....            | By leaps.                               |
| <i>Saturatus-a-um</i> ..                | <i>Sat.</i> .....              | Saturated.                              |
| <i>Scatula</i> .....                    | <i>Scat.</i> .....             | A box.                                  |
| <i>Scilicet</i> .....                   | <i>Scil.</i> .....             | Namely.                                 |
| <i>Scrupulum</i> .....                  | <i>Scrup.</i> or $\mathcal{D}$ | A scruple (20 grs)                      |
| <i>Secundem artem</i> .                 | <i>S. A.</i> .....             | According to art.                       |
| <i>Secundus</i> .....                   | <i>Secund.</i> ...             | Second.                                 |
| <i>Semel</i> .....                      | <i>Semel</i> .....             | Once.                                   |
| <i>Semis</i> or <i>semissis</i>         | <i>Ss.</i> .....               | A half.                                 |
| <i>Septem</i> .....                     | <i>Sept.</i> .....             | Seven.                                  |
| <i>Septimana</i> .....                  | <i>Septim.</i> ....            | A week.                                 |
| <i>Sescuncia</i> .....                  |                                | An ounce and a half.                    |
| <i>Sesquihora</i> .....                 |                                | An hour and a half                      |
| <i>Sex</i> .....                        | <i>Sex</i> .....               | Six.                                    |
| <i>Si</i> .....                         | <i>Si</i> .....                | If.                                     |
| <i>Signa</i> .....                      | <i>Sig.</i> .....              | Write, or Mark (thou).                  |
| <i>Signatur nomine proprio</i> .....    | <i>Sig.nom. pro</i>            | Let it be written with its proper name. |
| <i>Simul</i> .....                      | <i>Simul.</i> .....            | Together.                               |
| <i>Sine</i> .....                       | <i>Sin.</i> .....              | Without.                                |
| <i>Singularum</i> .....                 | <i>Sing.</i> .....             | Of each.                                |
| <i>Si opus sit</i> .....                | <i>Si op. sit</i> ..           | If necessary.                           |
| <i>Sit</i> .....                        | <i>Sit.</i> .....              | Let it be.                              |
| <i>Solus</i> .....                      | <i>Sol.</i> .....              | Alone.                                  |
| <i>Solve</i> .....                      | <i>Solv.</i> .....             | Dissolve.                               |
| <i>Somnus</i> .....                     | <i>Somnus.</i> ...             | Sleep.                                  |
| <i>Spiritus vini rectificatus</i> ..... | <i>Spt.vin.rect.</i>           | Rectified spirit of wine (alcohol).     |
| <i>Spiritus vini tenuis</i> .....       | <i>Spt. vin. ten.</i>          | Proofspirit.                            |
| <i>Statim</i> .....                     | <i>Stat.</i> .....             | Immediately.                            |
| <i>Stet. or Stent</i> ...               | <i>St.</i> .....               | Let it (or them) stand.                 |
| <i>Subinde</i> .....                    | <i>Subind.</i> ....            | Frequently.                             |
| <i>Sumat talem</i> ....                 | <i>Sum. tal.</i> ..            | Let him take one like this.             |
| <i>Sume</i> .....                       | <i>Sum.</i> .....              | Take.                                   |
| <i>Supra</i> .....                      | <i>Supra</i> .....             | Above.                                  |
| <i>Tabella</i> .....                    | <i>Tab.</i> .....              | A lozenge.                              |
| <i>Talis</i> .....                      | <i>Tal.</i> .....              | Such a one.                             |

|                                       |                              |                         |
|---------------------------------------|------------------------------|-------------------------|
| <i>Ter</i> .....                      | <i>Ter</i> .....             | Thrice, or Three times. |
| <i>Ter in die, or Ter die</i> .....   | <i>T.i.d.</i> or <i>T.D.</i> | Thrice daily.           |
| <i>Tero</i> .....                     | <i>Tero</i> .....            | I rub.                  |
| <i>Tere simul</i> .....               | <i>Tere sim</i> ..           | Rub together.           |
| <i>Tertius</i> .....                  | <i>Tert.</i> .....           | Third.                  |
| <i>Tinctura</i> .....                 | <i>Tinct.</i> or <i>Tr.</i>  | Tincture.               |
| <i>Tres</i> .....                     | <i>Tres</i> .....            | Three.                  |
| <i>Triduum</i> .....                  | <i>Trid.</i> .....           | Three days.             |
| <i>Tritura</i> .....                  | <i>Trit.</i> .....           | Triturate.              |
| <i>Troschiscus, Trochisin</i> .....   | <i>Troch.</i> .....          | A lozenge or troche.    |
| <i>Tussis</i> .....                   | <i>Tus.</i> .....            | A cough.                |
| <i>Ultimo (or Ultima) præscriptus</i> | <i>Ult. præsc.</i>           | The last ordered.       |
| <i>Una</i> .....                      | <i>Una</i> .....             | Together.               |
| <i>Uncia</i> .....                    | <i>Unc.</i> or $\frac{3}{4}$ | An ounce.               |
| <i>Ut dictum</i> .....                | <i>Ut. dict.</i> ..          | As directed.            |
| <i>Vas vitreum</i> .....              | <i>Vas vit.</i> ..           | A glass vessel.         |
| <i>Vehiculum</i> .....                | <i>Vehic.</i> .....          | A vehicle or menstruum. |
| <i>Vel</i> .....                      | <i>Vel.</i> .....            | Or.                     |
| <i>Vesper-eris</i> .....              | <i>Vesp.</i> .....           | The evening.            |
| <i>Vices</i> .....                    | <i>Vic.</i> .....            | Turns.                  |
| <i>Vinum</i> .....                    | <i>Vin.</i> .....            | Wine.                   |
| <i>Vires</i> .....                    | <i>Vir.</i> .....            | Strength.               |
| <i>Vitellus</i> ..                    | <i>Vitel.</i> .....          | Yolk.                   |
| <i>Vitreum, Vitrum</i> ..             | <i>Vitr.</i> .....           | Glass.                  |
| <i>Volatilis, is, Volatile</i> .....  | <i>Volat.</i> .....          | Volatile.               |

## INCOMPATIBILITY.

In prescription writing, incompatibility may be defined as an interference, with each other, of the constituents of a mixture in a way not intended by the prescriber. Sometimes there is *intentional* incompatibility by the prescriber as in the case of white lotion, p. 89.

There are three types of incompatibility: Chemic, Pharmaceutic and Physiologic.

*Chemic Incompatibility* occurs when a new chemic compound results. In general it may be recognized in one of three ways: 1. By precipitation—the formation of an insoluble compound. 2. By effervescence or explosion—evolution of gas. 3. By a change in color. Another form may be referred to, because it is not easy to recognize any change and therefore more dangerous. A new product may be formed, possibly of a poisonous nature and remain in solution without in the least changing the appearance of the mixture. The avoidance of this form of incompatibility rests upon a knowledge of the ordinary chemic reactions, and the knowledge cannot be too greatly emphasized. Chemic incompatibility is not always evident immediately, some little time may elapse before changes occur. A general rule is that substances are incompatible if they are used in testing for each other or if they form antidotes.

*Pharmaceutic Incompatibility* results in the production of an unsightly appearance due to *physical* changes. It is, therefore, largely a question of solvents and solubility, and often

occurs when solids or liquids are added to solutions, thereby changing their densities. It occurs when there is a combination of such substances as are physically incapable of mixing; thus, if spirit of nitrous ether be added to tincture of guaicum a gelatinous mass will result, or if resinous tinctures be added to aqueous solutions the resins will separate.

*Physiologic or Therapeutic Incompatibility* depends upon the *antagonistic* or opposite physiologic or therapeutic actions of the drugs, so that one drug may weaken or neutralize the action of another with regard to its effects upon the tissues. Atropine and pilocarpine are examples of antagonists therapeutically. No two drugs, however, are exactly opposed to each other throughout their whole range of action, and more or less latitude in this respect may be permitted in prescribing.

Incompatibility must always be kept in mind in writing a prescription. It is best avoided, as a rule, by not attempting to combine too many drugs. Some general principles which it is well to keep in mind may be formulated as follows:

Acids should not be added to alkalies, alkaline salts or vegetable acids on account of decomposition and chemic change.

Solutions of alkaloids are incompatible with tannic acid, alkalies, alkaline salts, iodides and bromides on account of precipitation.

Glucosides (Digitalin, Salicin, etc.) are decomposed by acids.

A mixture of salts in solution will decom-

pose if either an insoluble compound or double salt can be formed.

Chloral is incompatible with alkaline solutions, chloroform is produced.

Potassium chlorate, nitrate or permanganate liberate oxygen and should not be mixed with readily oxidizable substances, such as charcoal, sugar, sulphur, glycerin, carbolic acid, iodine, turpentine, and organic materials, lest explosive compounds be formed.

Lime water precipitates mercury salts. Calomel and prussic acid form the poisonous mercuric cyanide.

Calomel should not be combined with nitrohydrochloric acid as corrosive sublimate may be produced. Both calomel and antipyrin are incompatible with sweet spirit of nitre.

Liquid iron preparations are incompatible with fluid preparations of the vegetable bitters (except calumba and quassia), because the tannic acid in them forms a precipitate.

Considerable quantities of acid are incompatible with tinctures, because ethers are formed.

Water causes precipitates with tinctures containing resins.

Gum arabic is incompatible with lead and iron salts and mineral acids.

Solutions of potassium chlorate and iodide unite to form a poisonous compound.

For convenient reference, the following list of the more important incompatibles, taken from Merck's Report Ready Reference, is given.

ACACIA—mineral acids; alcohol; ammonia;

antimony and potassium tartrate; borax (unless syrup or glycerin is present); ether; ferric salts (not if excess of acid present); lead subacetate (not acetate); lead-water; mercuric chloride (concent. sol.); potassium bitartrate and tartrate; silicates; syrup squill; tinct. guaiac (blue color); tinctures (alcoholic and ethereal).

ACETANILID—amyl nitrite; bromine and bromides of alkalis; carbolic acid; chloral hydrate; iodides of alkalis; nitrites; piperazine; potassium hydroxide; pyrocatechin; resorcin; sodium hydroxide; spirit nitrous ether; thymol.

ACIDS—alcohol (with strong acids); alkalis; alkaloids; benzoates and borates (with strong acids); bismuth and ammonium citrate; bicarbonates; bromides (of weak acids); carbonates; chlorides (of weak acids); iodides (of weak bases); metallic salts (with organic acids); pancreatin; potassium and sodium tartrate; potassium tartrate; salicylates; silicates.

ACID, ARSENOUS—copper sulphate; decoction cinchona; dialyzed iron; ferric hydrate; lime water; salts of aluminium, antimony, barium, calcium, chromium, copper, lead, magnesium, mercury, silver, zinc; potassium iodide; tannic acid; vegetable astringent decoctions and infusions.

ACID, BENZOIC—free bromine or chlorine; ferric salts; hydrogen dioxide with sulphuric acid; urethane.

ACID, BORIC—alkaline hydrates; alkaline earths (hydrates); carbonates. See also Borates.

ACID, CARBOLIC—acetanilid; albumin; anti-pyrin; antiseptin; bromal hydrate; bromine water; butyl chloral hydrate; camphor; camphor monobromated; chloral hydrate; collodion; diuretin; exalgin; ferric salts; gelatin (in dilute solution); hydrogen dioxide; lead acetate; menthol; naphthalin; naphthol; nitric acid; phenacetin; potassium permanganate; pyrogallol; resorcin; salol; sodium phosphate; thymol; urethane; terpin hydrate.

ACID, CHROMIC—alcohol; bromides; chlorides; ether; glycerin; hypophosphites; iodides; oxalates; sulphides; sulphites; tartrates. See also chromates.

ACID, CITRIC—acetates; acids (mineral); carbonates; potassium tartrate; sulphides. See also citrates.

ACID, GALLIC—arsenic acid; carbonates; copper salts; ferric salts (if excess of acid absent); gold salts; lead acetate; iodine; lime water; nitric acid; opium in solution; potassium permanganate; silver salts; sodium bicarbonate; tartar emetic.

ACID, HYDROCHLORIC—alkalies; bromates; carbonates; chlorates; chromates; lead salts; mercurous salts; oxides; permanganates; silver salts; tartar emetic. See also chlorides.

ACID, HYDROCYANIC, DILUTE—acids (mineral); antimony oxide; copper and iron salts; mercury oxide; silver nitrate; sulphides. See also cyanides.

ACID, LACTIC—albumin; milks; oxidizers generally.

ACID, NITRIC—alcohol, alkalies; carbonates;



ferrous sulphate; lead acetate; oils (essential); sulphides.

ACID, OSMIC—all organic or oxidizable substances; iodides.

ACID, OXALIC—arsenates; gold salts; metallic salts generally (all but those of aluminium, chromium and magnesium).

ACID, PHOSPHORIC, META—albumin; ferric chloride; gelatin; lead acetate; silver nitrate.

ACID, PHOSPHORIC, ORTHO—chlorides of barium, calcium and magnesium (in ammoniacal solutions); lead acetate; silver nitrate; soluble iron phosphate; and pyrophosphate.

ACID, PICRIC—albumin; alkaloids; gelatin; oxidizable substances; piperazine.

ACID, SALICYLIC—Ferric salts; exalgin; lead acetate; lime water; potassium iodide; quinine salts; sodium phosphate; spirit nitrous ether; urethane.

ACID, SULPHURIC—alcohol; barium and calcium salts; carbonates; hypophosphorous acid; metals; oils (essential); lead, mercurous, silver and strontium salts; organic substances; sulphides; vegetable astringent infusions.

ACID, TANNIC—albumin; alkaloids; amyl nitrite; antipyrin; arsenic acid; bromine; calcium chloride (concent. solution); chlorine; chromic acid; ferric salts; gelatin; glucosides; gluten; hydrochloric acid; iodine; iodoform; lime water; nitric acid; permanganate; piperazine; salts of antimony, bismuth, chromium, copper, gold, lead, mercury and silver; spirit nitrous ether; potassium chlorate or other oxidizers; sulphuric acid; potassium bichromate.

ACID, TARTARIC—alkalies; calcium salts; carbonates; lead salts; lime water; mercury salts; vegetable astringents.

ACONITINE—hot acids, alkalies or water. *Antagonists*; atropine; digitalis; morphine; scoparin; strychnine. See also alkaloids.

ALBUMIN—acetic acid (with heat); alcohol; alum; ammonium sulphate; camphor; carbolic acid; coniine; collodion; copper sulphate; ether; ferric chloride; heat; hydrogen peroxide; lactic acid; mercuric chloride; metallic salts; metaphosphoric acid; mineral acids; picric acid; tannic acid; thymol; volatile oils.

ALCOHOL—acacia; albumin; bromine; chlorine; chromic acid; inorganic salts; mercuric chloride; mineral acids; potassium permanganate. *Antagonists*: Cocaine; strychnine.

ALKALOIDS—alkalies; alkali carbonates and bicarbonates; ammonium chloride; benzoates; bichromates; bromides; borax; cyanides; gold chloride; ichthyol; iodides; mercuric chloride; oxalic acid; picric acid; piperazine; potassio-mercuric iodide (not if acacia present); oxidizers; sodium phosphate; tannic acid; salicylates.

ALOES—mercury nitrate; silver nitrate.

ALOIN—Alkali hydrates; bromine water; ferric chloride; lead acetate, basic (not neutral); tannic acid.

ALUM—alkali hydrates; borax; carbonates; galls; kino; lead acetate; lime water; magnesia and magnesium carbonate; mercury salts; phosphates; tartaric acid; potassium chlorate.

AMMONIUM CARBONATE—acid salts; alkalies; alum; calomel; copper, iron, lead and silver

salts; magnesia; magnesium sulphate; mercuric chloride; potassium bitartrate and bisulphate; tartar emetic; zinc sulphate. See also carbonates.

AMYL NITRITE—alcohol; antipyrin; caustic potassa. *Antagonists:* chloroform, cocaine; morphine; strychnine.

ANGUSTURA—acids (mineral; cinchona infusion; copper sulphate; galls infusion; ferrous sulphate; lead acetate; mercuric chloride; silver nitrate; catechu infusion; zinc sulphate.

ANTHEMIS—cinchona infusion; gelatin; iron salts; lead salts; mercuric chloride; silver nitrate.

ANTIMONY AND POTASSIUM TARTRATE—acacia; acids (mineral); albumin; alcohol; alkalies; ammonia; ammonium carbonate; antipyrin; bicarbonates; calcium chloride; carbonates; gelatin; lead salts; lime water; mercuric chloride; metallic salts; sulphides; tannic acid; vegetable decoctions and infusions.

ANTIMONY SULPHIDE—chlorates and other oxidizers; nitric acid.

ANTIPYRIN—alum; ammonia water; amyl nitrite; benzoates; beta naphthol; bromine; carbolic acid; calomel; chloral hydrate; copper sulphate; chromic acid; cinchona alkaloids; euphorin; ferric chloride; ferrous sulphate; hydrocyanic acid; iodides; iodine; lead subacetate; mercuric chloride; potassium permanganate; pyrocatechin; pyrogallol; resorcin; sodium bicarbonate; sodium salicylate; solution arsenic and mercury iodide; spirit nitrous ether; syrup ferrous iodide; tartar emetic;

tannic acid; thymol; urethane; infusions of catechu, cinchona, rose leaves and uva ursi; tinctures of catechu, cinchona, hamamelis, iodine and rhubarb; orthoform.

APOMORPHINE HYDROCHLORIDE—alkali hydrates and carbonates; alkaloidal reagents generally; ferric chloride; iodides; lime water; permanganates; picric acid; silver nitrate; tannic acid. *Antagonists*: chloral hydrate; chloroform; strychnine.

ARISTOL—Water; substances having affinity for iodine.

ARNICA—acids (mineral); ferrous sulphate, lead acetate; zinc sulphate.

ARSENATES—hypophosphites; iodides and sulphides in acid solutions; salts of aluminium, antimony, barium, calcium, chromium, copper, lead, mercury, silver, and zinc in neutral solutions; tannic acid; iron salts.

ARSENIC—See acid arsenous.

ARSENIC IODIDE—alkaloids generally.

ARSENITES—dialyzed iron; ferric hydrate; hypophosphorous acid and hypophosphites (in acid solution); salts of heavy metals; tannic acid; copper sulphate; potassium iodide; silver nitrate; sulphides; vegetable astringent decoctions and infusions.

ATROPINE—See belladonna.

BALSAM PERU—ferric salts; iodoform; hydrogen peroxide.

BIARIUM SALTS—carbonates; chromates; oxalic acid or oxalates; phosphoric acid or phosphates; sulphuric acid or sulphates; tannic acid; tartaric acid or tartrates.

BELLADONNA—alkaloidal precipitants; alkali hydrates or acids with heat; tannic acid; vegetable decoctions or infusions. *Antagonists:* Aconitine; bromal hydrate; chloral hydrate; hydrocyanic acid; jaborandi; morphine; muscarine; physostigmine; phytolacca; pilocarpine; quinine.

BENZALDEHYDE—ammonia water; caustic potassa; phenol, resorcin or pyrocatechin in absence of hydrochloric acid; sodium bisulphite.

BENZOATES—acids; ferric salts.

BENZOIN—acids; alkalies; water.

BERBERINE SALTS—alkaloidal precipitants, soluble tartrates.

BICARBONATES—like carbonates.

BISMUTH AND AMMONIUM CITRATE—acids.

BISMUTH SUBGALLATE—acids.

BISMUTH SUBNITRATE—alkali carbonates and hydrates; calomel; hypophosphites; gallic acid; iodides; salicylic acid; sulphur, tannic acid.

BORATES—acids (mineral); alkaloidal salts; metallic salts.

BROMAL HYDRATE—acetamide; borneol; carbolic acid; exalgin; menthol; pyrocatechin; urea; urethane. *Antagonist.* Atropine.

BROMIDES—acids; alkaloids; antimony salts; bismuth salts; chlorine water; chlorates (in acid solution); chromates (in acid solution); copper, lead, mercurous, and silver salts; spirit nitrous ether (if acid); nitric acid.

BROMINE WATER—alkali hydrates; arsenites; ferrous salts; hypophosphites; hydriodic acid; mercurous salts.

BROMOFORM—caustic alkalies; aqueous liquids.

BUCHU—ferrous sulphate; infusion galls.

BUTYL-CHLORAL HYDRATE Croton-chloral Hydrate)—acetamide; alkalies; camphor; carbolic acid; exalgin; menthol; piperazine; pyrocatechin; thymol; urethane.

CADMIUM SALTS (Soluble)—alkalies, carbonates; chromates; phosphates; sulphides.

CAFFEINE—like alkaloids in general. *Antagonists*: chloral hydrate; cocaine; morphine; physostigmine.

CALCIUM CARBONATE—acids; alum; ammonium chloride.

CALCIUM SALTS (Soluble)—alkalies; carbonates; citrates (with heat); oxalates; phosphates; tartrates.

CALOMEL—See mercurous chloride.

CALUMBA—acids (mineral); ammonia; cinchona infusion; galls infusion; ferric salts; lead acetate; lime water; mercuric chloride; silver nitrate; tartar emetic.

CAMPHOR—butyl-chloral hydrate; carbolic acid; chloral hydrate; chromic acid; dichloroacetic acid; euphorin; hydrochloric acid; menthol; monochloroacetic acid; naphthol; potassium permanganate; pyrocatechin; pyrogallol; resorcin; salol; salicylic acid; thymol; urethane; water.

CAMPHOR, MONOBROMATED—carbolic acid; chloral hydrate; euphorin; pyrocatechin; salol; thymol.

CANTHARIDIN—copper sulphate; lead acetate; mercuric chloride; silver nitrate.

CAPSICUM—alum; ammonia; carbonates (alka-

line); copper sulphate; ferrous sulphate; galls infusion; lead acetate; mercuric chloride; silver nitrate; zinc sulphate.

**CARBONATES**—acids; acid salts; alkaloidal salts; bismuth subnitrate; salts of aluminium, antimony, barium, bismuth, cadmium, calcium, chromium, cobalt, copper, iron, (ic and ous), lead, manganese, mercury (ic and ous), nickel, silver, strontium and zinc; urethane.

**CARDAMOM**—acids; ferrous sulphate; mercuric chloride.

**CATECHU**—acids (mineral); albumin; alkalies; calcium salts; cinchona infusion; ferric and ferrous salts; gelatin; lime water; mercuric chloride; zinc sulphate.

**CHARCOAL**—all oxidizers (potassium chlorate, potassium permanganate, etc.).

**CHLORAL HYDRATE**—acetanilid; alcohol; alkalies; ammonium salts; borax; borneol; camphor; camphor monobromated; carbolic acid; diuretin; euphorin; exalgin; glycerin (with heat); lead acetate; menthol; mercuric oxide and nitrate; phenacetin; piperazine; potassium cyanide; potassium permanganate; potassium iodide; pyrocatechin; quinine sulphate; salol; sodium phosphate; thymol; urea; urethane. *Antagonists*: ammonium chloride; atropine; brucine; carbolic acid; caffeine; cocaine; codeine; digitalis; physostigmine; picrotoxin; strychnine; thebaine.

**CHLORATES**—ammonium picrate; arsenites or bromides (in acid solution); carbolic acid; charcoal; cyanides; ferrous salts (in acid solution); gallic acid; glycerin; honey; hydro-

chloric acid; hypophosphites; hyposulphites; iodides (in acid solution); iodine; iron (reduced); lycopodium; mercurous salts (in acid solution); oxalic acid; phosphorus (amorphous); sulphides in acid solution; sulphuric acid; salicylic acid; shellac; starch; sugar; sulphides; sulphites.

CHLORIDES—hydrogen peroxide; lead, mercurous, and silver salts; nitric and sulphuric acids.

CHLORINATED LIME—fats; glycerine; iodides; oils.

CHLORINE WATER—alkalies; ammonium salts; arsenous salts; bromides; ferrous salts; hypophosphites; iodides; lead salts; lime water; mercurous salts; oxalic acid; silver salts.

CHLOROFORM—caustic alkalies; aqueous fluids. *Antagonists*: amyl nitrite.

CHROMATES—barium, bismuth, lead, manganese, mercury, silver, and strontium salts.

CINCHONA—acids (mineral); alkalies; carbonates; alkaloidal precipitants; ferric and ferrous salts; lead acetate; lime water; magnesia; mercuric chloride; rhubarb infusion; silver nitrate; tartar emetic; zinc sulphate.

CITRATES—alcohol; lead acetate; potassium permanganate (in acid solution); silver nitrate.

COCAINE—acids (concent.); alkaloidal precipitants; alkalies; caustic alkalies; hot water. Cocaine hydrochloride is incompatible with calomel, chloroform water, mercuric oxide and silver nitrate. *Antagonists*: alcohol; amyl nitrite; caffeine; chloral hydrate; digitalis; **morphine**.



CODEINE—alkalies; alkaloidal precipitants; ammonium bromide or chloride; ammonium valerianate; copper, iron, and lead salts. *Antagonist*: chloral hydrate.

COLCHICINE—acids; alkalies; alkaloidal precipitants.

COLLODION—carbolic acid; aqueous fluids.

COLOCYNTH—alkalies; ferrous sulphate; lead sulphate; lime water; mercuric chloride; silver nitrate.

CONIINE—albumin; aluminium salts; alkaloidal precipitants; chromic acid; copper, iron, manganese, and zinc salts.

CONIUM—acids (vegetable); alkalies; tannic acid.

COPAIBA—acids (mineral); caustic alkalies; both calcium hydrate and magnesia solidify it; water.

COPPER AMMONIATED—acids; alkalies; lime water.

COPPER SULPHATE—alkalies; ammonium acetate; arsenites; arsenous acid; calcium chloride; carbonates; ferric acetate; glucose (in alk. sol.); iodides; lead acetate; lime water; mercuric chloride; potassium tartrate; phosphates; silver nitrate; sodium borate; vegetable astringent infusions and tinctures.

CORROSIVE SUBLIMATE—See mercuric chloride.

CREOSOTE (BEECHWOOD)—acacia; albumin; cupric, ferric, gold, and silver salts; nitric acid; oxidizers.

CYANIDES—acids; alkaloids; chloral hydrate; iodine, lead, mercurous, and silver salts; per-

manganates; potassium chlorate; potassium nitrate. *Antagonist*: atropine.

DECOCTIONS—like infusions.

DIGITALIS—acids; alkalies; alkaloidal precipitants; cinchona infusion; ferrous sulphate; lead acetate; tannic acid and other vegetable astringents. *Antagonists*: aconite; chloral hydrate; cocaine; glonoin; muscarine; saponin; scoparin; strychnine.

DIURETIN—acids; bicarbonates; borates; carbolic acid; chloral hydrate; ferric chloride; phosphates; phosphoric acid. Also those of salicylates.

ERGOT—alkaloidal precipitants; tannic acid.

ETHER—bromine; chromic acid.

ETHER ACETIC—alkalies; chlorine water; chromic acid; water.

ETHYL BROMIDE—alkalies; ammonia water.

EUCALYPTOL—potassium permanganate.

EXALGIN—bromal hydrate; butyl-chloral hydrate; carbolic acid; chloral hydrate; euphorin; menthol; naphthol; pyrocatechin; pyrogallol; resorcin; salicylic acid; salol; thymol; urethane.

FORMALDEHYDE—albumin; alkalies; ammonia; bisulphites; gelatin; copper, gold and silver salts; phenylhydrazine; iron and tannin preparations.

GELATIN—alcohol; alumol; chlorine water; ferric salts; formaldehyde; mercuric chloride; metaphosphoric acid; picric acid; platinum chloride; potassium ferrocyanide; tannic acid; tartar emetic.

GENTIAN—ferric and ferrous salts; lead acetate.

GLONAIN—alkalies; carbonates; hydrochloric acid; hydriodic acid.

GLUCOSIDES—acids; alkalies; ferments; lead acetate and subacetate; hot water; tannic acid.

GLYCERIN—chromic acid; hot acids; lead oxide; potassium permanganate; silver nitrate.

GLYCYRRHIZIN, AMMONIATED—acids (mineral); alkalies; metallic salts.

GOLD AND SODIUM CHLORIDE—alkalies; alkaloïds; arsenites; hypophosphorous acid; ferrous and mercurous salts; organic substances; oxalic acid; potassium iodide; sulphurous acid; thymol; vegetable infusions.

GUAIAC RESIN—acids (mineral); acacia; chlorine water; chromic acid; ferric and gold chlorides; metallic salts; potassium permanganate; spirit nitrous ether.

GUAIACOL—like creosote.

HOMATROPINE—like belladonna.

HYDRASTIS—alkaloidal precipitants.

HYDROGEN DIOXIDE—alkalies; albumin; ammonia; arsenous salts; balsam Peru; carbolic acid; charcoal; chlorides; chlorine water; citrates of alkalies; ferric salts; glycerin; gold salts; hydrocyanic acid; hypophosphites; iodides; lime water; manganese dioxide; mercurous salts; nitrates; potassium bromide; potassium permanganate; sulphates; solution of chlorinated soda; tartrates; tinctures generally.

HYOSCYAMUS—acids; alkaloidal precipitants;

ferrous sulphate; lead acetate; silver nitrate; vegetable astringents.

**HYPOPHOSPHITES**—arsenic salts; bromine and bromates; chlorine and chlorates; chromates; cupric salts; ferric salts; iodine and iodates; nitric acid; permanganates; sulphuric acid; sulphurous acid.

**ICHTHYOL**—acids; alcohol; alkaloids; carbonates; iron salts.

**INFUSIONS**—alkaloidal salts; aluminium-hydrate solution; lead acetate and subacetate; mercuric chloride; silver nitrate; tartar emetic.

**IODIDES**—alkaloids; arsenic salts (in acid sol.); bromine; chlorine; bismuth, cupric, ferric, lead, mercury (ic and ous), and silver salts; hydrogen peroxide (in acid sol.); nitric acid; nitrites (in acid sol.).

**IODINE**—alkalies; alkaline earths; chloral hydrate; alkaloids; ferrous salts; hypophosphites; hyposulphites; mercurous salts, metals; oils; turpentine; starch, tannic acid.

**IODOFORM**—alkalies (with heat); balsam Peru; calomel; mercuric oxide; oils (in the light); silver nitrate; tannic acid.

**IPECAC**—lead acetate; vegetable astringents.

**IRON (FERROUS) SALTS**—alkalies; carbonates; chromates; chlorates (in acid sol.); ferricyanides; gold salts; hydrogen dioxide; mercuric salts; phosphates; permanganates; sulphides; tannic acid; silver salts.

**IRON (FERRIC) SALTS**—acacia; albumin; alkalies; apomorphine; aloin; benzoates; carbonates; creosote; balsam Peru; benzoin (in alcohol sol.); diuretin; gallic acid; gelatin; guaiac;

guaiacol; hydriodic acid; hypophosphites; hyposulphites; iodides; morphine; oils of bay, cloves, cinnamon, pimento, thyme, and wintergreen; pyrogallol; resorcin; salol; sulphides; sulphites; salicylates; tannic acid; vegetable infusions and decoctions.

**IRON CHLORIDE (FERRIC)**—acacia; albumin; alkalies; carbonates; gelatin; lime water; magnesium carbonate; piperazine; vegetable decoctions, infusions and tinctures.

**IRON SULPHATE (FERROUS)**—alkalies; ammonium, barium, and calcium chlorides; carbonates; gold and silver salts; lead acetate; lime water; potassium iodide; piperazine; potassium nitrate; Rochelle salt; sodium borate; tannin; vegetable astringent infusions.

**LEAD ACETATE**—acids; alkalies; bromides; carbolic acid; carbonates; chloral hydrate; chlorides; chromates; cyanides; glucosides; gums; hydrochloric acid; iodides; opium; pyrocatechin; pyrogallol; resorcin; salicylic acid; sodium phosphate; sodium salicylate; sulphates; sulphides; sulphites; tannic acid; urea; urethane; vegetable decoctions, infusions, and tinctures.

**LEAD SUBACETATE**—see sol. lead subacetate.

**LUPULIN**—salts of iron, mercury, platinum and tin.

**MAGNESIA**—acids; with copaiba forms solid mass; with little water becomes hydrated.

**MAGNESIUM SALTS**—alkalies; arsenates; carbonates; lead acetate; lime water; oxalates; phosphates; silver nitrate; sulphites; tartrates.

**MANGANESE SALTS**—alkalies; carbonates; bro-

mine; chlorine, and iodine (in alk. sol.); cyanides; phosphates.

MENTHOL—bromal hydrate; butyl-chloral hydrate; camphor; carbolic acid; chloral hydrate; chromic acid; exalgin; naphthol; potassium permanganate; pyrocatechin; pyrogallol; resorcin; thymol; urethane.

MERCURIC CHLORIDE (CORROSIVE SUBLIMATE)—albumin; alkalies; alkaloids; ammonia; antimonous and arsenous salts; bromides; borax; carbonates; copper salts; ferrous salts; formic acid; glucosides; honey; hypophosphites or hypophosphorous acid; iodides; infusions of cinchona, columbo, oak bark, and senna; lead salts; lime water; milk; phosphates; piperazine; silver nitrate; soap; sulphates of potassium or sodium; sulphides; syrup sarsaparilla compound; tannic acid; tartar emetic; vegetable astringents; zinc salts.

MERCUROUS CHLORIDE (CALOMEL)—acacia; acids (mineral); alkalies; ammonia; antimony sulphide, golden; arsenites (in alk. mixtures); bromides; carbonates; chlorides; citric acid; cocaine; cyanides; copper salts; hydrocyanic acid; hydrogen peroxide; hypophosphorous acid; iodides; iodine; iodoform; lead salts; lime water; mercuric oxides; pilocarpine; sodium bicarbonate; sugar (cane and milk; silver salts; soaps; sulphides; tragacanth.

MERCURY AMMONIATED (WHITE PRECIPITATE)—acids; alkalies; bromine; chlorine; iodine; lime water.

MERCURY IODIDE, RED—like mercuric chloride.

MERCURY IODIDE, YELLOW—like mercurous chloride.

MERCURY OXIDE—mineral acids; chloral hydrate; mercuric chloride.

MERCURY SUBSULPHATE (TURPETH MINERAL)—acids; caustic alkalies.

METHYLENE BLUE—caustic potassa; potassium bichromate; potassium iodide; reducing agents; sulphuric acid.

MORPHINE—alkaloidal precipitants; borax; chlorates; ferric chloride; iodates; iodides; iodine; lead acetate and subacetate; magnesia; spirit nitrous ether; silver nitrate. See also alkaloids. *Antagonists*: atropine; caffeine; chloroform; cocaine; daturine; gelsemium; hyoscyamine; nicotine; paraldehyde; physostigmine; picrotoxin; veratrum viride.

MUSK—acids (mineral); cinchona infusion; ferrous sulphate; mercuric chloride; silver nitrate.

NAPHTALIN—carbolic acid; chromic acid; pyrocatechin; salol.

NAPHTOL BETA—antipyrin; camphor; carbolic acid; chlorinated lime; exalgin; ferric chloride; menthol; potassium permanganate; pyrocatechin; urethane.

NITRITES—Acetanilid; antipyrin; chlorates; chromates; gold chloride; hypophosphites; iodates; iodides; mercury salts (ic and ous); permanganates; sulphites; tannic acid; vegetable astringent decoctions; infusions or tinctures.

NITROGLYCEBIN—see glonoin.

NUX VOMICA—see strychnine.

OIL TURPENTINE—bromine; chlorine; iodine; water.

OIL WINTERGREEN—like acid salicylic.

OPIUM—alkalies; alkaloidal precipitants; carbonates; catechu; cinchona; copper salts; galls; iron salts; kino; lead acetate and subacetate; lime water; mercuric chloride; silver nitrate; zinc sulphate. *Antagonists:* see morphine.

OXALATES—see oxalic acid.

PANCREATIN—acids; alcohol; sodium chloride (in excess).

PARALDEHYDE—alkalies; hydrocyanic acid; iodides; oxidizers.

PEPSIN—alcohol; alkalies; tannic acid; vegetable decoctions and infusions.

PHENACETIN—acids (strong; alkalies (strong); carbolic acid; chloral hydrate; iodine; oxidizers; piperazine; pyrocatechin; salicylic acid.

PHENOCOLL HYDROCHLORIDE—acids (nitric or nitro-hydrochloric); alum; benzoates; chloral hydrate; cinchona; compound tincture or decoction; mercuric chloride; piperazine; potassium acetate, bicarbonate, bromide, citrate or sulphate.

PHOSPHATES—see acid phosphoric.

PHOSPHORUS—all oxidizers.

PHYSOSTIGMINE—see alkaloids. *Antagonists:* atropine; caffeine; chloral hydrate; morphine; strychnine.

PICROTOXIN—acids. *Antagonists:* chloral hydrate; morphine.

PILOCARPINE HYDROCHLORIDE—alkaloidal pre-



cipitants; calomel; potassium permanganate.  
*Antagonists:* atropine.

PIPERAZINE—acetanilid; alkaloidal salts; alum; butyl-chloral hydrate; carbolic acid; chloral hydrate; copper sulphate; ferric chloride; ferrous sulphate; mercuric chloride; phenacetin; phenocoll hydrochloride; picric acid; potassium permanganate; quinine; silver nitrate; solution arsenic and mercury iodide; sodium salicylate; spirit nitrous ether; tannic acid.

POTASSA, SULPHURATED—acids; acid salts.

POTASSIUM AND SODIUM TARTRATE—acids; ammonium chloride; barium salts; calcium salts; lead salts; magnesium sulphate; silver nitrate; sodium sulphate.

POTASSIUM PERMANGANATE—acids (mineral); alcohol; ammonia; arsenites; bromides; carbolic acid; chlorides; charcoal; fats; ferrous salts; glycerine; gums; hydrogen dioxide; hypophosphites; hyposulphites; mercurous salts; oils; organic substances; oxalic acid; oxalates; picric acid; piperazine; sulphites; tannic acid; tartaric acid.

PYOKTANIN—alkalies; mercuric chloride.

PYROCATECHIN—acetanilid; alkalies; antipyrin; ammonium carbonate; bromal hydrate; butyl-chloral hydrate; camphor; camphor monobromated; carbolic acid; chloral hydrate; diuretin; euphorin; exalgin; ferric chloride; lead acetate; menthol; naphthain; naphcol; nitric acid; phenacetin; pyrogallol; resorcin; salol; sodium phosphate; thymol; urea; urethane.

PYROGALLOL—alkalies; ammonia; antipyrine;

camphor; carbolic acid; diuretin; exalgin; ferric acetate or chloride; ferrous sulphate; gold salts; iodine; lead acetate; lime water; menthol; mercury salts; potassium permanganate; pyrocatechin; sodium phosphate; urea; urethane.

QUININE AND SALTS—like alkaloids.

RESIN—carbolic acid; caustic alkalies; menthol; salol; thymol; urethane.

RESORCIN—acetanilid; albumin; alkalies; antipyrin; camphor; exalgin; ferric chloride; menthol; potassium iodide (in alk. sol.); spirit nitrous ether; urethane.

RHUEARB—acids (mineral); ferrous sulphate; infusion of catechu; cinchona or galls; lead acetate; lime water; mercuric chloride; silver nitrate; tartar emetic; zinc sulphate.

SALICYLATES—see acid, salicylic.

SALOL—alkalies (with heat); bromine water; camphor; camphor monobromated; carbolic acid; chloral hydrate; exalgin; ferric chloride; naphthalin; pyrocatechin; resin; thymol; urethane.

SARSAPARILLA—galls infusion; lead acetate; lime water; mercuric chloride (with comp. syr. of).

SENNA—acids (mineral); carbonates; cinchona infusion; lead acetate; lime water; mercuric chloride; silver nitrate; tartar emetic.

SILVER NITRATE—acetates; alcohol; alkalies; antimony salts; arsenites; bromides; carbonates; chlorides; chromates; creosote; cyanides; copper salts; ferrous sulphate; glucose; hypophosphites; iodides; morphine salts; oils;

manganous salts; organic substances; phosphates; sulphides; sulphates; tartrates; vegetable astringent infusions and decoctions.

SILVER OXIDE—antimony and arsenic sulphides; bismuth; copper, iron and mercury salts; creosote; iodine; organic substances; phosphorus; tannic acid.

SODIUM HYPOSULPHITE (THIOSULPHATE)—acids; barium, lead, mercurous, and silver salts; arsenic and ferric salts, and chromates and permanganates (all in acid solution); chlorates; iodine; nitrates; oxidizers.

SODIUM PHOSPHATE—alkaloids; antipyrine; carbolic acid; choral hydrate; lead acetate; pyrocatechin; pyrogallol; resorcin; salicylic acid; sodium salicylate. See also acid, phosphoric.

SOLUTION ARSENIC AND MERCURY IODIDE (DONOVAN'S SOLUTION)—alkaloids; caustic alkalies; piperazine. See also acid arsenous and iodides.

SOLUTION LEAD SUBACETATE—acacia; acids (organic); albumin; alkaloids; antipyrine; glucosides. Otherwise like lead acetate.

SOLUTION SODIUM SILICATE—acacia; acids; alcohol.

SPIRIT AMMONIA, AROMATIC—acids; acid salts; lime water; aqueous fluids.

SPIRIT CAMPHOR—acacia; aqueous fluids; gelatin.

SPIRIT LEMON—acacia, aqueous fluids; gelatin.

SPIRIT NITROUS ETHER—acacia; acetanilid; alkalies; antipyrin; carbonates; ferrous sulphate; gelatin; guaiac tincture; iodides; mor-

phine; tannic acid; piperazine; preparations of uva ursi; thymol. See also nitrites.

SPIRIT PEPPERMINT—acacia; aqueous fluids; gelatin.

STARCH (IN SOLUTION)—acids; alcohol; alkalies; diastase; iodine; lead subacetate; lime water; tannic acid.

STRAMONIUM—acids (mineral) salts of iron, lead, mercury and silver. Otherwise like belladonna.

STRONTIUM SALTS—alkalies; carbonates; chromates; oxalates; phosphates; sulphates.

STRYCHNINE—all alkaloidal precipitants. *Antagonists*: aconite; alcohol; amyl nitrite; atropine; chloral hydrate; chloroform; curarine; digitalis; hydrocyanic acid; morphine; nicotine; paraldehyde; physostigmine; potassium bromide; urethane.

SULPHATES—see acid sulphuric.

SULPHUR—potassium chlorate; potassium permanganate.

TARAXACUM—galls infusion, iron, lead, mercury and silver salts.

TARTAR EMETIC—see antimony and potassium tartrate.

TEREBENE—chlorine; bromine; iodine; water.

THEOBROMINE SALTS—gold, mercury and silver salts; water. See also diuretin.

THYMOL—Acetanilid; antipyrin; butyl-chloral hydrate; camphor; camphor monobromated; carbolic acid; chloral hydrate; exalgin; gold salts; menthol; pyrocatechin; quinine sulphate; resin; salol; spirit nitrous ether; urethane.

TRAGACANTH—alcohol; copper sulphate; ferrous sulphate; lead acetate (basic and neutral).

UREA—bromal hydrate; chloral hydrate; lead acetate; pyrocatechin; pyrogallol.

URETHANE—aldehydes; alkalies; antipyrin; benzoic acid; bromal hydrate; butyl-chloral hydrate; camphor; carbonates; carbolic acid; exalgin; menthol; naphtol; pyrocatechin; pyrogallol; resin; resorcin; salicylic acid; salol; thymol.

UVA URSI—alkalies; gelatin; cinchona infusion; iron and lead salts; opium; silver nitrate; spirit nitrous ether; tartar emetic.

VALERIAN—cinchona infusion; iron and silver salts.

VEGETABLE PREPARATIONS—iron and lead salts.

WATER—alcoholic extracts and tinctures; alkaloids generally; collodion; fats; oils; gum resins; resins; resinous extracts and tinctures.

ZINC SALTS—acacia; alkalies; arsenates; carbonates; cyanides; lime water; milk; oxalates; phosphates; sulphates; sulphides; vegetable astringent decoctions and infusions.

EXAMPLES OF INCOMPATIBILITY IN  
PRESCRIPTIONS \*

**R**

Sodii Boratis, gr x

Zinci Sulphatis, gr  $\frac{ii}{\text{II}}$

Aquae Camphoræ, f $\frac{ij}{\text{J}}$

Aquae Rosae, qs. ad., f $\frac{ij}{\text{J}}$

M. Sig. Put one drop in each eye night and morning.

The zinc is entirely precipitated by the borax, producing a white flocculent precipitate of zinc borate or hydrate. If dispensed, the precipitate should be filtered out.

**R**

Iodine, gr xxx

Spirit of Camphor, f $\frac{ij}{\text{J}}$

Soap Liniment, f $\frac{ij}{\text{IIIJ}}$

Mix and label. Apply as directed.

This makes a clear brownish-red solution, which on standing two or three days loses much of its color, becoming light brown. On applying the starch test for free iodine no blue color was obtained. According to Muir and Morley, iodine with camphor forms a hydrocarbon and other substances.

**R**

Liquor Ferri Chloridi, f $\frac{ij}{\text{IJ}}$

Potassii Chloratis, gr xxx

Glycerini, f $\frac{ij}{\text{J}}$

\*From Ruddiman's "Incompatibilities in Prescriptions."  
John Wiley & Sons, Publishers.

M. Sig. Teaspoonful twice a day.

There is considerable danger of having an explosion in attempting to fill this. If the potassium chlorate is rubbed with the glycerin, explosion is liable to take place or if the chlorate be added to the solution of ferric chloride, which always contains some free hydrochloric acid, chlorine will be formed, and this will act upon the glycerin, converting it into oxalic and carbonic acids. In filling this the temperature should not go above 70°F., and then the bottle should be loosely stoppered for a time before giving out.

**R**

Iodoform,

Tannic acid, . . . . . āā  $\frac{\text{3}}{\text{IJ}}$

Mix and label. Dust over abraded surface.

No change is noticed in the appearance of this mixture on standing. The odor of the iodoform slowly diminishes, and, according to the U. S. Dispensatory (17th Ed.), this is due to the decomposition of the iodoform by the tannic acid.

**R**

Sodii Salicylatis,  $\frac{\text{3}}{\text{IJ}}$  ss

Syrupi Limonis,  $\frac{\text{f3}}{\text{IJ}}$

M. Sig. Teaspoonful three times a day.

On standing, the citric acid in the syrup combines with the sodium, liberating salicylic acid, which, being only sparingly soluble in water, is precipitated in needle-shaped crystals. This can be dispensed as a shake mixture. The precipi-

tation is rather tardy and it would be well to give notice of the change which will take place.

**R**

Liquoris Potass. Arsenitis,  $f\overline{3}_J$

Hydrargyri Chloridi Cor.,  $gr\overline{J}$

Aquae,  $f\overline{5}_{IV}$

Misce et fiat sol. Sig. Dessert spoonful three times a day.

Fowler's solution is alkaline, due to the excess of potassium bicarbonate used in making the solution. Boiling with water converts the bicarbonate into the normal carbonate of potassium to some extent. Either the bicarbonate or the normal carbonate precipitates mercuric chloride in solution as the red-brown mercuric oxychloride. If the solution of arsenous acid be used, instead of Fowler's solution it will not give a precipitate with corrosive sublimate.

**R**

Quininae Sulph.,  $gr\ x$

Potassi Acetatis,  $gr\ xx$

Acidi Sulphurici Dil.,  $gtt\ iv$

Aquae, q. s. ad,  $f\overline{5}_J$

M. S. Teaspoonful after meals.

On dissolving the quinine sulphate in part of the cinnamon water with the aid of the sul-



phuric acid, then adding the potassium acetate previously dissolved in the remainder of the water, a voluminous precipitate of quinine acetate is obtained. Quinine acetate is only sparingly soluble in water, and the amount here formed is so large and bulky that it is difficult to pour out an even dose.

**R**

Acidi Carbolici, ʒiiss

Aquae, q. s. ad, ʒ̄j

M. S. Use with camel-hair brush.

Water can be added to carbolic acid, until the proportion is about 3 parts of acid to 1 part of water, forming a clear solution. (Allen). On adding more water the acid separates as an oily liquid, going to the bottom. When water has been added so that the proportion is about 1 part of acid to 15 parts of water, a clear solution again results. In this prescription there will be a layer of liquefied acid in the bottom of the bottle. If the brush should remain in the bottle between the periods of using it there is danger that it will become saturated with the strong acid and that it will be applied in this condition. By the use of some glycerin in place of part of the water a clear solution can be made and this is what should be done.

**R**

Syrupi Acidi Hydriodici, fʒ̄ij

Bismuthi Subnit, ʒ̄iiss

M. S. Teaspoonful three times a day.

The bismuth subnitrate is insoluble in the syrup, but a chemical reaction takes place between it and the hydriodic acid, as is evidenced by the change in color. Bismuth subnitrate is white; on mixing it with the syrup the color becomes yellow, and within a few minutes it turns to a dark brown and then grayish black. On allowing the precipitate to settle it appears to be a mixture of two compounds, one yellow and the other dark gray. According to Watts' Dictionary, the oxyiodide of bismuth is copper-colored and the bismuth iodide is a brilliant gray.

## R

|             |         |
|-------------|---------|
| Alcohol,    | 30 cc.  |
| Iodine,     | 10 gm.  |
| Turpentine, | 200 cc. |

Mix. To be used as a spray.

If the turpentine is poured upon the iodine violent chemical reaction results, with the formation of violet fumes of vaporized iodine, caused by the heat generated. While there is not enough of alcohol to dissolve all of the iodine, it is best to dissolve as much as possible before adding the turpentine, which should be added in small portions, cooling the mixture if necessary. Upon standing the liquid separates into two layers. The lower one, being much smaller in amount and very dark colored, is probably the alcohol holding most of the

iodine in solution; the upper stratum is very much lighter in color and is probably the turpentine. Turpentine and alcohol are not miscible in all proportions.

## R

|                        |               |
|------------------------|---------------|
| Bismuth Subnit.,       | $\frac{3}{1}$ |
| Sodii Bicarbonatis,    | grxxx         |
| M. Fiant pil., No. XX. |               |

In mixing these two substances chemical reaction takes place, with the liberation of carbon dioxide, which causes the mass to swell to several times its original size. This reaction goes on slowly requiring several hours for its completion, and the mass should not be made into pills until the reaction has been completed. If the subcarbonate had been substituted for the subnitrate incompatibility would have been avoided and the same physiologic effects obtained.

## R

|                                            |      |
|--------------------------------------------|------|
| Potassii Bromidi,                          | grxv |
| Hydrargyri Chlor. Mitis,                   | grxv |
| Misce et fiat pulvis: Mitte tales No. XII. |      |

If the ingredients are powdered separately and are perfectly dry when mixed no chemical reaction takes place. But upon addition of water or in the presence of moisture the powder becomes dark gray in color. The darkening is due to the formation of metallic mercury. At

the same time some of the calomel is converted into a mercuric salt, rendering the prescription dangerous. It should not be dispensed.

### R

Morphinae Sulph., gr ii

Sp. Aetheris Nitrosi,

Aquae, a a f̄<sub>5</sub> ss

Misce. Signa: Capiat cochleare unum parvum quoties requiritur.

The nitrous ether acts upon the morphine giving a yellowish green solution. Morphine is undoubtedly oxidized by the nitrous acid, but the products have not been determined.

### R

Liq. Plumbi Subacet. Dil.,

Tinctural Opii, a a f̄<sub>5</sub> ss

Aquae, f̄<sub>5</sub> J

M. S. Lotion.

This is a very common combination. Lead subacetate forms compounds with nearly all alkaloids, and these are insoluble in water. The opium alkaloids are no exceptions. The alcohol of the tincture undoubtedly tends to prevent the precipitation to some extent, though there is still quite a heavy one. The mixture should not be filtered.

|          |                       |                                      |
|----------|-----------------------|--------------------------------------|
| <b>R</b> | Cocainae Hydrochlor., | grv                                  |
|          | Sodae Boratis,        | gr <sup>ij</sup>                     |
|          | Aquae Dest.,          | ʒj                                   |
|          | M. S.                 | Drop one drop in right eye at night. |

Borax is alkaline in reaction and precipitates nearly all alkaloids from solutions of their salts. It precipitates the cocaine in this prescription, but the difficulty can be prevented by the use of a little glycerin. The glycerin acts chemically on the borax, breaking it up and forming sodium metaborate and boric acid. If boric acid were used instead of borax no precipitation would occur.

|          |                     |                                |
|----------|---------------------|--------------------------------|
| <b>R</b> | Sp. Ammoniae Arom., | fʒ <sup>ii</sup>               |
|          | Liquoris Calcis,    | fʒ <sup>ii</sup> <sub>ss</sub> |
|          | M. S.               | Dessertspoonful as needed.     |

On mixing these two ingredients together a white precipitate of calcium carbonate is formed, the spirit containing ammonium carbonate. The lime water also throws out of solution the oils of the aromatic spirit. Whether the precipitate should be filtered out or not must depend upon the conditions for which the medicine is prescribed.

## POISONS AND THEIR ANTIDOTES \*

In treating cases of poisoning, four indications must be kept in mind: (A) How to most quickly get the bulk of the poison out of the stomach by forcibly emptying it; (B) how to antidote the residual poison after evacuating the stomach; (C) how to eliminate from the system the poison that has entered the blood or gone on into the intestines; (D) how to treat the dangerous symptoms as they arise from the effects of the poison.

ACETANILID. ANTIFEBRIN. ANTIPYRIN.—Place patient in a recumbent position, allow plenty of fresh air; give stimulants (brandy, whiskey, aromatic spirits of ammonia, etc.) Apply heat externally; use atropine or belladonna to maintain blood pressure; strychnine to aid respiration; oxygen inhalations if there is excessive cyanosis.

ACID ACETIC.—Administer magnesia freely; soap and water; lime water; chalk; milk, oils and thick gruel may be given.

ACID CARCOLIC.—Unless great destruction of mucous membrane has occurred, produce vomiting by means of warm water containing some sodium bicarbonate or zinc sulphate; mustard; apomorphine. Demulcent drinks, flaxseed or elm tea, and white of egg beaten up with water, protect mucous surfaces. Do not give oils or glycerin. As stimulants use whiskey, alcohol, ammonia, etc., hypodermically if need be;

\*From Merck's Report Ready Reference. (Adapted to veterinary practice. When vomiting is mentioned it is understood to refer to the smaller animals as the pig, dog and cat; not to the herbivora).

warmth; friction. Opium relieves pain. Excite counter irritation over the abdomen. Give digitalis and strychnine if needed. Recently whiskey and brandy have been warmly recommended, followed in a few minutes by a hypodermic injection of apomorphine to produce vomiting. A Dublin veterinarian, Allen, has lately recommended turpentine for carbolic acid poisoning.

ACID, CARBONIC AND COAL GAS.—Bring the patient at once into the open air. If the respiratory movements have ceased, cold water should be dashed on the face and chest, to awaken them to reflex action. If no effect is thereby produced resort to artificial respiration which should be continued for at least an hour. A series of quick sharp blows over the cardiac region will sometimes start the heart into action after it has stopped. Inhalation of oxygen or ammonia vapor, or an enema of black coffee, and venesection, may be of service.

ACID, CHROMIC, POTASSIUM CHROMATE AND BICHROMATE.—Evacuate the stomach with  $\frac{1}{2}$  oz. of mustard stirred to a cream with 1 oz. of water; (man or dog), or with zinc sulphate, apomorphine; ipecac or pump. Follow with magnesium oxide or carbonate, sodium bicarbonate, or chalk, in water; as demulcent drinks give barley, elm or flaxseed water.

ACID, HYDROCYANIC, CYANIDES, CHERRY-LAUREL WATER, OIL BITTER ALMOND.—Fifteen minims of official acid, or 1 grain of anhydrous acid, usually kills (man or dog) in 10 to 15 minutes. Place in recumbent position, allow plenty of

fresh air; empty the stomach by mustard, zinc sulphate, or pump; keep the body warm. If breathing ceases, use artificial respiration, mild faradic current to the heart, alternate cold and warm affusion to head chest and spine; administer ammonia by inhalation or give it by mouth or veins; inject atropine solution 2 to 4 drops every half hour, to assist the heart's action. Ferrous sulphate with ferric sulphate, followed by potassium carbonate, yields inert Prussian blue. Ferrous sulphate alone or with calcined magnesia renders the acid insoluble, but the action of the acid is so quick that there is scarcely time for the applications of many remedies. Brandy by the mouth, skin, or rectum has been found valuable.

ACID, OXALIC AND OXALATES.—Half to one ounce usually proves fatal (man or dog). If not already vomited by the poison, empty the stomach at once with mustard, zinc sulphate, pump or tube, then neutralize with chalk, whiting, or wall plaster in water, or lime water itself, never with sodium, potassium or ammonia salts, as these form soluble oxalates; apply hot fomentations to the loins. Give an enema to empty the bowels. Give much water to facilitate elimination by the kidneys.

ACIDS, MINERAL: HYDROCHLORIC, NITRIC, NITROHYDROCHLORIC, SULPHURIC, PHOSPHORIC.—One to four drams of the stronger acids usually proves fatal (man and dog). Neutralize with sodium bicarbonate, calcined magnesia, lime, chalk, or wall plaster mixed with water; if none of these are accessible, dilute and wash out the stomach



with considerable water. One may use with advantage any of the following—soap, milk, gruel, olive and almond oil, eggs beaten up. Avoid the stomach pump as it might perforate the softened œsophagus.

ACONITE AND ACONITINE.—Thirty to sixty drops of tincture or one-twentieth grain of alkaloid generally prove fatal (man or dog). Evacuate the stomach at once with zinc sulphate; apomorphine, mustard, or pump; place in a recumbent position, the head the lowest; apply warmth to the extremities; give solution, four drops hypodermically or, give tincture of belladonna twenty drops by the mouth, repeated. If heart syncope presents, give tincture of digitalis fifteen drops hypodermically or thirty drops by the mouth. As stimulants, use ammonia, brandy, strychnine, mustard plasters to the chest. Aid vomiting and elimination of the poison by abundant water, to which may be added brandy or alcohol in any form. Inhale amyl nitrite, or oxygen, and if breathing stops use artificial respiration. Animal charcoal and tannin are of service.

(The doses of the antidotes mentioned above are for man and dog; for larger animals the dosage should be in proportion to size).

ALCOHOL.—Inebriation somewhat resembles opium poisoning and concussion of the brain. Empty the stomach, wash out well with warm coffee, keep the body very warm, but apply cold douche to the head; allow plenty of fresh air; apply interrupted current to the respiratory muscles; ammonia water or amyl nitrite to the

nostrils; keep the patient awake mechanically by shaking, shouting, etc.

ALKALIES, POTASSA. SODA AND AMMONIA.—They usually cause vomiting, but if they do not, accomplish this by plenty of luke-warm water, to be followed by vinegar (dilute acetic acid, lemon or orange juice, tartaric or citric acid solution, 2 drams to a pint of water); olive oil (1 to 4 drams for man and dog); egg white, milk, demulcent drinks (arrowroot, elm, barley, or flaxseed water) to protect the mucous membranes and sustain vital powers. May always give plenty of water and relieve pain with laudanum or hypodermics of morphine.

ALKALOIDS IN GENERAL.—Tannin generally forms comparatively insoluble tannates: albumin; iodine and charcoal also of service; use emetics and cathartics *later*.

AMMONIA.—Administer vinegar, lemon juice, orange juice, or any vegetable acid, followed by demulcents to protect the mucous surfaces. When inhaled, give vapor of acetic or hydrochloric acid or chlorine water by inhalation.

AMYL NITRITE.—Atropine, ergotin, or strychnine hypodermically are the best antidotes; stimulants, alternate hot and cold douches, with cold to the head, and artificial respiration are also useful measures.

ANTIMONY COMPOUNDS, TARTAR EMETIC.—In man, 2 to 5 grains have occasioned death, while several drams have failed to produce more than great vomiting and alarming general symptoms. Should these fail to cause the patient to vomit one must create this by mustard, zinc sulphate,

apomorphine or pump; follow with strong tea or coffee, solution of tannic or gallic acid, to form an insoluble compound. Give demulcent drinks (flaxseed, slippery elm, egg white, milk); opium and stimulants in small but frequent doses. If the body be cold, apply blankets; faradic current over the heart if necessary. Instead of tannin, freshly precipitated ferric hydroxide can be used, following with opium or morphine for the pain.

ANTIPYRIN.—See Acetanilid.

APOCYNIN.—Like Digitalis.

ARSENIC COMPOUNDS.—Unless the poison itself vomits, accomplish this with mustard, zinc sulphate, apomorphine, pump, or tube. Either wash out the stomach with a large quantity of water or give freshly precipitated hydrated oxide of iron, made by double decomposition between any ferric solution and a solution of either diluted ammonia water, sodium carbonate, or magnesium oxide, the object being to form insoluble ferric arsenite or arsenate. The ammonia acts as a stimulant, the calcined magnesia as an aperient. One may give with advantage, oil, mucilaginous drinks, egg white, and in case of faintness, stimulants. If the skin be cold, apply hot blankets, and relieve the pain by opium or morphine; one may conclude with a dose of castor oil.

ATROPINE.—See Belladonna.

BARIIUM COMPOUNDS.—See Lead compounds.

BELLADONNA OR ATROPINE, HYOSCYAMUS OR HYOSCYAMINE, STRAMONIUM OR DATURINE, DULCAMARA OR SOLANINE, DUBOISIA OR DUBOISINE.—Empty the stomach by mustard, zinc sulphate

apomorphine, pump or tube; give strong infusion of coffee, or tea by the mouth or rectum; also pilocarpine nitrate; or instead, use morphine, opium, or physostigmine to antagonize the nervous disturbances of the poison. Apply hot water to the feet; alternate douches of hot and cold water are useful. Give stimulants (whiskey or brandy), ammonia to the nostrils; also practise artificial respiration.

**BENZENE.**—Evacuate the stomach (mustard, zinc sulphate, apomorphine, ipecac, pump). Give abundant fresh air; hypodermic of atropine, or tincture of belladonna. Apply alternately hot and cold water douches to the chest; practise artificial respiration, and apply a mild interrupted current over the heart.

**BLUE STONE.**—See copper, under mercury compounds.

**BROMIDES.**—Give strong coffee, caffeine citrate, digitalis; morphine is antagonistic to mental symptoms; ergot and belladonna are sometimes used.

**BROMINE.**—Give albumin, starch, gelatin, sodium or potassium carbonate or bicarbonate. Against the irritant vapor, inhalations of steam and ammonia vapor may be employed.

**BRUCINE.**—See strychnine.

**CALABAR BEAN.**—See Physostigma.

**CAMPHOR.**—Empty the stomach (by mustard, zinc sulphate, pump, etc.); give alcohol or brandy in small and frequent doses (best hypodermically) ether inhalations; alternate hot and cold douches; warmth to the extremities by hot blankets, etc.

**CANNABIS INDICA.**—Treat as in opium, but also in the first stages use lemon juice.

**CANTHARIDES OR CANTHARIDIN.**—In man or dog a half dram of powder or one ounce of the tincture usually proves fatal. Empty the stomach (mustard, zinc sulphate, apomorphine, ipecac, pump); allay pain with morphine hypodermically or tincture of opium (through the mouth or rectum). Give plenty of demulcent drinks (barley, elm, flaxseed tea, gruel or pure water) but no oils or oily emulsion, in which catharidin is very soluble; opium, stimulants, warm baths, cataplasms to the abdomen.

**CARBON DISULPHIDE.**—Quiet the nervous excitement with potassium bromide and chloral; support the circulation with stimulants; may vomit with mustard at first; ammonia to nostrils, warmth to the body, cold douche to the head; artificial respiration.

**CASTOR BEANS.**—In man three seeds in one case, and twenty in another, have caused death in two and five days respectively. As soon as they have been swallowed give an emetic (mustard, etc.); later give demulcent drinks, opium to quiet violent symptoms which resemble those of cholera.

**CAT BITES.**—See Dog Bites.

**CHERRY-LAUREL WATER.**—See Acid Hydrocyanic.

**CHLORAL.**—One-half to one dram may prove fatal (small animals); empty the stomach (mustard, zinc sulphate, apomorphine, ipecac, pump). When the stomach is empty introduce coffee by tube (mouth or rectum); keep limbs

warm (friction, mustard plasters, water bags). Administer hypodermically, fresh 2% solution of strychnine nitrate every fifteen minutes. Picrotoxin may be substituted for strychnine. Arouse the patient and keep him awake by coffee, caffeine, flagellation, shaking, shouting; apply ammonia to the nostrils, cold to the head; amyl nitrite inhalation to stimulate the heart; practise artificial respiration if necessary.

CHLORATES (and Nitrates—potassium, sodium, etc.)—Empty the stomach (mustard, zinc sulphate, amorphine). Give plenty of water and mucilaginous drinks to dilute the poison, opium to relieve the pain; amyl nitrite inhalations; avoid stimulants that would increase kidney congestion, keep warm by hot fomentations to the loins.

CHLOROFORM or Ether, Nitrous Oxide Gas.—Withdraw the inhalation at once, lower well the head; pull the tongue forward so as to admit plenty of fresh air. Use artificial respiration and heat; weak current—one pole at the larynx, the other on the pit of the stomach (not far from the diaphragm). Apply hot and cold douche; inhale amyl nitrite. If the heart has stopped, give several taps over that region, inhale ammonia, give brandy, atropine, strychnine. If swallowed evacuate the stomach (mustard, zinc sulphate, apomorphine, pump); enema of hot coffee, large draughts of water, containing sodium carbonate or bicarbonate, and proceed as if inhaled.

CHLORINATED LIME.—Administer albumin, mucilaginous drinks, oils, milk, or flour and water;

avoid acids. Opium and alcohol are used for the vital depression.

**CHLORINE.**—Against chlorine preparations in the stomach employ albumin or ammonia water in small quantity and well diluted; emesis with warm water, then white of egg, or milk, flour, or lime water. Ammonia vapor is used against inhaled chlorine.

**COAL GAS.**—Carbon monoxide is the poisonous agent. See also Acid, Carbonic.

**COBALT.**—See Arsenic.

**COCAINE.**—Resembles closely atropine in its general action as to pulse, pupils, respiration, sweat glands and bowels. Give one of the usual emetics, then tannin. Morphine is probably the best all round antagonist; then in sequence, chloral, chloroform, and ether. Give amyl nitrite to counteract heart depression; alcohol and opium to stimulate the heart; should these fail, use artificial respiration. One may employ ammonia inhalations and caffeine.

**COCCULUS INDICUS.**—See Strychnine.

**CODEINE.**—See Opium.

**COLCHICUM** (wine or tincture; Colocynth, Elaterium).—If vomiting and purging have not occurred, accomplish the former by one of the usual emetics (mustard, zinc sulphate, ipecac, apomorphine, or pump); follow with tannic or gallic acid, or strong tea or coffee; plenty of water and demulcent drinks; opium or morphine to allay the pain in the stomach, purging, and to antagonize heart depression, stimulants (alcohol, whiskey, etc.). Keep the extremities warm and apply hot fomentations to the abdomen.

COLOCYNTH.—See Colchicum.

CONIUM (or Coniine).—Empty the stomach (mustard, zinc sulphate, apomorphine, pump); apply external warmth (hot wraps, bags or bottles), give strong tea, coffee, tannic, or gallic acid, or any solution containing tannin; stimulants, artificial respiration; strychnine, picrotoxin, active exercise; castor oil.

CONVALLARIA.—See Digitalis.

COPPER COMPOUNDS.—See Mercury Compounds.

CORROSIVE SUBLIMATE.—See Mercury Compounds.

CREOSOTE.—Practically the same as with Carbolic Acid.

CROTON OIL.—Empty the stomach (mustard, zinc sulphate apomorphine, pump); give tincture of opium or morphine hypodermically, until pain and purging are abated. Give demulcent drinks (elm, flaxseed water, mucilage, milk, olive oil, albumin, soup); spirit of camphor in milk; stimulants (brandy, alcohol, whiskey, ammonia), warm baths are also used.

CURARINE (or Curare).—If introduced in a wound and all is not removed apply ligature, suck the injured part, washing it out with slightly alkaline solution of potassium permanganate; apply warmth to the loins, plenty of water internally, artificial respiration; spirit of nitrous ether rapidly eliminates the poison through the urine. The great difficulty is in sustaining life by artificial respiration until elimination begins.

CYANIDES.—See Acid Hydrocyanic.

OIL BITTER ALMOND.—See Acid Hydrocyanic.



CYTISINE (or Laburnum Seeds).—Induce vomiting and wash out the stomach with strong tea or coffee; follow with enema or quick purgative; stimulant; rouse the patient by hot and cold douche.

DATURINE.—See Belladonna.

DIGITALIS (or Digitalin); Scillain [Scillitin], (Strophanthus, Strophanthin, Convallaria, Scoparius).—Evacuate the stomach (mustard, zinc sulphate, apomorphine, pump). Follow with strong tea or coffee or tannic or gallic acid in water. Hypodermic solution of aconitine nitrate may be given, or tincture of aconite by mouth; if this has given good results repeat in thirty minutes, keep the patient quiet and do not allow an erect position, as that may cause fainting to death. Give stimulants frequently by the mouth, or if vomiting occurs, by the rectum. When the drug has been in continuous use, opium is the best antidote. Saponin and Senegin are the best physiologic antagonists.

DOG BITES (and Cat Bites).—Suck out the wound well with the mouth, wash with a weak alkaline solution (ammonia, caustic potash, etc.), then cauterize with lunar caustic.

DUBOISIA (and Duboisine).—See Belladonna.

DULCAMARA (and Solanin.)—See Belladonna.

ELATERIUM.—See Colchicum.

ERGOT.—Evacuate the stomach (mustard, zinc sulphate, apomorphine, pump). Give purgative (Croton Oil) and assist the action by plenty of warm drinks. Tannic or gallic acid may be useful; after vomiting and purging, administer small doses of opium at intervals.

Nitroglycerin every 15 minutes has been effective. Allow a recumbent position. Apply warmth and friction to maintain the circulation; stimulants; amyl nitrite.

ESERINE.—See Physostigma.

ETHER.—See Chloroform.

FISH POISON.—Administer emetics and cathartics; potassium chlorate; solution ammonium acetate; opium; capsicum or chloroform.

FOWLER'S SOLUTION.—See Arsenic.

FUNGI.—See Mushrooms.

GELSEMIUM (and Gelsemine).—Empty the stomach (mustard or pump); give atropine hypodermically or tincture of belladonna by mouth; apply external heat by rubbing; stimulants (digitalis, ammonia, coffee, alcohol, artificial respiration, electricity); rouse the patient by hot and cold douches.

GLONAIN.—Like Amyl Nitrite.

GOLD SALTS.—Like Mercury compounds.

HYOSCINE.—Similar to Belladonna, but chloral is used here with great advantage.

HYOSCYAMUS (and Hyoscyamine).—See Belladonna.

IGNATIA.—See Strychnine.

IODINE.—Empty the stomach (mustard, zinc sulphate, apomorphine, pump); follow with starch diffused in hot water or as a paste, or flour in warm water; farinaceous substances (arrow-root, boiled rice, thin gruel); demulcent drinks; may inhale amyl nitrite and relieve the pain by opium and morphine.

LABURNUM SEEDS.—See Cytisine.

LACTUCARIUM.—See Opium.

LAUDANUM.—See Opium.

LEAD COMPOUNDS (Lead Chromate and Acetate; Barium Compounds).—If acute, empty the stomach (mustard, zinc sulphate, apomorphine, pump); follow with sulphate of magnesium or sodium, or dilute sulphuric acid; milk, demulcent drinks. For the pain give opium or morphine; for lead colic, apply hot fomentations. If it be chronic lead poisoning, recognized by a blue line (sulphide) along the margin of the gums, paralyzed extensors, constipation, etc., give iodides to saturation (sodium and calcium iodides being best); sulphurated potassa baths.

LOBELIA.—If the patient has failed to vomit, use emetics; follow with tannin, stimulants, strychnine, opiates.

LUNAR CAUSTIC.—See Silver Compounds.

MATCHES.—See Phosphorus.

MERCURY COMPOUNDS (also Copper Compounds).—Empty the stomach (mustard, zinc sulphate, apomorphine, ipecac, pump); follow with albumin (white of one egg to every 4 grains of corrosive sublimate. Too much must not be given lest the precipitate formed by the mercuric salt and albumin be redissolved. Now give an emetic—warm water with sodium bicarbonate, zinc sulphate, or mustard, and wash out the stomach with demulcent drinks (flaxseed or elm). If egg white is not convenient, one may use for mercury salts, gluten, wheat flour in paste form, milk, or chop and diffuse in water fresh meat and administer the broth. Morphine for pain. For copper compounds also use stimulants; relieve the pain

with opium or give reduced iron or weak solution of potassium ferrocyanide; then potassium iodide until the system is saturated to promote elimination.

MORPHINE SALTS.—See Opium.

MUSCARINE.—See Mushrooms.

MUSHROOMS (and Poisonous Fungi; also Muscarine).—Empty the stomach (mustard, zinc sulphate, apomorphine, pump); inject at once solution of atropine, or after emesis give tincture of belladonna every half hour; castor oil and enema to remove fungi from lower bowel; stimulants; the body should also be kept warm.

NICOTINE.—See Tobacco.

NITRATES.—See Chlorates.

NITROBENZENE.—(Oil Mirbane).—Empty the stomach (mustard, zinc sulphate, pump), washing it out with plenty of warm water if possible. Give stimulants by the mouth, the rectum or hypodermically; artificial respiration which must be maintained by weak, interrupted currents to the chest wall. Rouse the patient by the douche; hypodermic atropine may be useful.

NITROGLYCERIN—Like Amyl Nitrite.

NITROUS OXIDE GAS.—See Chloroform.

NUX VOMICA.—See Strychnine.

OIL BITTER ALMOND.—See Acid Hydrocyanic.

OIL MIBRANE.—See Nitrobenzene.

OPIUM (also Laudanum, Morphine, Codeine Lactucarium, Cannabis Indica)—When the poison has been taken by the mouth give at once a solution of potassium permanganate, then empty the stomach, which may be difficult, by

pump, apomorphine, mustard or zinc sulphate. Wash the stomach out well with hot coffee, leaving there a pint or more; keep the body warm with hot wraps, but use alternate hot and cold douches to the head. Use hypodermic solution of atropine every 15 minutes for three doses; tannin and strychnine are also valuable. Apply electricity to chest muscles and artificial respiration. Keep the patient awake by shaking, flicking with a towel, applying cold water over the face and chest, keep patient moving; give inhalation of amyl nitrite. Evacuate the bladder often to prevent reabsorption.

PHENACETIN.—Like Acetanilid.

PHOSPHORUS (as well as Rat Poison and Matches).—Empty the stomach (copper sulphate, until the patient has vomited sufficiently; zinc sulphate, mustard, pump—the copper forming insoluble black phosphide). Follow this with old (oxygenated, acid, French) oil of turpentine in mucilage or floating on water; may also inhale diluted turpentine vapor; give charcoal or lime water to prevent action on tissues; also magnesium sulphate as a cathartic. Potassium permanganate, opium, and egg white may be of service, but never use fats or fatty oils, as these dissolve phosphorus, thus aiding in its absorption. It is mostly eliminated by the urine, hence the bladder should be frequently evacuated.

PHYSOSTIGMA (and Physostigmine).—Evacuate the stomach (mustard, zinc sulphate, ipecac, apomorphine, pump); hypodermic of atropine until pupils dilate. Should this fail, give

chloral, or hypodermic of strychnine. Diffusible stimulants, coffee, alcohol, etc., are used and artificial respiration should be induced if necessary; empty the bladder often.

PHYTOLACCA.—It acts *per se* as an emeto-cathartic, hence after the vomiting give stimulants, alcohol, ether, opium, digitalis.

PIROTOXIN.—See Strychnine.

PILOCARPUS (and Pilocarpine).—Evacuate the stomach, follow with hypodermic of atropine, or tincture of belladonna, until pupils are dilated; may give tannin.

POTASSA.—See Alkalies.

POTASSIUM BICHROMATE and CHROMATE.—See Chromic Acid.

POTASSIUM CYANIDE.—See Acid Hydrocyanic.

POTASSIUM NITRATE.—See Chlorates.

PRUSSIC ACID.—See Acid Hydrocyanic.

PULSATILLA.—Give tannic acid and follow with an emetic; alcohol, opium, or digitalis may also be indicated.

RAT PASTE.—See Phosphorus; also Arsenic.

RHUS TOXICODENDRON.—Rub in a saturated solution of lead acetate in diluted alcohol, and repeat for several days; 5% solution or 10% oleate of cocaine is also effective; a solution of 2 drams of lead acetate and 4 drams of ammonium chloride in 8 fl. oz. of water has also been recommended. Internally, opium or coffee may be used to relieve the nervous irritability.

SABADILLA.—See Veratrum Viride.

SAVINE (oil and tops; also Tansy).—If not vomited and the throat not inflamed, evacuate the stomach with mustard, zinc sulphate, ipecac,

pump. If the bowels have not moved freely, give either castor oil or epsom salt; allay pain with morphine and demulcents.

SCILLAIN (Scillitin).—See Digitalis.

SCOPARIUS.—See Digitalis.

SILVER COMPOUNDS.—Give common salt dissolved in warm water, to form insoluble silver chloride; or use egg white or milk; (follow with an emetic (mustard), and large draughts of warm water; give demulcent drinks (arrow-root, elm, flaxseed, gruel).

SNAKE BITES.—Suck the wound and apply to it an alkaline solution of potassium permanganate (may inject this under the skin). In severe cobra poisoning, with death threatening, bleed at one limb and transfuse blood by the other; give artificial respiration and weak interrupted galvanic shocks to the walls of the chest; inhale and give ammonia by the mouth.

SODA.—See alkalies.

SOLANIN.—See Belladonna.

STAPHISAGRIA (Stavesacre).—Evacuate the stomach (emetics, pump, draughts of warm water; give tannin, charcoal, diffusible stimulants. Keep the patient quiet and the extremities warm. Give chloral hydrate, or potassium bromide; or better inhale chloroform for the spasms. Use all haste as death is usually caused by asphyxia.

STINGS (Bees, Hornets, Wasps).—Apply ammonia water or some alkaline solution to the part stung; extract the sting; use stimulants, if necessary. One may apply an onion to the part, but this is not as good as ammonia.

STRAMONIUM.—See Belladonna.

STROPHANTHUS (or strophanthin).—See Digitalis.

STRYCHNINE SALTS (or Brucine, Ignatia, Nux Vomica, Picrotoxin, Cocculus Indicus).—Remove the patient from all noise, quickly empty the stomach (mustard, zinc sulphate, apomorphine hypodermically); give tannin, charcoal, iodide of starch. Place the patient under chloroform, ether, or chloral and potassium bromide, thus keeping up gentle narcosis several hours if necessary; inhale amyl nitrite. If spasms threaten respiration, induce it artificially; empty the bladder often.

SULFONAL AND TRIONAL.—Give diuretics and saline cathartics; sodium bicarbonate and water freely.

SULPHURETTED HYDROGEN.—Resort to artificial respiration and inhalation of chlorine diluted with air; or give chlorine water or chlorinated lime.

TANSY.—See Savine.

TARTAR EMETIC.—See Antimony Compounds.

TIN COMPOUNDS.—Evacuate the stomach (mustard, zinc sulphate, ipecac, etc.). Give milk of calcined magnesia; demulcent drinks (elm, flaxseed, etc.); laudanum if there is much pain.

TOBACCO (or Nicotine).—Concentrated enemas and large quantities of powder kill in a very few hours. If the patient has not already vomited the drug, empty the stomach by mustard, zinc sulphate or pump; give plenty of water; let the patient lie down; inject a solution of strychnine nitrate or give tincture of



nux vomica by the mouth; stimulants, brandy, whiskey, chloric ether, etc.; keep the body warm but apply cold douche to the head; tannin and astringent solutions may be given.

TURPENTINE.—Empty the stomach (mustard, zinc sulphate, ipecac, apomorphine, pump, tube). If there is no purging give enema, plenty of water and demulcent drinks to eliminate it by the kidneys. Apply hot fomentations to the loins. Allay the pain with opium.

TYROTOXICON (in milk, cheese, ice cream, etc.).—Give emetics and rinse out stomach; follow with purgative enema.

VERATRUM VIRIDE (also Veratrine, Sabadilla, Veratrum Album).—Evacuate the stomach (unless the veratroidine constituent has ejected itself by causing vomiting), by mustard, zinc sulphate, ipecac or pump. Give recumbent position, head lowest; dry warmth to the body, wraps, blankets, etc.; give hot coffee by the mouth or rectum; tannin, diffusible stimulants, alcohol, brandy, whiskey, ammonia, morphine, electricity, artificial respiration; atropine antagonizes the cardiac depression.

WHITE PRECIPITATE.—See Mercury Compounds.

ZINC COMPOUNDS.—Should the patient not vomit, use plenty of warm water containing carbonate or bicarbonate of sodium, or mustard; follow this with white of egg and milk; solution of tannin or strong tea to form insoluble tannate; allay the abdominal pain by hot fomentations, morphine or tincture of opium.

# CLASSIFICATION OF MEDICINES

ACCORDING TO

THEIR PHYSIOLOGIC ACTIONS.

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|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| ALTERATIVES.                            | Silver Salts.                                       |
|                                         | Stillingia.                                         |
| Acid, Arsenous.                         | Sulphur.                                            |
| Acid, Hydriodic.                        | Suprarenal Capsule.                                 |
| Ammonium Benzoate.                      | Xanthoxylum.                                        |
| Antimony Salts.                         | Zinc Salts.                                         |
| Arsenic and Mercury<br>Iodide Solution. | ANALGESICS. <i>See</i><br><i>Anodynes, General.</i> |
| Arsenites and Arsenates.                |                                                     |
| Calcium Chloride.                       | ANAPIHRODISIACS.                                    |
| Colchicum.                              | Belladonna.                                         |
| Copper Salts.                           | Bromides.                                           |
| Creosote and its<br>compounds.          | Bromipin.                                           |
| Gold Salts.                             | Camphor.                                            |
| Guaiacol and its<br>compounds.          | Cocaine.                                            |
| Ichthyol.                               | Conium.                                             |
| Iodides.                                | Digitalis.                                          |
| Iodipin.                                | Gelsemium.                                          |
| Iodoform.                               | Hyoscyamus.                                         |
| Manganese Dioxide.                      | Opium.                                              |
| Mercurials.                             | Stramonium.                                         |
| Potassium Bichromate.                   | ANESTHETICS, GENERAL.                               |
| Potassium Chlorate.                     | Chloroform.                                         |
| Pulsatilla.                             | Ether.                                              |
| Sanguinaria.                            | Ethyl Bromide.<br>(Nitrous Oxide).                  |

- ANESTHETICS LOCAL. Aconitine.  
 Ammonia water.  
 Chloretone. Atropine.  
 Cocaine Hydrochloride. Belladonna.  
 Ether Spray. Chloroform.  
 Ethyl Chloride. Chloral Hydrate.  
 Eucaine. Guaiacol.  
 Holocaine. Ichthyol.  
 Menthol.  
 Tropacocaine.
- ANTACIDS  
 OR ALKALINES.
- ANODYNES, GENERAL. Calcium Carbonate.  
 Lime Water.  
 Lithium Carbonate.  
 Magnesia.  
 Magnesium Carbonate.  
 Potassium Bicarbonate.  
 Potassium Carbonate.  
 Potassium Hydrate.  
 Sodium Bicarbonate.  
 Sodium Carbonate.  
 Sodium Hydrate.
- ANTHELMINTICS.
- Aloes. (Enema.)  
 Aspidium.  
 Chenopodium.  
 Koussein.  
 Naphtalin.  
 Oil Turpentine.  
 Extract Male Fern.  
 Pelletierine Tannate.  
 Pumpkin Seed.  
 Quassia Infusion.
- ANODYNES, LOCAL. Acid, Carbolic.  
 Aconite, Tincture.

|                        |               |
|------------------------|---------------|
| Santonin with Calomel. | Atropine.     |
| Sodium Chloride.       | Lead Acetate. |
| Sodium Santoninate.    | Picrotoxin.   |
| Spigelia.              | Quinine.      |
| Thymol.                | Salicin.      |

## ANTI-EMETICS.

Acid, Hydrocyanic.  
 Bismuth Subcarbonate.  
 Bismuth Subnitrate.  
 Bromides.  
 Cerium Oxalate.  
 Chloroform.  
 Codeine.  
 Ether.  
 Menthol.  
 Morphine.  
 Orexine Tannate.

## ANTIGALACTAGOGUES.

Agaricin.  
 Belladonna.  
 Camphor; topically.  
 Conium.  
 Ergot.  
 Iodides.  
 Saline Purgatives.

## ANTIHYDROTICS.

Acid, Camphoric.  
 Acid, Gallic.  
 Acid, Tannic.  
 Agaricin.

## ANTILITHICS.

Acid, Benzoic.  
 Alkalies.  
 Benzoates.  
 Lithium Salts.  
 Magnesium Citrate.  
 Magnesium Oxide.  
 Piperazine.  
 Potassium Bicarbonate.  
 Potassium Carbonate.  
 Potassium Citrate.  
 Sodium Bicarbonate.  
 Sodium Phosphate.  
 Sodium Salicylate.

## ANTIPARASITICS.

*See Parasitocides.*

## ANTIPERIODICS.

Acid, Arsenous.  
 Acid, Picric.  
 Arsenites.  
 Berberine Carbonate.  
 Cinchona and  
 alkaloids.  
 Methylene Blue.  
 Quinine.  
 Salicin.

ANTIPHLOGISTICS. *See* Aristol.  
*also Antipyretics.*  
 Aconite, Tincture. Bismuth, Benzoate.  
 Antimony-Potassium Bismuth, Oxyiodide.  
 Tartrate. Bismuth, Subgallate.  
 Gelsemium. Borolyptol.  
 Ichthyol; internally. Chlorine Water.  
 Lead Salts. Creolin.  
 Opium. Creosote and its com-  
 pounds.

## ANTIPYRETICS.

Acetanilid. Eucalyptol.  
 Acid, Benzoic. Formaldehyde.  
 Acid, Carbolic. Glycozone.  
 Acid, Salicylic. Hydrogen Peroxide.  
 Aconite, Tincture. Hydrozone.  
 Ammonium Acetate: Ichthyol.  
 Solution. Iodoform.  
 Ammonium Benzoate. Iodole.  
 Aspirin. Listerine.  
 Phenacetin. Magnesium Salicylate.  
 Quinine and Salts. Magnesium Sulphite.  
 Resorcin. Mercury Bichloride.  
 Veratrum Viride, Mercury Chloride.  
 Tincture. Mercury Cyanide.  
 Mercury Oxycyanide.  
 Naphtalin.  
 Naphtol.

ANTISEPTICS. *See also* Oil Cade.  
*Disinfectants.* Oil Eucalyptus.  
 Acetanilid. Oil Gaultheria.  
 Acid, Benzoic; and Oil Pinus Sylvestris.  
 Benzoates. Oil Turpentine.  
 Acid, Boric; and Borates. Potassium Chlorate.  
 Acid, Carbolic. " Permanganate.  
 Acid, Picric. Pyoktanin.

|                         |                        |
|-------------------------|------------------------|
| Quinine.                | Camphor.               |
| Resorcin.               | Camphor Monobrom.      |
| Salol.                  | Chloral Hydrate.       |
| Silver Citrate.         | Chloroform.            |
| Silver Nitrate.         | Coniine Hydrobromide.  |
| Sodium Biborate.        | Eserine.               |
| Sodium Bisulphite.      | Ether.                 |
| Sodium Salicylate.      | Ethyl Bromide.         |
| Sodium Sulphocarbolate. | Ethyl Iodide.          |
| Sodium Thiosulphate.    | Hyoscine Hydrobromide. |
| Tannoform.              | Hyoscyamus.            |
| Terebene.               | Lactucarium.           |
| Thymol.                 | Lobelia.               |
| Xeroform.               | Lupulin.               |
| Zinc Carbolate.         | Morphine.              |
| Zinc Permanganate.      | Musk.                  |
| Zinc Sulphocarbolate.   | Nitrites.              |

## ANTISIALAGOGUES.

|                        |                       |
|------------------------|-----------------------|
| Atropine.              | Nitroglycerine.       |
| Belladonna.            | Opium.                |
| Cocaine Hydrochloride. | Paraldehyde.          |
| Myrrh.                 | Pulsatilla: tincture. |
| Opium.                 | Stramonium.           |
| Potassium Chlorate.    | Zinc Valerianate.     |
| Sodium Borate.         |                       |

## ANTITUBERCULARS.

|                       |                             |
|-----------------------|-----------------------------|
|                       | Acid, Cinnamic.             |
|                       | Acid, Sulphurous.           |
|                       | Arsenical Compounds.        |
|                       | Cantharidin.                |
|                       | Cod-Liver Oil.              |
|                       | Creosote and its compounds. |
|                       | Guaiacol and Salts.         |
| ANTISPASMODICS.       |                             |
| Acid, Camphoric.      |                             |
| Ammonium Valerianate. |                             |
| Amyl Nitrite.         |                             |
| Atropine.             |                             |
| Bromides.             |                             |
| Bromoform.            |                             |

- Glycerinophosphates. Aluminum Sulphate.  
 Ichthyol. Bismuth Salts.  
 Iodoform, topically. Copper Acetate.  
 Menthol. Copper Sulphate.  
 Methylene Blue. Hydrastine Hydro-  
 Sodium Cacodylate. chloride.  
 Sodium Cinnamate. Hydrastis.  
 Sodium Formate: Sub- Ichthyol.  
 cutaneously. Iron Sulphate, and  
 other iron salts.  
 ANTIZYMOtics, *See An-* Lead Acetate, and other  
*tiseptics and Disin-* lead salts.  
*fectants.* Potassium Bichromate.  
 Silver Citrate.  
 Silver Nitrate.  
 ZINC Acetate.  
 ZINC Sulphate.
- APERIENTS. *See Cath-*  
*artics.*
- APHRODISIACS.
- Cantharides.  
 Damiana.  
 Glycerinophosphates.  
 Gold.  
 Nux Vomica.  
 Phosphorus.  
 Strychnine.
- ASTRINGENTS.
- Acid, Chromic.  
 Acid, Gallic.  
 Acid, Lactic.  
 Acid, Tannic.  
 Alum.  
 Aluminum Acetate:  
 Solution.  
 Aluminum Chloride.
- ASTRINGENTS, INTES-  
 TINAL.
- Acid Lactic.  
 Acid Tannic.  
 Bismuth Salts.  
 Catechu.  
 Geranium.  
 Kino.  
 Krameria.  
 Lead Acetate.  
 Silver Nitrate.  
 Tannalbin.
- CARDIAC SEDATIVES.
- Acid, Hydrocyanic.  
 Aconite.

Antimony preparations. Nutmeg.

Chloroform.

Digitalis.

Gelsemium.

Pilocarpine.

Veratrine.

Veratrum Viride.

CARDIAC STIMULANTS.

Ammonia.

Ammonium Carbonate.

Atropine.

Caffeine.

Digitalis.

Ether.

Nitroglycerin.

(Oxygen.)

Sparteine Sulphate.

Strophanthus.

Strychnine. (Tonic)

CARMINATIVES.

Anise.

Calumba.

Capsicum.

Cardamom.

Caraway.

Cascarilla.

Chamomile.

Cinchona.

Cinnamon.

Cloves.

Gentian.

Ginger.

Nux Vomica.

Oil Cajuput.

Oil Mustard.

Orange Peel.

Orexine Tannate.

Pepper.

Pimenta.

Quassia.

Sassafras.

Serpentaria.

CATHARTICS.

*Laxatives:*

Cascara Sagrada.

Figs.

Glycerin.

Magnesium Carbonate.

Magnesium Oxide.

Manna.

Oil Almond, Expressed.

Olive Oil.

Rahmnus Cathart.

Rhamnus Frang.

Sulphur.

*Saline Purgatives:*

Magnesium Citrate.

Magnesium Sulphate.

Potassium Bitartrate.

Potassium Tartrate.

Potassium and Sodium.

Tartrate.

Sodium Phosphate.



|                            |                                 |
|----------------------------|---------------------------------|
| Sodium Sulphate.           | CEREBRAL DEPRES-                |
| Sodium Tartrate.           | SANTS. <i>See also</i>          |
| <i>Simple Purgatives:</i>  | <i>Narcotics.</i>               |
| Aloes.                     | Anesthetics, general.           |
| Calomel.                   | Antispasmodics: several.        |
| Castor Oil.                | Hypnotics.                      |
| Rhubarb.                   | Narcotics.                      |
| Senna.                     | CEREBRAL STIMULANTS.            |
| <i>Drastic Cathartics:</i> | Alcohol.                        |
| Colocynth.                 | Amyl Nitrite.                   |
| Elaterium.                 | Atropine.                       |
| Euonymim.                  | Belladonna.                     |
| Gamboge.                   | Caffeine.                       |
| Jalap.                     | Cannabis.                       |
| Oil, Croton.               | Coca.                           |
| Podophyllin.               | Cocaine.                        |
| Scammony.                  | Coffee.                         |
|                            | Ether.                          |
| <i>Hydragogues:</i>        | Nitroglycerin.                  |
| Drastic Cathartics in      | Strychnine.                     |
| large doses.               |                                 |
| Saline Purgatives.         | CHOLAGOGUES. <i>See</i>         |
|                            | <i>Cathartics: also Hepatic</i> |
| <i>Cholagogues:</i>        | <i>Stimulants.</i>              |
| Aloin.                     | CONSTRUCTIVES. <i>See</i>       |
| Euonymim.                  | <i>Tonics.</i>                  |
| Leptandrin.                | COUNTER-IRRITANTS.              |
| Mercurials.                | <i>See Irritants.</i>           |
| Ox-Gall.                   | DEMULCENTS.                     |
| Podophyllum.               | Acacia.                         |
|                            | Albumin.                        |
| CAUSTICS. <i>See</i>       | Althea.                         |
| <i>Escharotics.</i>        |                                 |

|                       |                            |
|-----------------------|----------------------------|
| Cetraria.             | Opium.                     |
| Chondrus.             | Pilocarpine Hydrochloride. |
| Elm.                  | Potassium Citrate.         |
| Flaxseed.             | Potassium Nitrite.         |
| Gelatin.              | Sodium Nitrite.            |
| Glycerin.             | Spirit Nitrous Ether.      |
| Oil Almond Expressed. | Veratrum Viride.           |
| Oil Olive.            |                            |
| Starch.               |                            |

## DIGESTIVES.

|                                          |                     |
|------------------------------------------|---------------------|
| DEOXIDIZERS. ( <i>Reducing Agents.</i> ) | Acid, Hydrochloric. |
| Acid, Pyrogallic.                        | Acid, Lactic.       |
| Ichthyol.                                | Ingluvin.           |
| Resorcin.                                | Lactopeptine.       |
|                                          | Malt.               |
|                                          | Orexin Tannate.     |

## DEPILATORIES.

Barium Sulphide.  
Calcium Oxide.

(Calcium Sulphydrate). *DISINFECTANTS. See also Deodorants.*

Cautery.

Sodium Ethylate.  
Sodium Sulphide.

DIAPHORETICS AND  
SUDORIFICS.

Acid, Salicylic and  
Salicylates.

Aconite.  
Ammonium Acetate.  
Camphor.  
Dover's Powder.  
Ether.  
Guaiac.

Pancreatin.  
Papain.  
Pepsin.

Acid, Boric.  
Acid, Carbolic.  
Acid, Sulphurous.  
Aluminum Chloride.  
Ammonium Persulphate.  
Borates.  
Calcium Permanganate.  
Chlorine Water.  
Creolin.  
Eucalyptol.  
Formaldehyde.  
Glycozone.

Hydrogen Peroxide.  
 Hydrozone.  
 Iron Sulphate.  
 Lime, Chlorinated.  
 Mercury, Bichloride.  
 Naphtol.  
 Oil Eucalyptus.  
 Potassium Permanganate.  
 Solution Chlorinated Soda.  
 Thymol.  
 Zinch Chloride.

## DIURETICS.

Adonis Vernalis.  
 Ammonium Acetate.  
 Apocynum.  
 Atropine.  
 Belladonna.  
 Cactus Grandiflorus.  
 Caffeine.  
 Convallamarin.  
 Copaiba.  
 Cubebs.  
 Digitalis preparations.  
 Diuretin.  
 Juniper.  
 Kava Kava.  
 Lithium Salts.  
 Matico.  
 Nitrites.  
 Oil Juniper  
 Oil Santal.  
 Pilocarpine Hydrochlor.

Piperazine.  
 Potassium Acetate.  
 Potassium Bitartrate.  
 Potassium Citrate.  
 Potassium Nitrate.  
 Sodium Acetate.  
 Sodium Nitrate.  
 Sparteine Sulphate.  
 Spirit Nitrous Ether.  
 Squill.  
 Strophanthus.  
 Theobromine.

ECBOLICS. *See*  
*Oxytocics.*

## EMETICS.

Antimony and Potassium Tartrate.  
 Apomorphine Hydrochloride.  
 Copper Sulphate.  
 Emetine.  
 Ipecac.  
 Mercury Subsulphate.  
 Mustard with tepid water.  
 Zinc Sulphate.

## EMMENAGOGUES.

Aloes.  
 Cantharides.  
 Ergot.  
 Guaias.  
 Iron Chloride and other salts of iron.

- Manganese Dioxide.      Ammoniac.  
 Myrrh.                      Ammonium Carbonate.  
 Pennyroyal.                Ammonium Chloride.  
 Potassium Permangan.    Ammonium Salicylate.  
 Rue.                         Antimony and Potassi-  
                                         um Tartrate.  
 Savine.                      Antimony Salts in  
                                         general.  
 Tansy.                        Apomorphine Hydro-  
                                         chloride.  
  
 ERRHINES, (*Sternuta*  
                                         *tories*).  
  
 Cubeb.                        Balsam Tolu.  
 Sanguinarine.                Benzoates.  
 Veratrine.                    Emetine in small doses.  
 White Hellebore.            Glycyrrhizin, Ammoni-  
                                         ated.  
  
 ESCHIAROTICS.  
                                         *Caustics.*  
 Acid, Acetic Glacial.        Ipecac.  
 Acid, Arsenous.              Lobelia.  
 Acid, Carbolic.               Oil Turpentine.  
 Acid, Carbolic, Iodized.    Pilocarpine Hydrochlor.  
 Acid, Chromic.               Potassium Iodide.  
 Acid, Lactic.                 Sanguinarine.  
 Acid, Nitric.                 Saponin.  
 Alum Burnt.                  Senegin.  
 Copper Sulphate.             Squill.  
 Iodine.                        Tar.  
 Potassa.                      Terebene.  
 Silver Nitrate.  
 Soda.  
 Sodium Ethylate.  
 Zinc Chloride.  
  
 EXPECTORANTS.  
 Acid, Benzoic.                GALACTAGOGUES.  
                                         Acid, Lactic.  
                                         Alcohol.  
                                         Ammonium Chloride.  
                                         Castor Oil: topically.  
                                         Extract Malt.  
                                         Jaborandi.

Pilocarpine Hydrochlor. Opium.

Quinine.

GASTRIC TONICS.

(*Stomachics.*)

Alkalies: before meals.

Aromatics.

Berberine Carbonate.

Bismuth Salts.

Bitters.

Carminatives.

Hydrastis.

Ichthalbin.

Nux Vomica.

Orexine Tannate.

Quassin.

HEMATINICS.

Arsenical Compounds.

Ext. Bone Marrow.

Hemo-gallol.

Hemoglobin.

Iron Compounds.

Manganese Compounds.

Sodium Cacodylate.

HEMOSTATICS. *See*

*Styptics and Hemostatics.*

HEPATIC DEPRESSANTS.

*Lessening Bile.*

Lead Acetate.

Purgatives: Many of them.

Morphine.

*Lessening Urea:*

Colchicum.

Morphine.

Opium.

Quinine.

*Lessening Glycogen:*

Arsenic.

Antimony.

Codeine.

Dionin.

Morphine.

Opium.

Phosphorus.

HEPATIC STIMULANTS.

Acid, Benzoic.

Acid, Nitric.

Acid, Nitrohydrochlor.

Aloes.

Ammonium Chloride.

Amyl Nitrite.

Antimony.

Arsenic.

Benzoates.

Calomel.

Colocynth.

Euonymim.

Podophyllin.

Resin Jalap.

Sanguinarine.

|                     |                     |
|---------------------|---------------------|
| Sodium Bicarbonate. | Menthol.            |
| Sodium Phosphate.   | Mustard.            |
| Sodium Salicylate.  | Oil Turpentine.     |
| Sodium Sulphate.    | Oleoresin Capsicum. |

HYPNOTICS (*Soporifics*).

Acetanilid.  
 Apomorphine Hydrochloride.  
 Bromides.  
 Cannabin Tannate.  
 Chloral Hydrate.  
 Chloralose.  
 Chloretone.  
 Codeine.  
 Dionin.  
 Duboisine Sulphate.  
 Hyoscine Hydrobrom.  
 Hyoscyamine.  
 Morphine.  
 Paraldehyde.  
 Sulfonal.  
 Trional.  
 Urethane.

*Pustulants:*

Antimony and Potassium Tartrate.  
 Oil Croton.  
 Silver Nitrate.

*Vesicants:*

Acid, Acetic, Glacial  
 Cantharides.  
 Chrysarobin.  
 Oil Mustard.

LAXATIVES. *See*  
*Cathartics:*

## MOTOR DEPRESSANTS.

Acid Hydrocyanic.  
 Aconite.  
 Amyl Nitrite.  
 Apomorphine Hydrochloride.

## INTESTINAL ASTRINGENTS.

*See Astringents.*

## IRRITANTS.

*Rubefaciants:*

Ammonia.  
 Arnica.  
 Capsicum.  
 Iodine.

Bromides.  
 Bromipin.  
 Bromoform.  
 Chloral Hydrate.  
 Chloroform (large doses).  
 Coniine Hydrobromide.  
 Gelsemium.  
 Gold Bromide.  
 Lobelia.  
 Muscarine.

Nitrites. NARCOTICS. *See also*  
 Nitroglycerin. *Hypnotics.*  
 Physostigmine (Eser- Chloroform.  
 ine). Chloral Hydrate.  
 Quinine (large doses). Conium.  
 Sparteine Sulphate. Hyoscine.  
 Veratrum Viride. Hyoscyamine.  
 Morphine.

MOTOR EXCITANTS.

Alcohol. Stramonium.  
 Atropine. OXYTICIS (*Ecbo*ics).  
 Belladonna. Cotton Root Bark.  
 Brucine. Ergot.  
 Camphor. Hydrastine.  
 Chloroform. Hydrastinine Hydro-  
 Nux Vomica. chloride.  
 Picrotoxin. Pennyroyal.  
 Pilocarpine Hydrochlor. Quinine.  
 Pyridine. Rue.  
 Strychnine. Savine.

MYDRIATICS.

Atropine. PARASITICIDES.  
 Homatropine Hydro- *See Antiseptics and*  
 bromide. *Disinfectants.*  
 Hyoscine Hydrobrom. PURGATIVES. *See Ca-*  
 Scopolamine Hydro- *thartics.*  
 bromide.

MYOTICS.

Arecoline Hydrobrom. REFRIGERANTS.  
 Physostigmine. Acid, Citric.  
 (Eserine.) Acid, Phosphoric, Dil.  
 Pilocarpine Hydrochlor. Acid, Tartaric.  
 Ammonium Acetate:  
 Magnesium Citrate.





- Lavender.  
 Lobelia.  
 Morphine.  
 Paraldehyde.  
 Scopolamine Hydrobromide.  
 Stramonium; tincture.  
 Sulfonal.  
 Urethane.  
 Valerian and Valerianates.
- SIALAGOGUES.  
 (*Ptyalagogues*).
- Acids and Alkalies.  
 Antimony Compounds.  
 Capsicum.  
 Ginger.  
 Iodine Compounds.  
 Mercurials.  
 Muscarine.  
 Mustard.  
 Pilocarpine Hydrochlor.  
 Pyrethrum.
- SOPORIFICS. *See Hypnotics.*
- SPINAL STIMULANTS.  
*See also Motor Excitants.*
- Alcohol.  
 Atropine.  
 Camphor: small doses.  
 Nux Vomica.
- Picrotoxin.  
 Strychnine.
- STERNUTATORIES. *See Errhines.*
- STOMACHICS.  
*See Gastric Tonics.*
- STYPTICS AND HEMOSTATICS.  
 Acid, Gallic.  
 Acid, Tannic.  
 Adrenalin.  
 Alum.  
 Antipyrine.  
 Copper Sulphate.  
 Extract Suprarenal Capsule.  
 Hamamelis.  
 Hydrastinine Hydrochloride.  
 Iron Chloride, Ferric.  
 Iron Subsulphate.  
 Iron Sulphate.  
 Lead Acetate.  
 Manganese Sulphate.  
 Oil Turpentine.  
 Silver Nitrate.  
 Stypticin.  
 Terpinol.
- SUDORIFICS. *See Diaphoretics.*
- TENIAFUGES. *See Anthelmintics.*

- TONICS, GENERAL.** Ichthyol.  
*See also Hematinics.* Iron Compounds.  
*Vegetable Tonics:* Manganese Compounds.  
 Phosphorus.
- Bitters.  
 Berberine Carbonate. **VASO-CONSTRICTORS.**  
 Cinchona Alkaloids and Adrenalin.  
 Salts. Ergot.  
 Cod-Liver Oil. Extract Suprarenal  
 Eucalyptus. Capsule.  
 Hydrastis. Hydrastinine Hydro-  
 Quassin. chloride.  
 Salicin. Stypticin.
- Mineral Tonics:* **VASO-DILATORS.**
- Acids, Mineral. Amyl Nitrite.  
 Acid, Arsenous and its Ether.  
 salts. Nitroglycerin.  
 Acid, Hypophosphorous. Potassium Nitrite.  
 Acid, Lactic. Sodium Nitrite.  
 Bismuth Salts. Spirit Nitrous Ether.  
 Calcium Glycerinophos.  
 Copper Salts: small **VERMICIDES.** *See*  
 doses. *Anthelmintics.*  
 Gold Salts.  
 Glycerinophosphates. **VESICANTS.** *See Irri-*  
 Hypophosphites. *tants.*

## PHYSIOLOGICAL POINTS FOR PRACTITIONERS.

| FREQUENCY OF HEART BEAT.    | Per Minute |
|-----------------------------|------------|
| Horse                       | 30—45      |
| Ox                          | 40—50      |
| Ass                         | 45—52      |
| Pig, Sheep, Goat            | 70—80      |
| Dog                         | 70—120     |
| Cat                         | 120—140    |
| Man                         | 60—80      |
| Horse, after trotting       | 60—80      |
| Horse, after galloping      | 80—100     |
| Calf, 2 weeks, about        | 70         |
| Calf, 6 weeks, about        | 65         |
| Calf, 6 mos.-12 mos., about | 55—65      |
| Elephant                    | 25—28      |
| Camel                       | 30         |
| Lion                        | 40—50      |
| Rabbit                      | 140—160    |
| Birds                       | 120—140    |
| Frog                        | 60         |
| Fish                        | 20—25      |

(Ellenberger and Scheunert.)

| RESPIRATORY FREQUENCY. | Per Minute |
|------------------------|------------|
| Horse                  | 8—16       |
| Cattle                 | 10—30      |
| Sheep and Goat         | 12—20      |
| Swine                  | 8—18       |
| Dog                    | 15—20      |
| Cat                    | 24         |
| Man                    | 15—20      |
| Tiger                  | 6          |
| Lion                   | 10         |

|                    |         |
|--------------------|---------|
| Monkey             | 19      |
| Rabbit             | 55      |
| Guinea pig and rat | 100—150 |
| Hen                | 40—50   |
| Pigeon             | 50—70   |

### BODY TEMPERATURE.

(Average Rectal Temperature).

|            |               |
|------------|---------------|
| Horse      | 100.°2        |
| Ass        | 98.°5         |
| Cow        | 101.°5        |
| Sheep      | 104.° —105.°  |
| Goat       | 103.°         |
| Pig        | 101.°7—103.°3 |
| Dog        | 101.° —102.°  |
| Cat        | 101.°7        |
| Rabbit     | 101.°7—102.°5 |
| Guinea-pig | 101.°7—102.°6 |
| Fowl       | 106.°9—109.°  |
| Duck       | 107.°8—110.°5 |

### DURATION OF PREGNANCY.

|                |              |
|----------------|--------------|
| Mare           | 330—340 days |
| Ass            | 348—377 days |
| Cow            | 270—285 days |
| Sheep and Goat | 145—155 days |
| Sow            | 115—120 days |
| Bitch          | 58— 65 days  |
| Cat            | 54— 62 days  |

## RED CORPUSCLES PER CUBIC MILLIMETER OF BLOOD.

|            |            |                                 |
|------------|------------|---------------------------------|
| Horse      | 7,431,200  | (average from 10 investigators) |
| Colt       | 9,390,000  | (Storch)                        |
| Cow        | 6,022,700  | (average from 7 investigators)  |
| Calves     | 8,523,000  | (Storch)                        |
| Sheep      | 10,439,000 | (average from 5 investigators)  |
| Lambs      | 11,032,000 | (Storch)                        |
| Goat       | 14,507,000 | (average from 6 investigators)  |
| Swine      | 7,407,640  | (average from 5 investigators)  |
| Dog        | 6,240,625  | (average from 16 investigators) |
| Cat        | 7,828,000  | (average from 4 investigators)  |
| Rabbit     | 5,668,320  | (average from 10 investigators) |
| Guinea Pig | 4,983,250  | (average from 6 investigators)  |
| Fowl       | 3,064,500  | (average from 9 investigators)  |

## LEUCOCYTES PER CUBIC MILLIMETER OF BLOOD.

|            |        |                                 |
|------------|--------|---------------------------------|
| Horse      | 9,473  | (average from 11 investigators) |
| Colts      | 14,034 | (Storch)                        |
| Cow        | 8,133  | (average from 5 investigators)  |
| Calves     | 15,739 | (Storch)                        |
| Sheep      | 7,140  | (average from 4 investigators)  |
| Lambs      | 10,198 | (Storch)                        |
| Goat       | 9,750  | (average from 3 investigators)  |
| Swine      | 13,420 | (average from 2 investigators)  |
| Dog        | 11,370 | (average from 15 investigators) |
| Ca.        | 12,410 | (average from 5 investigators)  |
| Rabbit     | 9,161  | (average from 12 investigators) |
| Guinea Pig | 9,145  | (average from 5 investigators)  |
| Fowl       | 26,723 | (average from 7 investigators)  |

## SIZE OF RED CORPUSCLES.

|            |                                                                 |
|------------|-----------------------------------------------------------------|
| Horse      | 5.60 $\mu$ (average from 5 investigators)                       |
| Cow        | 5.85 $\mu$ (average from 4 investigators)                       |
| Sheep      | 4.90 $\mu$ (average from 4 investigators)                       |
| Goat       | 3.96 $\mu$ (average from 5 investigators)                       |
| Swine      | 6.19 $\mu$ (average from 3 investigators)                       |
| Dog        | 7.20 $\mu$ (average from 6 investigators)                       |
| Cat        | 6.03 $\mu$ (average from 5 investigators)                       |
| Rabbit     | 6.80 $\mu$ (average from 5 investigators)                       |
| Guinea Pig | 7.52 $\mu$ (average from 4 investigators)                       |
| Fowl       | 12.62 $\mu$ lo., 7.25 $\mu$ wide (average from 7 investigators) |

## COMPOSITION OF MILK.

|        | Water<br>% | Solids<br>% | Proteid<br>% | Fat<br>% | Sugar<br>% | Salts<br>% | Sp. Gr. |
|--------|------------|-------------|--------------|----------|------------|------------|---------|
| Woman  | 87.58      | 12.42       | 2.01         | 3.74     | 6.37       | 0.30       | 1.0298  |
| Cow    | 87.27      | 12.73       | 3.39         | 3.68     | 4.94       | 0.72       | 1.0313  |
| Mare   | 90.26      | 9.74        | 1.86         | 1.06     | 6.50       | 0.32       | 1.0348  |
| Ass    | 90.12      | 9.88        | 1.85         | 1.37     | 6.19       | 0.47       | 1.033   |
| Sheep  | 83.57      | 16.43       | 5.15         | 6.18     | 4.17       | 0.93       | 1.0355  |
| Goat   | 86.88      | 13.12       | 3.76         | 4.07     | 4.44       | 0.85       | 1.0329  |
| Swine  | 82.37      | 16.73       | 6.09         | 6.44     | 4.04       | 1.06       |         |
| Bitch  | 77.00      | 23.00       | 9.72         | 9.26     | 3.11       | 0.91       |         |
| Cat    | 81.63      | 18.37       | 9.08         | 3.33     | 4.91       | 0.58       |         |
| Rabbit | 69.50      | 30.50       | 15.54        | 10.45    | 1.95       | 2.56       |         |

(Ellenberger and Scheunert.)

COMPOSITION OF URINE.

|                    | Horse                 | Man                      |
|--------------------|-----------------------|--------------------------|
| Amount in 24 hours | 3000-4000 cc.         | 1000-1500 cc.            |
| Specific gravity   | 1025-1050             | 1015-1025                |
| Reaction           | Alkaline              | Acid                     |
| Solids             | 50-120 parts per 1000 | 34-50 parts per 1000     |
| Chlorides          | 8-14 parts per 1000   | 6-9 parts per 1000       |
| Phosphates         | Trace                 | 1.5-2.5 parts per 1000   |
| Sulphates          | 2-3 parts per 1000    | 1.5-3. parts per 1000    |
| Urea               | 20-40 parts per 1000  | 14-22 parts per 1000     |
| Uric acid          | Trace                 | 0.25-0.40 parts per 1000 |
| Hippuric acid      | 4-8 parts per 1000    | —                        |
| Indican            | Much                  | Absent or Trace          |

PAGES FOR  
SELECTED PRESCRIPTIONS.

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# The Pathology and Differential Diagnosis of Infectious Dis- eases of Animals

By Veranus Alva Moore, B. S., M. D., Professor of Comparative Pathology, Bacteriology and Meat Inspection, of New York State Vétérinary College, Cornell University, Ithaca, N. Y. With an introduction by Daniel Elmer Salmon, D. V. M., Former Chief of the Bureau of Animal Industry, United States Department of Agriculture.

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