

**Synopsis of the British Pharmacopœia, 1898. Processes and formulae. A pocket guide, etc.**

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183 Euston Road  
London NW1 2BE UK  
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SYNOPSIS OF THE  
BRITISH PHARMACOPŒIA  
(1898)  
PROCESSES AND FORMULÆ.



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SYNOPSIS OF THE  
BRITISH PHARMACOPŒIA  
(1898)

PROCESSES AND FORMULÆ.

A Pocket Guide for Pharmacists  
and Students.



SEVENTH EDITION.

London :

PHARMACEUTICAL JOURNAL OFFICE,

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1898.





# THE BRITISH PHARMACOPŒIA, 1898.

## ALTERATIONS, ADDITIONS, AND OMISSIONS.

### INTRODUCTORY.

**I**N the following summary will be found sufficiently full details concerning all medicinal preparations in the British Pharmacopœia, 1898, to enable the pharmacist, medical practitioner, or student to appreciate fully the extent of all alterations in, and additions to, preparations formerly official. Unless the contrary is expressly stated here, no change in a formula, process, or dose has been effected. If, therefore, the details of any formula or process are not stated, or a dose is not given, it must be understood that the 1885 Pharmacopœia remains unaltered in that respect.

### ALTERATIONS OF CHIEF IMPORTANCE.

**Special Notice.**—Full particulars of *all* alterations in the official processes and formulæ are given at page 6 *et seq.*, but attention is particularly directed to the following:—

#### Notable Alterations in Potency.

STRONGER.	WEAKER.
Lamellæ Cocain. 4 times stronger	Aqua Chlorof. 50 p. c. weaker
Liq. Epispast. 100 p. c. „	Ext. Bellad. Alch. 66 p. c. „
Pil. Phosphori 80 p. c. „	Ext. Nucis Vom. 33 p. c. „
Pil. Saponis Co. Slightly „	Ext. Opii Liq. 25 p. c. „
Spt. Cajuputi 5 times „	Ext. Physostig. 75 p. c. „
Spt. Cinnam. 5 times „	Inj Apomorphin. 50 p. c. „
Spt. Juniperi 2½ times „	Inj. Morphinae 50 p. c. „
Spt. Menth. Pip. 5 times „	Suppos. Morphin. 50 p. c. „
Spt. Myristicæ 5 times „	Tinct. Aconiti 60 p. c. „
Spt. Rosmarini 5 times „	Tinct. Strophanth. 50 p. c. „
Tinct. Belladon. 100 p. c. „	
Tinct. Chlorof. „	
et Morphinae Much „	
(Contains 4 times as much morphine as formerly.)	
Tinct. Nucis Vom. 100 p. c. „	
Tinct. Podophylli 100 p. c. „	
Tinct. Quassia 2⅔ times „	

#### MINOR ALTERATIONS.

Other alterations in potency are very numerous, and the comparative strengths of *all* the altered preparations are shown in the following pages by notes in italics following the respective paragraphs.

#### Notable Alterations in Nomenclature.

OLD NAME (1885).	NEW NAME (1898).
Ergotinum	= Ext. Ergotæ
Inject. <i>Ergotini</i> Hypoderm.	= Inject. <i>Ergotæ</i> Hypoderm.
Lin. Camph. Co.	= Lin. Camph. <i>Ammon.</i>
<i>Lin.</i> Iodi	= <i>Liquor Iodi Fortis</i>
<i>Liq.</i> Cocain. <i>Hydrochlor.</i>	= <i>Inject. Cocain. Hypoderm.</i>
Pil. <i>Asafetida</i> Co.	= Pil. <i>Galbani</i> Co.
Tinct. Chlorof. et Morph.	= Tinct. Chlorof. et Morph. Co.



## ADDITIONS.

Articles and Preparations included in the British Pharmacopœia of 1898, which were not in that of 1885, nor in "Additions" of 1890.

Araroba	Lithii Citras Effervescens
Aurantii Cortex Recens	Morphinæ Tartras
Benzol. (In Appendix, 1885.)	Naphthol
Bismuthi Salicylas	Oleum Pini
Caffeinæ Citras Effervescens	Oleum Rosæ
Caoutchouc	Paraffinum Liquidum
Carbonis Bisulphidum	Physostigminæ Sulphas
Cocaina	Pilula Quininæ Sulphatis
Codeinæ Phosphas	Pix Carbonis Præparata
Extractum Belladonnæ Liq.	Pruni Virginianæ Cortex
Extractum Ipecacuanhæ Liq.	Quillaiaæ Cortex
Extractum Jaborandi Liquidum	Quininæ Hydrochloridum Acid.
Extractum Nucis Vomicae Liq.	Salol
Extractum Strophanthi	Spiritus Anisi
Glycerinum Acidi Borici	Strychninæ Hydrochloridum
Glycerinum Pepsini	Suppositoria Acidi Carbolici
Hydrargyri Oleas	Suppositoria Belladonnæ
Hyoscinae Hydrobromidum	Syrupus Aromaticus
Hyoscyaminæ Sulphas	Syrupus Calcii Lactophosphatis
Infusum Scoparii	Syrupus Cascaræ Aromaticus
Kaolinum	Syrupus Codeinæ
Lamellæ Homatropinæ	Syr. Ferri Phos. c. Quin. et Strych.
Liquor Calumbæ Concentratus	Syrupus Glucosi
Liquor Caoutchouc	Syrupus Pruni Virginianæ
Liquor Chiratae Concentratus	Terebenum
Liquor Cuspariæ Concentratus	Thyroideum Siccum
Liquor Ethyl Nitritis	Tinctura Ergotæ Ammoniata
Liquor Hamamelidis	Tinctura Pruni Virginianæ
Liquor Hydrogenii Peroxidi	Tinctura Quillaiaæ
Liquor Krameriaæ Concentratus	Trochiscus Acidi Carbolici
Liquor Morphinæ Tartratis	Trochiscus Eucalypti Gummi
Liquor Pancreatis	Trochiscus Guaiaci Resinæ
Liquor Picis Carbonis	Trochiscus Krameriaæ
Liquor Quassiaæ Concentratus	Trochiscus Krameriaæ et Cocainæ
Liquor Rhei Concentratus	Unguentum Aquæ Rosæ
Liquor Sarsæ Compositus Conc.	Unguentum Capsici
Liquor Senegæ Concentratus	Unguentum Cocainæ
Liquor Sennæ Concentratus	Unguentum Hydrargyri Oleatis
Liquor Serpentariae Conc.	Unguentum Hydrarg. Ox. Flav.
Liquor Thyroidei	Unguentum Paraffini

**Abbreviations.**—To economise space the following abbreviations have been adopted :—s. g. = specific gravity ; p. c. = per cent. ; m. p. = melting point ; o. p. = over-proof ; fl. dr. = fluid drachm ; fl. oz. = fluid ounce ; Gm. = gramme ; Mgm. = milligramme ; C. c. = cubic centimetre ; q.s. = a sufficiency.



## OMISSIONS.

Articles and Preparations included in the British Pharmacopœia of 1885, or in the "Additions" of 1890, but omitted from the British Pharmacopœia of 1898.

Acetum	Decoctum Sarsæ Compositum
Acidum Lacticum Dilutum	Decoctum Scoparii
Acidum Meconicum	Decoctum Taraxaci
Aconiti Folia	Ecballii Fructus
Alcohol Amylicum	Elemi
Ammonii Nitras	Emplastrum Ferri
Anisi Stellati Fructus	Emplastrum Galbani
Aqua	Emplastrum Saponis Fuscum
Argentum Purificatum	Enema Aloes
Aurantii Fructus	Enema Asafoetidæ
Beberinæ Sulphas	Enema Magnesii Sulphatis
Belæ Fructus	Enema Opii
Bismuthi Citras	Enema Terebinthinæ
Bismuthi et Ammonii Citras	Essentia Anisi
Bismuthum	Essentia Menthæ Piperitæ
Bismuthum Purificatum	Extractum Aconiti
Calamina Præparata	Extractum Aloes Socotrinæ
Canellæ Cortex	Extractum Belæ Liquidum
Carbo Animalis	Extractum Calumbæ
Carbo Animalis Purificatus	Extractum Colchici Aceticum
Cataplasma Carbonis	Extractum Conii
Cataplasma Conii	Extractum Gelsemii Alcoholicum
Cataplasma Fermenti	Extractum Hæmatoxyli
Cataplasma Lini	Extractum Jaborandi
Cataplasma Sinapis	Extractum Lactuæ
Cataplasma Sodæ Chlorinatæ	Extractum Lupuli
Cerevisiæ Fermentum	Extractum Mezerei Æthereum
Cetraria	Extractum Papaveris
Charta Epispastica	Extractum Pareiræ
Cinchonæ Cortex (Cinchonæ Rubræ Cortex is retained)	Extractum Quassiæ
Cinchonidinæ Sulphas	Extractum Rhamni Frangulæ
Cinchoninæ Sulphas	Extractum Rhamni Frang. Liq.
Confectio Opii	Farina Tritici
Confectio Rosæ Caninæ	Ferri Peroxidum Hydratum
Confectio Scammonii	Ferri Sulphas Granulata
Confectio Terebinthinæ	Glycerinum Acidi Gallici
Creta	Gutta Percha
Cupri Nitras	Hordeum Decorticatum
Decoctum Cetrariæ	Hydrargyri Persulphas
Decoctum Cinchonæ	Infusum Anthemidis
Decoctum Hordei	Infusum Catechu
Decoctum Papaveris	Infusum Cusso
Decoctum Pareiræ	Infusum Jaborandi
Decoctum Quercûs	Infusum Lini
Decoctum Sarsæ	Infusum Maticæ
	Infusum Valerianæ



Kamala	Rosæ Caninæ Fructus
Lac	Rosæ Centifoliæ Petala
Lactuca	Sabadilla
Laricis Cortex	Sabinæ Cacumina
Liquor Ammonii Acetatis Fort.	Santonica
Liquor Ammonii Citratis Fort.	Sodii Nitras
Liquor Antimonii Chloridi	Sodii Valerianas
Liquor Calcii Chloridi	Spiritus Tenuior
Liquor Ferri Acetatis Fortior	Suppositoria Acidi Carbolici cum Sapone
Liquor Ferri Dialysatus	Suppositoria Acidi Tannici cum Sapone
Liquor Gutta Percha	Suppositoria Hydrargyri
Liquor Iodi	Suppositoria Morphinae cum Sapone
Liquor Lithiæ Effervescens	Syrupus Ferri Subchloridi
Liquor Magnesii Citratis	Syrupus Mori
Liquor Morphinae Bimeconatis	Syrupus Papaveris
Liquor Morphinae Sulphatis	Tabaci Folia
Liquor Potassæ Effervescens	Theriaca
Liquor Sodæ	Tinctura Aurantii (Cort. Sicc.)
Liquor Sodæ Effervescens	Tinctura Chloroformi Comp.
Manna	Tinctura Ergotæ
Marmor Album	Tinctura Ferri Acetatis
Mastiche	Tinctura Gallæ
Maticæ Folia	Tinctura Laricis
Mel	Tinctura Lobeliae
Mica Panis	Tinctura Sabinæ
Mistura Ferri Aromatica	Tinctura Valerianæ
Mistura Scammonii	Tinctura Veratri Viridis
Mori Succus	Tinctura Zingiberis Fortior
Morphinae Sulphas	Trochisci Opii
Mucilago Amyli	Unguentum Antimonii Tartarati
Nectandræ Cortex	Unguentum Calaminæ
Oleatum Hydrargyri	Unguentum Elemi
Oleatum Zinci	Unguentum Potassæ Sulphuratæ
Oleo-resina Cubebæ	Unguentum Sabinæ
Oleum Myristicæ Expressum	Unguentum Simplex
Oleum Pini Sylvestris	Unguentum Terebinthinæ
Oleum Rutæ	Uvæ
Oleum Sabinæ	Vapor Acidi Hydrocyanici
Os Ustum	Vapor Chlorig
Ovi Albumen	Vapor Coninæ
Ovi Vitellus	Vapor Creasoti
Physostigmina	Vapor Iodi
Pilula Conii Composita	Vapor Olei Pini Sylvestris
Pilula Ferri Carbonatis	Veratri Viridis Rhizoma
Pilula Ferri Iodidi	Vinum Aloes
Plumbi Nitras	Vinum Opii
Potassii Cyanidum	Vinum Rhei
Potassii Ferrocyamidum	
Quercûs Cortex	
Rhamni Frangulæ Cortex	



## SYNOPSIS OF THE B.P., 1898.\*

**Weights and Measures.**—Unless otherwise stated, all formulæ are given in parts and fluid parts, in accordance with the well-established rule—*solids by weight ; liquids by measure*. In certain cases, however, where special difficulties have prevented the adoption of that rule, definite weights and volumes are stated.

**Acetum Cantharidis.**—Bruised cantharides, 2 ; glacial acetic acid (99 p. c.) and distilled water in equal volumes, 18 ; Macerate for 24 hours, percolate, and add sufficient menstruum to make 20 of product. S. g. not stated.

**Acetum Ipecacuanhæ.**—Liquid extract of ipecacuanha, 1 ; alcohol (90 p. c.), 2 ; diluted acetic acid, 17 ; mix, filter and, if necessary, add sufficient acid to make 20. Dose : 10 to 30 minims.

**Acetum Scillæ.**—Bruised squill, 2·5 ; diluted acetic acid, 20 ; macerate as directed for tinctures, and make product up to 20. S. g. not stated. Dose : 10 to 30 minims.

**Acidum Aceticum Dilutum.**—Acetic acid (s. g. 1·044), 2·49 ; distilled water, *q.s.* to produce 20. S. g. 1·006. Dose :  $\frac{1}{2}$  to 2 fl. dr.

**Acidum Carbolicum Liquefactum.**—Phenol (m. p. 38°·8 C. and s. g. 1·060 to 1·066) liquefied, by the addition of 10 p. c. by weight of distilled water. S. g. 1·064 to 1·069. Dose : 1 to 3 m.

**Acidum Hydrochloricum Dilutum.**—Strength unaltered. Dose : 5 to 20 minims.

**Acidum Hydrocyanicum Dilutum.**—Strength unaltered. Dose : 2 to 6 minims.

**Acidum Lacticum Dilutum.**—Omitted.

**Acidum Nitricum Dilutum.**—Strength unaltered. Dose : 5 to 20 minims.

**Acidum Nitro-Hydrochloricum Dilutum.**—Strength and dose unaltered.

**Acidum Phosphoricum Dilutum.**—Process unaltered. Dose : 5 to 20 minims.

**Acidum Sulphuricum Aromaticum.**—Tincture of ginger, 10 ; spirit of cinnamon, 0·5 ; alcohol (90 p. c.), 29·5 ; sulphuric acid (s. g. 1·843), 3. Mix acid gradually with alcohol, then add tincture and spirit. S. g. 0·922 to 0·926. Dose : 5 to 20 minims.

**Acidum Sulphuricum Dilutum.**—Strength unaltered. Dose : 5 to 20 minims.

**Adeps.**—Additional tests of purity are given.

**Adeps Benzoatus.**—Lard, 500 ; benzoin in powder, 15.

\* Note.—An asterisk (\*) preceding a name indicates that the preparation is new, whilst the dagger (†) indicates alternative preparations sanctioned for use in India and the Colonies. The comparative strengths of new and old preparations are given in italics ; in a few instances they are approximate only.



† **Adeps Induratus.**—Lard deprived of a portion of its oil may be used in India and the Colonies in place of ordinary lard.

**Adeps Lanæ.**—No alteration.

**Adeps Lanæ Hydrosus.**—Proportion of water unaltered.

**Alcohol.**—See Spiritus Rectificatus for strength.

**Aqua Anethi.**—Dill fruit, not bruised, 1 ; water, 20. Distil, 10

**Aqua Anisi.**—Anise fruit, not bruised, 1 ; water, 20. Distil, 10.

**Aqua Aurantii Floris.**—Orange-flower water of commerce, 1 ; distilled water, 2. Mix immediately before use.

**Aqua Camphoræ.**—Camphor, 1 ; alcohol (90 p. c.), *q.s.* to make 3. Dissolve and add in successive portions to distilled water, 1000 ; shake after each addition, and subsequently agitate occasionally until all the camphor is dissolved. [*Alcohol now added.*]

**Aqua Carui.**—Caraway fruit, not bruised, 1 ; water, 20. Distil 10.

**Aqua Chloroformi.**—Chloroform, 2·5 ; distilled water, *q.s.* to produce 1000. Shake until dissolved. [*50 p. c. weaker.*]

**Aqua Cinnamomi.**—Cinnamon bark, bruised, 1 ; water, 20. Distil 10.

**Aqua Fœniculi.**—Fennel fruit, not bruised, 1 ; water, 20. Distil 10.

**Aqua Laurocerasi.**—Strength and dose unaltered.

**Aqua Menthæ Piperitæ.**—Peppermint oil, 1 ; water, 1500. Distil 1000.

**Aqua Menthæ Viridis.**—Spearmint oil, 1 ; water, 1500. Distil 1000.

**Aqua Pimentæ.**—Pimento, bruised, 25 ; water, 1000. Distil 500.

**Aqua Rosæ.**—Rose water of commerce, 1 ; distilled water, 2. Mix immediately before use.

**Aqua Sambuci.**—Formula unaltered.

† **Aquæ.**—Anise, caraway, cinnamon, dill, fennel, peppermint, pimento and spearmint waters may be prepared in India and other tropical countries by triturating the corresponding oil in each case with twice its weight of calcium phosphate, and five hundred times its volume of distilled water, afterwards filtering.

**Argenti Nitras Induratus.**—Silver nitrate, 95 ; potassium nitrate, 5. Fuse and mould.

**Argenti Nitras Mitigatus.**—Same as Argenti et Potassii Nit.

**Bismuth et Ammonii Citras.**—Omitted.

**Caffeinæ Citras.**—Process unaltered.

\***Caffeinæ Citras Effervescens.**—Sodium bicarbonate, in powder, 51 ; tartaric acid, in powder, 27 ; citric acid, in powder, 18 ; refined sugar, in powder, 14 ; caffeine citrate, 4. Mix the



citrate with the acids, then thoroughly incorporate the mixed sodium bicarbonate and sugar, and granulate. Dose : 60 to 120 grs.

**Cataplasmata.**—All omitted.

**Charta Epispastica.**—Omitted.

**Charta Sinapis.**—Black and white mustard seeds, in equal proportions by weight. Bruise, extract the fixed oil by percolation with benzol (s. g. 0·880 to 0·888), dry residue, and reduce to No. 60 powder. Mix this powder, 5 Gm., with solution of india-rubber, 18 C.c., and spread over about 30 square inches of cartridge paper.

**Collodium.**—Pyroxylin, 1; ether (s. g. 0·735), 36; alcohol (90 p. c.), 12.

**Collodium Flexile.**—Formula unaltered.

**Collodium Vesicans.**—Blistering liquid, 40; pyroxylin, 1.

**Confectio Opii.**—Omitted.

**Confectio Piperis.**—Formula unaltered.

**Confectio Rosæ Caninæ.**—Omitted.

**Confectio Rosæ Gallicæ.**—Formula unaltered.

**Confectio Scammonii.**—Omitted.

**Confectio Sennæ.**—Formula unaltered.

**Confectio Sulphuris.**—Sublimed sulphur, 100; acid potassium tartrate, 25; tragacanth, in powder, 1; syrup, 50; tincture of orange, 12·5; glycerin, 37·5. [*Glycerin now added.*]

**Confectio Terebinthinæ.**—Omitted.

**Decocta.**—All omitted except those referred to below.

**Decoctum Aloes Compositum.**—Extract of Barbados aloes is substituted for extract of Socotrine aloes.

**Decoctum Granati Corticis.**—Pomegranate bark, in No. 10 powder, 4; distilled water, 24. Boil for 10 minutes, strain, and add sufficient water to produce 20. Differs from *Decoctum Granati Radicis* in bark of stem being permitted as well as root-bark. Dose :  $\frac{1}{2}$  to 2 fl. oz. [*100 p. c. stronger.*]

**Decoctum Hæmatoxyli.**—Logwood, in chips, 50; cinnamon bark, bruised, 8; distilled water, 1200. Boil for 10 minutes, strain, and add sufficient water to make 1000. Dose :  $\frac{1}{2}$  to 2 fl. oz.

**Decoctum Sarsæ Compositum.**—Now replaced by *Liquor Sarsæ Compositus Concentratus*, which see.

**Decoctum Scoparii.**—Now replaced by *Infusum Scoparii*, which see.

**Emplastrum Ammoniaci cum Hydrargyro.**—Unaltered.

**Emplastrum Belladonnæ.**—Liquid extract of belladonna, 4; evaporate to 1 part by weight and add resin plaster, 5. Contains 0·5 p. c. of the alkaloids of belladonna root.



**Emplastrum Calefaciens.**—Omit expressed oil of nutmeg, and use distilled water. Otherwise unaltered.

**Emplastrum Cantharidis.**—Cantharides, in powder, 7; yellow beeswax, 4; lard, 4; resin, 4; soap plaster, 1.

**Emplastrum Ferri.**—Omitted.

**Emplastrum Galbani.**—Omitted.

**Emplastrum Hydrargyri.**—Formula unaltered.

**Emplastrum Menthol.**—Menthol, 3; yellow beeswax, 2; resin, 15. Add the menthol to the melted wax and resin at 71° to 77° C., and stir until dissolved. [25 p. c. weaker.]

**Emplastrum Opii.**—Unaltered.

**Emplastrum Picis.**—Omit the expressed oil of nutmeg.

**Emplastrum Plumbi.**—Formula unaltered.

**Emplastrum Plumbi Iodidi.**—Formula unaltered.

**Emplastrum Resinæ.**—Hard soap is substituted for curd soap.

**Emplastrum Saponis.**—Hard soap is substituted for curd soap.

**Emplastrum Saponis Fuscum.**—Omitted.

**Enemata.**—All omitted.

**Ergotinum.**—Now official as *Extractum Ergotæ*, which see.

**Essentia Anisi.**—Omitted. See *Spiritus Anisi*.

**Essentia Menthæ Piperitæ.**—Omitted. See *Spiritus Menthæ Piperitæ*.

†**Extracta Liquida.**—In India and other tropical countries any liquid extract containing less than one-fourth of its weight of 90 p. c. alcohol, may have the proportion of alcohol increased to an extent not exceeding one-fourth of the weight of the extract.

**Extractum Aconiti.**—Omitted.

**Extractum Aloes Barbadosis.**—Formula unaltered, but the period of maceration is extended to 24 hours, and the liquid is to be evaporated at a temperature not exceeding 60° C. Dose: 1 to 4 grains.

**Extractum Aloes Socotrinæ.**—Omitted.

**Extractum Anthemidis.**—Formula unaltered, but consistence directed to be that of a soft extract. Dose: 2 to 8 grains.

**Extractum Belæ Liquidum.**—Omitted.

**Extractum Belladonnæ.**—See *Extractum Belladonnæ Viride*.

**Extractum Belladonnæ Alcoholicum.**—Liquid extract of belladonna, 20; milk sugar, *q.s.* Evaporate the liquid extract to a thin syrup, and add sufficient milk sugar to produce, on evaporation, 15 parts of a moderately firm extract, containing 1 p. c. of the alkaloids of belladonna root. To determine the quantity of milk sugar that must be added, evaporate 50 C.c. of the liquid extract, in a counterpoised dish on a water bath, to a moderately



firm extract, and weigh. The difference between that weight and 37·5 Gm. will indicate the amount of milk sugar that must be used as a diluent for each 50 C.c. of the liquid extract. Dose:  $\frac{1}{4}$  to 1 grain. [66 p. c. weaker.]

**\*Extractum Belladonnæ Liquidum.**—Belladonna root, in No. 20 powder, is exhausted with a mixture of alcohol (90 p. c.), 7 volumes, and distilled water, 1 volume, by re-percolation. Moisten belladonna powder, 8, with menstruum, 6, and set aside for 6 hours; next pack firmly in a percolator, add menstruum, 6, and when the liquid begins to drop close the lower orifice of the percolator and set aside for 24 hours. Then percolate slowly, adding more of the menstruum as required, collect the percolate in small portions, and use this as the menstruum for percolating a second quantity of belladonna powder, equal in weight to the first. Two more similar quantities must subsequently be treated in like manner, the third portion being extracted with the percolate from the second, and the fourth with that from the third. The product collected from the fourth percolator should measure 12·5. This product is next standardised, so that it shall contain 0·75 Gm. of the alkaloids of the root in 100 C.c. Shake 10 C.c. of the extract with 10 C.c. of chloroform, 50 C.c. of water, and a decided excess of ammonia; separate the chloroformic solution, and twice repeat the agitation and separation with chloroform. Shake the mixed chloroformic solutions with 5 C.c. of diluted sulphuric acid, mixed with twice its volume of warm water, separate, and repeat the operation. Wash the mixed acid liquids with 3 C.c. of chloroform, then agitate with 10 C.c. of chloroform and an excess of ammonia. Separate the chloroformic solution, twice repeat the agitation and separation with chloroform, wash the mixed chloroformic solutions with 5 C.c. of water containing 1 drop of solution of ammonia, evaporate on a water-bath, dry residue below 100° C., and weigh. Next dissolve the residue in 10 C.c. of decinormal hydrochloric acid, neutralise with centinormal sodium hydroxide, using tincture of cochineal as an indicator, deduct the measure of soda solution required from 100 C.c., and multiply the remainder by 0·00287. The product will be the weight in grammes of alkaloids present in 10 C.c. of the liquid extract; from this weight calculate the amount present in the bulk of strong percolate, and add to the latter sufficient of the alcoholic menstruum to make it contain 0·75 Gm. of alkaloids in 100 C.c.

**Extractum Belladonnæ Viride.**—Identical with Extractum Belladonnæ of the 1885 Pharmacopœia, except that the consistence is to be that of a soft extract.

**Extractum Calumbæ.**—Omitted.

**Extractum Cannabis Indicæ.**—Indian hemp, in coarse powder, is exhausted with alcohol (90 p. c.), and the percolate evaporated to the consistence of a soft extract.



**Extractum Cascaræ Sagradæ.**—Cascara sagrada, in No. 20 powder, is exhausted with distilled water by moistening and setting aside for a few hours, then percolating. The percolate is afterwards evaporated to dryness. [*Now a dry extract.*]

**Extractum Cascaræ Sagradæ Liquidum.**—Cascara sagrada, in No. 20 powder, 20; alcohol (90 p. c.), 4; distilled water, *q.s.* Moisten the drug with water, 15, set the mixture aside for 6 hours, then percolate till the powder is exhausted, evaporate the percolate to 12 fluid parts, add the alcohol and sufficient water to make the product measure 20. Dose:  $\frac{1}{2}$  to 1 fl. dr.

**Extractum Cimicifugæ Liquidum.**—The drug is exhausted with 90 p. c. alcohol instead of rectified spirit. Dose: 5 to 30 minims.

**Extractum Cinchonæ Liquidum.**—The rectified spirit of the older process is replaced by 90 p. c. alcohol. The finished extract must contain 5 Gm. of the alkaloids of red cinchona bark in 100 C.c. The assay process is practically the same as that official in the 1885 Pharmacopœia, 5 C.c. of the evaporated percolate being placed in a stoppered glass separator, together with 25 C.c. of water, 30 C.c. of benzolated amylic alcohol, and 15 C.c. of solution of potassium hydroxide. After shaking repeatedly, the lower dark-coloured alkaline layer that separates is run off and again shaken with 30 C.c. of benzolated amylic alcohol, the lower layer that now separates being rejected. The two upper layers containing the alkaloids in solution are then mixed, washed with a little water, and agitated thoroughly with 30 C.c. of a warm mixture of 1 volume of diluted hydrochloric acid and 5 volumes of water. This operation is repeated with the alcoholic layer that separates, and the two acid layers are subsequently mixed. The alkaloids are then shaken out with 10 C.c. of chloroform and sufficient solution of ammonia to impart a strongly alkaline reaction; the agitation and separation are repeated with two successive quantities of 10 C.c. of chloroform, the chloroformic liquids mixed, evaporated slowly, the residue dried at 110° C., and the residual alkaloids weighed. The liquid extract must next be adjusted, either by evaporation or dilution with water, so that 5 parts of total alkaloid are contained in 85 fluid parts. Now add 12.5 of alcohol (90 p. c.), and make up to 100 with distilled water. Dose: 5 to 15 minims.

**Extractum Cocæ Liquidum.**—The coca leaves are reduced to No. 20 powder and exhausted with 60 p. c. alcohol. Dose:  $\frac{1}{2}$  to 1 fl. dr.

**Extractum Colchici.**—Process unaltered, but consistence to be that of a soft extract. Dose:  $\frac{1}{4}$  to 1 grain.

**Extractum Colchici Aceticum.**—Omitted.

**Extractum Colocynthis Compositum.**—Extract of



Barbados Aloes is to be used in making this preparation, the proportion of curd soap is increased by one-third, 60 p. c. alcohol is ordered instead of proof spirit, and the consistence is to be that of a firm extract. Dose : 2 to 8 grains.

**Extractum Conii.**—Omitted.

\***Extractum Ergotæ.**—Ergot, in No. 40 powder, 1000; alcohol (60 p. c.), 500; distilled water, 250; diluted hydrochloric acid, 47; sodium carbonate, 20. Moisten the ergot with the alcohol and percolate until exhausted, then evaporate to 250, add the water and filter when cold, washing the residue with a little water. Add the acid to the filtrate, set aside for 24 hours, filter, wash the residue with distilled water until the washings no longer have an acid reaction, and add the washings to the filtrate. Finally add the sodium carbonate and evaporate to a soft extract. Dose : 2 to 8 grains. [Syn : *Ergotin.*]

**Extractum Ergotæ Liquidum.**—Use 90 p. c. alcohol instead of rectified spirit.

**Extractum Euonymi Siccum.**—Euonymus bark, in No. 20 powder, 20; alcohol (45 p. c.), *q.s.*; calcium phosphate, *q.s.* Moisten the drug with alcohol, 10, and percolate until exhausted, using sufficient of the menstruum for that purpose. Evaporate off the alcohol, thoroughly dry the residue, powder and mix with one-fourth its weight of calcium phosphate, again dry and powder, and immediately transfer to a well-closed bottle. Dose : 1 to 2 grains. [*Milk sugar now omitted.*]

**Extractum Filicis Liquidum.**—Male fern rhizome, in No. 20 powder, is exhausted by percolation with ether, and the ether evaporated from the clear percolate, on a water-bath or by distillation, until an oily extract remains. Dose : 45 to 90 minims.

**Extractum Gelsemii Alcoholicum.**—Omitted.

**Extractum Gentianæ.**—Gentian root not directed to be sliced, and consistence to be that of a soft extract. Dose : 2 to 8 grains.

**Extractum Glycyrrhizæ.**—The first period of maceration is extended to 24 hours, and the consistence is to be that of a soft extract.

**Extractum Glycyrrhizæ Liquidum.**—Liquorice root, in No. 20 powder, 20; distilled water, 5; 90 p. c. alcohol, *q.s.* Mix the liquorice with half of the water, set aside for 24 hours, strain, press, mixed the strained liquids, heat to 100° C., strain through flannel, and evaporate until the fluid, when cold, is of s.g. 1.200. Finally add to the extract one-fourth its volume of the alcohol, stand for 12 hours and filter. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Alcohol increased.*]

**Extractum Hamamelidis Liquidum.**—Alcohol (45 p. c.) replaces the mixture of rectified spirit and water formerly employed as a menstruum. Dose : 5 to 15 minims.



**Extractum Hæmatoxyli.**—Omitted.

**Extractum Hydrastis Liquidum.**—Alcohol (45 p. c.) replaces the mixture of rectified spirit and water formerly employed as a menstruum. Dose : 5 to 15 minims.

**Extractum Hyoscyami Viride.**—Identical with Extractum Hyoscyami of the 1885 Pharmacopœia, except that the consistence is to be that of a soft extract. Dose : 2 to 8 gr.

**\*Extractum Ipecacuanhæ Liquidum.**—Ipecacuanha root, in No. 20 powder, 80 ; calcium hydroxide, 8 ; alcohol (90 p. c.), 3. Moisten the ipecacuanha with the alcohol, pack firmly in a percolator, add more alcohol, and when the liquid begins to drop, close the lower orifice of the percolator and set aside for 24 hours. Then percolate slowly until the product measures 67·5, and set this portion aside. Continue percolation until nothing more is extracted, drain well, mix the lime with the marc, and after standing for 24 hours, continue percolation until exhaustion is complete. Recover the alcohol from the last two percolates by distillation, and dissolve the residual extract in the portion of the percolate that was set aside. The extract is next standardised so that it shall contain 2 to 2·25 Gm. of the alkaloids of the root in 100 C.c. The assay process is as follows :—Dilute 20 C.c. of the strong liquid extract with an equal bulk of water, remove the alcohol by the aid of a water-bath, add to the warm solution an excess of solution of lead subacetate, filter, wash the precipitate with water, and add the washings to the filtrate. Remove excess of lead from filtrate by precipitation with diluted sulphuric acid, filter, wash, and add the washings to the filtrate. Transfer filtrate to a separator, add excess of solution of ammonia (s. g. 0·959), and agitate with 25 C.c. of chloroform. Separate and set aside the chloroformic solution, and twice repeat the agitation with chloroform and the subsequent separation. Then mix the chloroformic solutions, evaporate, dry at a temperature below 80° C., and weigh the residue of total alkaloids. From this weight calculate the amount of alkaloids in the bulk of strong liquid extract, and add to the latter sufficient alcohol (90 p. c.) to make the liquid extract of the required strength. Dose : As an expectorant,  $\frac{1}{2}$  to 2 minims ; as an emetic, 15 to 20 minims.

**Extractum Jaborandi.**—Omitted.

**\*Extractum Jaborandi Liquidum.**—Jaborandi leaves, in No. 20 powder, 20 ; alcohol (45 p. c.), 10. Moisten the powder with the alcohol, pack in a percolator and set aside for twelve hours ; then percolate with more alcohol, and collect 17 of percolate. Continue percolation until 50 parts more are obtained, distil the latter so as to recover the alcohol, evaporate the residual aqueous liquid to the consistence of a soft extract, add to this the reserved percolate, and sufficient alcohol to make 20 of product. Dose : 5 to 15 minims.



**Extractum Jalapæ.**—Alcohol (90 p. c.) is substituted for rectified spirit as the first macerating medium, and the finished product must have the consistence of a firm extract. Dose: 2 to 8 grains.

**Extractum Krameriz.**—Coarsely powdered krameria root is macerated in twice its weight of distilled water for 24 hours; then packed in a percolator and percolated with more water until exhausted. Finally evaporate the liquid to dryness. Dose: 5 to 15 grains.

**Extractum Lactucæ.**—Omitted.

**Extractum Lupuli.**—Omitted.

**Extractum Mezerei Æthereum.**—Omitted.

**Extractum Nucis Vomicæ.**—Liquid extract of nux vomica, 10; milk sugar, *q.s.* Distil the alcohol from the liquid extract, and add sufficient milk sugar to produce, on evaporation, three parts of a firm extract containing 5 p. c. of strychnine. To determine the quantity of milk sugar that must be added, evaporate 50 C.c. of the liquid extract, in a counterpoised dish on a water-bath, to a moderately firm extract, and weigh. The difference between that weight and 15 Gm. will indicate the amount of milk sugar that must be used as a diluent for each 50 C.c. of the liquid extract. Dose:  $\frac{1}{4}$  to 1 grain. [33 p. c. weaker.]

**\*Extractum Nucis Vomicæ Liquidum.**—Moisten nux vomica in No. 20 powder, 16, with alcohol (70 p. c.), 8; set aside in a covered vessel for 6 hours, then pack firmly in a percolator, and add more alcohol, so as to saturate the powder and leave a stratum above it. When the liquid begins to flow, close the lower orifice of the percolator, set aside for 24 hours, then continue slow percolation and collect the first 12 fluid parts of strong percolate. Change the receiver and continue percolation until the powder is exhausted, press the marc, add the expressed liquid to the weaker percolate, which must then be freed from alcohol by distillation and evaporated to 1 fluid part. To this add alcohol (90 p. c.), 3, mix with the reserved stronger percolate, and, after standing for 24 hours, pour off the clear liquid and filter the remainder. Next determine the proportion of strychnine present in the liquid extract, evaporate 10 C.c. to a thick syrup on a water-bath, dissolve the residue in 20 C.c. of water, heating if necessary, place the solution in a separator, and shake out with 5 Gm. of sodium carbonate dissolved in 25 C.c. of water, together with 10 C.c. of chloroform. Separate, and twice repeat the operation with chloroform only. Then mix 6 C.c. of diluted sulphuric acid with 25 C.c. of water, divide the mixture into three parts, and shake the mixed chloroformic solutions with each in turn. Mix the acid liquids, dilute with water to 175 C.c., and shake well and frequently in a stoppered flask during half an hour with 25 C.c. of potassium



ferrocyanide solution (10 Gm. in 200 C.c.). The precipitate formed is transferred to a filter, the flask rinsed with water containing one-fortieth its volume of diluted sulphuric acid, and the precipitate washed until the washings are free from bitterness. Next, shake the precipitate in a separator with 5 C.c. of solution of ammonia, add 15 C.c. of chloroform in two successive portions, shaking well after each addition, separate and mix the chloroformic solutions, and evaporate in a counterpoised dish in a current of warm air, the dish being covered to avoid loss of strychnine. The residue is dried for 1 hour on a water-bath, and then weighed. From this weight calculate the amount of strychnine in the bulk of the strong liquid extract, and add to the latter sufficient alcohol (70 p. c.) to produce a liquid extract of nux vomica containing 1.5 Gm. of strychnine in 100 C.c. Dose : 1 to 3 minims.

**Extractum Opii.**—The opium is directed to be sliced. Dose :  $\frac{1}{4}$  to 1 grain.

**Extractum Opii Liquidum.**—Extract of opium, 3, distilled water, 64, alcohol (90 p. c.), 16. Mix the extract with the water, and set aside for an hour, stirring frequently ; then add the alcohol, set aside in a cool place for 24 hours, and filter. The product should measure 80 fluid parts, its s. g. should be from 0.985 to 0.995, and 100 C.c. should contain 0.75 Gm. of morphine. Dose : 5 to 30 minims. [25 p. c. weaker.]

**Extractum Papaveris.**—Omitted.

**Extractum Pareiræ.**—Omitted.

**Extractum Pareiræ Liquidum.**—Pareira root, in No. 40 powder, is moistened with boiling distilled water, set aside for 24 hours, then slowly percolated with more boiling water until exhausted. The proportion of extractive matter in the percolate is determined by evaporating a small weighed quantity, in a counterpoised dish on a water-bath, to a firm consistence, and weighing the product. Next, evaporate the bulk of the percolate until it contains one-third its weight of such extractive matter, and add sufficient alcohol (90 p. c.) to increase the bulk of the evaporated liquid by one-third. Filter, or otherwise clarify, if necessary. Dose :  $\frac{1}{2}$  to 2 fl. dr.

**Extractum Physostigmatis.**—Alcohol (90 p. c.) replaces the rectified spirit formerly used as a menstruum, and after a very soft extract has been produced on evaporation, it is mixed with three times its weight of milk sugar, so as to produce a firm extract. The strength is thus reduced to one-fourth that of the older extract. Dose :  $\frac{1}{4}$  to 1 grain. [75 p. c. weaker.]

**Extractum Quassiæ.**—Omitted.

**Extractum Rhamni Frangulæ**—Omitted.

**Extractum Rhamni Frangulæ Liquidum.**—Omitted.



**Extractum Rhei.**—Rhubarb root, in No. 20 powder, is exhausted by moistening with 60 p. c. alcohol, setting aside for 48 hours, then slowly percolating with alcohol, most of which is subsequently recovered by distillation, and evaporating extract to dryness. Dose : 2 to 8 grains. [*Now a dry extract ; stronger.*]

**Extractum Sarsæ Liquidum.**—Sarsaparilla, in No. 40 powder, 20 ; alcohol (20 p. c.), *q.s.* ; glycerin, 2. The sarsaparilla is divided into three portions, the first of which is moistened with alcohol, 4 fluid parts, packed in a percolator, set aside for 24 hours, then percolated with alcohol until the product measures 4 fluid parts. Moisten the second portion with this, and go through the same steps as before, percolating with a menstruum obtained by further percolation of the first portion. Repeat the whole operation with the third portion—obtaining all the menstruum required by passing more of the alcohol through the first and second portions—and adjust the final percolate, so that after adding the glycerin it shall measure exactly 20 fluid parts. Dose : 2 to 4 fl. dr. [*Glycerin replaces sugar.*]

**Extractum Stramonii.**—Pack stramonium seeds, in No. 40 powder, in a percolator, exhaust by slow percolation with alcohol (70 p. c.), remove most of the alcohol by distillation, and evaporate the residual liquid to a firm extract. Dose :  $\frac{1}{4}$  to 1 grain.

\***Extractum Strophanthi.**—Pack strophanthus seeds, reduced to No. 30 powder and dried at 43° C., in a percolator, moisten with purified ether (s. g. 0.720 to 0.722), set aside for 24 hours, then percolate with ether until it passes through colourless. Remove the marc and dry it, gradually heating it up to 49° C. Then reduce to powder, repack in percolator, moisten with alcohol (90 p. c.), leave for 48 hours, then percolate slowly with alcohol until for each part of the powder 10 fluid parts of liquid have been obtained. Evaporate most of the alcohol, transfer residual liquid to a counterpoised basin and concentrate until it begins to thicken, then add sufficient finely-powdered milk sugar to produce extract, in powder, equal to twice the weight of the strophanthus powder operated upon. Dose :  $\frac{1}{4}$  to 1 grain. [*Dry extract.*]

**Extractum Taraxaci.**—No limit of temperature is specified at which to evaporate the juice, and the final consistence is to be that of a soft extract : Dose : 5 to 15 grains.

**Extractum Taraxaci Liquidum.**—Alcohol (60 p. c.) is used as a menstruum instead of the proof spirit. Dose :  $\frac{1}{2}$  to 2 fl. dr.

**Fel Bovinum Purificatum.**—Alcohol (90 p. c.) is used as a solvent instead of rectified spirit, and the consistence of the product is to be that of a thick extract. Dose : 5 to 15 grains.

**Ferri et Ammonii Citras.**—Strength and dose unaltered.

**Ferri et Quininæ Citras.**—Strength and dose unaltered.

**Ferrum Redactum.**—Contains 75 per cent. instead of 50 p. c. of metallic iron. [*50 per cent. stronger.*]



**Ferrum Tartaratum.**—Strength and dose unaltered.

**\*Glycerinum Acidi Borici.**—Boric acid, in fine powder, 6 ; glycerin (s. g. 1.260), sufficient to produce 20 by weight. Heat glycerin, 9 parts by weight, to a temperature not exceeding 150° C., and add the boric acid gradually, constantly stirring until all is dissolved. Maintain the temperature until the mixture has been reduced to 10 parts by weight, then add sufficient glycerin to make 20.

**Glycerinum Acidi Carbolici.**—Phenol, 1 ; glycerin, sufficient to produce 5 by volume. Dissolve by trituration.

**Glycerinum Acidi Gallici.**—Omitted.

**Glycerinum Acidi Tannici.**—Tannic acid, 1 ; glycerin, sufficient to produce 5 by volume. Dissolve by trituration.

**Glycerinum Aluminis.**—Alum, in powder, 40 ; distilled water, 15 ; glycerin, sufficient to produce 240 by volume. Dissolve by trituration, warming if necessary, set aside to settle and pour off the clear liquid.

**Glycerinum Amyli.**—Starch, 2 ; glycerin, 13 ; distilled water, 3. Mix, heat, and stir constantly until a translucent jelly is formed. *[Less water now used.]*

**Glycerinum Boracis.**—Borax, 1 ; glycerin, 6. Dissolve by trituration. *[Water now omitted.]*

**\*Glycerinum Pepsini.**—Pepsin (2500 times), 16 ; hydrochloric acid, 2 ; glycerin, 105 ; distilled water, sufficient to produce 175. Mix the acid, glycerin, and 52 of water ; then add the pepsin, and, after one week, filter and make up to the required volume with water. Dose : 1 to 2 fl. dr.

**Glycerinum Plumbi Subacetatis.**—Lead acetate, 5 ; lead oxide, in powder, 3.5 ; glycerin, 20 ; distilled water, 12. Mix, boil for 15 minutes, filter, and evaporate at a temperature not exceeding 105° C. until the product weighs 32.75 and is of s. g. 1.48.

**Glycerinum Tragacanthæ.**—Tragacanth, in fine powder, 1 ; glycerin, 3 ; distilled water, 1. Mix the glycerin with the tragacanth, add the water, and triturate until a homogeneous paste is produced. *[11 p. c. more tragacanth, less glycerin, and more water.]*

**\*Hydrargyri Oleas.**—Mercuric chloride, 8 ; hard soap, powdered, 16 ; oleic acid, 1 ; boiling distilled water, *q.s.* Dissolve the mercuric chloride in 80 of water ; triturate the acid with the soap and dissolve in 88 of water. Mix the solutions, boil for 10 minutes, set aside to deposit, decant, wash the precipitated oleate with hot distilled water until free from chloride, and dry on a water-bath.

**Hydrargyrum Ammoniatum.**—Unaltered.

**Hydrargyrum cum Creta.**—Unaltered.

**†Infusa.**—In India and the Colonies, dried instead of fresh lemon peel may be used in preparing the compound infusions of gentian and orange peel.



**Infusum Anthemidis.**—Omitted.

**Infusum Aurantii.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Aurantii Compositum.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Buchu.**—The buchu leaves are to be freshly broken, not bruised, and infused for 15 minutes only. Dose : 1 to 2 fl. oz.

**Infusum Calumbæ.**—The calumba root is to be thinly sliced, not cut small. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Caryophylli.**—Infuse for 15 minutes only. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Cascarillæ.**—Cascarilla, in No. 10 powder, 1 ; boiling distilled water, 20. Infuse for 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz. [50 *p. c. weaker.*]

**Infusum Catechu.**—Omitted.

**Infusum Chiratæ.**—Chiretta, cut small, 1 ; boiling distilled water, 20. Infuse for 15 mins. Dose :  $\frac{1}{2}$  to 1 fl. oz. [100 *p. c. stronger.*]

**Infusum Cinchonæ Acidum.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Cuspariæ.**—Cusparia bark, in No. 20 powder, 1 ; boiling distilled water, 20. Infuse for 15 minutes.

**Infusum Cusso.**—Omitted.

**Infusum Digitalis.**—Digitalis leaves, in No. 20 powder, 3 ; boiling distilled water, 437·5.

**Infusum Ergotæ.**—Ergot, freshly crushed, 1 ; boiling distilled water, 20. Infuse for 15 minutes. [100 *p. c. stronger.*]

**Infusum Gentianæ Compositum.**—Formula unaltered, but period of infusion reduced to 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Jaborandi.**—Omitted.

**Infusum Krameriæ.**—Krameria root, bruised, 1 ; boiling distilled water, 20. Infuse for 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Lini.**—Omitted.

**Infusum Lupuli.**—Hops, freshly broken, 1 ; boiling distilled water, 20. Infuse for 15 minutes.

**Infusum Maticæ.**—Omitted.

**Infusum Quassiæ.**—Quassia, finely rasped, 1 ; cold distilled water, 100. Infuse in a covered vessel for 15 minutes. Dose :  $\frac{1}{2}$  to 1 fluid ounce. [20 *p. c. weaker.*]

**Infusum Rhei.**—Rhubarb, in thin slices, 1 ; boiling dist. water, 20. Infuse 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz. [100 *p. c. stronger.*]

**Infusum Rosæ Acidum.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Scoparii.**—Broom tops, dried and bruised, 2 ;



boiling distilled water, 20. Infuse in a covered vessel for 15 minutes. Dose : 1 to 2 fl. oz. [*Replaces the decoctum.*]

**Infusum Senegæ.**—The senega root is ordered in No. 10 powder. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Sennæ.**—Infuse for 15 minutes only. Dose :  $\frac{1}{2}$  to 1 fl. oz. ; as a draught, 2 fl. oz.

**Infusum Serpentariæ.**—Serpentary rhizome, in No. 10 powder, 1 ; boiling distilled water, 20. Infuse for 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz. [*100 p. c. stronger.*]

**Infusum Uvæ Ursi.**—Infuse for 15 minutes. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Infusum Valerianæ.**—Omitted.

**Injectio Apomorphinæ Hypodermica.**—Apomorphine hydrochloride, 1 ; diluted hydrochloric acid, 1 ; distilled water, 100. Boil the water for a few minutes, cool, add the acid, and dissolve the apomorphine hydrochloride in the mixture ; if necessary make up with recently boiled and cooled distilled water to 100 fluid parts. Dose : 5 to 10 minims. [*Now acidulated ; 50 p. c. weaker.*]

**\*Injectio Cocainæ Hypodermica.**—Cocaine hydrochloride, 10 ; salicylic acid, 0.15 ; distilled water, 100. Boil the water, add the acid, and dissolve the cocaine hydrochloride in the solution when cool ; if necessary, make up to 100 with recently boiled and cooled distilled water. Dose : 2 to 5 minims. [*Replaces the liquor.*]

**Injectio Ergotæ Hypodermica.**—Formerly known as *Injectio Ergotini Hypodermica*. Extract of ergot, 50 ; phenol, 1.5 ; distilled water, 100. Mix the phenol with the water and boil for a few minutes ; cool, add the extract of ergot and, if necessary, make up to 150 fluid parts with recently boiled and cooled distilled water. Dose : 3 to 10 minims.

**Injectio Ergotini Hypodermica.**—Now official as *Injectio Ergotæ Hypodermica*, which see above.

**Injectio Morphinæ Hypodermica.**—Dissolve morphine tartrate, 5, in sufficient recently boiled and cooled distilled water to produce 100 fluid parts. Dose : 2 to 5 minims. [*50 p. c. weaker.*]

**Jalapæ Resina.**—Alcohol (90 p. c.) is used to exhaust the jalap, instead of rectified spirit. The powdered resin should not yield more than 10 p. c. to ether.

**Lamellæ Atropinæ.**—Formula unaltered.

**Lamellæ Cocainæ.**—The weight of the discs is increased to 2.17 Mgm., and each must contain 1.3 Mgm. of cocaine hydrochloride. [*4 times stronger.*]

**\*Lamellæ Homatropinæ.**—Discs of gelatin, with some glycerin, each weighing about 1.3 Mgm., and containing 0.65 Mgm. of homatropine hydrobromide.

**Lamellæ Physostigminæ.**—Physostigmine sulphate is used instead of physostigmine.



**Linimentum Aconiti.**—Alcohol (90 p. c.) is ordered instead of rectified spirit.

**Linimentum Ammoniae.**—Solution of ammonia, 1 ; almond oil, 1 ; olive oil, 2. Shake together.

**Linimentum Belladonnæ.**—Liquid extract of belladonna, 10 ; camphor, 1 ; distilled water, 2 ; alcohol (90 p. c.), *q.s.* to produce 20. Dissolve the camphor in 6 of the alcohol, add the extract, water, and sufficient alcohol to produce the required volume. Set aside for 24 hours, then filter. [*Prepared from liquid extract.*]

**Linimentum Calcis.**—Unaltered.

**Linimentum Camphoræ.**—The camphor is ordered to be used in flowers. [*Syn : Camphorated oil.*]

**Linimentum Camphoræ Ammoniatum.**—This is the Linimentum Camphoræ Compositum of the 1885 Pharmacopœia, with the rectified spirit replaced by 90 p. c. alcohol, whilst a definite volume—20 fl. oz.—is to be produced with the quantities there ordered, the camphor and oil being dissolved in about 5 times their volume of alcohol, the strong solution of ammonia gradually added, with constant shaking, and sufficient alcohol then added to make a clear solution of the required volume. [*Formerly Lin. Camph. Co.*]

**Linimentum Chloroformi.**—Unaltered.

**Linimentum Crotonis.**—Alcohol (90 p. c.) takes the place of rectified spirit

**Linimentum Hydrargyri.**—Ointment of mercury, 30 ; strong solution of ammonia, 10 ; liniment of camphor, *q.s.* Add the ammonia solution to sufficient of the liniment to make 45 of product ; triturate the ointment with sufficient liniment to produce an equal volume ; then mix the liquids. [*Process altered.*]

**Linimentum Iodi.**—Now official as Liquor Iodi Fortis, which see at page 23. [*Name altered.*]

**Linimentum Opii.**—Formula unaltered, but the product is directed to be set aside for a few days before filtration.

**Linimentum Potassii Iodidi cum Sapone.**—The curd soap must be recently prepared and in fine shavings.

**Linimentum Saponis.**—Soft soap replaces the hard soap formerly ordered, and 90 p. c. alcohol is to be used instead of rectified spirit. Dissolve the soap in the water and the camphor and oil in the alcohol, mix the two solutions, set aside for a week, and filter. [*Soft soap now used.*]

\***Linimentum Sinapis.**—Volatile oil of mustard, 2 ; camphor, 3 ; castor oil, 7 ; 90 p. c. alcohol, 43. Dissolve the camphor in the alcohol and add the oils. [*50 p. c. stronger than Lin. Sinapis Co.*]

**Linimentum Sinapis Compositum.**—Omitted.

**Linimentum Terebinthinæ.**—Soft soap, 1·5 ; distilled water, 5 or *q.s.* ; camphor, 1 ; oil of turpentine, 13. Mix the soap with 2



of water, dissolve the camphor in the turpentine, gradually add the second solution to the first, triturate until a thick creamy emulsion is formed, then add sufficient water to make 20 of product. *[Now more fluid ; weaker.]*

**Linimentum Terebinthinæ Aceticum.**—Unaltered.

**Liquor Acidi Chromici.**—Unaltered.

**Liquor Ammoniaë.**—Unaltered.

**Liquor Ammoniaë Fortis.**—Identical with Liquor Ammoniaë Fortior of the 1885 B.P.

**Liquor Ammonii Acetatis.**—Dissolve ammonium carbonate, 1, in 10 times its weight of distilled water, neutralise with acetic acid, and add sufficient distilled water to produce 20 of the solution. Preserve in green glass. Dose : 2 to 6 fl. dr. *[Slightly weaker.]*

**Liquor Ammonii Acetatis Fortior.**—Omitted.

**Liquor Ammonii Citratis.**—Dissolve citric acid, 2·5, in 5 times its weight of distilled water, neutralise with ammonium carbonate (about 1·75), and add sufficient distilled water to produce 20 of the solution. Preserve in a green glass bottle. Dose : 2 to 6 fl. dr. *[Slightly weaker.]*

**Liquor Ammonii Citratis Fortior.**—Omitted.

**Liquor Antimonii Chloridi.**—Omitted.

**Liquor Arsenicalis.**—Add half a grain each of arsenious anhydride and potassium carbonate to the quantities ordered in the 1885 B.P., to produce one pint. *[1 in 100.]*

**Liquor Arsenici Hydrochloricus.**—Add half a grain of arsenious anhydride to the quantity ordered in the 1885 B.P., to produce one pint. *[1 in 100.]*

**Liquor Arsenii et Hydrargyri Iodidi.**—Arsenious iodide, 1; mercuric iodide, 1; distilled water, *q.s.* to produce 100 of solution. Dose : 5 to 20 minims. *[1 in 100.]*

**Liquor Atropinæ Sulphatis.**—Dissolve atropine sulphate, 1, and salicylic acid, 0·12, in sufficient recently boiled and cooled distilled water to produce 100 of the solution. Dose :  $\frac{1}{2}$  to 1 minim. *[Contains salicylic acid.]*

**Liquor Bismuthi et Ammonii Citratis.**—Bismuth oxynitrate, 35; potassium citrate, 35; potassium carbonate, 10; nitric acid, 25; solution of ammonia and distilled water, *q.s.* Dissolve the oxynitrate in the acid diluted with an equal volume of water, add more water with constant stirring until the liquid is very faintly opalescent; then add the potassium salts dissolved in a little water, heat the liquid to the boiling-point, cool, separate the precipitate, and wash it with distilled water until free from nitrates. Now gradually add solution of ammonia to the moist precipitate until it is just dissolved, dilute with distilled water to produce 500 fluid parts of the solution, and filter. *[Formula improved.]*



**Liquor Calcii Chloridi.**—Omitted.

**Liquor Calcis.**—Calcium hydroxide is specified in the formula instead of slaked lime.

**Liquor Calcis Chlorinatæ.**—Formula unaltered, but it is recommended that the filtered solution should be preserved in a cool and dark place.

**Liquor Calcis Saccharatus.**—Calcium hydroxide is ordered instead of slaked lime, and the specific gravity is altered to 1.055. Dose : 20 to 60 minims.

**\*Liquor Calumbæ Concentratus.**—Calumba root, in No. 5 powder, 10 ; 90 p. c. alcohol, 4.5 ; distilled water, *q.s.* to make 20. Macerate the calumba for 24 hours with 10 of water, press strongly, macerate the residue for 24 hours with 10 of water, again press strongly, mix the expressed liquids, and heat for 5 minutes to 82° C. When cold, add the alcohol, set aside, filter, and add sufficient water to produce the required volume. Dose :  $\frac{1}{2}$  to 1 fl. dr.  
[*Concentrated infusion ; 1 = 10.*]

**\*Liquor Caoutchouc.**—Indiarubber, 1 ; benzol, 10 ; carbon bisulphide, 10. Cut the rubber into fine shreds, and place in a well-stoppered bottle containing the previously mixed liquids. Set aside in a cool place, and agitate occasionally until solution is effected.  
[*Replaces liquor gutta-percha.*]

**\*Liquor Chiratæ Concentratus.**—Chiretta, in No. 40 powder, 10 ; 20 p. c. alcohol, *q.s.* to produce 20. Moisten the chiretta with 5 of alcohol, pack in a closed percolator, and set aside for three days, then percolate with 20 of alcohol, added in 10 equal portions at intervals of 12 hours, and continue percolation with more alcohol until the required volume of product is obtained. Dose :  $\frac{1}{2}$  to 1 fl. dr.  
[*Concentrated infusion ; 1 = 10.*]

**Liquor Cocainæ Hydrochloratis.**—Now official as *Injectio Cocainæ Hypodermica*, which see.  
[*Name altered.*]

**\*Liquor Cuspariæ Concentratus.**—Cusparia bark, in No. 40 powder, 10 ; 20 p. c. alcohol, *q.s.* to produce 20. Proceed in the same manner as in preparing *Liquor Chiratæ Concentratus*. Dose :  $\frac{1}{2}$  to 1 fl. dr.  
[*Concentrated infusion ; 1 = 10.*]

**Liquor Epispasticus.**—Cantharides, in No. 20 powder, 10 ; acetic ether, *q.s.* to produce 20.  
[*100 p. c. stronger.*]

**\*Liquor Ethyl Nitritis.**—A mixture of 95 parts by volume of absolute alcohol with 5 of glycerin, containing, when freshly made, 3 p. c. by weight of ethyl nitrite, and even when long kept not less than 2.5 p. c. The ethyl nitrite is obtained by the interaction of 90 p. c. alcohol, sodium nitrite, and diluted sulphuric acid at a low temperature. Dose : 20 to 60 minims.

**Liquor Ferri Acetatis.**—Solution of ferric sulphate, 2.5 ; solution of ammonia, 4 or *q.s.* ; glacial acetic acid, liquefied, 1.5 ;



distilled water, *q.s.* to produce 20 of the solution. Mix the solution of ammonia with 20 of water, gradually add to this the ferric sulphate solution diluted with 20 of water, stir well together, keeping the ammonia in slight excess, and let the whole stand for two hours, stirring occasionally. Next, transfer to a calico filter, wash the precipitate with distilled water until free from sulphates, drain and squeeze to remove superfluous moisture, dissolve the precipitate in the glacial acetic acid, and make up the required volume with distilled water. Finally, allow any insoluble matter to subside and pour off the clear solution. S. g. 1.031. Dose: 5 to 15 minims. [*Now made direct, not by dilution.*]

**Liquor Ferri Acetatis Fortior.**—Omitted.

**Liquor Ferri Dialysatus.**—Omitted.

**Liquor Ferri Perchloridi.**—Formula unaltered. Dose: 5 to 15 minims.

**Liquor Ferri Perchloridi Fortis.**—Formula unaltered.

**Liquor Ferri Pernitratis.**—Formula unaltered. Dose: 5 to 15 minims.

**Liquor Ferri Persulphatis.**—Unaltered.

**Liquor Gutta-Percha.**—Omitted.

\***Liquor Hamamelidis.**—Macerate fresh hamamelis leaves, 50, in a mixture of water, 100, and 90 p. c. alcohol, 10, for 24 hours: then distil one-half. [*Prepare by distillation.*]

**Liquor Hydrargyri Nitratis Acidus.**—Unaltered.

**Liquor Hydrargyri Perchloridi.**—The ammonium chloride is omitted from the formula. Dose:  $\frac{1}{2}$  to 1 fl. dr.

\***Liquor Hydrogenii Peroxidi.**—An aqueous solution of hydrogen peroxide, prepared by the interaction of water, barium peroxide, and a dilute mineral acid, at a temperature below 10°C. The solution should yield from 9 to 11 volumes of oxygen, and not more than 0.5 p. c. of solid residue should remain when it is evaporated to dryness on a water-bath. Dose:  $\frac{1}{2}$  to 2 fl. dr.

**Liquor Iodi.**—Omitted.

\***Liquor Iodi Fortis.**—Dissolve iodine, 25, and potassium iodide, 15, in distilled water, 25; then add 90 p. c. alcohol, 180, and shake. This preparation replaces the Linimentum Iodi of the 1885 B.P. [*Glycerin now omitted.*]

\***Liquor Krameriae Concentratus.**—Krameria root, in No. 40 powder, 10; 20 p. c. alcohol, *q.s.* to produce 20. Proceed in the same manner as in preparing Liquor Chiratae Concentratus. Dose:  $\frac{1}{2}$  to 1 fl. dr. [*Concentrated infusion; 1 = 10.*]

**Liquor Lithiæ Effervescens.**—Omitted.

**Liquor Magnesii Carbonatis.**—Unaltered.

**Liquor Magnesii Citratis.**—Omitted.



**Liquor Morphinæ Acetatis.**—Dissolve morphine acetate, 1, in a mixture of 90 p. c. alcohol, 25, distilled water, 25, and diluted acetic acid, 2; then dilute with sufficient distilled water to produce 100 of the solution. Dose: 10 to 60 minims.

**Liquor Morphinæ Bimeconatis.**—Omitted.

**Liquor Morphinæ Hydrochloridi.**—Dissolve morphine hydrochloride, 1, in a mixture of 90 per cent. alcohol, 25, distilled water, 25, and diluted hydrochloric acid, 2. Then dilute with sufficient distilled water to produce 100 of the solution. Dose: 10 to 60 minims.

**Liquor Morphinæ Sulphatis.**—Omitted.

**\*Liquor Morphinæ Tartratis.**—Dissolve morphine tartrate, 1, in a mixture of 90 per cent. alcohol, 25, and distilled water, 25, then dilute with sufficient distilled water to produce 100 of the solution. Dose: 10 to 60 minims. [1 in 100.]

**\*Liquor Pancreatis.**—A liquid preparation containing the digestive principles of the fresh pancreas of the pig. Digest 5 parts of pancreas—freed from fat and external membrane, and finely divided by trituration with washed sand or powdered pumice—in a closed vessel, in 20 fluid parts of 20 per cent. alcohol, for 7 days, then filter.

**\*Liquor Picis Carbonis.**—Coal tar—prepared by heating the tar of commerce in a shallow vessel at 49° C. for 1 hour and stirring frequently—is emulsified by means of a tincture of quillaia. Moisten quillaia bark, in No. 20 powder, 2 parts, with 1 of 90 p. c. alcohol, and percolate with more alcohol until the product measures 20. To this add 4 of prepared coal tar, and digest the mixture at 49° C. for two days, stirring occasionally. Then cool, and decant or filter. [B.P.C. formula.]

**Liquor Plumbi Subacetatis Dilutus.**—Alcohol (90 p. c.) is used in place of rectified spirit.

**Liquor Plumbi Subacetatis Fortis.**—Unaltered.

**Liquor Potassæ.**—Strength unaltered.

**Liquor Potassæ Effervescens.**—Omitted.

**Liquor Potassii Permanganatis.**—Potassium permanganate, 1, is dissolved in sufficient distilled water to produce 100.

**\*Liquor Quassiae Concentratus.**—Quassia wood, in No. 40 powder, 2; 20 p. c. alcohol, *q.s.* to produce 20. Moisten the quassia with 2 of alcohol, and proceed as in preparing Liquor Chiratae Concentratus. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Concentrated infusion; 1 = 10.]

**\*Liquor Rhei Concentratus.**—Rhubarb root, in No. 5 powder, 10; 20 p. c. alcohol, *q.s.* to produce 20. Proceed in the same manner as in preparing Liquor Chiratae Concentratus. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Concentrated infusion; 1 = 10.]



**\*Liquor Sarsæ Compositus Concentratus.**—Sarsaparilla, cut transversely and bruised, 20; sassafras root, in shavings, 2; guaiacum wood, in shavings, 2; dried liquorice root, bruised, 2; mezereon bark, cut small, 1; 90 p. c. alcohol, 4.5; distilled water, *q.s.* to produce 20. Infuse the sarsaparilla in three successive portions of 100 fluid parts of distilled water, for 1 hour each, at 71° C. Boil the other solid ingredients with distilled water until exhausted, and rapidly concentrate the mixed infusion and decoction until, when cold, the liquid measures 16 fl. parts. Next add the alcohol, set aside for 14 days, and filter. The product should measure 20 fl. parts. Dose: 2 to 8 fl. dr. [1 = 8 of *comp. decoction*, 1885.]

**\*Liquor Senegæ Concentratus.**—Senega root, in No. 20 powder, 10; a mixture of 2 parts of 20 p. c. alcohol and 1 part of 45 p. c. alcohol, *q.s.* to produce 20. Moisten the senega with 4 of the menstruum, and proceed as in preparing Liquor Chiratae Concentratus. Dose:  $\frac{1}{2}$  to 1 fl. dr. [*Concentrated infusion*; 1 = 10.]

**\*Liquor Sennæ Concentratus.**—Senna, in No. 5 powder, 20; tincture of ginger, 2.5; 90 p. c. alcohol, 2; distilled water, *q.s.* to produce 20. Divide the senna into three portions and exhaust by moistening with water, setting aside for 24 hours, then percolating and re-percolating, as in the process for preparing Extractum Sarsæ Liquidum. Collect 16 fluid parts from the third percolator, heat the liquid to 82° C. for 5 minutes; then cool, and add the alcohol and tincture of ginger, previously mixed. Set aside for 7 days and filter. The product should measure 20 fluid parts. Dose:  $\frac{1}{2}$  to 1 fl. dr. [*Concentrated infusion*; 1 = 10.]

**\*Liquor Serpentariæ Concentratus.**—Serpentary rhizome, in No. 40 powder, 10; 20 p. c. alcohol, *q.s.* to produce 20. Proceed in the same manner as in preparing Liquor Chiratae Concentratus. Dose:  $\frac{1}{2}$  to 2 fl. dr. [*Concentrated infusion*; 1 = 10.]

**Liquor Sodæ.**—Omitted.

**Liquor Sodæ Chlorinatae.**—Unaltered.

**Liquor Sodæ Effervescens.**—Omitted.

**Liquor Sodii Arsenatis.**—Sodium arsenate, recently rendered anhydrous, 1; distilled water, *q.s.* to produce 100. Dose: 2 to 8 minims.

**Liquor Sodii Ethylatis.**—Unaltered.

**Liquor Strychninæ Hydrochloridi.**—Dissolve strychnine hydrochloride, 1, in 90 p. c. alcohol, 25, mixed with sufficient distilled water to produce 100. Dose: 2 to 8 minims. [1 in 100.]

**\*Liquor Thyroidei.**—A liquid prepared from the fresh and healthy thyroid gland of the sheep. Carefully selected glands, taken from sheep immediately after killing, are sliced and bruised thoroughly in a mortar; then, for each entire gland, add 2 C.c. each of glycerin and 0.5 p. c. solution of phenol in distilled



water. Transfer the mixture, well stirred, to a flask, and close the neck with a plug of cotton wool. Allow to stand for 24 hours, then strain through linen, with strong pressure, and add to the strained liquid sufficient of the 0·5 p. c. solution of phenol to make 6 C.c. of the thyroid solution for each gland used. The solution must be freshly prepared and kept in well-stoppered, sterilised bottles. Dose : 5 to 15 minims.

**Liquor Trinitrini.**—Dissolve trinitroglycerin of commerce, 1, in sufficient 90 p. c. alcohol to produce 100. S. g. 0·840. Dose :  $\frac{1}{2}$  to 2 minims.

**Liquor Zinci Chloridi.**—Formula practically unaltered, but the specific gravity is to be 1·530.

**\*Lithii Citras Effervescens.**—Mix lithium citrate, 5, with citric acid, in powder, 21, then add tartaric acid, in powder, 31, and sodium bicarbonate, in powder, 58. Triturate thoroughly, and heat the mixture to a temperature between 93° and 104° C., until granulation is effected. Dry the granules at a temperature not exceeding 54° C. The product should weigh about 100.

**Lotio Hydrargyri Flava.**—The quantity of mercuric chloride is increased by one-ninth. [11 p. c. stronger.]

**Lotio Hydrargyri Nigra.**—Each 10 fluid parts must contain 0·5 of glycerin, and 1·25 of mucilage of tragacanth. Triturate the mercurous chloride with the glycerin and mucilage, transfer to a bottle, and add 2 fluid parts of the solution of lime ; shake well, then add sufficient solution of lime to make up to 10 fluid parts. [Glycerin now added.]

**Magnesii Sulphas Effervescens.**—Formula unaltered, but it is directed that the granules are to be dried at a temperature not exceeding 54° C. Dose : 60 to 240 grains, for repeated administration ;  $\frac{1}{2}$  to 1 ounce for a single administration.

**Mel Boracis.**—Unaltered.

**Mel Depuratum.**—Should not yield more than 0·2 p. c. of ash, nor contain starch.

**Mistura Ammoniaci.**—One-sixteenth part of the distilled water is to be replaced with syrup of tolu.

**Mistura Amygdalæ**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Mistura Creosoti.**—The glacial acetic acid is omitted, the quantity of creosote increased by one-fifteenth, and the quantity of spirit of juniper is reduced so as to equal the amount of creosote. Finally, the volume of the finished product is increased by one-fifteenth. Dose :  $\frac{1}{2}$  to 1 fl. oz. [Acetic acid now omitted.]

**Mistura Cretæ.**—Triturate prepared chalk, 1, with powdered tragacanth, 0·125, and refined sugar, 2, then add gradually sufficient cinnamon water to produce 32 of the mixture. Dose :  $\frac{1}{2}$  to 1 fl. oz. [Gum acacia now omitted.]



**Mistura Ferri Aromatica.**—Omitted.

**Mistura Ferri Composita.**—The quantity of spirit of nutmeg is reduced to 50 minims, and the quantity of rose water is increased so as to make the volume of finished product the same as in the 1885 B.P. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Mistura Guaiaci.**—The gum acacia is replaced by 35 grains of powdered tragacanth. Dose :  $\frac{1}{2}$  to 1 fl. oz.

**Mistura Olei Ricini.**—Place mucilage of acacia, 1·5, in a mortar, and add to it, in alternate portions, castor oil, 3, and a mixture of strong orange-flower water, 1, and cinnamon water, 2·5, with constant trituration. Dose : 1 to 2 fl. oz. [*Formula improved.*]

**Mistura Scammonii.**—Omitted.

**Mistura Sennæ Composita.**—Dissolve magnesium sulphate, 5, in infusion of senna, 10. Then add a mixture of liquid extract of liquorice, 1, compound tincture of cardamoms, 2, and aromatic spirit of ammonia, 1, together with sufficient infusion of senna to make 20. Dose : 1 to 2 fl. oz. [*Slightly stronger.*]

**Mistura Spiritus Vini Gallici.**—Unaltered.

**Mucilago Acaciæ.**—The gum is to be rapidly rinsed with a little distilled water before dissolving it, and the mucilage must be strained.

**Mucilago Tragacanthæ.**—Alcohol (90 p. c.) replaces the rectified spirit, and the volume of finished product is to be that of the quantity of distilled water formerly ordered.

**Oleatum Hydrargyri.**—Omitted. See Hydrargyri Oleas.

**Oleatum Zinci.**—Omitted. See Unguentum Zinci Oleatis.

**Oleo-Resina Cubebæ.**—Omitted.

**Oleum Phosphoratum.**—This now contains 1 p. c., by weight, of phosphorus. Dose : 1 to 5 minims. [*1 in 100.*]

**Oxymel.**—The specific gravity must be 1·320.

**Oxymel Scillæ.**—Digest bruised squill 2·5, for 7 days in a mixture of acetic acid, 2·5, and distilled water, 8. Then press strongly, filter, and mix with sufficient clarified honey, liquefied, to produce an oxymel of s. g. 1·320.

**Pilula Aloes Barbadensis.**—Formula unaltered. Dose : 4 to 8 grains.

**Pilula Aloes et Asafetidæ.**—Formula unaltered except that the asafetida is directed to be in powder. Dose : 4 to 8 grains.

**Pilula Aloes et Ferri.**—The ferrous sulphate is replaced by two-thirds the quantity of the exsiccated salt, and the confection of roses by three-fourths its weight of syrup of glucose. Dose : 4 to 8 grains. [*Slightly stronger.*]

**Pilula Aloes et Myrrhæ.**—Socotrine aloes, in powder, 2;



myrrh, in powder, 1 ; syrup of glucose, 1·5 or *q.s.* to make a mass.  
Dose : 4 to 8 grains. [*Saffron now omitted.*]

**Pilula Aloes Socotrinæ.**—Formula unaltered. Dose : 4 to 8 grains.

**Pilula Asafœtidæ Composita.**—Now official as *Pilula Galbani Composita*, which see below. [*Name altered.*]

**Pilula Cambogiæ Composita.**—The syrup is replaced by syrup of glucose. Dose : 4 to 8 grains.

**Pilula Colocynthis Composita.**—Formula unaltered, except that the potassium sulphate is directed to be in very fine powder. Dose : 4 to 8 grains.

**Pilula Colocynthis et Hyoscyami.**—Formula unaltered. Dose : 4 to 8 grains.

**Pilula Conii Composita.**—Omitted.

**Pilula Ferri.**—Exsiccated ferrous sulphate, in fine powder, 150 ; exsiccated sodium carbonate, in fine powder, 95 ; gum acacia, in powder, 50 ; tragacanth, in powder, 15 ; syrup, 150 ; glycerin, 10 ; distilled water, 20 or *q.s.* In this instance both solids and liquids are to be weighed. Mix the liquids, add the ferrous sulphate, and mix ; then add quickly the sodium carbonate and mix, set aside for 15 minutes, or until the reaction is complete, add the gums and incorporate thoroughly. Each 5-grain pill prepared from this mass should contain about 1 grain of ferrous carbonate. Dose : 5 to 15 grains. [*Formula improved.*]

**Pilula Ferri Carbonatis.**—Omitted.

**Pilula Ferri Iodidi.**—Omitted.

**\*Pilula Galbani Composita.**—Identical with *Pilula Asafœtidæ Composita*, except that syrup of glucose replaces the treacle. Dose : 4 to 8 grains. [*P. L. name restored.*]

**Pilula Hydrargyri.**—Formula unaltered. Dose : 4 to 8 grs.

**Pilula Hydrargyri Subchloridi Composita.**—The quantity of castor oil is reduced to 180 grains, and 1 fluid drachm or *q.s.* of 90 p. c. alcohol added. Dose : 4 to 8 grains. [*Excipient improved.*]

**Pilula Ipecacuanhæ cum Scilla.**—Syrup of glucose replaces the treacle. Dose : 4 to 8 grains.

**Pilula Phosphori.**—Melt white beeswax, 12·5, and lard, 12·5, in a slightly warmed mortar, and stir to a creamy consistence. Then carefully mix with this a solution of phosphorus, 1, in carbon bisulphide, 3 or *q.s.*, add kaolin, 11·5, and mix well together. Keep the mixture immersed in cold water, in a bottle from which light is excluded. When dispensing, incorporate 1 part of powdered gum acacia with every three of the mixture, and varnish the pills. Dose : 1 to 2 grains. [*80 p. c. stronger.*]

**Pilula Plumbi cum Opio.**—The confection of roses is replaced by two-thirds its weight of syrup of glucose. Dose : 2 to 4 grs.



**\*Pilula Quininæ Sulphatis.**—Triturate quinine sulphate, 30, with powdered tartaric acid, 1; then add the product to a mixture of glycerin, 4 (by weight), and powdered tragacanth, 1. Dose: 2 to 8 grains.

**Pilula Rhei Composita.**—The glycerin and treacle are replaced by syrup of glucose, 2.75 oz. or *q.s.* Dose: 4 to 8 grains.

**Pilula Saponis Composita.**—Opium, in powder, 1; hard soap, in powder, 3; syrup of glucose, 1. Mix to form a mass. Dose: 2 to 4 grains. [*Slightly stronger.*]

**Pilula Scammonii Composita.**—The strong tincture of ginger and rectified spirit are replaced by an equal volume of the new tincture of ginger. Dose 4 to 8 grains.

**Pilula Scillæ Composita.**—The treacle is replaced by half its weight of syrup of glucose. Dose: 4 to 8 grains.

**\*Pix Carbonis Præparata.**—Commercial coal tar is placed in a shallow vessel, and maintained at a temperature of 49° C. for 1 hour, stirring frequently.

**Podophylli Resina.**—The rectified spirit is replaced by 90 p. c. alcohol, and the distilled water, into which the alcoholic liquid is poured, after distillation, is acidulated with one twenty-fourth of its bulk of hydrochloric acid. Dry the washed resin at a temperature not exceeding 38° C. Dose:  $\frac{1}{4}$  to 1 grain.

**Potassa Sulphurata.**—Formula unaltered.

**Pulvis Amygdalæ Compositus.**—Formula unaltered.

**Pulvis Antimonialis.**—Formula unaltered. Dose: 3 to 6 grains.

**Pulvis Catechu Compositus.**—Formula unaltered. Dose: 10 to 40 grains.

**Pulvis Cinnamomi Compositus.**—Formula unaltered. Dose: 10 to 40 grains.

**Pulvis Cretæ Aromaticus.**—The saffron is omitted. Dose: 10 to 60 grains.

**Pulvis Cretæ Aromaticus cum Opio.** The saffron is omitted.

**Pulvis Elaterini Compositus.**—Formula unaltered. Dose: 1 to 4 grains.

**Pulvis Glycyrrhizæ Compositus.**—Formula unaltered. Dose: 60 to 120 grains.

**Pulvis Ipecacuanhæ Compositus.**—Formula and dose unaltered.

**Pulvis Jalapæ Compositus.**—Formula and dose unaltered.

**Pulvis Kino Compositus.**—Formula and dose unaltered.

**Pulvis Opii Compositus.**—Formula unaltered. Dose: 2 to 10 grains.



**Pulvis Rhei Compositus.**—Formula and dose unaltered.

**Pulvis Scammonii Compositus.**—Formula and dose unaltered.

**Pulvis Sodæ Tartaratæ Effervescens.**—Formula and dose unaltered. [*Syn : Seidlitz powder.*]

**Pulvis Tragacanthæ Compositus.**—Formula and dose unaltered.

**Pyroxylinum.**—Formula unaltered.

**Scammoniæ Resina.**—The rectified spirit is replaced by 90 p. c. alcohol, and the scammony root exhausted by percolation only. Dose : 3 to 8 grains.

**Sevum Præparatum.**—Melting point  $44^{\circ}\cdot4$  to  $48^{\circ}\cdot9$  C. ; commences to re-solidify at about  $37^{\circ}\cdot8$  C.

**Soda Tartarata.**—Prepared by neutralising acid potassium tartrate with sodium carbonate.

**Sodii Citro-Tartras Effervescens.**—Formula unaltered. Dose : 60 to 120 grains.

**Sodii Phosphas Effervescens.**—Formula unaltered. Dose : 60 to 120 grains, for repeated administration ;  $\frac{1}{4}$  to  $\frac{1}{2}$  an ounce for a single administration.

**Sodii Sulphas Effervescens.**—Formula unaltered. Dose : 60 to 120 grains, for repeated administration ;  $\frac{1}{4}$  to  $\frac{1}{2}$  an ounce for a single administration.

**Spiritus Ætheris.**—The rectified spirit is replaced by 90 p. c. alcohol. S.g. 0·806 to 0·811. Dose : 20 to 40 minims, for repeated administration ; 60 to 90 minims, for a single administration.

**Spiritus Ætheris Compositus.**—Distillation is to be continued until the temperature reaches  $171^{\circ}\cdot6$  C. Add to the supernatant liquor 1·5 fl. oz. of distilled water and, gradually, sufficient sodium bicarbonate to nearly neutralise the liquid. Then separate the ethereal liquid, and add to it ether, 5·5 fl. oz., and 90 p. c. alcohol, 38 fl. oz. Finally, filter. S.g. 0·808 to 0·812. Dose : 20 to 40 minims, for repeated administration ; 60 to 90 minims, for a single administration.

**Spiritus Ætheris Nitrosi.**—The rectified spirit is replaced by 90 p. c. alcohol, half of which is to be placed in the receiver. The finished product must contain 2·5 p. c. of ethyl nitrite, and should be kept in a cool, dark place, in small bottles. S.g. 0·838 to 0·842. Dose : 20 to 40 minims, for repeated administration ; 60 to 90 minims, for a single administration. [*Syn : Sweet spirit of nitre.*]

**Spiritus Ammoniæ Aromaticus.**—The rectified spirit is replaced by 90 p. c. alcohol. S. g. 0·888 to 0·893. Dose : 20 to 40 minims, for repeated administration ; 60 to 90 minims, for a single administration.

**Spiritus Ammoniæ Fetidus.**—The rectified spirit is re-



placed by 90 p. c. alcohol. Dose : 20 to 40 minims, for repeated administration ; 60 to 90 minims, for a single administration.

**\*Spiritus Anisi.**—Oil of anise, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 10 minims.

**Spiritus Armoraciæ Compositus.**—The proof spirit is replaced by five-eighths its volume of 90 p. c. alcohol, whilst the quantity of distilled water is doubled.

**Spiritus Cajuputi.**—Oil of cajuput, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims. [5 times stronger.]

**Spiritus Camphoræ.**—Camphor, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims.

**Spiritus Chloroformi.**—Chloroform, 1 ; 90 p. c. alcohol, *q.s.* to make 20. Dose : 5 to 20 minims, for repeated administration ; 30 to 40 minims, for a single administration.

**Spiritus Cinnamomi.**—Oil of cinnamon, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims. [5 times stronger.]

**Spiritus Juniperi.**—Oil of juniper, 1 ; 90 p. c. alcohol, *q.s.* to make 20. Dose : 20 to 60 minims. [2½ times stronger.]

**Spiritus Lavandulæ.**—Oil of Lavender, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims. [5 times stronger.]

**Spiritus Menthæ Piperitæ.**—Oil of peppermint, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims. [5 times stronger.]

**Spiritus Myristicæ.**—Distilled oil of nutmeg, 1 ; 90 p. c. alcohol, *q.s.* to make 10. Dose : 5 to 20 minims. [5 times stronger.]

**Spiritus Rectificatus.**—Alcohol (90 p. c.) of s. g. 0·834 (58 o. p.). To produce weaker spirits, dilute each 100 fluid parts at 15°·5 C. with 31·05 of distilled water for 70 p. c. alcohol (s. g. 0·890) ; for 60 p. c. spirit (0·9135), add 53·65 of water ; for 45 p. c. spirit (s. g. 0·9436), add 105·34 of water ; and for 20 p. c. spirit (s. g. 0·976), add 355·8 of water to 100 of 90 p. c. alcohol.

**Spiritus Rosmarini.**—Oil of rosemary, 1 ; 90 p. c. alcohol, *q.s.* to make 10. [5 times stronger.]

**Spiritus Tenuior.**—Omitted.

**Spiritus Vini Gallici.**—Must contain not less than 36·5 p. c. by weight, or 43·5 p. c. by volume, of ethyl hydroxide.

**Succus Belladonnæ.**—Preserved with 90 p. c. alcohol.

**Succus Conii.**—Preserved with 90 p. c. alcohol. Dose : 1 to 2 fl. dr.

**Succus Hyoscyami.**—Preserved with 90 p. c. alcohol.

**Succus Limonis.**—Freshly expressed from ripe fruit, and containing 7 Gm. to 9 Gm. of citric acid in 100 C.c. S.g. 1·03 to 1·04.

**Succus Scoparii.**—Preserved with 90 p. c. alcohol.

**Succus Taraxaci.**—Preserved with 90 p. c. alcohol.



† **Suppositoria.**—In making suppositories, more or less white beeswax may be used in place of an equivalent amount of theobroma oil, in India and the Colonies.

\***Suppositoria Acidi Carbolici.**—Dissolve phenol, 12 grains, in a mixture of white beeswax, 24 grains, and theobroma oil, *q.s.* to fill twelve 15-grain moulds.

**Suppositoria Acidi Carbolici cum Sapone.**—Omitted.

**Suppositoria Acidi Tannici.**—Formula unaltered.

**Suppositoria Acidi Tannici cum Sapone.**—Omitted.

\***Suppositoria Belladonnæ.**—Alcoholic extract of belladonna, 18 grains ; theobroma oil, *q.s.* to make 12 suppositories, as directed for **Suppositoria Acidi Tannici**.

**Suppositoria Glycerini.**—Formula unaltered.

**Suppositoria Hydrargyri.**—Omitted.

**Suppositoria Iodoformi.**—Formula unaltered.

**Suppositoria Morphinæ.**—Morphine hydrochloride, 3 grains ; theobroma oil, *q.s.* to make 12 suppositories. [50 *μ. c.* weaker.]

**Suppositoria Morphinæ cum Sapone.**—Omitted.

**Suppositoria Plumbi Composita.**—Formula unaltered.

**Syrupus.**—Formula unaltered.

\***Syrupus Aromaticus.**—Mix tincture of orange, 5, and cinnamon water, 5 ; shake the mixture with a little powdered talc, then filter, and add syrup 10. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Syrupus Aurantii.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Syrupus Aurantii Floris.**—Undiluted orange-flower water must be used. Dose :  $\frac{1}{2}$  to 1 fl. dr.

\***Syrupus Calcii Lactophosphatis.**—Add gradually precipitated calcium carbonate, 2·5, to lactic acid, 6, diluted with 4 times its volume of distilled water. When solution is complete, add concentrated phosphoric acid, 4·6, and triturate until the precipitate which forms is dissolved. Next, dilute the solution with a little distilled water, add undiluted orange-flower water, 2·5 ; then filter and dissolve in the liquid refined sugar, 70. Finally, strain and make up the volume with distilled water to 100. Dose :  $\frac{1}{2}$  to 1 fl. dr.

\***Syrupus Cascaræ Aromaticus.**—Liquid extract of cascara sagrada, 8 ; tincture of orange, 2 ; 90 p. c. alcohol, 1 ; cinnamon water, 3 ; syrup, 6. Dose :  $\frac{1}{2}$  to 2 fl. dr. [B.P.C. *elixir*.]

**Syrupus Chloral.**—Formula and dose unaltered.

\***Syrupus Codeinæ.**—Dissolve codeine phosphate, 40 grains, in distilled water, 0·25 fl. oz. ; then add to syrup, 19·75 fl. oz. Dose :  $\frac{1}{2}$  to 2 fl. dr. [Differs from B.P.C. formula.]



**Syrupus Ferri Iodidi.**—Iron wire, 25 ; iodine, 83 ; refined sugar, 825 ; distilled water, *q.s.* to make 1000. The process is practically unaltered. S.g. 1·380 to 1·387. The syrup should contain 1 grain of ferrous iodide in each 11 minims. [25 *p. c. stronger.*]

**Syrupus Ferri Phosphatis.**—Dissolve iron wire, 8·6, in concentrated phosphoric acid, 62·5, diluted with an equal volume of distilled water, heating gently in a small flask, the neck of which is plugged with cotton wool. When cold filter the solution into syrup, 700, and pass sufficient distilled water through the filter to make the product measure 1000. The syrup should contain the equivalent of 1 grain of anhydrous ferrous phosphate in each fluid drachm. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Proportion of acid reduced.*]

**\*Syrupus Ferri Phosphatis cum Quinina et Strychnina.**—Proceed as in making Syrupus Ferri Phosphatis, but before filtering the iron solution into the syrup, dissolve in the former powdered strychnine, 0·57, and quinine sulphate, 14·8, for each 1000 fluid parts of syrup required. The finished syrup should contain  $\frac{1}{32}$  grain of strychnine and  $\frac{4}{5}$  grain of quinine sulphate, in each fluid drachm. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Easton's syrup.*]

**Syrupus Ferri Subchloridi.**—Omitted.

**\*Syrupus Glucosi.**—Mix liquid glucose, of commerce, 1, and syrup, 2. [*A pill excipient.*]

**Syrupus Hemidesmi.**—Formula unaltered. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Syrupus Limonis.**—Macerate fresh lemon peel, in thin slices or grated, 1, in 90 *p. c.* alcohol, 1·5, for 7 days, press, filter, and add sufficient alcohol to produce 2. Then dissolve refined sugar, 38, in clarified lemon juice, 25, by the aid of gentle heat, and when the resulting syrup is cold, add to it the alcoholic liquid. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Formula improved.*]

**†Syrupus Limonis.**—In India and the Colonies, dried instead of fresh lemon peel may be used in preparing this syrup.

**Syrupus Mori.**—Omitted.

**Syrupus Papaveris.**—Omitted.

**\*Syrupus Pruni Virginianæ.**—Moisten Virginian prune bark, in No. 20 powder, 3, with distilled water, and set aside for 24 hours in a closed vessel ; then percolate with more water until the percolate measures 9. Dissolve in this, by agitation, refined sugar, 15, add glycerin, 1·25, strain, and pour sufficient water over strainer to produce 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*B.C.P. formula.*]

**Syrupus Rhei.**—Alcohol (90 *p. c.*) replaces the rectified spirit. Dose :  $\frac{1}{2}$  to 2 fl. dr.

**Syrupus Rhæados.**—Alcohol (90 *p. c.*) replaces the rectified spirit. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**†Syrupus Rhæados.**—In India and the Colonies, the proportion of 90 *p. c.* alcohol in this preparation may be increased to double



the proportion stated in the official formula, an equivalent quantity of water being omitted.

**Syrupus Rosæ.**—Identical with Syrupus Rosæ Gallicæ of the 1885 B.P. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Syrupus Scillæ.**—The quantity of sugar ordered is reduced by one-twentieth.

**Syrupus Sennæ.**—Senna, 40 ; 20 p. c. alcohol, 70 ; refined sugar, 50 ; distilled water, *q.s.* ; add 1 minim of a mixture of 1 part of oil of coriander and 4 parts of 90 p. c. alcohol for each ounce of sugar, or 1 C.c. for each 500 Gm. Moisten the senna with 40 of alcohol, pack tightly in a closed vessel, set aside for 3 days, press strongly and reserve the liquid obtained. Break up the marc, moisten it with 15 of alcohol, set aside for 24 hours, press, and add the liquid to that reserved ; then repeat the operation with the remaining 15 of alcohol, reducing the time of maceration to 3 hours and evaporating the liquid finally expressed until it is reduced to such volume that, when added to the reserved portion, the whole shall measure 40 fluid parts. Now heat the product in a covered vessel to 82° C. for a few minutes, set aside for 24 hours, then filter, pass distilled water through the filter until the liquid again measures 40, and dissolve the sugar in it, in a covered vessel, by the aid of gentle heat. Finally, cool the syrup, add the solution of oil of coriander, and shake well. The product should weigh 92 parts. Dose :  $\frac{1}{2}$  to 2 fl. dr. [*Formula improved.*]

**Syrupus Tolutanus.**—Formula unaltered. Dose  $\frac{1}{2}$  to 1 fl. dr.

**Syrupus Zingiberis.**—Percolate ginger, in fine powder, 0.5, with 90 p. c. alcohol, *q.s.* to produce 1. Then add to the tincture sufficient syrup to make 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Slightly stronger.*]

**Tabellæ Trinitrini.**—These are the Tabellæ Nitroglycerini, doubled in weight, but of the same strength as formerly. [*Larger.*]

**\*Thyroideum Siccum.**—Prepared from the fresh and healthy thyroid gland of the sheep, after removing external fat and connective tissue. Mince the glands finely, dry at a temperature of 32° to 38° C., powder the dried product, remove all fat with petroleum spirit, and again dry. Dose : 3 to 10 grains.

**Tincturæ.**—In several instances the new B.P. processes for preparing tinctures are described in full in the official monographs, and sufficiently so for all practical purposes in the abstracts here given. Where, however, it is simply stated that the solid materials are to be percolated or macerated, one or other of the following methods of procedure must be adopted :—*Percolation* : After moistening with the prescribed quantity of menstruum, set aside in a closed vessel for 24 hours. Then pack in a percolator, in a manner to be determined by the nature of the materials, and pour on successive portions of the menstruum, always maintaining a layer of liquid above the materials. Percolation should proceed slowly at



first, and afterwards less slowly, until sufficient menstruum has been used to produce about three-fourths of the required volume of finished tincture, or until the solid materials have been exhausted. Then remove the marc and submit it to pressure. Filter the expressed liquid, if necessary, either at once or after standing for 24 hours; mix the filtrate with the percolate, and then add sufficient menstruum to produce the prescribed volume of tincture. *Maceration*: Place the solid materials in the whole of the menstruum, in a closed vessel, for 7 days, frequently agitating. Strain, press the marc, mix the expressed with the strained liquid, and filter if necessary.

**Tinctura Aconiti.**—Moisten aconite root, in No. 40 powder, 1, with 70 p. c. alcohol, 0·5, and percolate with that menstruum so as to produce 20 of tincture. Dose: 5 to 15 minims; if very frequently repeated, 2 to 5 minims. [60 p. c. weaker.]

**Tinctura Aloes.**—Macerate extract of Barbados aloes, 0·5, in 45 p. c. alcohol, 16, for 48 hours; then add liquid extract of liquorice, 3, filter, and pass sufficient of the alcohol through the filter to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr., for repeated administration;  $1\frac{1}{2}$  to 2 fl. dr., for a single administration.

**Tinctura Arnicæ.**—Moisten arnica rhizome, in No. 40 powder, 1, with 70 p. c. alcohol, 1, and percolate with that menstruum so as to produce 20 of tincture.

**Tinctura Asafetidæ.**—Macerate bruised asafetida, 4, in 70 p. c. alcohol, 15, for 7 days; then filter and pass sufficient of the alcohol through the filter to produce 20 of tincture. [60 p. c. stronger.]

**Tinctura Aurantii.**—Macerate fresh bitter-orange peel, cut small, 5, in 90 p. c. alcohol, 20. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Fresh peel used.]

**Tinctura Aurantii Recentis.**—Omitted.

**Tinctura Belladonnæ.**—Add to liquid extract of belladonna, 2, sufficient 60 p. c. alcohol to produce 30 of tincture; set aside for 24 hours and filter. The amount of alkaloid in 100 C.c. should be 0·048 Gm. to 0·052 Gm. Dose: 5 to 15 minims. [100 p. c. stronger.]

**Tinctura Benzoini Composita.**—The rectified spirit is replaced by 90 p. c. alcohol, in which the other ingredients are macerated for 2 days, with frequent agitation.

**Tinctura Buchu.**—Moisten buchu leaves in No. 20 powder, 4, with 60 p. c. alcohol 4, and percolate with that menstruum so as to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Calumbæ.**—Macerate calumba in No. 20 powder, 2, in 60 p. c. alcohol, 20. Dose:  $\frac{1}{2}$  to 1 fl. dr. [20 p. c. weaker.]

**Tinctura Camphoræ Composita.**—The powdered opium is replaced by tincture of opium, 585 minims, and the proof spirit by 60 p. c. alcohol. Dissolve the other ingredients in the alcohol, add the tincture, and make up to the specified volume, filtering if



necessary. The finished tincture should contain the equivalent of  $\frac{1}{30}$  grain of morphine hydrochloride, or  $\frac{1}{4}$  grain of opium (containing 10 p. c. of anhydrous morphine), in each fluid drachm. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Cannabis Indicæ.**—Dissolve extract of Indian hemp, 1, in 90 p. c. alcohol, 18 ; filter if necessary and add sufficient alcohol to produce 20 of tincture. Dose : 5 to 15 minims.

**Tinctura Cantharidis.**—Macerate cantharides, in No. 40 powder, 0·25, in 90 p. c. alcohol, 20. Dose : 5 to 15 minims ; if frequently repeated, 2 to 5 minims.

**Tinctura Capsici.**—Macerate capsicum, in No. 20 powder, 1, in 70 p. c. alcohol, 20. Dose : 5 to 15 minims. [ 30 p. c. stronger.]

**Tinctura Cardamomi Composita.**—The proof spirit is replaced by 60 p. c. alcohol, and the tincture prepared by maceration only. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Cascarillæ.**—Moisten cascarilla, in No. 40 powder 4, with 70 p. c. alcohol, 3, and percolate with that menstruum so as to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [ 60 p. c. stronger.]

**Tinctura Catechu.**—Macerate coarsely-powdered catechu, 4, and bruised cinnamon bark, 1, in 60 p. c. alcohol, 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [ 60 p. c. stronger.]

**Tinctura Chiratae.**—Moisten chiretta, in No. 40 powder, 2, with 60 p. c. alcohol, 2, and percolate with that menstruum so as to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [ 20 p. c. weaker.]

**Tinctura Chloroformi Composita.**—Omitted.

**Tinctura Chloroformi et Morphinae Composita.**—Mix chloroform, 75 ; tincture of capsicum, 25 ; tincture of Indian hemp, 100 ; oil of peppermint, 1·5 ; glycerin, 250 ; and 90 p. c. alcohol, 450. Dissolve morphine hydrochloride, 10, in the mixture ; add diluted hydrocyanic acid (2 p. c.), 50 ; then mix with enough of the alcohol to produce 1000 of the tincture. This preparation contains  $\frac{3}{4}$  minim of chloroform,  $\frac{1}{2}$  minim of diluted hydrocyanic acid, and  $\frac{1}{11}$  grain of morphine hydrochloride, in each 10 minims, or 4 times as much morphine as formerly. Dose : 5 to 15 minims.

[ Much altered ; stronger.]

**Tinctura Cimicifugæ.**—Moisten cimicifuga, in No. 40 powder, 2, with 60 p. c. alcohol, 1, and percolate with that menstruum so as to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [ 20 p. c. weaker.]

**Tinctura Cinchonæ.**—Moisten red cinchona bark, in No. 40 powder, 4, with 70 p. c. alcohol, 4, and set aside for 24 hours in a closed vessel ; then percolate with more of the alcohol until the product measures 14. Press the marc, add the expressed liquid to the percolate, set aside for 24 hours, and filter. Determine the alkaloidal strength of 10 C.c. of the filtrate by the assay process given for Extractum Cinchonæ Liquidum (see page 11), and add to the bulk of the strong tincture such a quantity of 70 p. c. alcohol that 100 C.c. of the product shall contain 1 Gm. of total alkaloids. Dose :  $\frac{1}{2}$  to 1 fl. dr. [ Now standardised—1 in 100.]



**Tinctura Cinchonæ Composita.**—The red cinchona bark is replaced by an equivalent quantity of tincture of cinchona, and the proof spirit by 70 p. c. alcohol. The orange peel should be well bruised and the serpentary in No. 40 powder. Macerate the solid ingredients for 7 days in a quantity of alcohol equal in volume to the tincture of cinchona, and mix the strained and expressed liquids with that tincture, after which add sufficient alcohol to make up the required volume. Filter after standing for 24 hours. Each 100 C.c. of the product should contain about 0.5 Gm. of alkaloids. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Now standardised—1 in 50.]

**Tinctura Cinnamomi.**—Moisten cinnamon in No. 40 powder, 4, with 70 p. c. alcohol, 4, then percolate with that spirit to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Cocci.**—Macerate powdered cochineal, 2, in 45 p. c. alcohol, 20. Dose: 5 to 15 minims. [20 p. c. weaker.]

**Tinctura Colchici Seminum.**—Moisten colchicum seeds in No. 30 powder, 4, with 45 p. c. alcohol, 2.5, and percolate with that menstruum so as to produce 20 of tincture. Dose: 5 to 15 minims. [60 p. c. stronger.]

**Tinctura Conii.**—Moisten conium fruit, recently reduced to No. 40 powder, 4, with 70 per cent. alcohol, 4, and percolate with that menstruum so as to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Croci.**—Macerate saffron, 1, in 60 p. c. alcohol, 20. Dose: 5 to 15 minims.

**Tinctura Cubebæ.**—Moisten powdered cubebs, 4, with 90 p. c. alcohol, 2, and percolate with that menstruum so as to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Digitalis.**—Moisten digitalis leaves in No. 20 powder, 2.5, with 60 p. c. alcohol, 2, and percolate with that menstruum so as to produce 20 of tincture. Dose: 5 to 15 minims.

**Tinctura Ergotæ.**—Omitted.

**\*Tinctura Ergotæ Ammoniata.**—Moisten ergot, in No. 20 powder, 5, with 2 parts of a mixture consisting of 2 of solution of ammonia, and 18 of 60 p. c. alcohol; then percolate with the rest of the mixture. Press the marc, mix the expressed liquid with the percolate, and add sufficient 60 p. c. alcohol to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Differs from B.P.C. formula.]

**Tinctura Ferri Acetatis.**—Omitted.

**Tinctura Ferri Perchloridi.**—The rectified spirit is replaced by 90 p. c. alcohol. Dose: 5 to 15 minims.

**Tinctura Gallæ.**—Omitted.

**Tinctura Gelsemii.**—Moisten gelsemium root, in No. 40 powder, 2, with 60 p. c. alcohol, 1, and percolate with that menstruum to produce 20 of tincture. Dose: 5 to 15 minims. [20 p. c. weaker.]



**Tinctura Gentianæ Composita.**—The quantity of gentian root is increased by one-third, and the proof spirit replaced by 45 p. c. alcohol. Macerate only. Dose:  $\frac{1}{2}$  to 1 fl. dr. [33 p. c. *stronger*.]

**Tinctura Guaiaci Ammoniata.**—Macerate powdered guaiacum resin, 4, for 48 hours, in a mixture of strong solution of ammonia, 1·5, and 90 p. c. alcohol, 16. Filter, add 30 minims of oil of nutmeg and 20 minims of oil of lemon for each pint of finished tincture to be produced, and pass sufficient 90 p. c. alcohol through the filter to produce 20 of tincture.

**Tinctura Hamamelidis.**—Moisten hamamelis bark, in No. 20 powder, 2, with 45 p. c. alcohol, 1, and percolate with that menstruum so as to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Hydrastis.**—Moisten hydrastis rhizome, in No. 60 powder, 2, with 60 p. c. alcohol, 2, and percolate with that menstruum so as to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Hyoscyami.**—Moisten hyoscyamus leaves and flowering tops, in No. 20 powder, 2, with 45 p. c. alcohol, 2, and percolate with that menstruum to produce 20 of tincture. [20 p. c. *weaker*.]

**Tinctura Iodi.**—Dissolve iodine, 0·5, and potassium iodide, 0·5, in distilled water, 0·5; then add sufficient 90 p. c. alcohol to produce 20 of tincture. Dose: 2 to 5 minims.

**Tinctura Jaborandi.**—Moisten jaborandi leaves, in No. 40 powder, 4, with 45 p. c. alcohol, 2·5, and percolate with that menstruum so as to produce 20 of tincture. [20 p. c. *weaker*.]

**Tinctura Jalapæ.**—Moisten jalap, in No. 40 powder, 4, with 70 p. c. alcohol, 2, then pack in a percolator and gradually add more alcohol until the percolate measures 12. Press the marc, mix the expressed liquid with the percolate, set aside for 24 hours, and filter. Determine the amount of jalap resin present in 10 C.c. of the filtrate (see Jalapæ Resina), and add sufficient 70 p. c. alcohol to produce a tincture containing 1·5 Gm. of the resin in 100 C.c. Dose:  $\frac{1}{2}$  to 1 fl. dr. [Now standardised—1·5 in 100.]

**Tinctura Kino.**—The rectified spirit is replaced by 90 p. c. alcohol. Mix the glycerin and water, rub the kino to a smooth paste with sufficient of the mixture, then add the remainder; transfer to a closed vessel, add five-sixths of the alcohol, and set aside for 12 hours, frequently agitating. Filter through a plug of cotton wool, and pass sufficient alcohol through the filter to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Krameria.**—Moisten krameria, in No. 40 powder, 4, with 60 p. c. alcohol, 2, and percolate with that menstruum to produce 20 of tincture. Dose:  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. *stronger*.]

**Tinctura Laricis.**—Omitted.

**Tinctura Lavandulæ Composita.**—The rectified spirit is replaced by 90 p. c. alcohol, and the tincture prepared by maceration, the oils being added last. Dose:  $\frac{1}{2}$  to 1 fl. dr.



**Tinctura Limonis.**—Macerate fresh lemon peel, cut small, 5, in 90 p. c. alcohol, 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [100 p. c. stronger.]

†**Tinctura Limonis.**—In India and the Colonies, dried instead of fresh lemon peel may be used in preparing this tincture.

**Tinctura Lobeliæ.**—Omitted.

**Tinctura Lobeliæ Ætherea.**—Moisten lobelia, in No. 40 powder, 4, with spirit of ether, 2, and percolate with that spirit to produce 20 of tincture. Dose : 5 to 15 minims. [60 p. c. stronger.]

**Tinctura Lupuli.**—Macerate hops, 4, in 60 p. c. alcohol, 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Myrrhæ.**—Macerate coarsely powdered myrrh, 4, for 7 days, in 90 p. c. alcohol, 16. Agitate frequently. filter, and pass sufficient alcohol through filter to make 20 [60 p. c. stronger.]

**Tinctura Nucis Vomicae.**—Mix liquid extract of nux vomica, 2, with distilled water, 3, and add sufficient 90 p. c. alcohol to produce 12 of tincture, then filter. This preparation should contain from 0.24 Gm. to 0.26 Gm. of strychnine in each 100 C.c. Dose : 5 to 15 minims. [100 p. c. stronger.]

**Tinctura Opii.**—Opium, 3, is rubbed to a paste with distilled water, 10, the water having previously been heated to at least 93° C. After standing for 6 hours, add 90 p.c. alcohol, 10, and again set aside for 24 hours ; then strain, press, mix the liquids, set aside for 24 hours, and filter. Determine the proportion of morphine present by evaporating 80 C.c. of the tincture to 30 C.c., mixing the residue with 3 Gm. of freshly-slaked lime, adding water to 85 C.c., and setting aside for half an hour, stirring occasionally. Next, filter off 50 C.c. of the liquid (representing 50 C.c. of the strong tincture), add 5 C.c. of 90 p. c. alcohol and 30 C.c. of ether, shake, and add 2 Gm. of ammonium chloride. Shake well and frequently during half-an-hour, set aside for 12 hours for the morphine to separate, filter the ethereal layer through two small counterbalanced filters wetted with ether, then add to the remaining liquid 15 C.c. of ether, rotate, separate and filter the ethereal layer. Wash the filters with 10 C.c. of ether, added slowly and in portions, dry the filters in air, then carefully pour the remaining liquid upon the filters in such a manner as to transfer the morphine crystals completely to the inner filter. Wash with morphinated water until all colour is removed, then dry the filters and crystals, first by gentle pressure between filter paper, afterwards at 55° to 60° C., and finally at 110° C. for two hours. Weigh the crystals, placing one of the filters in each pan of the balance, and titrate 0.3 Gm. with decinormal solution of sulphuric acid until the liquid, after boiling, slightly reddens blue litmus paper. 1 C.c. of this volumetric solution represents 0.0285 Gm. of pure anhydrous morphine. Add to the weight of anhydrous morphine thus indicated, 0.05 Gm., to cover loss, and having thus ascertained the pro-



portion present in 50 C c. of strong tincture, dilute the remainder of the latter with sufficient of a mixture of equal volumes of 90 p.c. alcohol and distilled water, to produce a tincture containing the equivalent of 0.75 Gm. of anhydrous morphine in each 100 C.c. Dose : 5 to 15 minims, for repeated administration ; 20 to 30 minims, for a single administration.

**Tinctura Opii Ammoniata.**—The powdered opium is replaced by its equivalent of tincture of opium, the saffron is omitted, the strong solution of ammonia is replaced by the weaker solution, and 90 p. c. alcohol is ordered instead of rectified spirit. The oil and acid are dissolved in three-fourths of the alcohol, the other liquid ingredients added, and after filtration enough alcohol is added to produce the required volume of tincture. [*Less ammonia ; saffron now omitted.*]

**Tinctura Podophylli.**—The quantity of podophyllum resin is doubled and 90 p. c. alcohol is the menstruum. Macerate for 24 hours with nine-tenths of the alcohol, occasionally agitating ; then filter and pass sufficient alcohol through filter to produce required volume of tincture. Dose : 5 to 15 minims. [*100 p. c. stronger.*]

**\*Tinctura Pruni Virginianæ.**—Macerate for 24 hours Virginian prune bark, in No. 20 powder, 4, with distilled water, 7.5, then add 90 p. c. alcohol, 12.5, and complete the process. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*B.P.C. formula.*]

**Tinctura Pyrethri.**—Moisten pyrethrum root, in No. 40 powder, 4, with 70 p. c. alcohol, 3, and percolate with that menstruum so as to produce 20 of tincture.

**Tinctura Quassiaæ.**—Macerate rasped quassia wood, 2, in 45 p. c. alcohol, 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*2 $\frac{2}{3}$  times stronger.*]

**\*Tinctura Quillaiaæ.**—Moisten quillaia bark, in No. 20 powder, 1, with 60 p. c. alcohol, 0.5, and percolate with that menstruum so as to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr.

**Tinctura Quininæ.**—Dissolve quinine hydrochloride, 2, in tincture of orange, 100. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Slightly stronger.*]

**Tinctura Quininæ Ammoniata.**—Dissolve quinine sulphate, 2, in a mixture of solution of ammonia, 10, and 60 p. c. alcohol, 90. Set aside for 3 days and filter. Dose :  $\frac{1}{2}$  to 1 fl. dr. [*Slightly stronger.*]

**Tinctura Rhei Composita.**—The saffron is omitted and 60 p. c. alcohol is ordered instead of proof spirit, whilst one-tenth part by volume of finished tincture must be glycerin. The solid ingredients are moistened with one-ninth part of the alcohol and percolated with more of that menstruum until the required volume is obtained. After 48 hours, the percolate is filtered and the glycerin added. Dose :  $\frac{1}{2}$  to 1 fl. dr., for repeated administration ; 2 to 4 fl. dr. for a single administration. [*Glycerin added ; saffron now omitted.*]

**Tinctura Sabinæ.**—Omitted.



**Tinctura Scillæ.**—Macerate bruised squill, 4, in 60 p. c. alcohol, 20. Dose 5 to 15 minims. [60 p. c. stronger.]

**Tinctura Senegæ.**—Moisten senega root, in No. 40 powder, 4, with 60 p. c. alcohol, 4, and percolate with that menstruum so as to produce 20 of tincture. Dose  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Sennæ Composita.**—The quantity of senna is increased by three-fifths, and 45 p. c. alcohol is used instead of proof spirit. Macerate only. Dose :  $\frac{1}{2}$  to 1 fl. dr., for repeated administration ; 2 to 4 fl. dr., for a single administration. [60 p. c. stronger.]

**Tinctura Serpentariæ.**—Moisten serpentary rhizome, in No. 40 powder, 4, with 70 p. c. alcohol, 4, and percolate with that menstruum so as to produce 20 fluid parts of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [60 p. c. stronger.]

**Tinctura Stramonii.**—Moisten stramonium leaves, in No. 20 powder, 4, with 45 p. c. alcohol, 4, and percolate with that menstruum so as to produce 20 fluid parts of tincture. Dose : 5 to 15 minims. [60 p. c. stronger.]

**Tinctura Strophanthi.**—Pack strophanthus seeds, in No. 30 powder, 0·5, in a percolator, moisten with one-fourth the volume of 70 p. c. alcohol, and set aside for 48 hours. Then pour on successive quantities of the alcohol, allowing percolation to proceed slowly, until the total volume of percolate measures 10 fluid parts. Filter, and add sufficient alcohol to produce 20 of tincture. Dose : 5 to 15 minims. [50 p. c. weaker.]

**Tinctura Sumbul.**—Macerate bruised sumbul root, 2, in 70 p. c. alcohol, 20. Dose :  $\frac{1}{2}$  to 1 fl. dr. [20 p. c. weaker.]

**Tinctura Tolutana.**—Dissolve balsam of tolu, 2, in 90 p. c. alcohol, 16 ; then filter and pass sufficient alcohol through the filter to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [20 p. c. weaker.]

**Tinctura Valerianæ.**—Omitted.

**Tinctura Valerianæ Ammoniata.**—Macerate valerian rhizome, in No. 40 powder, 4, in a mixture of solution of ammonia, 2, and 60 p. c. alcohol, 18. For each pint of menstruum add oil of nutmeg, 30 minims, and oil of lemon, 20 minims. [60 p. c. stronger.]

**Tinctura Veratri Viridis.**—Omitted.

**Tinctura Zingiberis.**—Moisten ginger, in No. 40 powder, 2, with 90 p. c. alcohol, 2, and percolate with that menstruum so as to produce 20 of tincture. Dose :  $\frac{1}{2}$  to 1 fl. dr. [20 p. c. weaker.]

**Tinctura Zingiberis Fortior.**—Omitted.

**Trochisci.**—In each of the various formulæ for lozenges the quantities are specified for one lozenge only. There are four official bases for lozenges, and the materials ordered for those must, in every instance, be mixed with 500 times the quantity of drug ordered for a single lozenge. *Fruit basis* : Make into a paste refined sugar, in fine powder, 15·5 ounces, and gum acacia, in powder, 300 grains, with mucilage of gum acacia, 1·25 fluid ounce, and black currant paste of commerce, 2 ounces, previously softened



with boiling distilled water. Use additional distilled water if necessary, and after dividing the mass dry the lozenges in a hot air chamber at a moderate temperature. *Rose basis*: Refined sugar, in fine powder, 17·5 ounces; gum acacia, in powder, 300 grains; mucilage of gum acacia, 5 fluid drachms; official rose water, *q.s.* Proceed as in the case of fruit basis. *Simple basis*: Refined sugar, in fine powder, 17·5 ounces; gum acacia, in powder, 300 grains; mucilage of gum acacia, 1·25 fluid ounce; distilled water, *q.s.* Proceed as in the case of fruit basis. *Tolu basis*: Having dissolved what salts of alkaloids may be ordered in distilled water, 3 fluid drachms, mix the solution intimately with refined sugar, in fine powder, 17 ounces, and gum acacia, in powder, 300 grains. Then, thoroughly incorporate any other drugs ordered, together with tincture of balsam of tolu, 3 fluid drachms. Make into a paste with mucilage of gum acacia, 1·25 fluid ounce, and distilled water, *q.s.* Then proceed as in the case of fruit basis.

**Troschiscus Acidi Benzoici.**—Benzoic acid, 0·5 grain, with fruit basis.

\***Troschiscus Acidi Carbolici.**—Phenol, 1 grain, with tolu basis.

**Troschiscus Acidi Tannici.**—Tannic acid, 0·5 grain, with fruit basis.

**Troschiscus Bismuthi Compositus.**—Bismuth oxycarbonate, 2 grains; heavy magnesium carbonate, 2 grains; precipitated calcium carbonate, 4 grains, with rose basis.

**Troschiscus Catechu.**—Catechu, 1 grain, with simple basis.

\***Troschiscus Eucalypti Gummi.**—Eucalyptus gum, 1 grain, with fruit basis.

**Troschiscus Ferri Redacti.**—Reduced iron, 1 grain, with simple basis.

\***Troschiscus Guaiaci Resinæ.**—Guaiacum resin, 3 grains, with fruit basis.

**Troschiscus Ipecacuanhæ.**—Ipecacuanha root, in powder, 0·25 grain, with fruit basis.

\***Troschiscus Krameriaë.**—Extract of krameria, 1 grain, with fruit basis.

\***Troschiscus Krameriaë et Cocainæ.**—Extract of krameria, 1 grain; cocaine hydrochloride, 1/20th grain, with fruit basis.

**Troschiscus Morphinæ.**—Morphine hydrochloride, 1/36th grain, with tolu basis.

**Troschiscus Morphinæ et Ipecacuanhæ.**—Morphine hydrochloride, 1/36th grain; ipecacuanha root, in powder, 1/12th grain, with tolu basis.

**Troschiscus Opii.**—Omitted.

**Troschiscus Potassii Chloratis.**—Potassium chlorate, 3 grains, with rose basis. [40 *p. c. weaker.*]



**Trochiscus Santonini.**—Santonio, 1 grain, with simple basis.

**Trochiscus Sodii Bicarbonatis.**—Sodium bicarbonate, 3 grains, with rose basis. [40 p. c. weaker.]

**Trochiscus Sulphuris.**—Precipitated sulphur, 5 grains; acid potassium tartrate, in powder, 1 grain; refined sugar, 8 grains; gum acacia, in powder, 1 grain; tincture of orange, 1 minim; mucilage of gum acacia, 1 minim. Mix the tincture of orange with the powders, and add the mucilage to form a suitable mass. Dry in a hot-air chamber at a moderate temperature.

†**Unguenta.**—In India and the Colonies more or less indurated lard, prepared suet, yellow beeswax, or white beeswax may be employed in the preparation of ointments, but the official proportion of the active ingredients must in all cases be maintained.

**Unguentum Acidi Borici.**—Boric acid, in very fine powder, carefully sifted, 1; white paraffin ointment, 9. [Slightly weaker.]

**Unguentum Acidi Carbolici.**—Dissolve phenol, 0·5, in glycerin, 1·5, and add white paraffin ointment, 10·5. [Slightly weaker.]

**Unguentum Acidi Salicylici.**—Salicylic acid in powder, 10, white paraffin ointment, 490. [40 p. c. weaker.]

**Unguentum Aconitinæ.**—Rub crystalline aconitine, 10, with oleic acid, 80, and gently warm until solution is effected; then add lard, 410, and mix. [Crystalline aconitine now used; stronger.]

**Unguentum Antimonii Tartarati.**—Omitted.

\***Unguentum Aquæ Rosæ.**—Melt together white beeswax, 1·5, spermaceti, 1·5, and almond oil, 9. Pour the mixture into a warmed mortar and add undiluted rose water, 7, gradually with constant trituration. Next add oil of rose, 8 minims to each 19 ounces, and continue the trituration until cold. [Cold Cream.]

**Unguentum Atropinæ.**—Rub atropine, 10, with oleic acid, 40, and gently warm until solution is effected; then add lard, 450, and mix. [Slightly stronger.]

**Unguentum Belladonnæ.**—Evaporate liquid extract of belladonna, 2, on a water-bath until it is reduced to one-eighth of its original bulk; then add benzoated lard, 2·25. Each 100 parts of this ointment should contain 0·6 part of the alkaloids of belladonna root. [Now standardised—0·6 in 100.]

**Unguentum Calaminæ.**—Omitted.

**Unguentum Cantharidis.**—Cantharides, bruised, 1; benzoated lard, 10. Melt the lard, add the cantharides, and digest at about 49° C. for 12 hours. Strain through calico, press the residue gently, and stir the ointment until cold. [Slightly weaker.]

\***Unguentum Capsici.**—Capsicum fruit, bruised, 6; spermaceti, 3; olive oil, 22. Digest on a water-bath for 1 hour, occasionally stirring, then strain and cool, without stirring.



**Unguentum Cetacei.**—Melt together spermaceti, 10, and white beeswax, 4, with almond oil, 36; add coarsely powdered benzoin, 1, and apply heat for 2 hours, frequently stirring the mixture. Then remove from the source of heat, strain, and stir until cold.

**Unguentum Chrysarobini.**—Formula unaltered.

\***Unguentum Cocainæ.**—Rub cocaine, 20, with oleic acid, 80, and gently warm until dissolved; then add lard, 400. [4 in 100.]

**Unguentum Conii.**—Evaporate conium juice, 2, to one-eighth its volume, at a temperature not exceeding 60° C.; then add hydrous wool fat, 0.75, and mix by trituration. [*Boric acid now omitted.*]

**Unguentum Creosoti.**—Add creosote, 1, to a melted mixture of hard paraffin, 4, and white soft paraffin, 5; stir until the ointment is cold. [10 p. c. weaker.]

**Unguentum Elemi.**—Omitted.

**Unguentum Eucalypti.**—Add oil of eucalyptus, 1, to a melted mixture of hard paraffin, 4, and white soft paraffin, 5; stir until cold. [50 p. c. weaker.]

**Unguentum Gallæ.**—Galls, in very fine powder, 1; benzoated lard, 4. Mix by trituration. [*Slightly stronger.*]

**Unguentum Gallæ cum Opio.**—Gall ointment, 925; opium, in very fine powder, 75. Mix by trituration. [*Slightly stronger.*]

**Unguentum Glycerini Plumbi Subacetatis.**—Glycerin of lead subacetate, 1; white paraffin ointment, 5. [*Slightly stronger.*]

**Unguentum Hamamelidis.**—Liquid extract of hamamelis, 0.25; hydrous wool fat, 2.25.

**Unguentum Hydrargyri.**—Formula unaltered.

**Unguentum Hydrargyri Ammoniati.**—Ammoniated mercury, 1; white paraffin ointment, 9.

**Unguentum Hydrargyri Compositum.**—Heat together yellow beeswax, 6; olive oil, 6; and mercury ointment, 10; add camphor, in flowers, 3, and triturate until cold. [16 p. c. weaker.]

**Unguentum Hydrargyri Iodidi Rubri.**—Mercuric iodide, in fine powder, 20; benzoated lard, 480. [*Slightly stronger.*]

**Unguentum Hydrargyri Nitratis.**—Dissolve mercury, 1, in nitric acid, 3, without the aid of heat, agitating gently from time to time. Then heat together lard, 4, and olive oil, 7, on a sand-bath, so that the mixture, when transferred to a heated stoneware jar capable of holding ten times the quantity, shall have a temperature of about 143° C. Add the cold mercurial solution very gradually, stirring constantly to promote disengagement of the fumes. After frothing has ceased the mixture should have a temperature of not less than 93° C. Stir until cold. The ointment should be firm and have a pale lemon colour. [*Process altered.*]



**Unguentum Hydrargyri Nitratis Dilutum.**—Mercuric nitrate ointment, 1 ; yellow soft paraffin, 4. [40 *p. c. weaker.*]

**\*Unguentum Hydrargyri Oleatis.**—Mercuric oleate, 1 ; benzoated lard, 3. [50 *p. c. weaker than B.P.C. ointment.*]

**\*Unguentum Hydrargyri Oxidi Flavi.**—Yellow mercuric oxide, in very fine powder, 1 ; yellow soft paraffin, 49.

**Unguentum Hydrargyri Oxidi Rubri.**—Red mercuric oxide, in fine powder, 1 ; yellow paraffin ointment, 9. [*Slightly weaker.*]

**Unguentum Hydrargyri Subchloridi.**—Mercurous chloride, 1 ; benzoated lard, 9. [33 *p. c. weaker.*]

**Unguentum Iodi.**—Triturate, in a glass or porcelain mortar, iodine, 1, potassium iodide, 1, and glycerin, 3. Then gradually add lard, 20. [25 *p. c. stronger.*]

**Unguentum Iodoformi.**—Iodoform, in fine powder, 1, yellow paraffin ointment, 9.

**\*Unguentum Paraffini.**—Hard paraffin, 3 ; soft paraffin, 7. Melt together in a shallow evaporating dish, and triturate constantly as the mixture cools. When this preparation is used as the basis of white ointments, let the soft paraffin be white ; but for coloured ointments, use yellow soft paraffin. The proportions of hard and soft paraffins in the ointment may be modified to meet the exigencies of climate and prevailing temperature.

**Unguentum Picis Liquidæ.**—Formula unaltered.

**Unguentum Plumbi Acetatis.**—Lead acetate, in fine powder, 20 ; white paraffin ointment, 480. [50 *p. c. stronger.*]

**Unguentum Plumbi Carbonatis.**—Lead carbonate, in fine powder, 1 ; white paraffin ointment, 9. [20 *p. c. weaker.*]

**Unguentum Plumbi Iodidi.**—Lead iodide, in fine powder, 1 ; yellow paraffin ointment, 9. [20 *p. c. weaker.*]

**Unguentum Potassæ Sulphuratæ.**—Omitted.

**Unguentum Potassii Iodidi.**—Dissolve potassium iodide, 50, and potassium carbonate, 3, in distilled water, 47 by weight ; then gradually mix the solution with benzoated lard, 400, in a slightly warmed mortar. [10 *p.c. weaker.*]

**Unguentum Resinæ.**—Melt resin, in powder, 8, and yellow beeswax, 8, then add olive oil 8, and lard, 6 ; strain, and stir until cold.

**Unguentum Sabinæ.**—Omitted.

**Unguentum Simplex.**—Omitted.

**Unguentum Staphisagriæ.**—Crush stavesacre seeds, 2, and digest with benzoated lard, 8·5, on a water-bath, for two hours ; then strain and press through calico, add yellow beeswax, 1, heat gently to dissolve, and stir until cold. [50 *p. c. weaker.*]



**Unguentum Sulphuris.**—Sublimed sulphur, finely sifted, 1 ; benzoated lard, 9. [50 *p. c.* weaker.]

**Unguentum Sulphuris Iodidi.**—Triturate sulphur iodide, 20, and glycerin, 20, in a slightly warmed mortar, until a smooth paste results ; then gradually add benzoated lard, 460, and stir until cold. [40 *p. c.* weaker.]

**Unguentum Terebinthinæ.**—Omitted.

**Unguentum Veratrinæ.**—Rub veratrine, 10, with oleic acid, 40, and gently warm the mixture until solution is effected ; then add lard, 450. [25 *p. c.* stronger.]

**Unguentum Zinci.**—Zinc oxide, finely sifted, 3, benzoated lard, 17. Melt the lard at a low temperature, and add the oxide gradually, stirring the mixture constantly until cold.

**Unguentum Zinci Oleatis.**—Dissolve zinc sulphate, 2, in distilled water, 4 ; also dissolve hard soap, in shavings, 4, in distilled water, 40. Mix the two solutions, collect the precipitated zinc oleate, wash with hot distilled water until free from sulphate, then dry on a water-bath, mix with an equal weight of melted white soft paraffin, and stir until cold.

**Vapores.**—All omitted.

**Vinum Aloes.**—Omitted.

**Vinum Antimoniale.**—Strength unaltered, but one-twentieth part of the sherry is replaced by water, in which the tartarated antimony is to be dissolved before mixing with the wine. Dose : 10 to 30 minims ; as an emetic, 2 to 4 fl. dr.

**Vinum Aurantii.**—Strength unaltered.

**Vinum Colchici.**—Strength unaltered, but the colchicum corm is to be macerated as directed for tinctures.

**Vinum Ferri.**—Formula unaltered.

**Vinum Ferri Citratis.**—The iron and ammonium citrate is dissolved in sufficient orange wine to produce one pint.

**Vinum Ipecacuanhæ.**—Liquid extract of ipecacuanha, 1, sherry, 19. Mix, set aside for 48 hours, then filter. Dose : 10 to 30 minims, as an expectorant ; 4 to 6 fl. dr., as an emetic.

**Vinum Opii.**—Omitted.

**Vinum Quininæ.**—Dissolve quinine hydrochloride, 1, in orange wine, 437·5, set aside, and filter if necessary.

**Vinum Rhei.**—Omitted.

**Vinum Xericum.**—Should contain not less than 16 *p. c.* by volume of ethyl hydroxide



## [Appendix.]

# THE ALCOHOLIC MENSTRUA OF THE NEW PHARMACOPŒIA.

The strength of the standard alcohol of the Pharmacopœia having been increased in the new edition from 56 o. p. to 58 o. p., in order to facilitate the conversion of spirit of either strength into alcohol of various degrees of dilution, the table on page 48 is reprinted. It shows the approximate quantities (sufficiently exact for all practical purposes) of rectified spirit 56 o. p., or alcohol 90 per cent., and of water, required to form either 1 gallon or 1 litre of any of the weaker alcoholic menstua of the 1898 Pharmacopœia.

The calculations are based on a percentage of 88·7 by volume of alcohol in Spiritus Rectificatus, B.P. 1885. In the table, the quantities of alcohol and water required to produce 1 gallon of the required dilute spirit are first given, the quantities required to produce 1 litre being given below. The special mixtures of alcohol and water, which yield mixtures of 79·65 p. c., 46·2 p.c., and 28·45 p. c. respectively, are those required in the preparation of Extractum Belladonnæ Liquidum (see page 10), Liquor Senegæ Concentratus (see page 25), and Tinctura Opii (see page 39) respectively.

A more extended table has been prepared, in which the proportions for mixing the alcoholic menstua are given by weight as well as by volume, and single copies, printed on stout paper, will be sent by the Publishers, Pharmaceutical Journal Office, 5, Serle Street, Lincoln's Inn, London, W.C., at threepence each, post free.



## ALCOHOL CONVERSION TABLE.

BY F. C. J. BIRD.

Menstrua, B.P., 1898.	Spt. Rectificatus (56 o. p.), B.P. 1885.		Spt. Rectificatus (Alcohol, 90 p. c.), B.P. 1898.		Product, Sp. Gr., and Proof Strength.		
	S.V.R., 56 o. p.	Water	Alcohol, 90 p. c.	Water.	Pro- duct.	Sp. Gr.	Proof Degr.
Alcohol, 90 p. c. ..	142½ f. oz.  889 C.c.	* 18 f. oz. absolute alcohol 112 C.c. absolute alcohol			1 gall.  1000 C.c.	0·834	58 o. p.
Alcohol, 79·65 p.c. { Alcohol, 90 p.c., 7 vol. Water, 1 vol. }	143¾ f. oz.  897·7 C.c.	18 f. oz.  112·6 C.c.	141¾ f. oz.  884·6 C.c.	20½ f. oz.  127·1 C.c.	1 gall.  1000 C.c.	0·8645	40 o. p.
Alcohol, 70 p. c. ..	126¾ f. oz.  789·2 C.c.	36½ f. oz.  228·5 C.c.	12¼ f. oz.  777·7 C.c.	38½ f. oz.  241·6 C.c.	1 gall.  1000 C.c.	0·890	22·5 o. p.
Alcohol, 60 p. c. ..	108¾ f. oz.  676·4 C.c.	55¾ f. oz.  346·8 C.c.	106¾ f. oz.  666·6 C.c.	57¼ f. oz.  357·8 C.c.	1 gall.  1000 C.c.	0·9135	5·5 o. p.
Alcohol, 46·2 p. c. . { Alcohol, 90 p.c., 1 vol. Water, 1 vol. }	83½ f. oz.  521·3 C.c.	80¾ f. oz.  505 C.c.	82¼ f. oz.  513·7 C.c.	82½ f. oz.  513·3 C.c.	1 gall.  1000 C.c.	·9415	19 u. p.
Alcohol, 45 p. c. ..	81¼ f. oz.  507·5 C.c.	83 f. oz.  518·4 C.c.	80½ f. oz.  500 C.c.	84¼ f. oz.  526·6 C.c.	1 gall.  1000 C.c.	0·9435	21 u. p.
Alcohol, 28·45 p.c. { Alcohol, 20 p.c., 2 vol. Alcohol, 45 p.c., 1 vol. }	51½ f. oz.  321·4 C.c.	111¾ f. oz.  698·2 C.c.	50¾ f. oz.  316·7 C.c.	112½ f. oz.  703·4 C.c.	1 gall.  1000 C.c.	0·967	50 u. p.
Alcohol, 20 p. c. ..	36¼ f. oz.  25·5 C.c.	126 f. oz.  787·3 C.c.	35½ f. oz.  222·2 C.c.	126½ f. oz.  791 C.c.	1 gall.  1000 C.c.	0·976	65 u. p.

\* In this case absolute alcohol is to be added, not water.















