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1901

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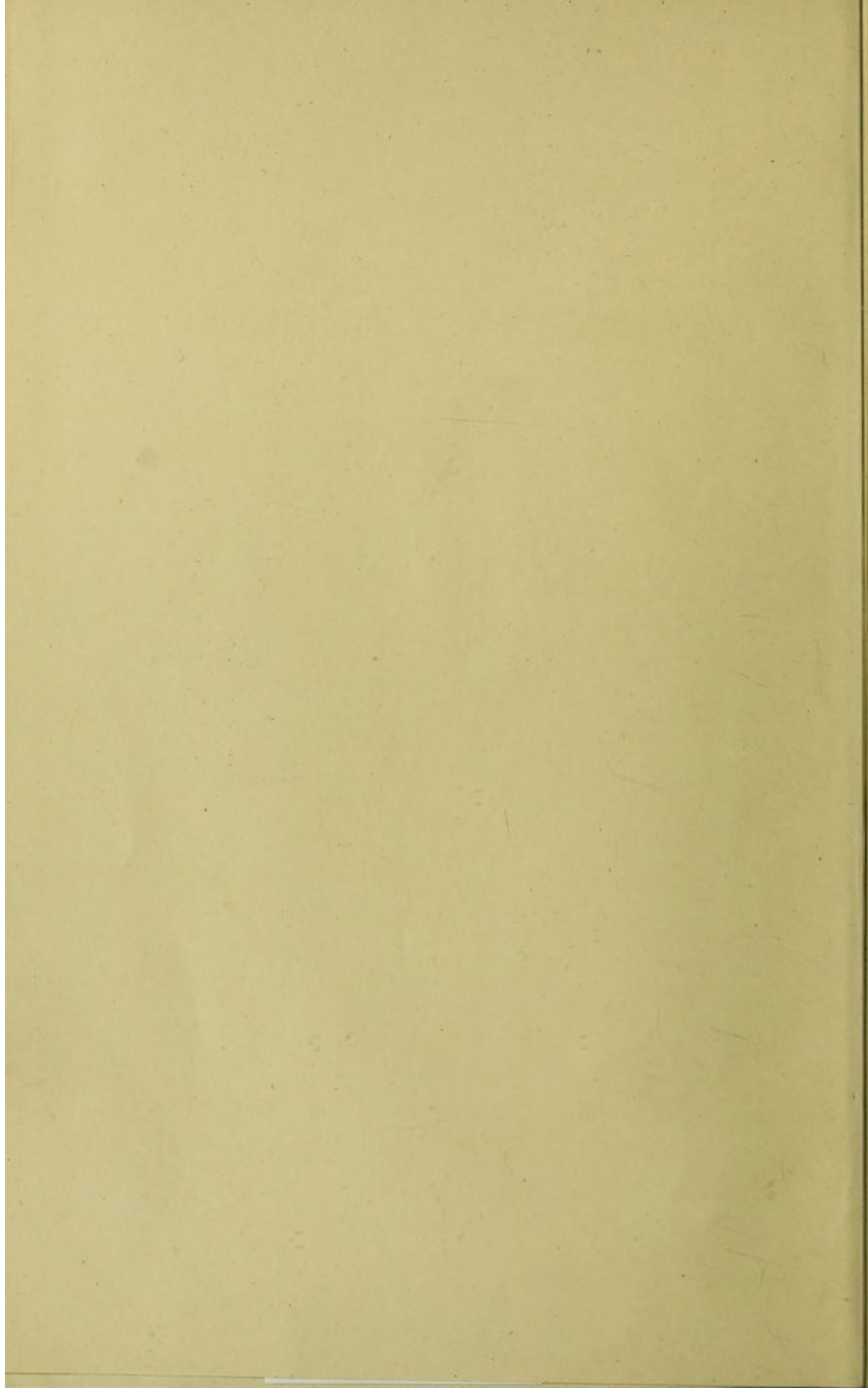
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British
Pharmaceutical Conference

FORMULARY



1901

LONDON
J & A. CHURCHILL, 7, GREAT MARLBOROUGH STREET

1901
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BUTLER & TANNER,
THE SELWOOD PRINTING WORKS,
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CONTENTS

	PAGE
Introductory Remarks	7
Preface to the Formulary, 1901	9
Members of the Formulary Committee	10
FORMULÆ.	
Acidum Hydrocyanicum (Scheele)	11
" Hydrofluoricum Dilutum	11
" Hypophosphorosum	12
Caffeinæ Hydrobromidum Effervescens	13
Chloral Camphoratum	13
Chloroformum Aconiti	13
" Belladonnæ	13
" Camphoratum	14
Collodium Belladonnæ	14
" Stypticum	14
Elixir Aletridis	15
" Glusidi	15
" Guaranæ	16
" Phosphori	16
" Rhei	16
" Sennæ	17
Emplastrum Belladonnæ Viride	17
Emulsio Olei Morrhuæ	18
" Petrolei et Hypophosphitum	18
Extractum Aletridis Liquidum	19
" Belladonnæ Folii Alcoholicum	19
" Cascaræ Sagradæ Liquidum Insuper	21
" Condurango Liquidum	21
" Conii Liquidum	22
" Damianæ Liquidum	23
" Eucalypti Gummi Liquidum	23
" Fuci Vesiculosi	23
" " Liquidum	24
" Hæmatoxyli Liquidum	24
" Kolæ	24
" Malti	25
" " cum Oleo Morrhuæ	26
" Sennæ Leguminorum Liquidum	26
Gelatinum Zinci	27
Glycerinum Belladonnæ	27

	PAGE
FORMULÆ (continued)—	
Hydrastinum	27
Infusum Digitalis Concentratum	27
„ Gentianæ Compositum Concentratum	28
Injectio Curare Hypodermica	28
Iridinum	29
Linimentum Opii Ammoniatum	29
Liquor Bismuthi Concentratus	29
„ Bromo-Chloral Compositus	30
„ Ferri Hypophosphitis Fortis	30
„ Hypophosphitum Compositus	31
Mistura Bismuthi Compositus	32
Phenacetinum cum Caffeina Effervescens	32
Phenazonum Effervescens	32
Pulvis Acetanilidi Compositus	33
„ Salis Carolini Factitii Effervescens	33
Succus Digitalis	33
Syrupus Acidi Hydriodici	34
„ Apomorphinæ Hydrochloridi	34
„ Butyl-Chloral	34
„ Calcii Hypophosphitis	35
„ Ferri Bromidi	35
„ „ Bromidi cum Quinina	35
„ „ „ „ et Strychnina	36
„ „ Hypophosphitis	36
„ „ Phosphatis Compositus	36
„ Glycerophosphatum Compositus	37
„ Hypophosphitum	38
„ Ipecacuanhæ Aceticus	38
„ Picis Liquidæ	39
„ Sodii Hypophosphitis	39
Tinctura Antiperiodica	39
„ Benzoini Simplex	40
„ Bryoniæ	40
„ Calendulæ Florum	41
„ Capsici Fortior	41
„ Carminativa	41
„ Chloroformi Composita	42
„ Convallariæ	42
„ Coto	42
„ Eucalypti	42
„ Euonymi	43
„ Euphorbiæ Piluliferæ	43
„ Guaiaci	43
„ Iodi Decolorata	44

	PAGE
<i>FORMULÆ (continued)—</i>	
Tinctura Lobeliæ	44
„ Phosphori Composita	44
„ Physostigmatis	45
„ Pulsatillæ	45
„ Valerianæ	45
„ Veratri Viridis	45
„ Zingiberis Fortior	46
Unguentum Hydrargyri Mitius	46
„ Oleo-Resinæ Capsici	46
Vinum Aurantii Detannatum	47
„ Pepsini	47
„ Xericum Detannatum	47
Warburg's Tincture	39

INTRODUCTORY REMARKS TO THE FIRST EDITION.

THE British Pharmaceutical Conference, at its Annual Meeting, held at Birmingham, in August, 1886, appointed a Committee of ten of its members to prepare a Formulary of Unofficial Remedies.

The proposal that this step should be taken was received by the Members present with such cordial approval, that there could be no doubt that it expressed the feeling of a general want. The revision of the British Pharmacopœia has been undertaken at periods so long apart, that the remedies introduced as new preparations in the latest edition have usually enjoyed extensive use during many years before their official recognition. Such a period of probation appears fitting, rather than the introduction to the medical world of new and untried remedies in the pages of the national Pharmacopœia. If this position be accepted, it rests either with individuals or with associations to advise as to the best formulæ for the administration of such remedies. This may involve considerations as to the material to be employed, its preliminary preparation, the most suitable solvent and process, the best proportions, and finally what adjuvants are most appropriate.

More than ten years since, the Société de Pharmacie of Paris, moved by identical considerations, appointed a Committee to prepare such a Formulary; and the result was a valuable contribution to pharmacy.¹ The American Pharmaceutical Association has also issued a comprehensive National Formulary of Unofficial Preparations.

The Committee of the British Pharmaceutical Conference cannot feel surprise if circumstances appear to have placed upon the body which they represent the responsibility of undertaking a like duty for Great Britain.

They have only to look back for the past fifty years to find that English pharmacists have supplied and continue to supply to medicine and pharmacy the most valuable of the published compilations of unofficial formulæ, a condition similar to that long found in France and in the United States.

¹ Vide *Pharmaceutical Journal*, series 3, vol. vii., p. 1039 *et seq.*

It is self-evident that when new remedies are first introduced the conditions of their fair trial demand that the preparations employed should be made *secundum artem*. It is also an important consideration, in the interest of the patient, that qualities that may be nauseous should be corrected or disguised by combination. The prescriber of the present day accords much more consideration to this than was the case formerly, and the term "elegant pharmacy" has become recognised as descriptive of a large and popular class of medicines. These cannot wait for the authority of the national Pharmacopœia, but they are important in the equipment of the practitioner of medicine, and their composition ought to be uniform and known both to prescriber and dispenser. To the prescriber, the Unofficial Formulary is offered with the belief that the principles upon which it is constructed will receive his approval, and that it will constantly suggest eligible combinations of medicines which he desires to employ. To the dispenser it affords information of the composition of medicines which he is called upon to supply, enabling him to prepare them, and to have supplies in a fresh condition, where demand might be too infrequent to secure this in the case of purchased stocks. It may reasonably be trusted that the Formulary will gradually relieve both classes from some of the incubus caused by the use of remedies of secret composition. Whilst the present issue is of limited scope, it is hoped that early additions will be made.

The formulæ now published have been selected by the Formulary Committee from those suggested for consideration by their members. They include a few formulæ from the United States Pharmacopœia, and some already published in the "Extra-Pharmacopœia" by Mr. W. Martindale and Dr. W. Wynn Westcott. The footnotes relating to the description of drugs, and the authorities for their botanical sources, have been kindly supplied by Mr. E. M. Holmes, curator of the Museum of the Pharmaceutical Society of Great Britain.

Suggestions for alterations or additions are invited, addressed, "The Hon. Secretary, Formulary Committee, 17, Bloomsbury Square, London, W.C."

In order to indicate clearly that the formulæ of the Unofficial Formulary are intended, it is suggested to the prescriber to add the letters "B.P.C." (British Pharmaceutical Conference).

PREFACE TO THE FORMULARY, 1901.

The remedies contained in the British Pharmacopœia, under its normal condition of revision at long intervals, are only a portion of those used by the medical profession and met with in prescriptions. Some of these extra-official preparations may have been omitted from the Pharmacopœia because they were not, from the medical standpoint, thought of sufficient importance to be included, while others may have been introduced into medicine since the publication of the last edition of the official work. In either case it has been universally admitted that uniformity in composition and strength, as well as in appearance, of such preparations is not only desirable, but is essential, if old remedies are to continue to be used with satisfaction to the prescriber, and if new substances are to receive a fair test as to their claims to a permanent place amongst remedies and their suitability for inclusion in the Pharmacopœia itself. Acting on this principle, the British Pharmaceutical Conference, in 1886, appointed a Committee to prepare a Formulary of such extra-official remedies, and since that date four editions of the Conference Formulary have been published. The last edition was issued in 1894, and a longer interval than usual has elapsed since that date; but the impending new edition of the Pharmacopœia which was published in 1898, and the necessary time for the collection of information since, accounts for the delay.

In the present edition, which has been authorized to be published by the Executive Committee of the British Pharmaceutical Conference, forty-nine preparations which appeared in the 1894 edition, but which have not been included in the 1898 Pharmacopœia, have been reproduced with sundry improvements in some of them which experiment and experience have shown to be desirable; whilst forty-two new preparations have been added.

Acceding to an almost universal demand, the revisers of the last edition of the Pharmacopœia introduced several concentrated representatives of the official infusions under the name of "Liquors," and of the strength 1 to 9. The Committee has ascertained by extensive inquiry that these preparations have not come into use, but that there is still a very large demand for the concentrated infusions of the strength 1 to 7. It has therefore introduced into the present Formulary two concentrated infusions of this strength,

viz., Digitalis and Compound Gentian. Moreover, these preparations are true infusions, as only the principles of the drugs which are soluble in water are retained, and the spirit is used for preservation. In most of the Pharmacopœia Liquors the principles of the drugs are extracted by the weak alcohol, and in that respect they fail to represent infusions, and are more like tinctures.

One of the greatest difficulties the Committee has experienced has been the selection of the preparations to be included in the Formulary. It is manifestly not fitting that a Committee of pharmacists should express any theoretical views as to the therapeutical value of the drugs and preparations, a matter which belongs wholly to the domain of the medical man; the sole consideration determining selection has been whether the preparations are actually met with sufficiently often in the practice of dispensing to warrant their inclusion.

In the introductory remarks to the first edition of the Formulary, prescribers were asked to indicate by the letters "B.P.C." that they wished the formulæ of the British Pharmaceutical Conference to be employed. The present Committee asks all pharmacists, whenever preparations are met with in prescriptions under the names given in this Formulary, to use them.

The Committee is of opinion that the loyal use by pharmacists of a Formulary such as this will do much to combat empiricism and the use of proprietary articles, and tend to secure uniformity in dispensing. It therefore invites suggestions and propositions for future revision. The Committee also asks pharmacists to make the Formulary known to physicians.

All communications relating to the Formulary should be addressed, "The Hon. Secretary, Formulary Committee, 17, Bloomsbury Square, London, W.C."

MEMBERS OF THE FORMULARY COMMITTEE.

Chairman—N. H. Martin.

Hon. Secretary—W. A. H. Naylor.

A. C. Abraham.
F. C. J. Bird.
Peter Boa.
W. Martindale.
F. Ransom.

C. Symes.
Harold Wilson.
H. Wilson.
R. Wright.

FORMULÆ.

THE Imperial weights and measures adopted in the following formulæ are those recognised by the British Pharmacopœia. The drugs and preparations are also those of the British Pharmacopœia, unless otherwise defined.

Acidum Hydrocyanicum (Scheele).

Hydrocyanic Acid (Scheele).

Potassium Ferrocyanide	2½ oz.
Sulphuric Acid	1 fluid oz.
Distilled Water	24 fluid oz., or a sufficient quantity.

Dissolve the potassium ferrocyanide in ten ounces of the water, then add the sulphuric acid, previously diluted with four ounces of the water, and cooled. Put the solution into a flask, to which are attached a condenser and a receiver arranged for distillation; and having previously put one ounce of distilled water into the receiver, and provided efficient means for keeping the condenser and receiver cold, cautiously apply heat to the flask, until by slow distillation the liquid in the receiver is increased to ten fluid ounces. Add to the product as much water as may be sufficient to bring the acid to the required strength.

CHARACTERS AND TESTS.—A colourless liquid. Specific gravity, 0.994. A fluid drachm of it leaves on evaporation no fixed residue. It gives no precipitate with barium chloride, but with silver nitrate it yields a white precipitate, entirely soluble in boiling concentrated nitric acid. Its strength, as determined by the process of the British Pharmacopœia by means of volumetric solution of silver nitrate, corresponds to four per cent. of hydrocyanic acid.

Dose.—1 to 3 minims.

Acidum Hydrofluoricum Dilutum.

Diluted Hydrofluoric Acid.

Redistilled Hydrofluoric Acid (containing about 30 per cent. of true Acid)	58 grains.
Distilled Water	a sufficiency.

Weigh the acid in a gutta-percha or paraffin-coated bottle, and pour it into fifteen fluid ounces of distilled water. Rinse out the bottle with three successive portions of distilled water, each measuring one fluid ounce, and add the several rinsings to the previous volume.

Adjust the solution so that 10 cubic centimetres require for neutralization 10 cubic centimetres of the decinormal volumetric solution of sodium hydroxide corresponding to 0.20 per cent. of hydrofluoric acid.

Preferably stored in gutta-percha bottles.

Dose.—5 to 20 minims.

Acidum Hypophosphorosum.

Hypophosphorous Acid.

Barium Hypophosphite	8 oz.
(Containing not less than 95 per cent. Ba (PH ₂ O ₂) ₂ .)	
Diluted Sulphuric Acid)	of each, a sufficient quantity.
Distilled Water	

Dissolve the barium hypophosphite in thirty-six fluid ounces of hot distilled water. Add slowly to the solution seventeen fluid ounces of diluted sulphuric acid, after which continue the addition, drop by drop, until no further turbidity is produced. Set aside in a warm place, and pass the clear liquid through a filter. Wash the precipitate by decantation with successive portions of hot distilled water, until the washings have no longer an acid reaction. Filter, unite the filtrates, and evaporate the liquid on a water-bath to the prescribed density. The product will weigh about eleven and a half ounces.

CHARACTERS AND TESTS.—Colourless. Specific gravity, 1.1367. Its strength, as determined by volumetric solution of sodium hydroxide, corresponds to thirty per cent. of hypophosphorous acid. Its aqueous solution is not precipitated by diluted sulphuric acid, nor by an excess of ammonia, nor by ammonium oxalate after neutralization, and gives not more than a faint opalescence with barium chloride. If solution of magnesium ammonio-sulphate be added after an excess of ammonia, no precipitate is produced. Calcium chloride added to a neutralized solution yields no precipitate.

Dose.—2 to 5 minims.

Caffeinæ Hydrobromidum Effervescens.*Effervescent Hydrobromide of Caffeine.*

Sodium Bicarbonate	in powder	46 oz.
Tartaric Acid	" "	24 "
Citric Acid	" "	18 "
Refined Sugar	" "	18 "
Caffeine Hydrobromide	" "	4 "

Mix the caffeine hydrobromide, tartaric acid, and citric acid, and with the product incorporate the sodium bicarbonate and refined sugar previously mixed. Place in a shallow enamelled pan, and apply heat sufficient to cause the mixture to assume a condition suitable for granulation, and then separate it into granules of a convenient size by means of a suitable sieve. Dry the granules at a temperature not exceeding 120° F. The product should weigh about one hundred ounces.

Dose.—60 to 120 grains.

Chloral Camphoratum.*Camphorated Chloral.*

Camphor	1 oz.
Chloral Hydrate	1 "

Rub together in a warm mortar until completely liquefied, and filter if necessary.

Chloroformum Aconiti.*Chloroform of Aconite.*

Aconite Root	20 oz.
Strong Solution of Ammonia	1½ fluid oz.
Distilled Water	1 pint.
Chloroform, a sufficient quantity.	

Bruise the aconite root, and moisten thoroughly with the solution of ammonia and distilled water previously mixed. Macerate for four hours, dry carefully, and reduce to No. 40 powder. Pack tightly in a percolator provided with a tap and closely fitting cover. Macerate for twenty-four hours with twenty fluid ounces of chloroform; then pour on successive quantities of chloroform, percolating slowly until thirty fluid ounces are obtained.

Chloroformum Belladonnæ.*Chloroform of Belladonna.*

Belladonna Root in No. 60 powder	20 oz.
Strong Solution of Ammonia	1½ fluid oz.
Distilled Water	1 pint.
Chloroform, a sufficient quantity.	

Moisten the belladonna thoroughly with the solution of ammonia and distilled water previously mixed. Macerate for four hours, dry carefully, and reduce to No. 60 powder again. Pack tightly in a percolator provided with a tap and closely fitting cover. Macerate for twenty-four hours with twenty fluid ounces of chloroform; then pour on successive quantities of chloroform, percolating slowly until thirty fluid ounces are obtained.

Chloroformum Camphoratum.*Camphorated Chloroform.*

Camphor	2 oz.
Chloroform	1 fluid oz.

Dissolve.

Collodium Belladonnæ.*Collodion of Belladonna.**Syn.*—EMPLASTRUM BELLADONNÆ FLUIDUM.

Alcoholic Extract of Belladonna Leaf	A quantity containing 44 grains of the alkaloids.
Alcohol (90 per cent.)	a sufficiency.

Dissolve the extract in nine fluid ounces of the alcohol, then add

Purified Ether (Sp. Gr. 0.72)	9 fluid oz.
---	-------------

Mix, set aside for twelve hours, decant, and dissolve in the mixture

Camphor	130 grains.
Pyroxylin	½ oz.

Then add

Alcohol (90 per cent.)	} in equal volumes, sufficient to produce one pint.
Purified Ether	

Collodium Stypticum.*Styptic Collodion.*

Benzoin	44 grains
Absolute Alcohol	1 fluid oz.

Dissolve and filter. In the filtrate dissolve

Tannic Acid	1 oz.
-----------------------	-------

And add

Purified Ether (Sp. Gr. 0.72)	4 fluid oz.
Pyroxylin	44 grains.

Mix, set aside for three days, and decant.

Elixir Aletridis.*Elixir of Aletris.*

Liquid Extract of Aletris	5 fluid oz.
Liquid Extract of Liquorice	1 $\frac{1}{4}$ " "
Tincture of Orange	1 $\frac{1}{4}$ " "
Syrup	7 $\frac{1}{2}$ " "
Distilled Water sufficient to produce	1 pint.

Mix.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Elixir Glusidi.*Elixir of Gluside.**Syn.*—ELIXIR SACCHARINI.

Gluside	480 grains.
Sodium Bicarbonate	240 "
Alcohol (90 per cent.)	2 $\frac{1}{2}$ fluid oz.
Distilled Water, a sufficient quantity.	

Rub the gluside and sodium bicarbonate in a mortar, with half a pint of distilled water gradually added. When dissolved, add the alcohol, filter, and wash the filter with sufficient distilled water to produce one pint.

Each fluid drachm contains three grains of gluside.

Dose.—5 to 20 minims.

Elixir Guaranaë.*Elixir of Guarana.*

Guarana, ¹ in No. 60 Powder	4 oz.
Light Magnesia	½ "
Oil of Cinnamon	6 minims.
Syrup	2 fluid oz.
Alcohol (60 per cent.), a sufficient quantity.	

Mix intimately the powders, and moisten them with three fluid ounces of the alcohol. After twenty-four hours' maceration, mix with eight ounces of coarse sand, and pack in a percolator; pass through proof spirit until sixteen ounces are obtained, then transfer the mass to a press-bag and apply pressure. To the percolate add the syrup and oil of cinnamon, and make up to one pint by addition of the expressed liquid, previously reduced by evaporation if necessary.

Dose.—½ to 2 fluid drachms.

Elixir Phosphori.*Elixir of Phosphorus.*

Compound Tincture of Phosphorus	4 fluid oz.
Glycerin	16 "

Add the tincture to the glycerin, and shake well. This elixir should be freshly prepared and preserved from the light in full bottles. Each fluid drachm contains $\frac{1}{30}$ grain of phosphorus.

Dose.—15 minims to 1 fluid drachm.

Elixir Rhei.*Elixir of Rhubarb.*

Rhubarb Root in No. 12 Powder	5 oz.
Fennel Fruit, bruised	2 "
Glycerin	3 fluid oz.
Refined Sugar	4 oz.
Alcohol (90 per cent.), 1 volume	} a sufficient quantity.
Distilled Water, 3 volumes	

Moisten the rhubarb and fennel with fifteen fluid ounces of the mixed alcohol and water, macerate for forty-eight hours, and express. Break up the marc, and add to it sufficient of the same

¹ A dried paste prepared from the crushed or ground seeds of *Paullinia cupana*, H. B. & K.

menstruum to furnish, with the previous pressing, fifteen fluid ounces of clear product. Express again after twenty-four hours' maceration. Unite the liquors, allow to stand for two days, and filter into the sugar and glycerin. Dissolve without heat; then, if necessary, add sufficient of the above menstruum to make the product measure one pint.

Dose.—1 to 3 fluid drachms.

Elixir Sennæ.

Elixir of Senna.

Alexandrian Senna	1 pound.
Alcohol (90 per cent.))	of each, a sufficient quantity.
Distilled Water)	
Refined Sugar, in coarse powder	12 oz.

Mix four fluid ounces of alcohol with twelve fluid ounces of water, and with it moisten evenly the senna. Pack tightly in a closed vessel, and macerate for three days. Express forcibly, and pour the product on the sugar. Break up the marc, and add to it sufficient of the same menstruum to furnish in all sixteen fluid ounces of product. Express again after twenty-four hours' maceration, add the liquor to the previously obtained product, and the sugar, heat in a closed vessel, by means of a water-bath, to 200° F., and maintain at that temperature for ten minutes. When cold, strain and add, after mixing,

Chloroform	24 minims.
Oil of Coriander	2½ "
Tincture of Capsicum	½ fluid drm.
Alcohol (90 per cent.)	3 "

Agitate thoroughly, and if necessary add alcohol (60 per cent.) to make the product measure twenty-four fluid ounces.

Dose.—1 to 3 fluid drachms.

Emplastrum Belladonnæ Viride.

Green Belladonna Plaster.

Alcoholic Extract of Belladonna Leaf—A quantity containing 11 grains of the alkaloids.

Resin Plaster sufficient to produce 10 oz.

Add the extract to the resin plaster previously melted, and mix

thoroughly. The plaster contains 0.25 per cent. of the alkaloids of belladonna leaf, and is therefore half the alkaloidal strength of *Emplastrum Belladonnæ* of the British Pharmacopœia.

Emulsio Olei Morrhuæ.

Emulsion of Cod Liver Oil.

Cod Liver Oil	8 fluid oz.
The Yolks of Two Eggs.	
Tragacanth, in powder	16 grains.
Elixir of Gluside	1 fluid drm.
Simple Tincture of Benzoin	1 " "
Spirit of Chloroform	4 " "
Essential Oil of Bitter Almonds ²	8 minims.
Distilled Water, sufficient to produce	16 fluid oz.

Measure five fluid ounces of the distilled water, place the tragacanth in powder in a dry mortar, and triturate with a little of the cod liver oil; then add the yolks of eggs, and stir briskly, adding water as the mixture thickens. When of a suitable consistence, add the remainder of the oil and water alternately, with constant stirring, avoiding frothing. Transfer to a pint bottle, add the elixir of gluside, tincture of benzoin, spirit of chloroform, and oil of almonds, previously mixed, shake well, and add distilled water, if necessary, to make the product measure sixteen fluid ounces.

Dose.—2 to 8 fluid drachms.

Emulsio Petrolei cum Hypophosphitibus.

Emulsion of Petroleum with Hypophosphites.

Liquid Paraffin	8 fluid oz.
Gum Acacia, in powder	4 oz.
Oil of Cinnamon	24 minims.
Tragacanth, in powder	120 grains.
Calcium Hypophosphite	192 "
Sodium Hypophosphite	192 "
Distilled Water, a sufficiency.	

Mix the four first ingredients well together in a mortar, and add all at once six ounces of water. Triturate until a perfect emulsion is produced. Then add gradually a solution of the hypophosphites

² The oil distilled from the official Bitter Almond after the expression of the fixed oil.

in four fluid ounces of the water. Finally adjust the volume to twenty-four fluid ounces by the addition of water.

Dose.—1 to 4 fluid drachms.

Extractum Aletridis Liquidum.

Liquid Extract of Aletris.

Aletris Rhizome,³ in No. 60 powder . . . 20 oz.

Alcohol (45 per cent.), a sufficient quantity.

Moisten the powdered rhizome with about eight fluid ounces of the alcohol; pack the moistened powder in a percolator, and add sufficient menstruum to saturate it thoroughly. When the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours, then allow percolation to proceed, gradually adding menstruum until the aletris is exhausted. Reserve the first seventeen fluid ounces of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to a soft extract, dissolve this in the reserved portion; add sufficient menstruum to produce one pint of liquid extract.

Dose.—5 to 15 minims.

Extractum Belladonnæ Folii Alcoholicum.

Alcoholic Extract of Belladonna Leaf.

Belladonna Leaf, in No. 60 powder . . . 1 pound.

Alcohol (90 per cent.), a sufficient quantity.

Moisten the powder with twelve fluid ounces of the alcohol, pack it tightly in a percolator, and pour on sufficient menstruum to saturate the powder and leave a stratum above it. When the liquid begins to drop, close the lower orifice of the percolator and macerate for forty-eight hours; then allow percolation to proceed, gradually adding menstruum until the belladonna is exhausted. Distil off most of the alcohol, and evaporate the residue over a water-bath to the consistence of an extract.

The extract is to be assayed by the following process:—

Extract	2.5 gm.
Potassium Carbonate	10 gm.
Distilled Water	15 c.c.

³ The dried rhizome and rootlets of *Aletris farinosa*, Linn. (Star-Grass).

Weigh the extract on a tared watch glass and transfer to a small mortar, rinsing off the last portion of extract with a little of the water. Rub to a smooth liquid, adding more of the water if necessary and transfer to a separator. Wash out the mortar with the remaining water, and add the washings, together with the carbonate of potash, to the contents of the separator. Shake until the salt is dissolved, then add

	Amylic Alcohol	3 vols.	} 20 c.c.
(Solvent)	Chloroform	1 vol.	
	Ether	4 vols.	

warm and agitate vigorously. Separate the ethereal layer, run off the aqueous portion, and add

Solvent	10 c.c.
-------------------	---------

to the resinous clot, which will generally be found adherent to the interior of the separator. Warm and agitate until the clot is completely disintegrated. Return the aqueous layer to the separator agitate and again separate. Continue with two successive quantities of

Solvent	10 and 5 c.c.
-------------------	---------------

Wash the mixed ethereal liquids twice with

Solution of Potassium Carbonate (1 in 2)	5 and 2 c.c.
--	--------------

Run off, reject, and with 1 c.c. of water added, without agitation, displace the last traces of alkaline washings, together with any resinous matter which may have fallen to the bottom of the aqueous layer. If necessary, invert the separator and wash out the interior of the stem by a jet of water from a wash bottle.

Extract the alkaloids with

Normal Sulphuric Acid	5 c.c.
Distilled Water	5 c.c.

and repeat with three successive quantities of

Distilled Water	5, 5 and 5 c.c.
---------------------------	-----------------

Wash the mixed acid liquids with

Chloroform	3 and 3 c.c.
----------------------	--------------

Run off and reject the chloroform (which removes a little chlorophyll), render alkaline with

Solution of Ammonia	<i>q.s.</i>
-------------------------------	-------------

and shake out the alkaloids with four successive quantities of

Chloroform	10, 5, 5 and 5 c.c.
----------------------	---------------------

aiding the separation of the chloroform, if necessary, by the addition of a few c.c. of a saturated solution of ammonium carbonate.

Evaporate in a tared dish, dry, weigh and titrate as directed in the British Pharmacopœia under *Extractum Belladonnæ Liquidum*, multiplying the result by 40, to obtain the percentage of alkaloids.

Extractum Cascaræ Sagradæ Liquidum Insuperum.

Tasteless Liquid Extract of Cascara Sagrada.

Cascara Bark in No. 40 powder	20 oz.
Light Magnesia	2 "
Distilled Water	1½ pints.
Alcohol (60 per cent.), a sufficient quantity.	

Mix the powders, moisten thoroughly with the water, and macerate for twenty-four hours; then dry over a water-bath and reduce the dry mass to powder. Moisten the powder with twenty ounces of the alcohol and pack it lightly in a percolator; then allow percolation to proceed, gradually adding alcohol until the cascara is exhausted. Reserve the first seventeen fluid ounces of the percolate, distil off the alcohol from the remainder, and evaporate the residue to a soft extract; dissolve this in the reserved portion, and add enough menstruum to make the liquid extract measure one pint.

Dose.—½ to 2 fluid drachms.

Extractum Condurango Liquidum.

Liquid Extract of Condurango.

Condurango Bark, ⁴ in No. 60 Powder	20 oz.
Alcohol (60 per cent.), a sufficient quantity.	

Moisten the powdered bark with ten fluid ounces of the alcohol; pack the moistened powder in a percolator, and add sufficient menstruum to saturate it thoroughly. When the liquid begins to drop, close the lower orifice of the percolator, set aside for forty-eight hours; then allow percolation to proceed gradually, adding more menstruum until the bark is exhausted. Reserve the first seventeen ounces of the percolate; remove the alcohol from the re-

⁴ The bark of *Marsdenia Cundurango*, Nicholson.

mainder by distillation; evaporate the residue to a soft extract; dissolve this in the reserved portion, and add sufficient menstruum to produce one pint of the liquid extract.

Dose.—10 to 60 minims.

Extractum Conii Liquidum.

Liquid Extract of Hemlock.

Conium Fruit in No 40 powder	20 oz.
Acetic Acid	2 fluid drms.
Alcohol (60 per cent.), a sufficient quantity.	

Mix the acetic acid with a pint of the alcohol, moisten the powder with six fluid ounces of the mixture, pack in a percolator, and proceed to exhaust as directed for *Extractum Damianæ Liquidum*.

Determine the proportion of alkaloids in the strong liquid extract by the following analytical process:—

Mix five cubic centimetres with one cubic centimetre of diluted sulphuric acid and twenty cubic centimetres of distilled water, and evaporate over a water-bath until the liquid is reduced to one-half its original bulk. Transfer to a separator, rinse the dish with a little distilled water, add ten cubic centimetres of chloroform with an excess of solution of potash and shake well. Draw off the chloroformic layer into a second separator, and repeat the agitation and separation with chloroform. Mix three cubic centimetres of diluted sulphuric acid with twenty-seven cubic centimetres of distilled water, divide into three portions, and agitate the mixed chloroformic solutions with each in turn. Separate and mix the acid solutions; to the mixed liquids add solution of potash in excess and shake with two successive quantities of ten cubic centimetres of chloroform. Draw off the chloroform liquids into a stoppered glass cylinder, add two drops of strong hydrochloric acid, shake well, pour into a tared dish, allow the chloroform to evaporate in a current of warm air, and dry the residue at a temperature not exceeding 90° C., until the weight is constant. From this weight calculate the proportion of alkaloids in the strong liquid extract, and add to the latter sufficient of the alcohol to produce a liquid extract containing alkaloids equivalent to one per cent. alkaloidal hydrochlorides.

Dose.—5 to 15 minims.

Extractum Damianæ Liquidum.*Liquid Extract of Damiana.*

Damiana⁵ in No. 60 powder 20 oz.
 Alcohol (60 per cent.), a sufficient quantity.

Moisten the powder with eight fluid ounces of the alcohol, pack it tightly in a percolator, and pour on sufficient menstruum to saturate the powder and leave a stratum above it. When the liquid begins to drop, close the lower orifice and macerate for forty-eight hours; then allow percolation to proceed, gradually adding menstruum until the damiana is exhausted. Reserve the first seventeen fluid ounces of the percolate, distil off the alcohol from the remainder, and evaporate the residue to a soft extract; dissolve this in the reserved portion, and add enough menstruum to make the liquid extract measure one pint.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Extractum Eucalypti Gummi Liquidum.*Liquid Extract of Eucalyptus Gum.*

Syn.—LIQUID EXTRACT OF RED GUM.

Red Gum 5 oz.
 Distilled Water 13 fluid oz.

Dissolve, strain, and add

Alcohol (90 per cent.) 2 fluid oz.
 Distilled Water sufficient to produce 1 pint.

Dose.—30 to 60 minims.

Extractum Fuci Vesiculosi.*Extract of Fucus Vesiculosus.*

Fucus Vesiculosus,⁶ dried, in No. 20 powder 1 pound.
 Alcohol (45 per cent.), a sufficient quantity.

Moisten the powdered fucus vesiculosus with eight fluid ounces of the alcohol; pack the damp powder in a percolator; percolate with the alcohol until the fucus is exhausted. Remove the alcohol from the percolate by distillation, and evaporate the residue to the consistence of a firm extract.

Dose.—3 to 10 grains.

⁵ The leaves and terminal twigs of *Turnera diffusa*, var. *aphrodisiaca* (Ward).

⁶ The flat branching thallus of *Fucus vesiculosus*, Linn.

Extractum Fuci Vesiculosi Liquidum.*Liquid Extract of Fucus Vesiculosus.*

Extract of Fucus Vesiculosus 1 pound.
 Alcohol (45 per cent.), a sufficient quantity.

Dissolve the extract in sixty-four fluid ounces of the alcohol, set aside for an hour, filter, and wash the residue on the filter with more of the alcohol to produce four pints of the liquid extract.

Dose.—1 to 2 fluid drachms.

Extractum Hæmatoxyli Liquidum.*Liquid Extract of Logwood.*

Unfermented Logwood, in No. 16 powder 20 oz.
 Alcohol (90 per cent.) 3 fluid oz.
 Distilled Water 6 pints.

Boil the logwood with two pints of the water in a covered copper or enamelled pan for half an hour, and strain. Add two pints of the water, boil for another half hour, and again strain. Repeat the process for a third time, and having mixed the strained liquors, evaporate over a water-bath (or preferably *in vacuo*) until the product measures seventeen fluid ounces. Add the alcohol, set aside for seven days, and then decant the clear liquor, by means of a syphon, from any sediment that may have been deposited.

Dose.— $\frac{1}{2}$ to 2 fluid drachms.

Extractum Kolæ Liquidum.*Liquid Extract of Kola.*

Kola,⁷ in No. 40 powder 20 oz.
 Alcohol (60 per cent.), a sufficient quantity.

Moisten the powder with ten fluid ounces of the alcohol: pack the moistened powder in a percolator, and add sufficient menstruum to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding more menstruum until the kola is exhausted. Reserve the first seventeen ounces

⁷ The seeds of *Cola vera*, Schumann.

of the percolate; remove the alcohol from the remainder by distillation; evaporate the residue to a soft extract; dissolve this in the reserved portion, and add sufficient menstruum to produce one pint of the liquid extract.

Dose.—10 to 20 minims.

Extractum Malti.

Extract of Malt.

Barley Malt, freshly crushed 14 pounds.

Water, a sufficiency.

Into a suitable vessel pour eight gallons of water heated to 150° F., and introduce the malt with agitation. Mash for two hours, and then draw off the liquid. By means of a vacuum apparatus evaporate the liquid, at a temperature not exceeding 130° F., to the consistence of thick honey.

TESTS.—Five grammes heated on a water-bath until the weight is constant should yield not less than three and a half grammes of residue. Incinerated it should not leave less than two per cent. of ash. On applying the following test it should convert twice its weight of Bermuda arrowroot in thirty minutes at a temperature of 100° F.

(a) Mix one gramme of the arrowroot with one hundred c.c. of water, boil for ten minutes, and when cold make up with water to 100 c.c.

(b) Dissolve five grammes of the extract in water sufficient to produce one hundred c.c.

(c) To one c.c. of tincture of iodine add water sufficient to produce fifty c.c.

Introduce fifty c.c. of (a) into a flask, and apply the heat of a water-bath until it has attained the temperature of 100° F. Then add five c.c. of (b), which must also be at the temperature of 100° F. Mix by gentle agitation, and replace on the water-bath. The temperature of the water-bath must be maintained constant at 100° F. If at the expiration of thirty minutes four c.c. of the solution be withdrawn from the flask and be added to one c.c. of (c), there should be no evidence of unconverted starch, as indicated by the cessation of all colour-play.

Dissolve in a flask five grammes of extract in twenty c.c. of

water, add ten c.c. of hydrochloric acid, and heat by placing the flask in boiling water for half an hour. Allow to cool; add forty c.c. of ether, agitate, set aside, separate the ethereal liquid, and evaporate it to dryness. To the residue add a few drops of test solution of ferric chloride, when no bluish-violet or violet-red colour should be produced, indicating absence of salicylic acid.

Dose.—1 to 4 fluid drachms.

Extractum Malti cum Oleo Morrhuæ.

Extract of Malt with Cod Liver Oil.

Extract of Malt	17 fluid oz.
Cod Liver Oil	3 " "

Heat the extract to 110° F., and pour it into a warm mortar; add the oil gradually and with constant trituration.

Dose.—1 to 4 fluid drachms.

Extractum Sennæ Leguminorum Liquidum.

Liquid Extract of Senna Pods.

Senna Pods bruised	20 oz.
Alcohol (90 per cent.)	
Distilled Water of each, a sufficient quantity.	

Mix seven and a half fluid ounces of alcohol with fifteen ounces of water, and with it moisten evenly the senna. Pack tightly in a closed vessel, and macerate for three days. Express forcibly and reserve the product (eleven fluid ozs. about). Break up the marc, and add to it sufficient of the same menstruum (nine fluid ozs. about) to furnish in all twenty fluid ounces of product. Express again after twenty-four hours' maceration, and mix the product with the reserved portion. Heat in a closed vessel by means of a water-bath to 200° F., and maintain at that temperature for ten minutes. When cold, if necessary, add menstruum to make the liquid extract measure one pint, and filter.

Dose.—1 fluid drachm.

Gelatinum Zinci.*Zinc Jelly.*

Zinc Oxide	2 oz.
Gelatin	3 oz.
Glycerin	5½ fluid oz.
Distilled water	9 " "

Dissolve the gelatin in the distilled water by the aid of heat. Rub the zinc oxide with the glycerin until quite smooth. Now add the gelatin solution and mix well.

Glycerinum Belladonnæ.*Glycerin of Belladonna.*

Extract of Belladonna	1 oz.
Boiling Distilled Water	1 fluid drm.

Rub together in a warm mortar to produce a smooth paste, and add

Glycerin sufficient to produce	2 fluid oz.
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Hydrastinum.*Hydrastin.*

Hydrastis Rhizome, in No. 60 powder	1 pound.
Alcohol (60 per cent.), a sufficient quantity.	

Moisten the rhizome with eight fluid ounces of the alcohol; pack in a percolator; gradually pour on more of the alcohol until the hydrastis is exhausted; collect the liquid, and remove the alcohol by distillation; evaporate the residue to dryness, and reduce to a fine powder. Transfer immediately to a well-closed bottle.

Dose.—½ to 2 grains.

Infusum Digitalis Concentratum.*Concentrated Infusion of Digitalis.*

Digitalis Leaves, in No. 20 powder	480 grains.
Alcohol (90 per cent.)	5 fluid oz.
Distilled Water, a sufficient quantity.	

Macerate the digitalis with fifteen fluid ounces of water for twenty-four hours, strain, and to ten fluid ounces of the strained

liquor add the alcohol. Again macerate the leaves with a second fifteen fluid ounces of distilled water for six hours and strain; macerate with a third fifteen fluid ounces of distilled water for six hours, and strain. Mix the residue of the first with the second and third liquors, and evaporate at a low temperature to five fluid ounces, and add it to the portion set aside to make one pint.

This is eight times the strength of the B.P. Infusum Digitalis.

Dose.—15 to 30 minims.

Infusum Gentianæ Compositum Concentratum.

Concentrated Compound Infusion of Gentian.

Gentian Root, in No. 20 powder	2 oz.
Dried Bitter Orange Peel	2 "
Dried Lemon Peel	1 "
Tincture of Fresh Lemon Peel ⁹	1 fluid oz.
Alcohol (90 per cent.)	4 " "
Distilled Water, a sufficient quantity.	

Mix the gentian, bitter orange and dried lemon peel, and pour over them twenty fluid ounces of distilled water; macerate twenty-four hours and press off the liquor. Reserve ten fluid ounces, and add to it the tincture of lemon peel and the alcohol. Treat the marc with two further macerations of twenty fluid ounces of distilled water for six hours each, press off, and mix the liquors, adding any left from the first maceration. Evaporate to five fluid ounces, and add it to the first portion to make one pint.

This is eight times the strength of the B.P. Infusum Gentianæ Compositum.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Injectio Curare Hypodermica.

Hypodermic Injection of Curare.

Curare ¹⁰ (the South American Indian arrow poison) 5 grains.
Distilled Water, a sufficient quantity.

⁹ This is made by taking the grated outside peel of fresh lemons, 2 oz. and alcohol (90 per cent.) 4 fluid oz. Macerate and filter. Product measures about 5 fluid ounces.

¹⁰ A dry inspissated extract of varying composition, prepared in South America from the bark of different species of *Strychnos* (principally *Strychnos toxifera*, Schomburgk) and other plants.

Reduce the curare to powder in such a way as to prevent its coming in contact with the naked hand, and add distilled water to form a thin paste. Transfer to a small funnel plugged with cotton-wool, and gradually pour upon it distilled water until one fluid drachm is obtained. If the injection be required in haste, proceed in the following manner:—

To the five grains of curare reduced to powder add one fluid drachm of distilled water, throw on a filter, and when the liquor ceases to drop pour over the contents of the filter distilled water sufficient to produce one fluid drachm.

Dose.—1 to 6 minims.

Iridinum.

Iridin.

Blue Flag Rhizome ¹¹ in No. 60 powder . . . 1 pound.
Alcohol (60 per cent.), a sufficient quantity.

Moisten the blue flag with eight fluid ounces of the alcohol; pack it in a percolator; gradually pour on more of the alcohol until the powder is exhausted, collect the liquid and remove the alcohol by distillation; evaporate the residue to dryness, and reduce to a fine powder. Transfer immediately to a well-closed bottle.

Dose.—1 to 3 grains.

Linimentum Opii Ammoniatum.

Ammoniated Liniment of Opium.

Liniment of Soap	6 fluid oz.
Ammoniated Liniment of Camphor	6 "
Tincture of Opium	6 "
Liniment of Belladonna	1 "
Strong Solution of Ammonia	1 "

Mix, and after standing a week, filter quickly.

Liquor Bismuthi Concentratus.

Concentrated Solution of Bismuth.

Bismuth Subnitrate	7 oz.
Nitric Acid	5 fluid oz.
Distilled Water	5 "

¹¹ *Iris versicolor*, Linn.

Dissolve by the aid of a little heat, and add after cooling

Citric Acid	5 oz.
Distilled Water	7 fluid oz.

Previously dissolved. Add gradually, with stirring,

Sodium Bicarbonate	8 $\frac{3}{4}$ oz.
Distilled Water	7 fluid oz.

Previously dissolved. Wash the precipitate by decantation with successive portions of distilled water until the washings are free from nitrates. Collect the precipitate, and after draining, dissolve it in

Solution of Ammonia	6 fluid oz., or a sufficiency.
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Then add

Solution of Ammonium Citrate	12 fluid oz.
Distilled Water, sufficient to produce 2 $\frac{1}{2}$ pints.	

Liquor Bromo-Chloral Compositus.

Compound Solution of Bromo-Chloral.

Chloral Hydrate	1600 grains.
Tincture of Indian Hemp	400 minims.
Tincture of Fresh Orange Peel	400 "
Juice of Henbane	1600 "
Syrup	3 $\frac{3}{4}$ fluid oz.
Liquid Extract of Liquorice	$\frac{1}{2}$

Dissolve.

Take of

Potassium Bromide	1600 grains.
Distilled Water, a sufficient quantity.	

Dissolve the potassium bromide in seven fluid ounces of distilled water, and add to the former solution; filter, and wash the filter with sufficient distilled water to produce one pint.

This preparation should be shaken whenever any of it is to be dispensed.

Each fluid drachm contains ten grains each of chloral hydrate and of potassium bromide.

Dose.— $\frac{1}{2}$ to 2 fluid drachms.

Liquor Ferri Hypophosphitis Fortis.

Strong Solution of Ferric Hypophosphite.

Ferric Chloride	1000 grains.
Sodium Hypophosphite	1100 "
Distilled Water, a sufficient quantity.	

Dissolve the ferric chloride and sodium hypophosphite each in ten fluid ounces of distilled water, and pour the latter slowly with stirring into the former. Collect the precipitate, and wash it with successive portions of distilled water until the washings are almost free from chloride. Dissolve the well-drained precipitate in the following, previously mixed:—

Strong Solution of Ammonia	360 minims.
Citric Acid	800 grains.
Distilled Water	5 fluid oz.

Filter. Determine the proportion of hypophosphite of iron by the following process:—

Take ten cubic centimetres of the solution, dilute with an equal volume of distilled water, add an excess of solution of potash, and apply a gentle heat. Collect the precipitate, wash, dry, ignite, and weigh the resulting oxide of iron. The weight in grammes multiplied by the factor 137.1 will give the amount of iron in the solution expressed as hypophosphite in grains per fluid ounce. Adjust the volume by the addition of distilled water, so that it shall contain iron equal to forty grains of ferric hypophosphite in the fluid ounce.

Dose.—10 to 30 minims.

Liquor Hypophosphitum Compositus.

Compound Solution of Hypophosphites.

Syn.—LIQUOR FERRI HYPOPHOSPHITIS COMPOSITUS.

Calcium Hypophosphite	320 grains.
Sodium Hypophosphite	320 „
Magnesium Hypophosphite	160 „
Strong Solution of Ferric Hypophosphite	6 fluid oz.
Distilled Water, a sufficient quantity.	

Dissolve the calcium, sodium, and magnesium hypophosphites in twelve fluid ounces of distilled water; add the solution of ferric hypophosphite. Filter, and make up to one pint by the addition of distilled water.

Each fluid drachm contains about two grains each of sodium and calcium hypophosphite, one grain of magnesium hypophosphite and one and a half grains of ferric hypophosphite.

Dose.— $\frac{1}{2}$ to 2 fluid drachms.

Mistura Bismuthi Composita.*Compound Mixture of Bismuth.*

Morphine Hydrochloride	8 grains.
Distilled Water	4 fluid drms.

Dissolve and add

Compound Tincture of Cardamoms	3 fluid oz.
Chloroform	70 minims.
Liquid Extract of Nux Vomica	135 "
Diluted Hydrocyanic Acid	320 "

Mix. Add

Concentrated Solution of Bismuth	15 fluid oz.
Distilled Water, sufficient to produce	1 pint.

Each fluid drachm, contains two minims of diluted hydrocyanic acid, one-twentieth of a grain of morphine hydrochloride, and the equivalent of five minims of tincture of nux vomica.

Dose.—20 to 30 minims.

Phenacetinum cum Caffeina Effervescens.*Effervescent Phenacetin with Caffeine.*

Sodium Bicarbonate, in powder	46 oz.
Tartaric Acid " "	24 "
Citric Acid " "	16 "
Refined Sugar " "	16½ "
Phenacetin " "	5 "
Caffeine Citrate " "	2½ "

Mix the phenacetin, caffeine citrate, tartaric acid and citric acid, and with the product incorporate the sodium bicarbonate and refined sugar previously mixed. Place in a shallow enamelled pan, and apply heat sufficient to cause the mixture to assume a condition suitable for granulation, and then separate it into granules of a convenient size by means of a suitable sieve. Dry the granules at a temperature not exceeding 120° F. The product should weigh about one hundred ounces.

Dose.—60 to 120 grains.

Phenazonum Effervescens.*Effervescent Phenazone.*

Sodium Bicarbonate, in powder	46 oz.
Tartaric Acid " "	24 "
Citric Acid " "	16 "
Refined Sugar " "	16 "
Phenazone " "	8 "

Mix the phenazone, tartaric acid and citric acid, and with the product incorporate the sodium bicarbonate and refined sugar previously mixed. Place in a shallow enamelled pan, and apply heat sufficient to cause the mixture to assume a condition suitable for granulation, and then separate it into granules of a convenient size by means of a suitable sieve. Dry the granules at a temperature not exceeding 120° F. The product should weigh about one hundred ounces.

Dose.—60 to 120 grains.

Pulvis Acetanilidi Compositus.

Compound Powder of Acetanilide.

Acetanilide	7 oz.
Caffeine	1 "
Sodium Bicarbonate	2 "

Mix.

Dose.—3 to 5 grains.

Pulvis Salis Carolini Factitii Effervescens.

Effervescent Powder of Artificial Carlsbad Salt.

Exsiccated Sodium Sulphate	11 oz.
Potassium Sulphate, in powder	$\frac{1}{2}$ "
Sodium Chloride " "	4 $\frac{1}{2}$ "
" Bicarbonate " "	54 "
Tartaric Acid " "	40 "
Gluside	28 grains.

Dry the ingredients separately, reduce to fine powder, and mix by trituration until quite uniform.

Dose.—60 to 120 grains.

Succus Digitalis.

Juice of Digitalis.

Bruise fresh digitalis leaves; press out the juice; to every three volumes of juice add one of alcohol (90 per cent.) set aside for seven days. Filter.

Dose.—5 to 10 minims.

Syrupus Acidi Hydriodici.*Syrup of Hydriodic Acid.*

Potassium Iodide	152 grains.
Potassium Hypophosphite	12 "
Tartaric Acid	140 "
Water	200 minims.
Alcohol (60 per cent.)	} of each a sufficient
Syrup	

Dissolve the two potassium salts in the water, and the tartaric acid in five fluid drachms of the alcohol. Mix the two solutions in a vial, shake it thoroughly, and place it in ice-water for half an hour, occasionally shaking. Then filter and carefully wash the vial and filter with alcohol (60 per cent.) until the filtrate ceases to produce more than a faint cloudiness when dropped into a solution of silver nitrate. Evaporate the filtrate in a tared capsule over a water-bath to 600 grains, and mix it, when cold, with syrup sufficient to produce one pint.

Contains about one per cent. by weight of hydriodic acid.

Dose.—20 to 60 minims, well diluted.

Syrupus Apomorphinæ Hydrochloridi.*Syrup of Apomorphine Hydrochloride.*

Apomorphine Hydrochloride	5 grains.
Diluted Hydrochloric Acid	15 minims.
Alcohol (90 per cent.)	7 fluid drms.
Distilled Water	7 " "

Dissolve and add

Syrup, sufficient to produce 1 pint.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Syrupus Butyl-Chloral Hydras.*Syrup of Butyl Chloral Hydrate.*

Butyl-Chloral Hydrate	320 grains.
Syrup, sufficient to produce	1 pint.

Dissolve the butyl-chloral hydrate in the syrup previously made hot.

Dose.—1 to 4 fluid drachms.

Syrupus Calcii Hypophosphitis.*Syrup of Calcium Hypophosphite.*

Calcium Hypophosphite	160 grains.
Distilled Water	9 fluid oz.

Dissolve and filter. To the filtered solution add

Refined Sugar, in coarse powder	1 pound
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Dissolve with the aid of a little heat, strain, and add after cooling

Hypophosphorous Acid	20 minims.
Distilled Water, sufficient to produce	1 pint.

Mix. Each fluid drachm contains one grain of calcium hypophosphite.

Dose.—1 to 4 fluid drachms.

Syrupus Ferri Bromidi.*Syrup of Ferrous Bromide.*

Iron Wire, free from Oxide	$\frac{1}{2}$ oz.
Bromine	533 grains.
Refined Sugar	14 oz.
Distilled Water, a sufficient quantity.	

Dissolve the sugar in six ounces of distilled water, by the heat of a water-bath. Put the iron wire with four ounces of distilled water into a glass flask, having a capacity of at least one pint, and surround it with cold water. Then add the bromine in successive quantities; shake occasionally until the froth becomes white, and the reaction is complete. Filter the solution into the warm syrup, and add, if necessary, distilled water sufficient to produce one pint.

Each fluid drachm contains about four and a half grains of ferrous bromide.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Syrupus Ferri Bromidi cum Quinina.*Syrup of Ferrous Bromide with Quinine.*

Quinine Acid Hydrobromide	160 grains.
Diluted Hydrobromic Acid	3 fluid drms.
Distilled Water	13 " "

Mix the diluted hydrobromic acid with the distilled water, and in the mixture dissolve the quinine acid hydrobromide.

Then add

Syrup of Ferrous Bromide, sufficient to produce 1 pint.

Each fluid drachm contains one grain of quinine acid hydrobromide, and about four grains of ferrous bromide.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Syrupus Ferri Bromidi cum Quinina et Strychnina.

Syrup of Ferrous Bromide, with Quinine and Strychnine.

Strychnine, in powder	2½ grains.
Quinine Acid Hydrobromide	160 "
Diluted Hydrobromic Acid	3 fluid drms.
Distilled Water	13 " "

Mix the diluted hydrobromic acid with the distilled water, and in the mixture dissolve the strychnine and quinine acid hydrobromide, by the aid of a gentle heat.

Then add

Syrup of Ferrous Bromide, sufficient to produce 1 pint.

Each fluid drachm contains $\frac{1}{64}$ grain of strychnine, one grain of quinine acid hydrobromide, and about four grains of ferrous bromide.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

Syrupus Ferri Hypophosphitis.

Syrup of Ferric Hypophosphite.

Strong solution of Ferric Hypophosphite	4 fluid oz.
Syrup	16 "

Each fluid drachm contains about one grain of ferric hypophosphite.

Dose.— $\frac{1}{2}$ to 2 fluid drachms.

Syrupus Ferri Phosphatis Compositus.

Compound Syrup of Phosphate of Iron.

Iron Wire, free from oxide	37½ grains.
Concentrated Phosphoric Acid (sp. gr. 1.5)	1 fluid oz.
Distilled Water	5 fluid drms.

Put these into a glass flask, so that the liquid completely covers the iron wire, plug the neck with cotton wool, and heat gently till

dissolved. Add this solution to the following when the latter has cooled :

Precipitated Calcium Carbonate	120 grains.
Concentrated Phosphoric Acid	4 fluid drms.
Distilled Water	2 „ oz.

Mix and add

Potassium Bicarbonate	9 grains.
Sodium Phosphate	9 „

Filter and set aside. Then take of

Cochineal	30 grains.
Distilled Water	7½ fluid oz.

Boil for fifteen minutes, allow to cool, and then filter, pouring over the filter a sufficient quantity of distilled water to produce seven fluid ounces of filtrate.

To this add

Refined Sugar	14 oz.
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Heat till dissolved, and strain. When cold, add the former filtrate set aside, and a sufficient quantity of distilled water to make the whole measure one pint. Thus made, the syrup will contain in each fluid drachm about half a grain of iron phosphate and four-fifths of a grain of calcium phosphate, with small quantities of the potassium and sodium phosphates. It should be kept in bottles quite full.

Dose.—½ to 2 fluid drachms.

Syrupus Glycerophospatum Compositus.

Compound Syrup of Glycerophosphates.

Cudbear ¹²	¼ oz.
Distilled Water	10 fluid oz.

Boil for ten minutes, filter and dissolve in the warm filtrate

Calcium Glycerophosphate	160 grains.
Potassium „	80 „
Sodium „	80 „
Magnesium „	80 „
Iron „ in scales	40 „
Citric Acid	30 „
Caffeine Citrate	80 „
Strychnine Hydrochloride	2 „

¹² A purplish-red powder obtained by fermenting *Lecanora tartarea*, Linn., or other species of lichen in ammoniacal liquor.

Then add

Refined Sugar 14 oz.

Heat until dissolved, and strain. When cold, add, previously mixed

Chloroform 20 minims.

Alcohol (90 per cent.) 40 ,

Then add

Distilled Water sufficient to produce . . . 1 pint.

Dose.—1 to 2 fluid drachms.

Syrupus Hypophosphitum Compositus.

Compound Syrup of Hypophosphites.

Strychnine 1 grain.

Hypophosphorous Acid 2 fluid drms.

Dissolve, and add it to the following solution :—

Calcium Hypophosphite 80 grains.

Manganese " 40 "

Potassium " 40 "

Quinine " 20 "

Distilled Water 8 fluid oz.

Filter, then add successively

Strong Solution of Ferric Hypophosphite . . 1 fluid oz.

Refined Sugar 14 oz.

Dissolve without heat, and add

Chloroform 20 minims. }
in

Alcohol (90 per cent.) 40 , }

Shake well, and add, lastly

Distilled water sufficient to produce . . . 1 pint.

Each fluid drachm contains $\frac{1}{100}$ grain of strychnine, and $\frac{1}{8}$ grain of quinine hypophosphite.

Dose.— $\frac{1}{2}$ to 2 fluid drachms.

Syrupus Ipecacuanhæ Aceticus.

Acetic Syrup of Ipecacuanha

Vinegar of Ipecacuanha 1 pint.

Refined Sugar 2½ pounds.

Dissolve by the aid of a gentle heat. Specific gravity about 1.33.

Dose.— $\frac{1}{4}$ to 2 fluid drachms.

Syrupus Picis Liquidæ.*Syrup of Tar.*

Tar	1½ oz.
Water	3 "
Boiling Distilled Water	8 fluid oz.
Glycerin	2 " "
Sugar	16 oz.
Distilled Water a sufficient quantity.	

Mix the tar intimately with about one ounce of white sand, pour on the water, and stir frequently during twelve hours; then pour off the water and throw it away. Pour the boiling distilled water upon the residue, stir well and frequently during fifteen minutes, add the glycerin, and set the vessel aside for twenty-four hours, occasionally stirring. Decant the clear solution, and filter. Dissolve the sugar in the filtrate with the aid of a gentle heat; allow the liquid to cool, then strain it and pass enough distilled water through the strainer to make the product measure one pint. Mix thoroughly.

Dose.—1 to 2 fluid drachms.

Syrupus Sodii Hypophosphitis.*Syrup of Sodium Hypophosphite.*

Sodium Hypophosphite	160 grains.
Distilled Water	3 fluid drms.

Dissolve, filter, and wash the filter with distilled water, 1 fluid drachm. To the filtered solution add

Syrup, sufficient to produce 1 pint.

Mix. Each fluid drachm contains 1 grain of sodium hypophosphite.

Dose.—1 to 4 fluid drachms.

Tinctura Antiperiodica.*Warburg's Tincture.*

Socotrine Aloes, bruised	240 grains.
Rhubarb, bruised	80 "
Angelica Fruit, bruised ¹³	80 "
Elecampane Root, bruised ¹⁴	40 "
Saffron	40 "
Fennel, bruised	40 "

¹³ The dried fruit of *Archangelica officinalis*, Hoffman.

¹⁴ The dried rhizome and root of *Inula Helenium*, Linn.

Prepared Chalk	40 grains.
Gentian, bruised	20 "
Zedoary Root, bruised ¹⁵	20 "
Cubebs, bruised	20 "
Myrrh, elect and bruised	20 "
White Agaric, in powder ¹⁶	20 "
Opium, in powder	2½ "
Black Pepper, bruised	4 "
Cinnamon, bruised	8 "
Ginger, bruised	8 "
Alcohol (60 per cent.), a sufficient quantity.	

Macerate for seven days in one pint of the alcohol, press and filter.

Dissolve in the product:—

Quinine Sulphate	175 grains.
Camphor	20 "

After three days filter, and add sufficient of the alcohol to make one pint.

Dose.—1 to 4 fluid drachms.

Tinctura Benzoini Simplex.

Simple Tincture of Benzoin.

Benzoin, in powder	2 oz.
Alcohol (90 per cent.), a sufficient quantity.	

Macerate the benzoin in sixteen fluid ounces of the alcohol for one hour, with frequent agitation, filter, and add more spirit to produce one pint of tincture.

Tinctura Bryoniæ.

Tincture of Bryony.

Fresh Bryony Root ¹⁷	} of each, a sufficient quantity.
Alcohol (90 per cent.)	
Distilled Water	

Ascertain the percentage of moisture in the root by drying 100 grains of it over a water-bath. Bruise the remainder, after having calculated the moisture it contains, and reckon this as part of the water to form, with the alcohol, a mixture equal in strength to alcohol (60 per cent.). Produce a tincture, by maceration for

¹⁵ The dried root of *Curcuma zedoaria*, Rosc.

¹⁶ The white fungus *Polyporus officinalis*, Fries, found upon the old trunks of the larch.

¹⁷ *Bryonia alba*, Linn.; and *B. dioica*, Jacquin.

seven days, of such a strength that ten fluid ounces shall represent one ounce of the dried root.

Dose.—1 to 10 minims.

Tinctura Calendulæ Florum.

Tincture of Marigold Flowers.

Marigold Flowers,¹⁸ dried, in No. 20 powder. . . . 4 oz.
Alcohol (60 per cent.), a sufficient quantity.

Moisten the powder with eight fluid ounces of the menstruum, and macerate for twenty-four hours. Then pack in a percolator, and gradually pour the alcohol upon it until one pint of tincture is obtained.

Dose.—5 to 20 minims.

Tinctura Capsici Fortior.

Stronger Tincture of Capsicum.

Capsicum Fruit, in No. 40 powder 10 oz.
Alcohol (90 per cent.), a sufficient quantity.

Moisten the powder with a suitable quantity of the menstruum, and macerate for twenty-four hours in a closed vessel. Then pack in a percolator, and gradually pour the alcohol upon it until a pint and a half of tincture is obtained.

Dose.—1 to 3 minims. Principally used externally.

Tinctura Carminativa.

Carminative Tincture.

Cardamom Seeds, bruised 600 grains.
Stronger Tincture of Ginger 1½ fluid oz.
Oil of Cinnamon 100 minims.
Oil of Caraway 100 "
Oil of Clove 100 "
Alcohol (90 per cent.), a sufficient quantity.

Macerate the cardamoms in fifteen fluid ounces of the alcohol for a week, decant, express, and dissolve the oils in the mixed tinctures, making up to one pint with alcohol.

Dose.—2 to 10 minims.

¹⁸ The florets of *Calendula officinalis*, Linn.

Tinctura Chloroformi Composita.

Compound Tincture of Chloroform.

Chloroform	2 fluid oz.
Alcohol (90 per cent.)	8 " "
Compound Tincture of Cardamoms	10 " "

Mix.

Dose.—5 to 60 minims.

Tinctura Convallariæ.

Tincture of Lily of the Valley.

Lily of the Valley flowers and stalks, ¹⁹ dried, in No. 20 powder	2½ oz.
Alcohol (60 per cent.), a sufficient quantity.	

Moisten the powder with a suitable quantity of the menstruum, and macerate for twenty-four hours; then pack in a percolator, and gradually pour the alcohol upon it until one pint of tincture is obtained.

Dose.—5 to 20 minims.

Tinctura Coto.

Tincture of Coto.

Coto Bark, ²⁰ bruised	2 oz.
Alcohol (90 per cent.), a sufficient quantity.	

Macerate with twenty fluid ounces of the alcohol for seven days, with occasional agitation; then press, filter, and add sufficient of the alcohol to produce one pint.

Dose.—10 to 30 minims.

Tinctura Eucalypti.

Tincture of Eucalyptus.

Eucalyptus Leaves, ²¹ in No. 20 powder	4 oz.
Alcohol (90 per cent.), a sufficient quantity.	

¹⁹ *Convallaria majalis*, Linn.

²⁰ A bark of unknown origin obtained from Bolivia. In flat or curved pieces about 1 centimetre in thickness, and of variable length. The taste is aromatic and very biting. The transverse section is of a cinnamon brown colour externally, and darker towards the inner surface.

²¹ *Eucalyptus globulus*, Labillardière.

Moisten the powder with a suitable quantity of the menstruum, and macerate for twenty-four hours; then pack in a percolator, and gradually pour the alcohol upon it until one pint of tincture is obtained.

Dose.—15 minims to 2 fluid drachms.

Tinctura Euonymi.

Tincture of Euonymus.

Euonymus Bark, in No. 20 powder 4 oz.
Alcohol (90 per cent.), a sufficient quantity.

Moisten the powder with a suitable quantity of the menstruum, and macerate for twenty-four hours; then pack in a percolator, and gradually pour the alcohol upon it until one pint of tincture is obtained.

Dose.—10 to 40 minims.

Tinctura Euphorbiæ Piluliferæ.

Tincture of Euphorbia Pilulifera.

Euphorbia,²² in No. 20 powder 4 oz.
Alcohol (60 per cent.), a sufficient quantity.

Moisten the powder with a suitable quantity of the menstruum, and macerate for twenty-four hours; then pack in a percolator, and gradually pour the alcohol upon it until one pint of tincture is obtained.

Dose.—10 to 30 minims.

Tinctura Guaiaci.

Tincture of Guaiacum.

Guaiacum Resin in powder 4 oz.
Alcohol (90 per cent.), a sufficient quantity.

Add the guaiacum resin to seventeen fluid ounces of the alcohol set aside in a closed vessel for forty-eight hours, shaking frequently; filter and pass sufficient of the alcohol through the filter to produce one pint of the tincture.

Dose.— $\frac{1}{2}$ to 1 fluid drachm.

²² The herb *Euphorbia pilulifera*, Linn., collected when in flower and carefully dried. The involucral glands of the perianth are without appendages. The mature seeds are minutely wrinkled.

Tinctura Iodi Decolorata.*Decolorised Tincture of Iodine.*

Iodine	250 grains.
Alcohol (90 per cent.)	5½ fluid oz.

Dissolve by the aid of a gentle heat. When cold, transfer to a stoppered bottle, and add

Strong Solution of Ammonia	10 fluid drms.
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Keep the mixture in a warm place until decolorised,²³ after which dilute it with

Alcohol (90 per cent.), sufficient to produce	1 pint.
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Tinctura Lobeliæ.*Tincture of Lobelia.*

Lobelia in No. 40 powder	2½ oz.
Alcohol (60 per cent.), a sufficient quantity.	

Macerate the lobelia for forty-eight hours in fifteen fluid ounces of the alcohol in a closed vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, continue the percolation with the remaining five ounces of alcohol. Afterwards subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient of the alcohol to make one pint.

Dose.—10 to 30 minims.

Tinctura Phosphori Composita.*Compound Tincture of Phosphorus.*

Phosphorus	12 grains.
Chloroform	2½ fluid oz.

Place in a stoppered bottle, and apply the heat of a water-bath until dissolved. Then add the solution to

Absolute Alcohol	12½ fluid oz.
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Shake well. This tincture should be preserved from the light, in accurately stoppered bottles. It deteriorates if long kept.

Each fluid drachm contains $\frac{1}{10}$ grain of phosphorus.

Dose.—3 to 12 minims.

²³ The preparation, if not further diluted, may be prescribed as *Tinctura Iodi Decolorata Fortior*.

Tinctura Physostigmatis.*Tincture of Calabar Bean.*

Calabar Bean, in No. 40 powder 4 oz.
 Alcohol (90 per cent.), a sufficient quantity.

Moisten the powder with two fluid ounces of the alcohol, and macerate for twenty-four hours; then pack in a percolator, and gradually pour more of the alcohol upon it until one pint of tincture is obtained.

Dose.—5 to 15 minims.

Tinctura Pulsatillæ.*Tincture of Pulsatilla.*

Pulsatilla²⁴ in No. 20 powder 2 oz.
 Alcohol (60 per cent.), a sufficient quantity.

Moisten the powder with a suitable quantity of the alcohol, and macerate for twenty-four hours; then pack in a percolator, and gradually pour more of the alcohol upon it until one pint of tincture is obtained.

Dose.—1 to 5 minims or more.

Tinctura Valerianæ.*Tincture of Valerian.*

Valerian Rhizome, in No. 40 powder 2½ oz.
 Alcohol (60 per cent.), a sufficient quantity.

Macerate the valerian for forty-eight hours in fifteen fluid ounces of the alcohol in a closed vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, continue the percolation with five ounces of the alcohol. Afterwards subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient alcohol to make one pint.

Dose.—1 to 2 fluid drachms.

Tinctura Veratri Viridis.*Tincture of Green Hellebore.*

Green Hellebore Rhizome²⁵ in No. 40 powder . . 4 oz.
 Alcohol (90 per cent.), a sufficient quantity.

Moisten the powder with two fluid ounces of the alcohol, and

²⁴ The dried herb of *Anemone Pulsatilla*, Linn., and *Anemone pratensis*, Linn.

²⁵ The rhizome and rootlets of *Veratrum viride*, Ait.

macerate for twenty-four hours; then pack in a percolator, and gradually pour more of the alcohol upon it until one pint of tincture is obtained.

Dose.—5 to 15 minims.

Tinctura Zingiberis Fortior.

Stronger Tincture of Ginger.

Syn.—ESSENCE OF GINGER.

Ginger in fine powder 10 oz.
Alcohol (90 per cent.), a sufficient quantity.

Pack the ginger tightly in a percolator and pour over it half a pint of the alcohol. At the expiration of two hours add more alcohol, and let it percolate slowly until one pint of tincture has been collected.

Dose.—5 to 20 minims.

Unguentum Hydrargyri Mitius.

Milder Mercurial Ointment.

Mercurial Ointment 1 oz.
Lard 2 oz.

Mix.

Unguentum Oleo-Resinæ Capsici.

Ointment of Oleo-Resin of Capsicum.

Oleo-Resin of Capsicum ²⁶ 1 oz.
Yellow Wax $\frac{1}{2}$ "
Benzoated Lard 4 "

Melt the wax and lard at a low temperature, add the oleo-resin, mix thoroughly, and, if necessary, strain through muslin. Stir until cold.

As a mild counter-irritant, the ointment will bear dilution from three to six times.

²⁶ **Oleo-Resin of Capsicum** (United States Pharmacopœia). It is prepared by exhausting capsicum fruit by percolation with ether, distilling off the ether, and pouring the liquid portion of the remainder on a strainer in order to separate and reject the fatty matter.

Vinum Aurantii Detannatum.*Detannated Orange Wine.*

Orange Wine	1 gal.
Gelatin, cut small	$\frac{1}{4}$ oz.

Macerate for fourteen days, and decant.

Vinum Pepsini.*Pepsin Wine.*

Pepsin	320 grains.
Hydrochloric Acid	2 fluid drms.
Glycerin	1 „ oz.
Sherry sufficient to produce	1 pint.

Add the acid to eighteen fluid ounces of the sherry. Rub in a mortar the pepsin with the glycerin, and gradually add the mixed sherry and acid, with constant stirring. Set aside for a week, filter, and add sufficient sherry to produce one pint.

Dose.—1 to 2 fluid drachms.

Vinum Xericum Detannatum.*Detannated Sherry.*

Sherry	1 gal.
Gelatin, cut small	$\frac{1}{4}$ oz.

Macerate for fourteen days, and decant.

$\frac{2}{13}$

