

**Syllabus of pharmacy course : Department of pharmacy, Massachusetts
College of Pharmacy, Boston Mass. / by Edgar L. Patch.**

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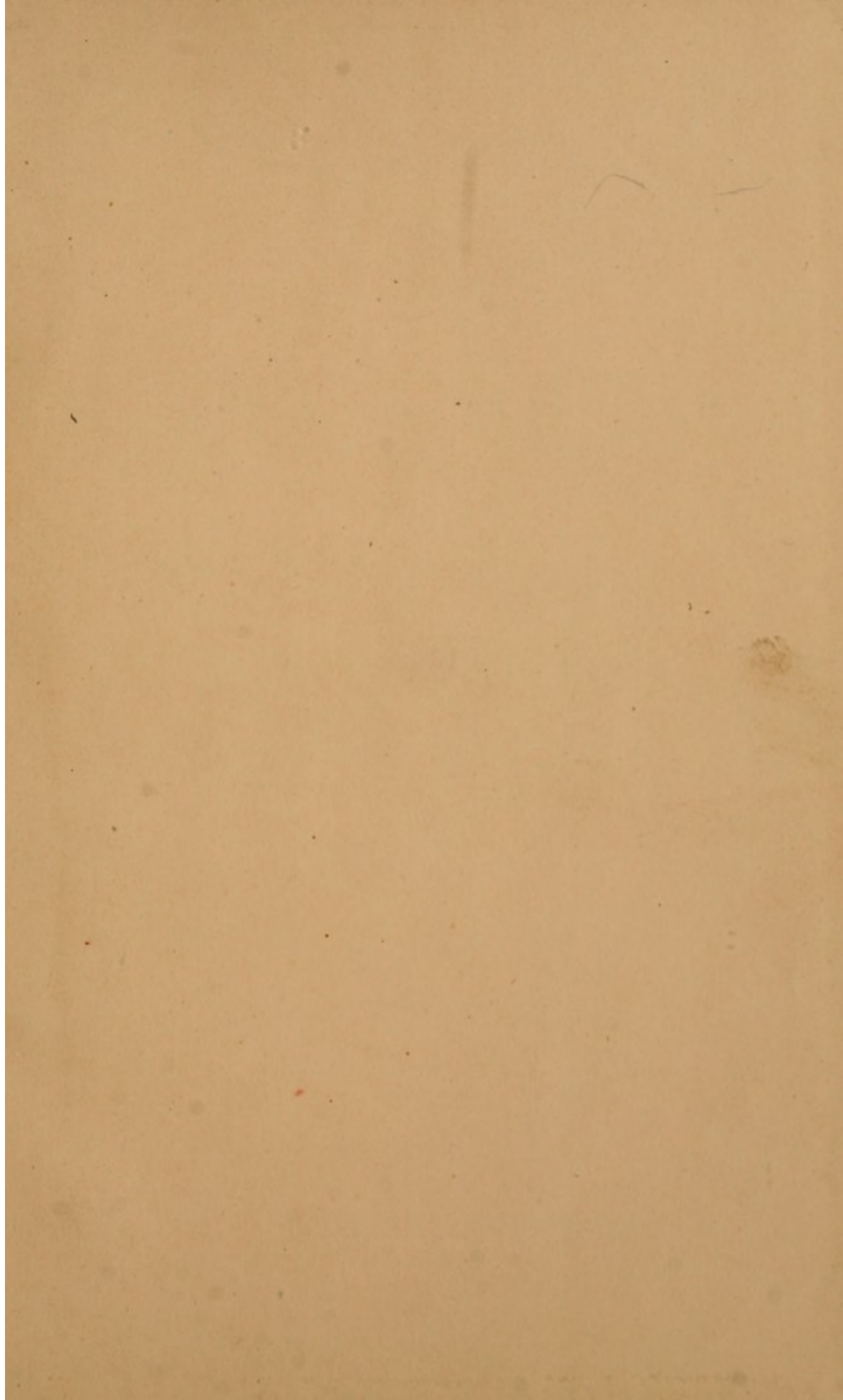


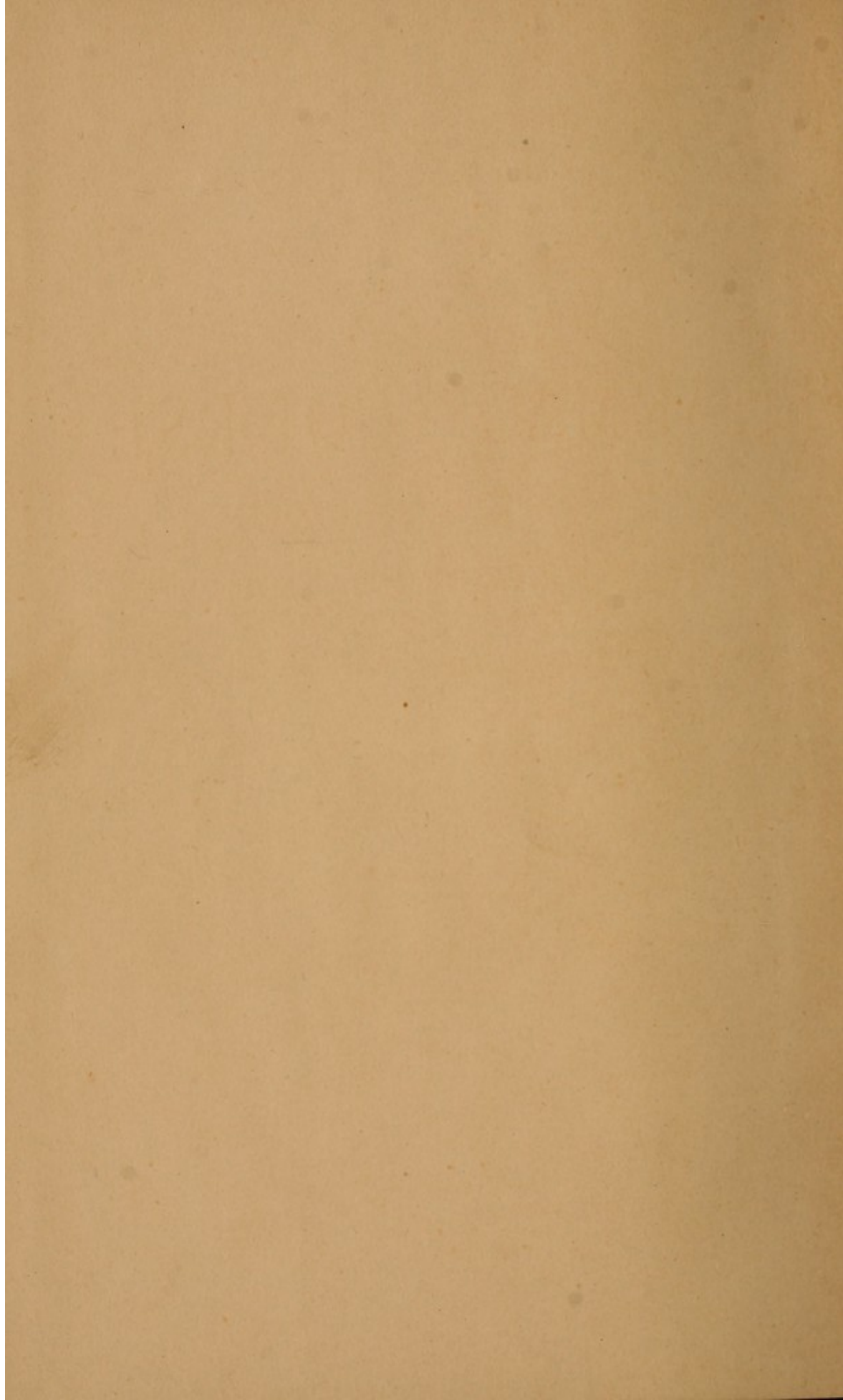
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SYLLABUS
OF
PHARMACY COURSE

BY
EDGAR L. PATCH, Ph. G.

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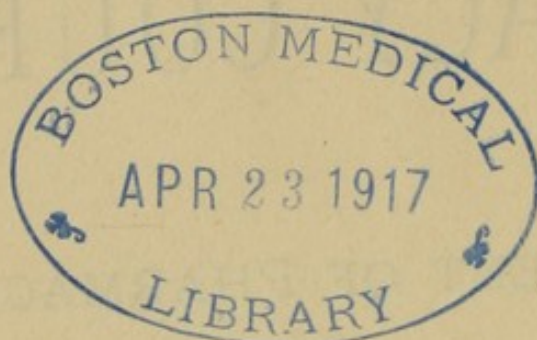
SYLLABUS
— OF —
PHARMACY COURSE.

DEPARTMENT OF PHARMACY,
MASSACHUSETTS COLLEGE OF PHARMACY,
BOSTON, MASS.

By EDGAR L. PATCH, *Ph. G.*

Professor Theory and Practice of Pharmacy.

BOSTON:
MILLS, KNIGHT & CO., PRINTERS, 115 CONGRESS STREET.
1883.



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EDGAR L. PATCH, BOSTON.
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INTRODUCTION.

To better enable the students in the Department of Pharmacy to follow the course of instruction there given, I devised a syllabus, modelled in part upon that proposed by the late Prof. Proctor. It was so well received that, at the request of the Board of Trustees, an interleaved edition has been printed, in form much more convenient than previous issues. It has been carefully prepared, and undoubtedly can be much improved, hence the provision of blank pages on which additions and corrections can be made. Being but a mere outline of the course of study, or a synopsis of the lectures, it cannot take the place of the lectures themselves, but may serve as an aid in taking notes upon the principal topics.

E. L. PATCH

INTRODUCTION.

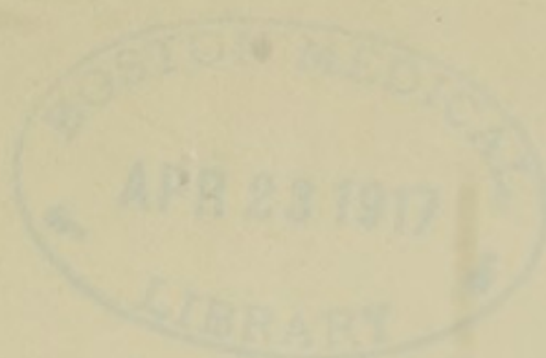
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E. L. PATCH.

INTRODUCTION

The purpose of this book is to provide a comprehensive survey of the history of the United States from the time of the first settlement to the present. The book is divided into three main parts: the first part covers the period from the first settlement to the end of the Civil War; the second part covers the period from the end of the Civil War to the end of the First World War; and the third part covers the period from the end of the First World War to the present. The book is written in a clear and concise style, and is suitable for use as a textbook or as a reference work. The book is also suitable for use as a general survey of the history of the United States.

BY J. H. HARRIS



JUNIOR COURSE.

SECTION ONE.

Pharmacy defined. Outline history of pharmacy. European and American pharmacy contrasted. Pharmacy laws. History of the pharmacopoeia. Review of last pharmacopoeia. Description of dispensatories.

BOOKS OF REFERENCE.

U. S. Pharmacopoeia 1880; Parke's Pharmacy; Procter's Pharmacy (Bernard Procter, Eng.); Aitich's Pharm. Chemistry; Lloyd's Chemistry of Medicine; Parke's Physician's Prescription Book; Mann's Prescriptions Writing; Allen's Pharmaceutical Table; Griffin's Formulary; Bennett's Pocket Dispensary and Dose Book; Diet's Encyclopedia; Gerst's Prescription Writing; Allen's Chemistry; Simpson & Fests.

PHARMACEUTICAL PUBLICATIONS.

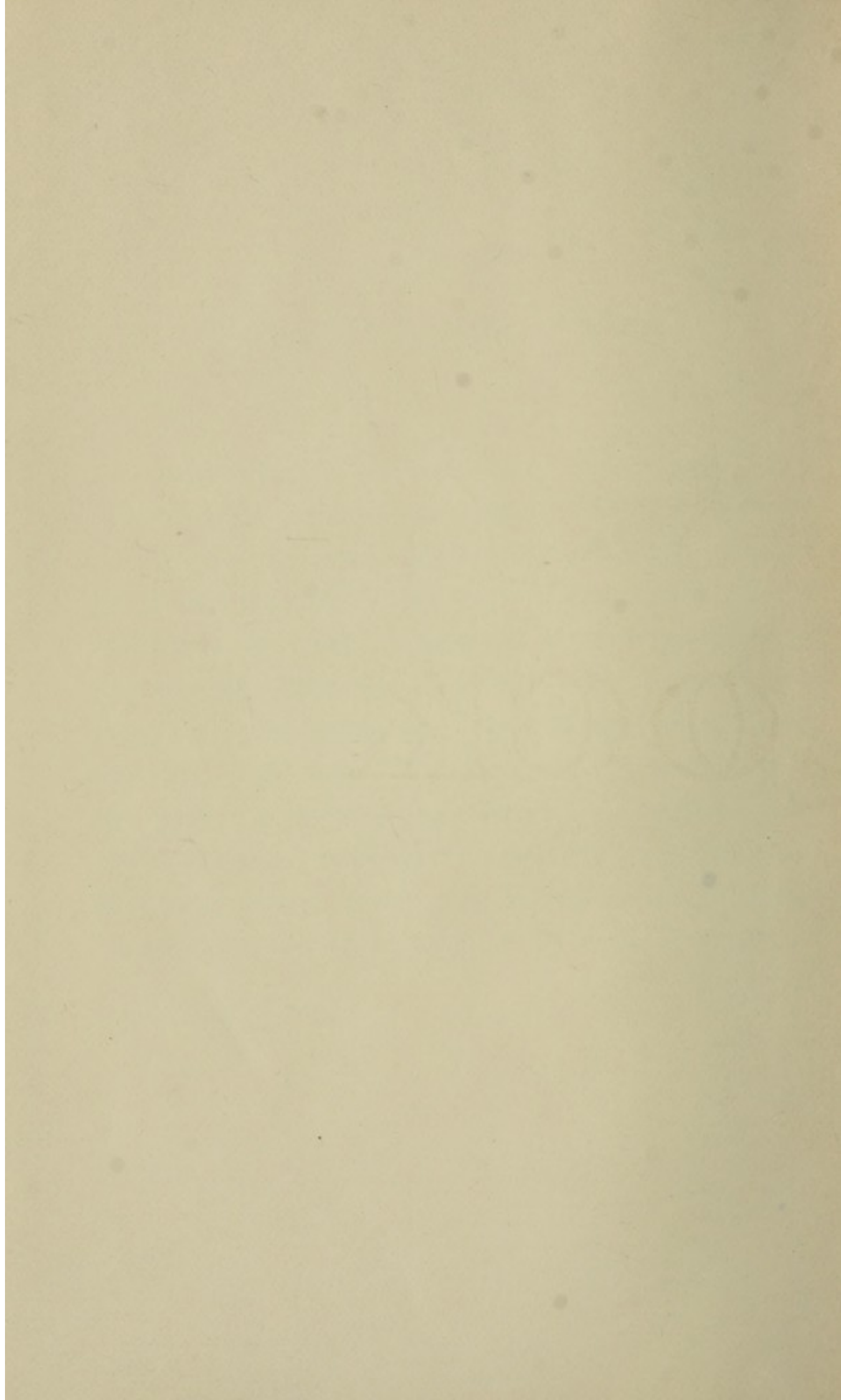
Am. Jour. Pharmacy; New Remedies; Druggist's Circular; Chemist and Druggist; Weekly Drug News; Pharmaceutical Record; The Pharmacist, etc.

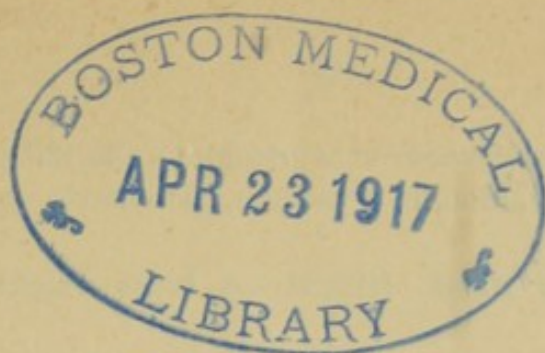
SECTION TWO.

Definition and consideration of weight. The balance: principles involved in its construction. How to care for the balance and how to use it. History of derivation of standards of weights and measures, English and Metric.

U. S. STANDARDS.

Standard Yard—A bronze bar thirty-eight inches long, with plugs of gold sunk in each end, on which the terminal lines of the yard are





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PHARMACEUTICAL PERIODICALS.

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Definition and consideration of weight. The balance; principles involved in its construction. How to care for the balance and how to use it. History of derivation of standards of weights and measures, English and Metric.

U. S. STANDARDS.

Standard Yard.—A bronze bar thirty-eight inches long, with plugs of gold sunk an inch from each end, on which the terminal lines of the yard are

engraved. Referable to the *length* of a pendulum (39.139 inches), vibrating seconds, in latitude of London, in a vacuum, barometric pressure 30 inches, temperature 62° F.

Standard of Troy and Apoth. Weight.—A brass weight, = 5,760 grains = Troy pound.

Standard of Avoirdupois Weight.—A brass weight, = 7,000 grs. = av. pound.

Standard of Wine Measure.—A gallon, = 231 cu. in. = 58.328 + grs. of water at 62° F., 30 in. barom.

Standard of Dry Measure.—A bushel, = 2,150 + cu. in. 77.6274 av. lbs. water at 62° F., 30 in. barom.

METRIC SYSTEM.

Metre (from Gr. Metron—measure) (Eng. meter) = $\frac{1}{10000000}$ of quadrant, = 39.370 inches.

Sub-divisions	{	Meter—Mille, from Latin Mille = $\frac{1}{1000}$.	Abbreviated m. m.
		“ Centi, “ “ Centum = $\frac{1}{100}$.	“ c. m.
		“ Deci, “ “ Decem = $\frac{1}{10}$.	“ d. m.
Multiples . .	{	“ Dekka, “ Greek Dekka = 10.	“ D. m.
		“ Hekto, “ “ Hecaton = 100.	“ H. m.
		“ Kilo, “ “ Chilioi = 1,000.	“ K. m.
		“ Myria, “ “ Myrioi = 10,000.	“ M. m

PRONUNCIATION.

Centi in French = Santí (an. as in want) Eng. sěntí.

Chilioi = Kē lē oy — hence kīlo, not kīlo.

ACCENT.

On first syllables. As mil'le méter, ki'lo méter.

Standard of Measure of Weight.—Gramme or gram (from Gr. gramma, a small weight) = weight of cu. c. m. of water at 39° F. or 4° C. = 15.432 grains.

Standard of Measure of Capacity.—Liter (from Gr. litra, a pound) = cu. d. m. = 1000 c. c. = 61.028 cu. in. = 2.113 wine pints.

Standard of Measure of Solidity.—Ster (from Gr. stereos, solid) = 1 cu. m. = 1,000 K. g. = 2,204.6 av. lbs.

Standard of Surface Measure.—Ar (from Latin area, surface) = sq. D. m. = 100 sq. m. = 119.6 sq. yds.

1 gram = 15.432 grs. 1 grain = 0.065 gms. 1 oz. av. = 28.35 gms.
1 troy oz. = 31.103 gms. 1 c. c. = 16.231 minims. 1 minim = 0.062 c. c.
1 fl. oz. = 29.573 c. c.

Conversion of quantities in each system to their equivalent in the other.

appended. Suitable to the length of a pendulum (39.139 inches) vibrating seconds at latitude of London, in a vacuum, barometric pressure 30 inches, & temperature 32° F.

Standard of Troy and Apoth. Weight.—A brass weight, = 5,760 grains Troy weight.

Standard of Apothecary Weight.—A brass weight, = 7,000 grs = av. pound.

Standard of Wine Measure.—A gallon, = 231 cu. in. = 83.333... grs. of water at 62° F., 30 in. barom.

Standard of Dry Measure.—A bushel, = 2,150 4/5 cu. in. 77.6254 av. lbs. av. at 62° F., 30 in. barom.

MEASUREMENTS

Measure from Gr. Measure—measures (Reg. meter) = measures of quadrat. = 36.318 inches.

	Water—Mile, from Latin Mile = rate	Abbreviated in m.
1000 paces	Centum = 100	c. m.
	Decem = 10	d. m.
	Deka = Greek Deka = 10	dk. m.
	Hekta = 100	hk. m.
	Kilo = 1,000	k. m.
	Myria = 10,000	my. m.

CONVERSION

Centum Paces = 360 (as in want) Reg. meas.

Chilod = 1000 paces = hence kilo, not kilo.

MEASURES

On first syllable. As will be evident, when added.

Standard of Measure of Weight.—Gramme or grain (from Gr. grammā, a small weight) = weight of cu. c. m. of water at 39° F. or 4° C. = 15.432 grains.

Standard of Measure of Capacity.—Liter (from Gr. litra, a pound) = cu. d. m. = 1000 c. c. = 33.814 cu. in. = 2.20462 lbs. av.

Standard of Measure of Solidity.—Ster (from Gr. stereos, solid) = 1 cu. m. = 1,000 K. g. = 2,204.62 av. lbs.

Standard of Surface Measure.—Are (from Latin area, surface) = sq. D. m. = 100 sq. m. = 119.6 sq. yds.

1 gram = 15.432 grs. 1 litre = 33.814 cu. in. 1 are = 119.6 sq. yds. 1 ster = 2,204.62 av. lbs.

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Conversion of quantities in each system to their equivalent in the other.

SPECIFIC GRAVITY.

Various methods of ascertaining sp. gr. of liquids; implements employed; sp. gr. bottles; hydrometers of different kinds; densimeters. Methods of ascertaining sp. gr. of solids soluble and insoluble in water; of solids lighter and heavier than water. Sp. gr. of gases.

SECTION THREE.

HEAT.

General uses of heat in pharmacy. Definition of and theories regarding heat. Sources of heat; sun, etc., and combustion of solids, liquids and gases in the great variety of furnaces, stoves, lamps and burners,—illustrated by diagrams, models and apparatus. Heating by conduction, convection and radiation. By reflection. Effects of heat. Structure and use of thermometers. Different kinds of thermometers. Equalization. Application of heat to drying. Steam, hot air and water ovens and drying closets. Desiccators. Drying drugs, gases and utensils.

Drug grinding and powdering by means of mills of various kinds and the pestle and mortar. Cleansing of mills and mortars. Drug sifting. Sieves of silk, hair cloth, iron or brass wire, etc. Considerations governing fineness of powders. Character of commercial powders; Powdering chemicals.

Boiling. Modification of boiling point by pressure of air or vapor,—by nature of containing vessel.

Evaporation. Spontaneous evaporation. Rapidity of evaporation; dependent upon degree of heat; amount of surface exposed to air; upon dryness of air brought in contact with the surface and its freedom of supply. Evaporation in retorts, flasks, capsules. Evaporation of solutions of salts; of solutions of gases; of liquids containing precipitates; of galenical solutions. Evaporation with exclusion of air. Evaporation in vacuo. Estimation of residue.

Heat for evaporation, etc. Sand-bath, water-bath, steam-bath, oil-bath, saturated solutions of salts.

Distillation and its uses. Simple, fractional and destructive distillation. The structure and method of employing the various forms of distillatory apparatus applicable to the chemical and pharmaceutical processes of the pharmacopœa. How to care for and cleanse such apparatus. Sublimation and calcination applied to pharmacopœal uses.

Deliquescence and efflorescence.

EFFECTS OF EXPOSURE TO AIR UPON PHARMACOPŒAL CHEMICALS.

These in this column exposed to moist air absorb moisture and liquify or deliquesce.

Acidum Carbolicum.
 " Chromicum.
 Ammonii Iodidum (badly).
 " Nitras.
 " Valerianas.
 Auri et Sodii Chloridum.
 Calcii Bromidum (badly).
 " Chloridum "
 Ferri " "
 Ferri et Ammonii Citras (slightly).
 " " Tartras "
 " Quininæ Citras "
 " Strychninæ " "
 Hyoscyaminæ Sulphas.
 Lithii Bromidum (badly).
 " Citras.
 " Salicylas.
 Magnesii Citras Granulatus.
 Pilocarpinæ Hydrochloras.
 Potassa (Potassii Hydras).
 " cum Calce.
 Potassii Acetas (badly).
 " Carbonas (Salt of Tartar).
 " Citras.
 " Cyanidum.
 " Hypophosphis (badly).
 " Iodidum (slightly).
 " Sulphis "
 " Tartras "
 Soda (Sodii Hydras).
 Sodii Hypophosphis.
 " Iodidum.
 " Nitras (slightly).
 Zinci Bromidum (badly).
 " Chloridum "
 " Iodidum.

Ammonii Carbonas—loses CO_2 and NH_3 and becomes bicarbonate

These in this column exposed to dry air lose water of crystallization or effloresce.

Acidum Citricum.
 Codeina.
 Cupri Acetas.
 " Sulphas (Blue Vitriol).
 Ferri et Ammonii Sulphas (Ferric Alum).
 Ferri Sulphas (Green Vitriol).
 Magnesii Sulphas (Epsom Salts).
 Mangani "
 Plumbi Acetas (Sugar of Lead).
 Potassii et Sodii Tartras (slightly) (Rochelle Salts).
 Potassii Ferrocyanidum (Yellow Prussiate of Potassium).
 Quininæ Bisulphas.
 Soda (Sodii Hydras).
 Sodii Acetas.
 " Arsenias (slightly).
 " Benzoas.
 " Boras (Borax).
 " Hyposulphis.
 " Carbonas (badly).
 " Phosphas "
 " Sulphas (Glauber's Salt) (badly).
 " Sulphis (badly).
 Strychninæ Sulphas.
 Zinci Acetas.
 " Sulphas (White Vitriol).

Ammonia Phosphor—loses NH₃.

All silver salts are decomposed by light in presence of organic matter.

Arsenic Iodide—loses I₂ & I₂O₅.

Calc Chlorate, Chloroform—loses Cl.

“ Sulphuric, Sulphurated Water—loses H₂S.

Chloral—evaporates slowly.

Magnesia (Calcined)—absorbs CO₂ and becomes carbonate.

Mercure Sulphide—oxidizes.

Nitrous Acetic—loses Acetic Acid.

Phosphorus—oxidizes—should be kept under water.

Potassa Sulphuric (Over of sulphur)—changes color.

Solid Bisulphic—loses SO₂.

Santoninum—is yellowed by light.

Notes. Methods of obtaining melting point.

MELTING POINT OF WAX, FAT, PARAFFIN, ETC.

<i>Common Name.</i>	<i>Officinal.</i>	<i>Source.</i>	<i>Melting Point.</i>
Tallow.	Adeps.	Sui Scrofa. (Abdominal fat.)	45° F.
Cocoa Butter.	Butyrum Theobroma.	Theobroma Cocoa (Seeds).	85° to 95° F.
White Wax.	Cera Alba.	Apis Mellifica (Wax of honeybees).	145° F.
Yellow “	“	“	145-4° to 157-2° F.
Spermaceti.	Cetaceum.	Phoca Naevula (Whale) (From blubber of whale).	122° F.
Petroleum.	Petroleum.	Petroleum. (Kud wax or tank residue).	104° to 125° F.
Suet.	Serum.	Ovis Arcti. (Abdominal Fat).	115° to 125° F.
Mutton Tallow.		Elas G. Macrourus. (West Africa, fruit.)	80-8° C.
Sheep Butter.		Lycium F. (Lycium).	
Cashew Butter.		(From seed of fruit by boiling; Cent. Africa.)	106-4° F.
Japan Wax.		Elus Saccorhiza. (By boiling the seeds, Japan.)	125° to 181° F.
Bayberry Wax.		Myrica Cerifera. (By boiling the berries, U. S. and So. Am.)	116° to 125° F.
Vegetable Tallow.		Stillingia Sibirica. (From seeds, China.)	99-6° to 115° F.

Ammonii Phosphas—loses NH_3 .

All silver salts are decomposed by light in presence of organic matter.

Arsenii Iodidum—loses Iodine.

Calx Chlorata, Chlorinated lime—loses Cl .

“ Sulphurata, Sulphurated lime—loses H_2S .

Chloral—evaporates slowly.

Magnesia (Calcined)—absorbs CO_2 and becomes carbonate.

Magnesii Sulphis—oxidizes.

Morphinæ Acetas—loses Acetic Acid.

Phosphorus—oxidizes—should be kept under water.

Potassa Sulphurata (liver of sulphur)—changes color.

Sodii Bisulphis—loses SO_2 .

Santoninum—is yellowed by *light*.

Fusion. Methods of obtaining fusing point.

FUSING POINT OF WAX, FATS, PARAFFINS, ETC.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Fusing Point.</i>
Lard.	Adeps.	Sus Scrofa. (Abdominal fat.)	95° F.
Cacao Butter.	Oleum Theobromæ.	Theobroma Cacao (Seeds).	85° to 95° F.
White Wax.	Cera Alba.	Apis Mellifica (Walls of honeycomb).	149° F.
Yellow “	“ Flava.	“ “	145-4° to 147-2° F.
Spermaceti.	Cetaceum.	Pyseter Macrocephalus (From cranial cavity).	122° F.
Petrolatum.	Petrolatum.	Petroleum (Rod wax or tank residues).	104° to 125° F.
Suet. Mutton Tallow.	Sevum.	Ovis Aries (Abdominal Fat).	113° to 122° F.
Palm Oil.		Elais Guineensis. (West Africa, fruit.)	80-6° F.
Shea Butter. Galam Butter.		Lucuma Parkii. (From seed of fruit by boiling. Cent. Africa.)	109-4° F.
Japan Wax.		Rhus Succedanea. (By boiling the seeds. Japan.)	125° to 131° F.
Bayberry Wax. “ Tallow.		Myrica Cerifera. (By boiling the berries. U. S. and So. Am.)	116° to 120° F.
Vegetable Tallow.		Stillingia Sebifera. (From seeds. China.)	98-6° to 113° F.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Fusing Point.</i>
Kokum Oil.		Garcinia Purpurea.	
Vegetable Tallow.		(From seeds. Singapore.)	
Carnahuba.		Ceroxylon Carnahuba and other palms. (Natural exudation on leaves. So. America.)	192° F.
Chinese Wax.		Fraxinus Chinensis, etc.	180-5° F.
" Spermaceti.		(Deposited on branches by Wax Insect, Coccus Sinensis, China. Obtained by boiling branches in water.)	
Pela.			
Goose Oil.		Bernicla Canadensis, etc.	55° to
Goose Grease.			77° F.
Bear's Oil.		Ursus Americanus, etc.	90° F.
Bear's Grease.			
Stearin.		Fats, etc.	143-6° F.
Deodoroline.		Petroleum,	111° F.
Petrolina.		"	102° F.
Cosmoline.		"	94° F.
Vaseline.		"	85° F.
Ozokerite.		A paraffin from natural depositions found in the earth in Gallicia (Austria), etc.	110° to 140° F.
Mineral Wax.			
Earth "			
Ceresin.			
Agaricin.		Agaricus Campestris and other mushrooms.	149° F.
Paraffine Wax.		Petroleum, etc.	110° to
White Paraffine.			149° F.

Oxidation, reduction and ignition. How conducted; their pharmaceutical application. Crucibles; their use and care.

SECTION FOUR.

SOLUTION.

Simple, compound and complex solutions. Solvents: simple and compound. Saturated solutions: chemical and pharmaceutical. Various methods of effecting solution. Freezing mixtures. Diffusion and dialysis.

FILTRATION.

Filtering media. Gray and white paper; asbestos fibre; asbestos paper; glass wool; sand; rubies; absorbent cotton, etc. Methods of conducting filtration of chemical solutions, acids, syrups, oils, etc. Rapid filtration by surface pressure, by exhaustion of air, etc. Use of aspirators and Richards'

papers. Hot distillation. Jacketed tumblers, steam coils, etc. Crystallization. Decolorization. Laws controlling precipitation. Separation, washing, drying and weighing of precipitates. Decomposition.

CRYSTALLIZATION.

Laws governing crystallization. Formation, separation and drying of crystals.

FORM, SOLUBILITY, ETC., OF SOLIDS OR CHEMICALS

Common Name.	Official.	Form.	Solubility.	
			Parts by weight soluble in one part of solvent.	Water. Alcohol.
White Arsenic.	Acidum Arsenicum.	Octahedral.	1	25-30
Benzoic Acid.	" Benzoicum.	Prism, needles and plates.	500	15
Boric " Benzoic Acid.	" Boricum.	Triclinic. Six-sided plates.	3	25
Carbonic Acid. Fixed.	" Carbonicum.	Triclinic. Needle-shaped.	3	30
Chromic Acid.	" Chromicum.	Hexagonal. (Crystals, needles or columns.)	6	Very, Very.
Cubic " "	" Cubicum.	Rhombic Prism.	1	4
Galle " "	" Gallicum.	Triclinic. Needle-shaped.	5	100
Salicylic.	" Salicylicum.	Monoclinic. Prism, needles.	4	450
Tartaric Acid.	" Tartaricum.	Monoclinic.	4	1/2
Tannic " "	" Tannicum.	Light yellow scales.	5	Very.
Alum.	Alumen.			
Al. or Pot. Sulph.		Octahedral.	1	100
Sulphate of Aluminium.	Aluminium Sulphas.	Cryt. powder.	1 1/2	Very.
Benzoate of Ammonium.	Ammonii Benzoas.	Four-sided masses.	3	1 1/2
Broside " "	" Bromidum.	Cubic plates.	1	11
Carbonate " "	" Carbonas.	Translucent masses.	4	Very, Very.
Chloride " "	" Chloridum.	Monoclinic.	1	3 1/2
Iodide " "	" Iodidum.	Cubic.	1	4
Nitrate " "	" Nitras.	Rhombic plates.	3	1
Phosphate " "	" Phosphas.	Monoclinic.	4	4
Sulphate " "	" Sulphas.	Rhombic.	3	1 1/2
Valerianate " "	" Valerianas.	Quadrangular Plates.	Very.	Very.

<i>Common Name.</i>	<i>Origin.</i>	<i>Source.</i>	<i>Melting Point.</i>
Carnauba Oil.		Garcinia Purpurea.	
Carnauba Tallow.		(From seeds. Singapore.)	
Carnauba.		Ceroxylon Carnabuba and other palms. (Natural exudation on leaves. So. America.)	192° F.
Chinese Wax.		Fraxinus Chirensis, etc.	133-5° F.
" Spermaceti.		(Deposited on branches by Wax Insect, Coccus Shanzha, China. Obtained by boiling branches in water.)	
Palm.			
Guaiac Oil.		Rempia Canadensis, etc.	55° to 77° F.
Guaiac Gum.			90° F.
Bees' Oil.		Urus Americanus, etc.	
Bees' Grease.			143-5° F.
Stearin.		Pars, etc.	111° F.
Stearodilin.		Petroleum,	107° F.
Petrolin.		"	94° F.
Candelin.		"	85° F.
Vanilin.			
Candelin.		A paraffin from natural deposits found in the earth in Galicia (Austria), etc.	110° to 127° F.
Mineral Wax.			
Parin.		Agaricus Campeche and other mushrooms.	149° F.
Guaiac.			
Agaric.		Petroleum, etc.	130° to 140° F.
Paraffin Wax.			
White Paraffin.			

Oxidation, reduction and ignition. How conducted; their pharmaceutical applications. Crustles: their use and care.

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SOLVENTS.

Simple, compound and complex solutions. Solvents: simple and compound. Saturated solutions; chemical and pharmaceutical. Various methods of effecting evaporation. Freezing mixtures. Diffusion and dialysis.

FILTRATION.

Filtrating media. Gray and white paper; asbestos fibre; asbestos paper; glass wool; sand, velvet, charcoal cotton, etc. Methods of conducting filtration of chemical solutions, acids, syrups, oils, etc. Rapid filtration by surface pressure, by exhaustion of air, etc. Use of aspirators and Richards'

pumps. Hot filtration. Jacketed funnels, steam coils, etc. Continuous filtration. Decolorization. Laws controlling precipitation. Separation, washing, drying and weighing of precipitates. Decantation.

CRYSTALLIZATION.

Laws governing crystallization. Formation, separation and drying of crystals.

FORM, SOLUBILITY, ETC., OF SOLUBLE OFF. CHEMICALS

Common Name.	Official.	Form.	Solubility.		
			Parts by weight solving one part of salt.		
		Figures refer to System of cryst.	Water 59° F.	Boiling Water.	
White Arsenic.	Acidum Arseniosum.	Octahedral.	1	38-80	15
Benzoic Acid.	" Benzoicum.	Feath. needles and plates.	500	15	
Boric " Boracic Acid.	" Boricum.	Triclinic. Six-sided plates.	5	25	3
Carbolic Acid. Phenol.	" Carbolicum.	Trimetric. Needle shaped.	3	20	
Chromic Acid.	" Chromicum.	Hexagonal. (Crimson needles or columns.)	6	Freely.	Freely.
Citric "	" Citricum.	Rt. Rhom. Prisms. [5]	$\frac{8}{4}$	$\frac{1}{2}$	
Gallic "	" Gallicum.	Triclinic. Needles or prisms.	5	100	3
Salicylic.	" Salicylicum.	Monoclinic. Prismatic needles.	4	450	14
Tartaric Acid.	" Tartaricum.	Monoclinic.	4	$\frac{7}{10}$	$\frac{1}{2}$
Tannic "	" Tannicum.	Light yel. scales.	6	Very.	
Alum.	Alumen.				
Al. et Pot. Sulph.		Octahedral.	1	10 $\frac{1}{2}$	$\frac{3}{10}$
Sulphate of Aluminium.	Aluminii Sulphas.	Cryst. powder.	1 $\frac{2}{10}$	Very.	
Benzoate of Ammonium.	Ammonii Benzoas.	Four-sided laminæ.	5	1 $\frac{2}{10}$	
Bromide "	" Bromidum.	Cubical prisms.	1 $\frac{1}{2}$	$\frac{7}{10}$	
Carbonate "	" Carbonas.	Translucent masses.	4	Decomposes.	
Chloride "	" Chloridum.	Monometric.	1	3	1 $\frac{37}{100}$
Iodide "	" Iodidum.	Cubical.	1	1	$\frac{1}{2}$
Nitrate "	" Nitras.	Rhombic prisms.	3	$\frac{1}{2}$	Very.
Phosphate "	" Phosphas.	Monoclinic "	4	4	$\frac{1}{2}$
Sulphate "	" Sulphas.	Rhombic "	3	1 $\frac{3}{10}$	1
Valerianate "	" Valerianas.	Quadrangular Plates.	Very.	Very.	

Common Name.	Official.	Form.	Solubility.		
			Parts by weight solving one part of salt.		
		Figures refer to System of cryst.	Water 59° F.	Boiling Water.	
Tartar Emetic.	Antimonii et Potassii Tartras.	Rhombs.	3	17	3
Hydrochlorate of Apomorphine.	Apomorphinæ Hydrochloras.		$6\frac{8}{10}$	Decomposes.	
Nitrate of Silver. Lunar Caustic. Lapis Infernalis.	Argenti Nitras.	Rhombic.	3	$\frac{8}{10}$	$\frac{1}{10}$
Iodide of Arsenic.	Arsenii Iodidum.	Orange red cryt. scales.	$3\frac{1}{2}$	Decomposes.	
Atropine.	Atropina.	Prisms.	600	35	
Sulphate of Atropine.	Atropinæ Sulphas.	"	$\frac{4}{10}$	Very.	
Chloride of Gold and Sodium.	Auri et Sodii Chloridum.	Orange yellow powder.	Very.	Very.	
Citrate of Bismuth and Ammonium.	Bismuthi et Ammonii Citras.	Pearly scales.	"	"	
Caffeine.	Caffeina.	Silky needles.	75	$9\frac{1}{2}$	
Bromide of Calcium.	Calcii Bromidum.	Granular.	$\frac{7}{10}$	Very.	
Chloride "	" Chloridum.	{ Off. fused. Hexagonal.	6	$1\frac{1}{2}$	"
Hypophosphite "	" Hypophosphis.	Six-sided prisms.	6	$6\frac{8}{10}$	6
Chloral. Hydrate of Chloral.	Chloral.	Rhomboidal.	6	Very.	Very.
Sulphate of Cinchonidine.	Cinchonidinæ Sulphas.	White needles or prisms.	100	4	
Cinchonine.	Cinchonina.	White needles or prisms.	Little.	Little.	
Sulphate of Cinchonine.	Cinchoninæ Sulphas.	Prisms.	70	14	
Codeine.	Codeina.	Rhombic prisms.	3	80	17
Acetate of Copper.	Cupri Acetas.	Bluish green prisms.	15	5	
Sulphate " Blue Vitriol. Blue Stone.	" Sulphas.	Blue triclinic.	5	$2\frac{6}{10}$	$\frac{1}{2}$
Chloride of Iron.	Ferri Chloridum.	Orange yellow cryt. masses.	Very.	Very.	
Ferric Alum. Ammonio-ferric Alum. " " Sulphate.	Ferri et Ammonii Sulphas.	Octahedral. (Pale violet.)	1	3	$\frac{8}{10}$
Lactate of Iron.	Ferri Lactas.	Greenish white cryt. crusts.	40	12	
Sulphate " Green Vitriol. Copperas.	Ferri Sulphas.	Monoclinic. (Green.)	4	$1\frac{8}{10}$	$\frac{3}{10}$

Common Name.	Official	Form.	Solubility.	
			Parts in weight soluble in 1 part of water.	Parts in weight soluble in 1 part of water.
Corrosive Sublimates.				
Mercuric Chloride.	*			
Oxymercuric Merc.				
Oxichloride.	Hydrogen Chloride.	Rhomboh. prism.	10	2
Bichloride.	San. Corrosivum.		15	
Perchloride.				
Ceroid of Mercury.	Hydrogen Cyanide.	Prisms (Quartz rare).	12 1/2	2
Sulphate of Hyoscyamine.	Hyoscyamine Sulphate.	Yellowish scales.	Very.	Very.
Berberate of Lobelia.	1. 2. 3. Berberis.	Powdery scales.	4	25
Necotia.	" Berberis.	Granular.	Very.	Very.
Citrus.	" Citrus.	Powder.	55	25
Salicaria.	" Salicaria.	"	Very.	Very.
Epsom Salt.	Magnesium Sulphate.	Rt. Rhombic prism.	5	2
Sulphate of Magnesium.	" Sulphate.	Crys. powder.	20	10
Sulphate of Manganese.	Manganese Sulphate.	Rt. Rhombic prism. (Rare when.)	5	15
Morphine.	Morphine.	Prism.	2	100
Aspartate of Morph.	Morphine Aspartate.	Powder.	12	25
Hydrochlorate of Morph.	" Hydrochloride.	Powdery crys.	24	4
Sulphate of "	" Sulphate.	"	24	2
Salicylate of Pyrocatechine.	Pyrocatechine Salicylate.	Winged scales (When wet.)	100	20
Pyrocatechin.	Pyrocatechin.	Prism.	2	100
Hydrochlorate of Fluor.	Fluoropycne Hydrochlorate.		Very.	Very.
Aspartate of Lead.	Lead Aspartate.	Monoclinic prism.	1 1/2	1
Nitrate of Lead.	" Nitrate.	Octahedral.	2	17
Caustic Potash.	Potash.	Prisms.	4	Very.
Aspartate of Potash.	Potash Aspartate.	Granular powder.	5	Very.
Bicarbonate.	" Bicarbonate.	Monoclinic. Four-sided prism.	4	51
Echinum.	" Echinum.	Triclinic. (Orange red.)	5	10
Bitartrate.	" Tartar.	Rhomboh. crys.	2	210
Cream of Tartar.				
Bromide of Potassium.	" Bromide.	Cubic.	1	1 1/2
Carbonate.	" Carbonate.	Gran. powd.	1	2 1/2

<i>Common Name.</i>	<i>Official.</i>	<i>Form.</i>	<i>Solubility.</i>	
		Figures refer to System of cryst.	Parts by weight solving one part of salt.	
			Water	Boiling Water.
Corrosive Sublimate.				
Mercuric Chloride.	*			
Oxymuriate Merc.				
Oxychloride "	Hydrargyri Chlori-	Rhombic prisms.	16	2
Bichloride "	dum. Corrosivum.	[3]		
Perchloride "				
Cyanide of Mercury.	Hydrargyri Cyanidum.	Prisms (Quad- ratic).	12 $\frac{8}{10}$ 2	3
Sulphate of Hyoscyamine.	Hyoscyaminæ Sulphas.	Yellowish scales.	Very.	Very.
Benzoate of Lithium.	Lithii Benzoas.	Powdery scales.	4	2 $\frac{1}{2}$
Bromide "	" Bromidum.	Granular.	Very.	Very.
Citrate "	" Citras.	Powder.	5 $\frac{1}{2}$	2 $\frac{1}{2}$
Salicylate "	" Salicylas.	"	Very.	Very.
Epsom Salts.	Magnesii Sulphas.	Rt. Rhombic prisms.	3 $\frac{8}{10}$	$\frac{1}{4}$
Sulphite of Magnesium.	" Sulphis.	Cryst. powder.	20	19
Sulphate of Manganese.	Mangani Sulphas.	Rt. Rhombic prisms. (Rose color.)	3 $\frac{7}{10}$	$\frac{8}{10}$
Morphine.	Morphina.	Prismatic.	3	500
Acetate of Morph.	Morphinæ Acetas.	Powder.	12	1 $\frac{1}{2}$
Hydrochlorate of Morph.	" Hydrochloras.	Feathery cryst.	24	$\frac{1}{2}$
Sulphate of "	" Sulphas.	" "	24	$\frac{3}{4}$
Salicylate of Physostigmine.	Pysostigminæ Salicylas.	White or reddish columnar cryst.	130	30
Picrotoxin.	Picrotoxinum.	Prismatic.	3	150
Hydrochlorate of Pilocarpine.	Pilocarpinæ Hydrochloras.		Very.	Very.
Acetate of Lead.	Plumbi Acetas.	Monoclinic prisms.	4 $\frac{8}{10}$	$\frac{1}{2}$
Sugar "				
Sal. Saturni.				
Nitrate of Lead.	" Nitras.	Octahedral.	2	$\frac{8}{10}$
Caustic Potash.	Potassa.	Pencils.	$\frac{1}{2}$	Very.
Acetate of Potassium.	Potassii Acetas.	Granular powder.	$\frac{4}{10}$	Very.
Bicarbonate "	" Bicarbonas.	Monoclinic. Four-sided prisms.	4 $\frac{3}{5}$	Decomposes.
Bichromate "	" Bichromas.	Triclinic. (Orange red.)	5	10
Bitartrate "	" Bitartras.	Rhombic cryst.	3	210
Cream of Tartar.				15
Bromide of Potassium.	" Bromidum.	Cubical.	1	1 $\frac{6}{10}$
Carbonate "	" Carbonas.	Gran. powd.	1	$\frac{7}{10}$

<i>Common Name.</i>	<i>Official.</i>	<i>Form.</i>	<i>Solubility.</i>	
		Figures refer to System of cryst.	Parts by weight solving one part of salt.	
			Water 59° F.	Boiling Water
Chlorate Potassium.	Potassii. Chloras.	Monoclinic plates. 4	16½	2
Citrate “	“ Citras.	Gran. powd.	$\frac{6}{10}$	Very
Cyanide “	“ Cyanidum.	“ “ or amorph. masses.	2	1
Rochelle Salts.	Potassii et Sodii Tar- tras.	Rhombic. 3	2½	Very.
Yellow Prussiate of Po- tassium.	Potassii Ferrocyani- dum.	Four-sided prisms. 2	4	2
Hypophosphite of Po- tassium.	Potassii Hypophos- phis.	Hexagonal or Gran. powder. 6	$\frac{6}{10}$	$\frac{3}{10}$
Iodide of Potassium.	Potassii Iodidum.	Cubical. 1	$\frac{8}{10}$	$\frac{5}{10}$
Nitrate “ Saltpetre. Nitre.	“ Nitras.	Rhombic. 3 Six-sided prisms.	4	$\frac{4}{10}$
Permanganate of Potas- sium.	“ Permanganas.	Purple Rhom. prisms. Needle shape. 3	20	3
Sulphate of Potassium.	“ Sulphas.	Rhombic prisms. 3	9	4
Sulphite “	“ Sulphis.	Rhombic Octahedral. 4	4	5
Tartrate “	“ Tartras.	Monoclinic. 4	$\frac{7}{10}$	$\frac{5}{10}$
Sulphate of Quinidine.	Quinidinæ Sulphas.	Silky needles.	100	7
Quinine.	Quinina.	Flaky powder.	1600	700
Bisulphate of Quinine.	Quininæ Bisulphas.	Needle shape.	10	Very.
Hydrobromate “	“ Hydrobromas.	“ “	16	1
Hydrochlorate “	“ Hydrochloras.	“ “	34	1
Sulphate “	“ Sulphas.	“ “	740	30
Valerianate “	“ Valerianas.	Triclinic. 5	100	40
Sugar.	Saccharum.	Monoclinic. 4	$\frac{5}{10}$	$\frac{2}{10}$
Sugar of Milk.	Saccharum Lactis.	Trimetric. 3	7	1
Salicin.	Salicinum.	Tabular.	28	$\frac{7}{10}$
Santonin.	Santoninum.	Prismatic.		250
Caustic Soda.	Soda.	Opaque masses.	1 $\frac{7}{10}$	$\frac{8}{10}$
Acetate of Sodium.	Sodii Acetas.	Monoclinic prisms. 4	3	1
Arseniate “	“ Arsenias.	Prismatic oblique. [4	4	Very.
Benzoate “	“ Benzoas.	Powder.	1 $\frac{8}{10}$	1 $\frac{3}{10}$
Bicarbonate “	“ Bicarbonas.	Powder. 4 Pure=Monoclinic	12	Decom- poses.
Bisulphite “	“ Bisulphis.	Prismatic.	4	2

Common Name	Official	Form	Solubility	
			Water	Alcohol
Borax	Soda Borax	Monoclinic	16	4
Bromide of Sodium	" Bromide	"	14	5
Carbonate " Sal. Nat.	" Carbonate	"	4 1/2	1
Chlorate	" Chlorate	Reg. Tetrahedron	1 1/2	1
Chloride " Common Salt	" Chloride	Cubic	1 1/2	2 1/2
Hypophosphite of Sodium	" Hypophosphite	Tetrahedral	1	1/2
Hypophosphite of Sodium	" Hypophosphite	Monoclinic	14	4
Iodide of Sodium	" Iodide	"	4	5
Nitrate	" Nitrate	Rhombohedral	1 1/2	5
Phosphate	" Phosphate	Monoclinic	4	3
Pyrophosphate	" Pyrophosphate	"	4	1 1/2
Sulphate	" Sulphate	Orthorhombic	14	Very
Sulphate " Chamber's salt	" Sulphate	Rhombohedral	4	3
Sulphate of Sodium	" Sulphate	"	4	3
Valerianate of Sodium	" Valerianate	Rhombohedral	1	1/2
Strychnine	Strychnine	Orthorhombic	1 1/2	1/2
Sulphate of Strychnine	Strychnine Sulphate	Prism	2	1
Thymol	Thymol	Hexagonal	3 1/2	1/2
Acetate of Zinc	Zinc Acetate	Six-sided plates	1	1/2
Bromide	" Bromide	Gran. powd.	Very	Very
Chloride	" Chloride	"	"	"
Iodide	" Iodide	Orthorhombic	1	1/2
Sulphate	" Sulphate	Right rhomb	1	1/2
Valerianate of Zinc	" Valerianate	Faint scales	1/2	1/2

SECTION FIVE

NOMENCLATURE OF CHEMICALS

Definition of Terms.—Salts, bases, acids, oxides, hydroxides, hydrides, anhydrides.

Common Name	Official Name	Form	Specific Gravity	Temperature of Fusion	Boiling Point
Chloride of Potassium	Potass. Chloras.	Monoclinic plates.	1.98	4	3
Chloride	" Chloras.	Gran. powd.	1.98	4	Very
Cyanide	" Cyanidum.	or amorph. masses.	2	1	
Bicarbonate of Potash	Potass. et Soda Tar. tar.	Rhombic.	3	24	Very
Yellow Peroxide of Potassium	Potass. Ferricyanidum.	Four-sided prisms.	2	4	2
Hypophosphite of Potassium	Potass. Hypophosphas.	Hexagonal or Gran. powder.	6	5	5
Iodide of Potassium	Potass. Iodidum.	Cubic.	1	5	5
Nitrate	" Nitras.	Rhombic. Striated prisms.	3	4	5
Peroxygensate of Potash	" Permanganas.	Purpl. Rhom. prisms. Needle shape.	3	30	3
Sulphate of Potassium	" Sulphas.	Rhombic prisms.	2	3	4
Sulphite	" Sulphis.	Rhombic. Octahedral.	4	4	3
Tartrate	" Tartas.	Monoclinic.	4	5	5
Sulphate of Quinine	Quinidiaz Sulphas.	Silky needles.	100	7	
Quinine	Quinas.	Flaky powder.	1000	100	
Bisulphate of Quinine	Quiniaz Bisulphas.	Needle shape.	10	Very	
Hydrobromate	" Hydrobromas.	"	18	1	
Hydrochlorate	" Hydrochloras.	"	34	1	
Sulphate	" Sulphas.	"	140	30	
Valerianate	" Valerianas.	Triclinic.	5	30	30
Sugar	Saccharum.	Monoclinic.	4	5	5
Sugar of Milk	Saccharum Lactis.	Triclinic.	3	1	1
Salicin	Salicinum.	Tabular.	38	5	
Santonin.	Santoninum.	Prismatic.		330	
Caustic Soda	Soda.	Opaque masses.	1.45	5	
Acetate of Sodium	Sod. Acetas.	Monoclinic prisms.	4	8	1
Arsenate	" Arsenias.	Prismatic oblique.	4	4	Very
Benzoate	" Benzoes.	Powder.	1.25	1.25	
Bicarbonate	" Bicarbonas.	Powder. Pure Monoclinic.	4	12	Decomposes
Bisulphate	" Bisulphis.	Prismatic.	4	5	

Common Name.	Official.	Form.	Figures refer to System of cryst.	Solubility.	
				Parts by weight solving one part of salt.	Boiling Water.
				Water 59° F.	
Borax.	Sodii Boras.	Monoclinic.	4	16	$\frac{1}{2}$
Bromide of Sodium.	" Bromidum.	"		$1\frac{1}{2}$	$\frac{2}{10}$
Carbonate " Sal Soda.	" Carbonas.	"	4	$1\frac{6}{10}$	$\frac{1}{4}$
Chlorate "	" Chloras.	Reg. Tetrahedrons.	1	$1\frac{1}{10}$	$\frac{1}{2}$
Chloride " Common Salt.	" Chloridum.	Cubical.	1	$2\frac{8}{10}$	$2\frac{1}{2}$
Hypophosphite of Sodium.	" Hypophosphis.	Tabular plates.		1	$\frac{1}{10}$
Hyposulphite of Sodium.	" Hyposulphis.	Monoclinic prisms.	4	$1\frac{1}{2}$	$\frac{1}{2}$
Iodide of Sodium.	" Iodidum.	" "	4	$\frac{6}{10}$	$\frac{3}{10}$
Nitrate "	" Nitras.	Rhombohedral.	6	$1\frac{3}{10}$	$\frac{6}{10}$
Phosphate "	" Phosphas.	Monoclinic.	4	6	2
Pyrophosphate "	" Pyrophosphas.	"	4	12	$1\frac{1}{10}$
Salicylate "	" Salicylas.	Quadrangular prisms.	2	$1\frac{1}{2}$	Very.
Santoninate "	" Santoninas.	Rhombic.	3	3	$\frac{1}{2}$
Sulphate " Glauber's salt.	" Sulphas.	Monoclinic.	4	$2\frac{8}{10}$	$\frac{1}{4}$
Sulphite of Sodium.	" Sulphis.	"	4	4	$\frac{9}{10}$
Sulphocarbonate of Sodium.	" Sulphocarbonas.	Rhombic prisms.			
Strychnine.	Strychnina.	Octahedral.	1	6700	2500
Sulphate of Strychnine.	Strychninae Sulphas.	Prisms.		10	2
Thymol.	Thymol.	Hexagonal.	6	1200	900
Acetate of Zinc.	Zinci Acetas.	Six-sided tables.		3	$1\frac{1}{2}$
Bromide "	" Bromidum.	Gran. powd.		Very.	Very.
Chloride "	" Chloridum.	" "		"	"
Iodide "	" Iodidum.	Octahedral or gran. powd.	1	"	"
Sulphate " White Vitriol.	" Sulphas.	Right rhomb prisms.	3	$\frac{6}{10}$	$\frac{3}{10}$
Valerianate of Zinc.	" Valerianas.	Pearly scales.		100	Decomposes.

SECTION FIVE.

NOMENCLATURE OF CHEMICALS.

Definition of Terms. — Salts, bases, acids, oxides, hydroxides, hydrates, hydrides, anhydrides.

Definition of Prefixes.—Meta, pyro, hyper, per, hypo, proto, bin, deuto, sesqui, ter, tri, super, sub.

Definition of Terminations.—Application.

SECTION SIX.

Maceration and Digestion ; their theory and practice.

PERCOLATION.

Brief history and latest theories. Principles involved. Forms of percolators. Preparing the drug. Moistening and packing. Rate of flow. The percolate. Continuous percolation. Repercolation.

SECTION SEVEN.

The Classes of Preparations, defined and described. — Aquæ, Liquores, Infusa, Decocta, Mucilagines, Syrupi, Spiritus, Tincturæ, Vina, Extracta Fluida, Aceta, Oleoresinæ, Glycerita, Mellita, Oxymellita, Misturæ, Confectiones, Extracta, Abstracta, Trochisci, Pulveres, Pilulæ, Chartæ, Cerata, Unguenta, Suppositoria, Oleata, Linimenta, Emplastra.

SECTION EIGHT.

DISPENSING PHARMACY.

Care of stock. Concentrated solutions for dispensing. Weighing and measuring. Mortars. Pestles. Spatulas of steel, silver, horn, ivory and glass. Ointment and pill tiles. Other apparatus. The cleansing of apparatus and utensils.

The Prescription Counter. Its management and furnishing.

THE PRESCRIPTION.

Its reading and interpretation. Copying. Labelling. Typical prescriptions, demonstrating peculiarities of chirography, abbreviations, incompatibles, omissions, overdoses, etc.

POWDER

Chemically incompatible. Therapeutically incompatible. Altered by exposure to heat, air or light. Emulsion of volatile and fixed oils. Dose in examples.

POWDER

Mixing of powders that vary in density in small and large masses. Dividing by measure and weight. Deliquescent, effervescent and volatile powders. Cakes; wafers; capsules.

PILL

How to form pills, of many different sizes. Containing volatile oils with pill masses. How to divide. How to coat. Coating with paraffin, wax, sandalwood, sugar, gelatin, etc. Different and similar masses.

SUPPOSITORY

Hot and cold processes. Home made and other moulds. Coniments. Troches. Plasters.

Definition of Prefixes.—Meta, para, hyper, per, hypo, proto, iso, deuto, tri-, etc. etc. super, sub.

Definition of Terminations.—Application.

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The Prescription Counter. Its management and furnishing.

THE PRESCRIPTION.

Its reading and interpretation. Copying. Labelling. Typical prescriptions demonstrating peculiarities of chirography, abbreviations, incompatibles, omissions, overdoses, etc.

MIXTURES.

Chemically incompatible. Therapeutically incompatible. Altered by exposure to heat, air or light. Emulsions of volatile and fixed oils. Difficult examples.

POWDERS.

Mixing of powders that vary in density in small and large masses. Dividing by measure and weight. Deliquescent, efflorescent and volatile powders. Cachets; wafers; capsules.

PILLS.

How to form SOLUBLE, *adhesive*, plastic masses. Combining volatile oils with pill masses. How divide. How finish. Coating with paraffin, tolu, sandarac, sugar, gelatin, etc. Difficult and peculiar masses.

SUPPOSITORIES.

Hot and cold processes. Home made and other moulds. Ointments. Troches. Plasters.

SENIOR COURSE.

THE PREPARATIONS OF THE PHARMACOPŒIA.

Their Source, Manufacture and Employment.

CELLULIN.

Used in natural conditions as filtering media and as surgical dressing.

<i>Common Name.</i>	<i>Botanical Name.</i>	<i>Geog. Source.</i>
Cotton fibre.	Gossypium herbaceum, etc.	(Off.) Semi-tropics.
Flax or linen.	Linum usitatissimum.	Temp. climes.
Hemp.	Cannabis sativa.	E. I. and tem. lat.
Tow.	Short fibre of flax or hemp.	
Oakum.	Old hemp rope, shredded.	
Jute.	Varieties of corchorus.	E. I. and So. U. S.
Manilla.	Musa textilis.	Phil. Islands.
	(Same genus as banana.)	
Ramie,	Boehmeria nivea.	E. I.
China Grass. }		

ACTION OF STRONG ACIDS ON CELLULIN.

H₂ SO₄—cold—dissolves it and forms dextrine.

do. —hot —chars it.

H NO₃—90° F—forms Gun-cotton, in which nitrile replaces a portion of H in celluline.

(Higher nitrogenized cotton used in gunnery; the lower known as pyroxylin (off.) Pyroxylinum, used in collodions,—Collodium, Collodium Flexile, Collodium cum Cantharide, Collodium Stypticum.)

H Cl.—boiled—dissolves it as celluline.

ACTION OF DILUTE ACIDS.

H₂ SO₄—boiled=dextrin and glucose.

H NO₃ — do. (Sp. gr. 1, 2)=Oxalic Acid.

ACTION OF STRONG ALKALIES.

Na HO , or K HO , dissolves very slightly and changes to starch and glue.

do. do. — best — 3 — form Oxalic Acid.

(Weaker alkalies leave yellow pulp).

CONSTITUTIVE DECOMPOSITION.

Residue = charcoal — oil — Carbo Lign.

Distillate = 1. Turp. bodies, resins, esters, etc. 2. Aqueous solution, pyroligneous acid, methyllic alcohol, acetone, etc.

No. 2 + Ca O form HA or Ca A . Distill acetone and residual solution of $\text{Ca A}_2 + \text{Na}_2 \text{SO}_4 = \text{Ca SO}_4 + 2 \text{Na A}$. From Na A purified by heat, solution and crystallization + $\text{H}_2 \text{SO}_4$ comes

Aceticum Acetuosum — oil. Red. Colch. Rad. (used in all instances, — very constitutive stuff).

Aceticum Acetuosum Dilutum. — Oil. Acids, Essp. Ammoniac, Lq. Am. Acq. Syr. Albi, Syr. Scilla.

From anhydrous $\text{Na A} + \text{H}_2 \text{SO}_4$ comes Aceticum Acetuosum Glaciale (oil). Distillate from No. 2 mixture contains methyllic alcohol and acetone.

Add Ca Cl_2 and distill acetone.

Add residue (as $\text{Ca Cl}_2 + \text{CH}_3 \text{HO}$) to water, and distill methyllic alcohol.

STARCHES.

The following list comprises those bodies whose virtue depends in whole or in part upon starch:

Common Name.	Offical Name.	Bot. Source.	Comp. Source.
Acorns. *		Genus Quercus.	Temp. Lat.
Am. carrot.		Moranta serotina. nacca.	E. and W. I.
Barley, 66%.		Hordium distichon.	Temp. Lat.
Beans, 23%.		Faba vulgaris. Phaseolus	do.
Chestnuts and other galls etc.		Castanea vesca, etc.	do.
Corn, 57%.		Zea Mays.	do.
Oats, 60%.		Avena Sativa.	do.
Diverted of Husks from grains.			
Peas, 57%.		Pisum sativum.	do.
Potatoes, 90%.		Solanum Tuberosa.	America.
Sweet Potatoes, 16%.		Convolvulus batatas.	Am. or E. I. C.

SENIOR COURSE.

THE PREPARATIONS OF THE PHARMACOPOEIA.

Their Source, Manufacture and Employment.

CELLULIN.

Used in natural condition as filtering media and as surgical dressing.

<i>Common Name.</i>	<i>Botanical Name.</i>	<i>Geog. Source.</i>
Cotton Seed.	<i>Gossypium herbaceum</i> , etc.	(Ind.) Semi-tropics.
Flax or Flaxseed.	<i>Linum catharticum</i> .	Temp. climate.
Hemp.	<i>Cannabis sativa</i> .	E. I. and W. Ind.
Tow.	Short flax of flax or hemp.	
Osaka.	Old hemp rope, shredded.	
Jute.	Varieties of <i>corchorus</i> .	E. I. and So. U. S.
Morilla.	Musci textile.	Phil. Islands.
Kamut.	(Same genus as banana.)	
China Grass.	<i>Burhneria nivea</i> .	E. I.

ACTION OF STRONG ACIDS ON CELLULIN.

H_2SO_4 —cold—dissolves it and forms dextrin.

do. —hot—chars it.

HNO_3 —32° F.—forms Gun-cotton, in which nitric replaces a portion of H in cellulose.

(Higher nitrogenized cotton used in gunpowder; the lower known as pyroxylin (off.) Pyroxylonate, used in cellulose, —Colloidum, Colloidum Fixile, Colloidum cum Castoreo, Colloidum Styrosum.)

HCl —boiled—dissolves it as cellulose.

ACTION OF DILUTE ACIDS.

H_2SO_4 —boiled—dextrin and glucose.

HNO_3 —do. (Sp. gr. 1.2)—Oxalic Acid.

ACTION OF STRONG ALKALIES.

Na HO. or K HO. dissolve very slightly and change to starch and gum.
 do. do. —heated—form Oxalic Acid.
 (Weaker alkalies form paper pulp).

DESTRUCTIVE DISTILLATION.

Residue = charcoal—off.—Carbo Ligni.

Distillate = 1. Tarry bodies, resins, creasote, etc. 2. Aqueous solution pyroligneous acid, methylic alcohol, acetone, etc.

No. 2 + Ca 2 HO fixes H \bar{A} as Ca \bar{A}_2 . Distill mixture and residual solution of Ca \bar{A}_2 + Na₂ SO₄ = Ca SO₄ + 2 Na \bar{A} . From Na \bar{A} purified by heat, solution and crytallization + H₂ SO₄ comes

Acidum Aceticum—off. Ext. Colch. Rad. (used in all acetates,—very unstable salts).

Acidum Aceticum Dilutum.—Off. Aceta, Emp. Ammoniacy, Liq. Am. Acet., Syr. Allii, Syr. Scillæ.

From anhydrous Na \bar{A} + H₂ SO₄ comes Acidum Aceticum Glaciale (off.).

Distillate from No. 2 mixture contains methylic alcohol and acetone.

Add Ca Cl₂ and distill acetone.

Add residue (= Ca Cl₂ + CH₃ HO), to water, and distill methylic alcohol.

STARCHES.

The following list comprises those bodies whose virtue depends in whole or in part upon starch:

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Bot. Source.</i>	<i>Geog. Source.</i>
Acorns.		Genus Quercus.	Temp. Lat.
Arrowroot.		Maranta-auranti-nacea.	E. and W. I.
Barley, 66%.		Hordeum distichon.	Temp. Lat.
Beans, 33%.		Faba vulgaris. } Phaseolus " }	do.
Chestnuts and other edible nuts.		Castanea vesca, etc.	do.
Corn, 67%.		Zea Mays.	do.
Oats, 60%.		Avena Sativa.	do.
Divested of husks form groats.			
Peas, 37%.		Pisum sativum.	do.
Potatoes, 20%.		Solanum Tuberosa.	America.
Sweet Potatoes, 16%.		Convolvulus batatus.	Am. or E. I. (?)

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Bot. Source.</i>	<i>Geog. Source.</i>
Rye, 6½%.		Secale cereale.	Temp. Lat.
Rice, 88%.		Oryza sativa.	(?)
Sago.		Metroxylon Sagus.	
		Sagus Reumphü.	E. I.
Tapioca. }			
Cassava. }		Janipha Manihot.	S. A.
Manioc. }			
Wheat, 57%.	{ Amylum. Amylum Iodatum. Glyceritum Amyli.	Triticum vulgare.	Temp. Lat.

BODIES THAT CONTAIN STARCH IN NOTABLE QUANTITY.

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Bot. Source.</i>	<i>Geog. Source.</i>
Cacao Seeds.		Theobroma Cacao.	Brazil and Trop. Am.
Canary Seeds. }		Phalaris	Basin of Mediter-
Phalaris. }		canariensis.	ranean Sea.
Hemidesmus. }		Hemidesmus	India.
Indian Sarsap. }		indicus.	
Orris Root.		Iris Florentina.	So. Eu.
Wild Yam Root.		Dioscorea villosa.	U. S.

BODIES THAT CONTAIN INULIN IN NOTABLE QUANTITY.

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Bot. Source.</i>	<i>Geog. Source.</i>
Arnica Root.		Arnica montana.	Eu.
Artichoke Root, Jer.		Helianthus tuberosus.	Eu.
Burdock "	Lappa.	Lappa officinalis.	Eu. and N. A.
Chicory "		Cichorium intybus.	Eu., U. S.
Colchicum "	Colchici Radix. Ext., Fl. Ext., Vin.	Colchicum autumnale.	Eu.
Dahlia "		Dahlia variabilis.	Mexico.
Dandelion "	Taraxacum. Ext. and Fl. Ext.	Taraxacum Dens Leonis.	U. S.
Elecampane "	Inula.	Inula helenium.	No. Eu.

BODIES ALLIED TO STARCHES IN THEIR USES.

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Bot. Source.</i>	<i>Geog. Source.</i>
Salep.		Orchis mascula.	Eu. and As.
Irish Moss. }			
Carrageen. }	Chondrus.	Chondrus crispus.	W. Eu. and N. A.
Iceland Moss.	Cetraria Off. in Dec. Cetraria.	Cetraria islandica.	Iceland, etc.

MUCILAGINOUS DRUGS

Containing soluble gum known as *Arabic*, and to be a Mixture of oil and gum. Soluble gum known as *Desmodium*. Insoluble gum known as *Resin*, and modifications of same. These are employed as demulcents, as vehicles for the suspension of insoluble solids in liquids, and to separate fatty particles in emulsions.

REACTIONS OF ARABIC.

Soluble in its own weight of water. Insoluble in Alcohol, Ether and Oil. Ppt. from solution by Sol. Salts of Lead, Potassium Silicate, Alcohol, Etc. Gelatinized by Ferric Chloride and Boiling.

ACTION OF ARABIC.

Strong H_2SO_4 with heat, chars it.
Dilute H_2SO_4 with heat = mucic and galactonic acids = mucic acid.
Strong HNO_3 converts into mucic acid, with traces of oxalic, tartaric and saccharic acids.

ACTION OF GUMM.

Alkalies and alkali carbonates form soluble compounds.

REACTIONS OF GUMM.

Soluble in water, but on cold. Insoluble in Alcohol, Ether and Oil. Soluble in HNO_3 Dil., in HCl Dil., and in Liq. Ammon. Strong HNO_3 converts into mucic and oxalic acids.

Arabic acid = $C_{11}H_{11}O_{11}$. Dextrin and Saccharin $C_6H_{12}O_6$.

TABLE I. CONTAINING NAMES OF MODIFICATIONS.

Common Name.	Official Name.	Botanical Source.	Geog. Source.
Gum Arabic.	{ Acacia. Muri. and Syr.	Acacia vera, etc.	Asia, Africa, etc.
Blue weed.		Echium vulgare.	Europe.
Butterbean.		Butterbean officinale.	Levant.
Guaiac Tongue.		Cynopodium officinale.	Europe and U. S.
Largwort.		Pulsatilla officinale.	Europe.
Morshallow.	Althaea. Symp.	Althaea officinale.	Asia, Africa & Eu.
Leadwort.		Algeria glandulosa.	Texas, N. Mex. etc.
Orchid.		Hibiscus esculentus.	Africa.
Virginia Longwort.		Pulsatilla Virginia.	United States.

<i>Common Name</i>	<i>Official Name</i>	<i>Bot. Source</i>	<i>Geog. Source</i>
Barley		<i>Secale cereale</i>	Temp. Lat.
Flax		<i>Oriza sativa</i>	Id.
Rye		<i>Metroxylon Sagus</i>	
		<i>Sagae Rumphii</i>	E. I.
Yucca			
Corn		<i>Jacipos Manihot</i>	S. A.
Muslin			
Wheat	<i>Anglica</i> <i>Aegilum Loliatum</i> <i>Triticum vulgare</i>		Temp. Lat.

BODIES THAT CONTAIN STARCH IN NOTABLE QUANTITY.

<i>Common Name</i>	<i>Official Name</i>	<i>Bot. Source</i>	<i>Geog. Source</i>
Cassia Seed		<i>Theobroma Cacao</i>	Brill. and Trop. Am.
Peas		<i>Phaseolus</i>	Brill. of Mediter. Russia Sea.
Indian Corn		<i>Zea mays</i>	India
Indian Potato		<i>Solanum</i>	
Onion Root		<i>Allium Flacellum</i>	So. Eu.
Wild Yam Root		<i>Dioscorea villosa</i>	U. S.

BODIES THAT CONTAIN INSULIN IN NOTABLE QUANTITY.

<i>Common Name</i>	<i>Official Name</i>	<i>Bot. Source</i>	<i>Geog. Source</i>
Amara Root		<i>Arnica montana</i>	Eu.
Artichoke Root, Jer.		<i>Helianthus tuberosus</i>	Eu.
Barley	<i>Lappa</i>	<i>Lappa officinalis</i>	Eu. and N. A.
Chicory		<i>Cichorium intybus</i>	Eu., U. S.
Celery	<i>Celastrol Radix</i>	<i>Celastrol</i>	Eu.
	<i>Ext., Fl., Est., Vin.</i>	<i>celastrol</i>	
Dahlia		<i>Dahlia variabilis</i>	Mexico
Urtica	<i>Taraxacum</i>	<i>Taraxacum Dore</i>	U. S.
	<i>Ext. and Fl., Est.</i>	<i>Leonis</i>	
Elephant	<i>Insula</i>	<i>Insula belandica</i>	N. Eu.

BODIES ALLIED TO STARCHES IN THEIR USES.

<i>Common Name</i>	<i>Official Name</i>	<i>Bot. Source</i>	<i>Geog. Source</i>
Salep		<i>Orchis mascula</i>	Eu. and As.
Iris Moss	<i>Chondrus</i>	<i>Chondrus crispus</i>	W. Eu. and N. A.
Caragana			
Iceland Moss	<i>Cetraria Off. in</i> <i>Spec. Cetraria</i>	<i>Cetraria Islandica</i>	Iceland, etc.

MUCILAGINOUS DRUGS

Containing soluble gum known as *Arabin*, said to be a bigummate of calcium, Soluble gum known as Dextrine, Insoluble gum known as Bassorin, and modifications of same. Gums are employed as demulcents, as vehicles for the suspension of insoluble solids in mixtures, and to separate fatty particles in emulsions.

REACTIONS OF ARABIN.

Soluble in its own weight of water. Insoluble in Alcohol, Ether and Oils. Ppt. from solution by Sol. Subacet. Lead, Potassic Silicate, Alcohol, Ether. Gelatinized by Ferric Chloride and Borax.

ACTION OF ACIDS.

Strong H_2SO_4 , with heat, chars it.

Dilute H_2SO_4 , with heat = non-fermentable glucose = arabinose.

Strong HNO_3 , converts into mucic acid, with traces of oxalic, tartaric and saccharic acids.

ACTION OF ALKALIES.

Alkalies and alkaline earths form soluble compounds.

REACTIONS OF BASSORIN.

Swells in water, hot or cold. Insoluble in Alcohol, Ether and Oils. Soluble in HNO_3 Dil., in HCl Dil., and in Liq. Ammon. Strong HNO_3 converts into mucic and oxalic acids.

Arabic acid = $C_{12}H_{22}O_{11}$. Dextrin and Bassorin $C_6H_{10}O_5$.

TABLE 1, CONTAINING ARABIN OR MODIFICATIONS.

<i>Common Name.</i>	<i>Official Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Gum Arabic.	{ Acacia. Mucil. and Syr.	Acacia vera, etc.	Asia, Africa, etc.
Blue-weed.		Echium vulgare.	Europe.
Borage-root.		Borago officinale.	Levant.
Hound's Tongue.		Cynoglossum officinale.	Europe and U. S.
Lungwort.		Pulmonaria officinalis.	Europe.
Marshmallow Root and flowers.	Althœa. Syrup. (root).	Althea officinale.	Asia Minor & Eu.
Mezquite gum.		Algarobia glandulosa.	Texas, N. Mex. etc.
Okra, or Gombo capsules.		Hibiscus esculentus.	Africa.
Virginia Lungwort.		Pulmonaria Virginica.	United States.

TABLE 2, CONTAINING BASSORIN OR MODIFICATIONS.

<i>Common Name.</i>	<i>Officinal Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Bael fruit.		<i>Ægle marmalos.</i>	India.
Baobab.		<i>Adansonia digitata.</i>	Trop. Africa.
Bassora, or Kutera-gum.		Unknown.	Persia & Greece.
Benne leaves.		<i>Sesamum Indicum.</i>	India.
Bashew nut.		<i>Anacardium occidentale.</i>	Trop. America.
Comfrey root.		<i>Symphytum officinale.</i>	Europe.
Evening Primrose.		<i>Oenothera biennis.</i>	North America.
Flaxseed.	Linum.	<i>Linum usitatissimum.</i>	So. Europe.
Hog, or Doctor gum.		<i>Rhus metopium.</i>	So. America.
Jujube berries.		<i>Zizyphus vulgaris.</i>	Originally Asia Minor & Greece.
Quince seeds.	Cydonium(Muc).	<i>Cydonia vulgaris.</i>	Ditto.
Sassafras pith.	Sassafras medulla (Muc).	<i>Sassafras officinale.</i>	No. America.
Slippery Elm.	Ulmus (Muc).	<i>Ulmus fulva.</i>	United States.
Tragacanth.	Tragacantha (Muc).	<i>Astragalus verus.</i>	Asia Minor and Persia.

Gums are infusible, non-volatile, amorphous bodies, destitute of N., distinguished from resins by their softening in water and insolubility in alcohol; from starches by their softening in cold water; from sugars by being non-fermentable from simple exposure, and with HNO_3 forming mucic acid.

STARCH AND SUGAR.

STARCH.

Sp. gr. about 1.5. Insoluble in cold water, alcohol or ether. Soluble in hot water. Employed as a nutrient.

ACTION OF HEAT.

Dry heat $320-350^\circ \text{F.}$ = dextrine. Higher heat = C. , CO_2 , $\text{H}\bar{\text{A}}$. etc.

ACTION OF REAGENTS.

Ppt.* from solution by Ca 2HO , Ba 2HO , tannin, alcohol and Sol. Subacet. Lead.

Strong HNO_3 = Explosive $\text{C}_{12}\text{H}_{22}\text{O}_{21}$ (80% H_2O).

Weaker " = Oxalic acid. Still weaker = derivate.

HCl , H_2SO_4 , H_2O , H_2TA present in solution.

Strong H_2SO_4 derivatives, forming compounds and

Derivate H_2SO_4 + heat = glucose derivative.

Dry, strong alkalies = heat = oxalic acid.

Soluble in solutions of alkalies.

Turned blue by iodine. Grain, unfermented, slowly to granular, dried = malt (Obl. Maltum. Extractum Maltis). With dilute acids (malt change) to maltose (modification of glucose, $\text{C}_{12}\text{H}_{22}\text{O}_{21}$ (80% H_2O) = $\text{C}_6\text{H}_{12}\text{O}_6$).

Starch with malt and yeast, fermented, distilled = whiskey (Obl. Spiritus Frumenti).

Malt with hops and yeast = beer (Begravata, pott).)

NON-VARIETIES OF STARCH.

Jodine—Becomes derivate by long boiling with water. With iodine no action (or brown color). With dilute acids no action.

Fermentable, glycogen or animal starch, found in lower animals, and in certain varieties of the higher animals. + acids = glucose. + L no action.

SUGARS.

(a) Saccharose = $\text{C}_{12}\text{H}_{22}\text{O}_{21}$ (80% H_2O). (b) Glucose = $\text{C}_6\text{H}_{12}\text{O}_6$.

1. Cane Sugar. Saccharum. Obl. Sugar cane, roots, sugar cane.

2. Milk Sugar (Lactose). Sac. Lactis (Obl. From Milk whey).

3. Maltose from Eucalyptus.

4. Maltose—Lactin.

5. Trehalose—Syrian Manna.

6. Mucose—Ergot.

SOLUBILITIES AND REACTIONS OF CANE SUGAR. (a)

Sg. gr. 1-5. Sol. 4 weight of water, cold;—more in hot. Insol. in alcohol, ether and chloroform.

Strong H_2SO_4 = char. HNO_3 = oxalic and acetic acids.

Strong HCl —sugar and oxalic acids. Dilute mineral and vegetable acids + heat, change from unfermentable sugar to fermentable dextrose and levulose.

Weak alkalies little action. Stronger = saccharates. Dry, is not colored brown by dry alkalies.

Reduces alkaline solution of copper—slowly.

Ignorant of KClO_4 = Explosive. + Pt , O_2 takes for

TABLE 2. CONTAINING BASIS OR MODIFICATIONS.

<i>Common Name</i>	<i>Official Name</i>	<i>Botanical Source</i>	<i>Geog. Source</i>
Cast. leaf.		<i>Egle Marmelos</i>	India.
Labdan.		<i>Adansonia digitata</i>	Trop. Africa.
Resorcin. or Rastoragum.		Unknown.	Persia & Greece.
Dense leafy.		<i>Sesamum indicum</i>	India.
Resorcin. root.		<i>Amacandium occidentale</i>	Trop. America.
Castorey root.		<i>Symphitum officinale</i>	Europe.
Evening Primrose.		<i>Oenothera biennis</i>	North America.
Flaxseed.	Linum.	<i>Linum catharticum</i>	So. Europe.
Flag. or Doctor gum.		<i>Rhus copallina</i>	So. America.
Jelaba berries.		<i>Zoeplus vulgaris</i>	Originally Asia Minor & Greece.
Quince seeds.	<i>Cydonium</i> (Muc.)	<i>Cydonia vulgaris</i>	Ditto.
Sassafras root.	<i>Sassafrasmedulla</i> (Mac.)	<i>Sassafras officinale</i>	No. America.
Slippery Elm.	<i>Ulmus</i> (Muc.)	<i>Ulmus alba</i>	United States.
Tragacanth.	<i>Tragacantha</i> (Muc.)	<i>Astragalus verus</i>	Asia Minor and Persia.

Gums are indissoluble, non-volatile, amorphous bodies, destitute of N., distinguished from resins by their softening in water and insolubility in alcohol; from starches by their softening in cold water; from sugars by being non-fermentable from simple exposure, and with HNO_3 forming mucic acid.

STARCH AND SUGAR.

STARCH.

Sp. gr. about 1.5. Insoluble in cold water, alcohol or ether. Soluble in hot water. Employed as a nutrient.

ACTION OF HEAT.

Dry heat 320–350° F. — disintegrates. Higher heat — C , CO_2 , H_2O , etc.

ACTION OF REAGENTS.

Pptd from solution by Ca OH_2 , Ba OH_2 , ammonia, alcohol and Sol. Subacet. Lead.

Strong HNO_3 = Xylodin $\text{C}_{18} \text{H}_{27} (\text{NO}_2)_3 \text{O}_{15}$.

Weaker " = Oxalic acid. Still weaker = dextrin.

HCl , $\text{H}_2 \text{C}_2 \text{O}_4$, $\text{H}_2 \text{Tä}$, convert to glucose.

Strong $\text{H}_2 \text{SO}_4$, dissolves, forming compound acid.

Dilute $\text{H}_2 \text{SO}_4$ + heat = glucose (amylose).

Dry, strong alkalies + heat = oxalic acid.

Soluble in solutions of alkalies.

Turned blue by Iodine. Grain, moistened, allowed to germinate, dried = malt. (Off. Maltum. Extractum Malti.) With diastase (malt) starch changes to maltose (modification of glucose, $\text{C}_{12} \text{H}_{22} \text{O}_{11} \text{H}_2\text{O} = 2\text{C}_6 \text{H}_{12} \text{O}_6$).

Starch with malt and yeast, fermented, distilled, = whiskey (off. Spts. Frumenti).

Malt with hops and yeast = beer (lager, ale, porter).

SUB-VARIETIES OF STARCH.

Inulin.—Becomes dextrin by long boiling with water. With iodine no action (or brown color). With dilute acids = laevulose.

Paramylon, glycogen or animal starch, found in lower animals, and in certain viscera of the higher animals. + acids = glucose. + I. no action.

SUGARS.

(a) Saccharoses = $\text{C}_{12} \text{H}_{22} \text{O}_{11}$. (b) Glucoses = $\text{C}_6 \text{H}_{12} \text{O}_6$.

a 1. Cane Sugar. Saccharum (Off). Sugar cane, beets, maple, etc.

2. Milk Sugar (Lactose). Sac. Lactis (Off). From Milk-whey.

3. Melitose from Eucalyptus.

4. Melizitose — Larch.

5. Trehalose — Syrian Manna.

6. Mycose — Ergot.

SOLUBILITIES AND REACTIONS OF CANE SUGAR. (a)

Sp. gr. 1-6. Sol. $\frac{1}{2}$ weight of water, cold:—more in hot. Insol. in alcohol, ether and chloroform.

Strong $\text{H}_2 \text{SO}_4$ — chars. HNO_3 = oxalic and saccharic acids.

Strong HCl = ulmin and ulmic acids. Dilute mineral and vegetable acids + heat, change from unfermentable sugar to fermentable dextrose and laevulose.

Weak alkalies little action. Stronger = sucrates. Dry, is not colored brown by dry alkalies.

Reduces alkaline solution of copper — slowly.

Triturated + KClO_3 = explosive. + Pb. O_2 takes fire.

ACTION OF HEAT.

360–365° F. melts; cooled = invert sugar. Moistened, melted and cooled = *barley candy*.

400–420° F. parts with H_2O and becomes *caramel*.

Higher heat decomposes = inflammable gases, acetone, aldehyde, $H\bar{A}$., carbon, etc.

Ferments, changes to glucose,—then to alcohol.

Solution invert sugar (molasses, Syr. Fuscus) + yeast, fermented and distilled = rum.

For consideration of glucoses, see “Glucoses and Alcohols.”

GLUCOSES AND ALCOHOLS.

Glucose — $C_6 H_{12} O_6$ = Grape Sugar = Dextro-glucose.

1. Found native in sweet fruits, chestnuts, vegetable mould, urine, in liver and stomach during digestion, in honey, etc.

2. Laevulose — In honey, ripe fruit, etc., with glucose.

3. Sorbite — Mountain Ash.

4. Inosite — sugar of muscle.

SOLUBILITIES AND REACTIONS.

Freely soluble in water. Insoluble in alcohol. At 338° F. parts with H_2O and becomes $C_6 H_{10} O_5$ (Glucosan). Higher heat = caramel. H_2SO_4 , *does not char.* = Sulpho-saccharic acid. HNO_3 = Oxalic and saccharic acids.

Alkalies — *turn brown*. Reduces alkaline copper solution, *quickly*. Ferments change *at once* to alcohol.

Fruit juices fermented, yield wines. (Off. Vin. Album, Vin. Album Fortius, Vin. Rubrum.)

Wines distilled yield brandies. (Spts. Vini Gallici, off.)

ALCOHOLS.

Hydrocarbons less one or more atoms of H, plus one or more molecules of HO, hence hydroxides of organic bases.

Common Alcohol — from fermentation of sugars. $C_2 H_5 HO$ = Ethyl Hydroxide.

Methylic Alcohol — from dest. dist. of wood, etc. $CH_3 HO$ = Methyl Hydroxide.

Amylic Alcohol — from fermentation of starch sugar, etc. $C_5 H_{11} HO$ = Amyl Hydroxide.

Phenylic Alcohol — from dest. dist. coal, etc. $C_6 H_5 HO$ = Phenyl Hydroxide = Carbolic acid.

Propargylic Alcohol \rightarrow Propa (40% or \rightarrow glycerol, $C_3 H_7 2HO$ Propargylic Hydroxide.

FRACTIONS.

Primary Alcohols $+ O =$ aldehydes. Aldehydes $+ O =$ acids. (Ethyl alcohol $C_2 H_5 HO + O = H_2 O + C_2 H_5 O$ acetic aldehyd. $+ O = C_2 H_5 O_2 =$ acetic acid.)

Amylic Alcohol $+ O =$ amylic aldehyd. $+ O =$ amylic or caproic acid.

Primary Alcohols form 1. Ethers \rightarrow by replacing HO with O, as $(C_2 H_5)_2 O =$ common ether.

2. *Soloid ethers*, \rightarrow by replacing HO with halogens, as $C_2 H_5 Br =$ Hydrobromic Ether.

3. *Compound ethers*, \rightarrow by replacing HO with compound acid radicals, as $C_2 H_5 NO_2 =$ Nitrous Ether.

4. *Complex ethers*, \rightarrow by the acid radical replacing the HO from more than one alcohol radical, as $CH_3 C_2 H_5 O =$ methyl-ethyl ether.

ETHYLIC ALCOHOL.

$+ H_2 SO_4 =$ Ether and Ethereal oil. (Hofmann's anhydride.)

$+ HNO_3 =$ Nitrous Ether. (Sweet Syntex of Naps.)

$+ Cl$ and an alkali $(C_2 H_5 ClO_2) =$ Chloroform.

$+ I$ and an alkali $(C_2 H_5 IO_2) =$ Iodoform.

$+ Br$ and an alkali $=$ Bromoform.

$+ Cl$ (the alcohol alone) $=$ Chloral.

AMYLIC ALCOHOL.

$+ HNO_3 =$ Amyl Nitrite. $+ H_2 SO_4 + HNO_3 =$ Amyl Nitrate.

Propyl Alcohol $+ HNO_3 + H_2 SO_4 =$ Glucose or Neo-glucose.

TARTRATES, CITRATES AND MALATES.

Tartaric Acid, $H_2 C_4 H_4 O_6$ or $H_2 Ta$.

Source—Argols or crude tartar of wines, \rightarrow impure cream of tartar, \rightarrow potassic bitartrate, $KH Ta$. Purified by dissolving, decolorizing with clay and animal C., concentrating and crystallizing many times, freeing from $Ca Ta$ with HCl Dil., washing, adding $Ca CO_3 + Ca Cl_2$ to decompose $KH Ta$ and form $Ca Ta$, which is washed and decomposed with $H_2 SO_4$ as \rightarrow $Ca Ta + H_2 SO_4 \rightarrow Ca SO_4 + H_2 Ta$.

COMPOUNDS OF H. Ta.

$KH Ta + SbO = K SbO Ta$ —Anhydrous tartaric acid. Vial, Bal., Soc., Bell & Co.

ACTION OF HEAT.

355-357° F. melts; cooled -> invert sugar. Molten, melted and heated -> *single sugar*.

400-420° F. parts with H₂O and becomes *crystalline*.

Higher heat decomposition -> inflammable gases, carbon, aldehyde, H₂, carbon, etc.

Ferments, changes to glucose, -> then to alcohol.

Remains inert sugar molasses, Syr. Fucose + yeast, fermented and distilled -> rum.

For consideration of glucose, see "Glucose and Alcohol."

GLUCOSE AND ALCOHOLS.

Glucose - $C_6H_{12}O_6$ - Grape Sugar - Dextro-glucose.

1. Found native in sweet fruits, chestnuts, vegetable mudd, urine, in liver and stomach during digestion, in honey, etc.

2. Lactates - in honey, ripe fruit, etc., with glucose.

3. Ferments - Molasses, Ash.

4. Insulin - sugar of muscle.

SOLUBILITY AND REACTIONS.

Freshly soluble in water. Insoluble in alcohol. At 338° F. parts with H₂O and becomes $C_6H_{12}O_6$ (Glucose). Higher heat -> caramel. H₂SO₄ dist. not clear -> Sulphosaccharic acid. HNO₃ -> Oxalic and saccharic acids.

Alkalies -> *turn brown*. Reduces alkaline copper solution, *gradually*. Ferments change of *color* to alcohol.

Fruit juices fermented, yield wines. (Oil, Vin. Aëre, Vin. Album Ferme, Vin. Rubrum.)

Wines distilled yield brandies. (Spts. Vin. Cœli, oil.)

ALCOHOLS.

Hydrocarbons less one or more atoms of H, plus one or more molecules of HO, hence hydroxides of organic bases.

Common Alcohol -> from fermentation of sugars. C_2H_5HO - Ethyl Hydroxide.

Methyl Alcohol -> from dist. of wood, etc. CH_3HO - Methyl Hydroxide.

Amylic Alcohol -> from fermentation of starch sugar, etc. $C_5H_{11}HO$ - Amyl Hydroxide.

Phenyl Alcohol -> from dist. of oil, etc. C_6H_5HO - Phenyl Hydroxide - Carbinic acid.

Propenyl Alcohol — from fats, etc = glycerine. $C_3 H_5 3HO$ Propenyl Hydroxide.

REACTIONS.

Primary Alcohols + O = aldehydes. Aldehydes + O = acids. (Ethylic alcohol $C_2 H_5 HO + O = H_2 O + C_2 H_4 O$ = acetic aldehyd. + O = $C_2 H_4 O_2$ = acetic acid.)

Amylic Alcohol + O = amylic aldehyd, + O = amylic or valerianic acid.

Primary Alcohols form 1. Oxyethers; — by replacing HO with O, as $(C_2 H_5)_2 O$ = *common ether*.

2. *Haloid ethers*; — by replacing HO with halogens, as $C_2 H_5 Br.$ = Hydrobromic Ether.

3. *Compound ethers*; — by replacing HO with compound acid radicals, as $C_2 H_5 NO_2$ = Nitrous Ether.

4. *Complex ethers*; — by the acid radical replacing the HO from more than one alcohol radical, as $CH_3, C_2 H_5 O$ = methyl, ethyl ether.

ETHYLIC ALCOHOL.

+ $H_2 SO_4$ = Ether and Etherial oil. (Hoffman's anodyne.)

+ HNO_3 = Nitrous Ether. (Sweet Spirits of Nitre.)

+ Cl. and an alkali ($CaHClO_2$) = Chloroform.

+ I. and an alkali ($K HCO_3$) = Iodoform.

+ Br. and an alkali = Bromoform.

+ Cl (the alcohol absolute) = Chloral.

AMYLIC ALCOHOL.

+ HNO_3 = Amyl Nitrite. + $H_2 SO_4 + HNO_3$ = Amyl Nitrate. Propenyl Alcohol + $HNO_3 + H_2 SO_4$ = Glonoin or Nitoglycerin.

TARTRATES, CITRATES AND MALATES.

Tartaric Acid. — $H_2 C_4 H_4 O_6$ or $H_2 T\bar{a}$.

Source—Argols or crude tartar of wines, — impure cream of tartar, — potassic bitartrate, $KH T\bar{a}$. Purified by dissolving, decolorizing with clay and animal C., concentrating and crystallizing many times, freeing from $Ca T\bar{a}$ with HCl Dil., washing, adding $Ca CO_3 + Ca Cl_2$ to decompose $KH T\bar{a}$ and form $Ca T\bar{a}$, which is washed and decomposed with $H_2 SO_4$ as—
 $Ca T\bar{a} + H_2 SO_4 = Ca SO_4 + H_2 T\bar{a}$.

COMPOUNDS OF $H_2 T\bar{a}$.

$KH T\bar{a} + SbO = K SbO T\bar{a}$ —Anhydrous tartar emetic. Vin. Ant., Syr. Scillæ Co.

$6 \text{ KH Tā} + \text{Fe}_2 6\text{HO} = 6 \text{ H}_2 \text{ O} + \text{K}_6 \text{ Fe}_2 6 \text{ Tā} (?)$ Ferri et Potassii Tartras.

$2 \text{ KH Tā} + \text{K}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ K}_2 \text{ Tā}$. Potassii Tartras.

$2 \text{ KH Tā} + \text{Na}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ K Na Tā}$, Rochelle Salts, Potassii et Sodii Tartras.

KH Tā 65 parts, Pulv. Jalap. 35 parts = Pulv. Jalapæ Comp.

$2 \text{ H}_2 \text{ Tā} + \text{Am}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ Am. H Tā}$. Ammon Bitart.

$4 \text{ Am. H Tā} + \text{Fe}_2 6\text{HO} = 4 \text{ H}_2 \text{ O} + 2 \text{ Am. HO} + \text{Fe}_2 \text{ Am}_2 4 \text{ Tā}$. Ferri et Ammonii Tartras.

$\text{H}_2 \text{ Tā}$ (1-7 Gms.) + NaHCO_3 (2 Gms.) = Soda Powders. *Not Off.*

$\text{H}_2 \text{ Tā}$ (2-25 Gms.) + NaHCO_3 (2-58 Gms.) + Na K Tā (7-75 Gms.) = Seidlitz Powders, Pulv. Effervescens Compositus.

Citric Acid.— $\text{H}_3 \text{ C}_6 \text{ H}_5 \text{ O}_7$ or $\text{H}_3 \text{ C}_i$.

Source—Juice of limes, tamarinds, lemons, citrons, etc. Lemon juice (off.) contains 7-11% $\text{H}_3 \text{ C}_i$. Mist. Potassii Citratis. Syrupus Limonis.

Lime juice—commercial source of $\text{H}_3 \text{ C}_i$. Clarified by boiling, neutralized + Ca CO_3 + Ca (HO)_2 , boiled, strained hot, the $\text{Ca}_3 2 \text{ C}_i$ washed with hot water and decomposed with $\text{H}_2 \text{ SO}_4$.

$\text{Ca}_3 2 \text{ C}_i + 3 \text{ H}_2 \text{ SO}_4 = 3 \text{ Ca SO}_4 + 2 \text{ H}_3 \text{ C}_i$ —Citric acid.

$2 \text{ H}_3 \text{ C}_i + \text{Fe}_2 6 \text{ HO} = 6 \text{ H}_2 \text{ O}, 2 \text{ Fe C}_i$ Ferri Citras. Liquor Ferri Citratis.

$\text{Sol. Fe C}_i + \text{Am HO} = \text{Ferri et Ammonii Citras}$.

Ferri et Am. Cit. 98 parts, Strychnine 1 part and $\text{H}_3 \text{ C}_i$ 1 part = Ferri et Strychninæ Citras.

65 Am. et Fe. Cit., 12 Quinine, 28 $\text{H}_3 \text{ C}_i$, 30 Alc., $\text{H}_2 \text{ O}$ q.s. = Liquor Ferri et Quininæ Citratis.

Ferri Cit. 88, Quinine 12, $\text{H}_2 \text{ O}$ q. s. = Ferri et Quininæ Citras.

$\text{H}_3 \text{ C}_i + 3 \text{ KH CO}_3 = \text{K}_3 \text{ C}_i$ (Potassii Citras). (Liquor Potassii Citratis) + $3 \text{ CO}_2 + 3 \text{ H}_2 \text{ O}$.

$2 \text{ H}_3 \text{ C}_i + 3 \text{ Li}_2 \text{ CO}_3 = 3 \text{ CO}_2 + 3 \text{ H}_2 \text{ O} + 2 \text{ Li}_3 \text{ C}_i$ —Lithii Citras,

13 Mag. Carb., 26 $\text{H}_3 \text{ C}_i$, 80 Syr. Acid Cit., 2 KHCO_3 , $\text{H}_2 \text{ O}$ q.s. = Liquor Magnesii Citratis.

11 Mag. Carb., + 48 $\text{H}_3 \text{ C}_i$, + 37 Na HCO_3 , + 8 No. 60 Sugar, + Alc. q.s. and $\text{H}_2 \text{ O}$ q.s. = Magnesii Citras Granulatus.

$\text{H}_3 \text{ C}_i + \text{Bi ONO}_3 = \text{HNO}_3 + \text{H}_2 \text{ O} + \text{Bi C}_i = \text{Bismuthi Citras}$.

$\text{Bi C}_i + \text{Am. HO} = \text{Bismuthi et Ammonii Citras}$.

8 $\text{H}_3 \text{ C}_i$, 8 $\text{H}_2 \text{ O}$, 4 Spts. Limonis, 980 Syr. = Syrupus Acidi Citrici.

Malic Acid.— $\text{H}_3 \text{ C}_4 \text{ H}_5 \text{ O}_5$ — $\text{H}_3 \text{ Mā}$.

Source—Juice of apples, gooseberries, *rhubarb* stalks, etc.

$\text{Pb}_3 2 \text{ Mā}$ insoluble in Am. HO, $\text{Pb}_3 2 \text{ C}_i$ and Pb Tā soluble.

$\text{Ca}_3 \text{ C}_i$ insoluble in KHO, Ca Tā soluble in KHO.

VOLATILE OILS.

Mostly liquids lighter than water, odorless, volatile. Misc. with water; little soluble in water, soluble in strong alcohol, ether, chloroform, benzole and fixed oils. Carminatives and stimulants.

Those marked Ag. are official in Aqua; Sp. in Symplicia; Tr. in Trochisci; Ph. in Phlegma.

CLASS I. TERPENEES $C_{10}H_{16}$ ROLLY & ELWORTH.

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
Oil of Amber.	Oleum Succini.	Fossil resin, Amber.	So. E. Eu.
" Bergamot.	" Bergamot. Spt. Odoratus.	Citrus Bergamia.	So. Italy.
" Bitter Orange. Bigarade. Seville.	" Auranti Com- pola.	Citrus Virgata. Amara (peel).	So. Eu. W. I. & C.
" Sweet Orange. Portugal.	Elix. Aur. Spt. Au. Spt. Myrcia.	Citrus Aurantium (peel).	So.
" Neroli. Orange Flowers.	" Auranti Florum. Spt. Odoratus.	Flowers of both named var. O.	So.
" Black Pepper.		Piper nigrum (fruits).	Tropics.
" Capilla.	" Capilla.	By dist. from Caps. Yu with N. O.	S. A.
" Cajuput.	" Cajuput.	Melaleuca Cajuputi (leaves).	E. I. C. & H. F. O.
" Cajeuba.	" Cajeuba.	Cajuputi officinale (leaves & fruits).	E. I.
" Fu.		Alnus incana.	N. A.
" Galbanum.		Galbanum—gum resin, from Ficus galbanifera.	No. India.
" Hemlock. Spruce.		Abies canadensis (branches).	U. S.
" Juniper.	" Juniperi. Sp. & Co. Sp.	Juniperus communis (berries).	N. A. and Eu.
" Lavender.	" Lavandula. Tr. Lav. Co.	Lav. vera. (flowers and plant).	Eng. France.
" Lavender Flowers.	" Lavandula Florum. Spt. Lavand. Odoratus. " Ammon. Arô.	Pross Lavender.	"
" Lemon.	" Limonis. Sp. Am. Arô. Spt. Odoratus.	Citrus Limonum.	So. Eu.

$6 \text{ KH Ta} + \text{Fe}_2 6\text{HO} = 4 \text{ H}_2 \text{ O} + \text{Fe}_2 6\text{Ta}$ Ferri et Potassi Tartar.

$2 \text{ KH Ta} + \text{K}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ K Ta}$ Potassi Tartar.

$2 \text{ KH Ta} + \text{Na}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ K Na Ta}$ Rochelle Salts, Potassi et Sodu Tartar.

KH Ta 60 parts, Pulv. Jalap. 35 parts = Pulv. Jalapic Comp.

$2 \text{ H}_2 \text{ Ta} + \text{Am}_2 \text{ CO}_3 = \text{H}_2 \text{ O} + \text{CO}_2 + 2 \text{ Am. H Ta}$ Ammon Bitart.

$4 \text{ Am. H. Ta} + \text{Fe}_2 6\text{HO} = 4 \text{ H}_2 \text{ O} + 2 \text{ Am. HO} + \text{Fe}_2 \text{ Am}_2 4 \text{ Ta}$ Ferri et Ammonii Tartar.

$\text{H}_2 \text{ Ta}$ (1-4 Gms.) + NaHCO_3 (2 Gms.) = Soda Powders. *Not Off.*

$\text{H}_2 \text{ Ta}$ (2-35 Gms.) + NaHCO_3 (2-75 Gms.) + Na K Ta (1-75 Gms.) = Saline Powders, Pulv. Effervescent Composita.

Chlor. Acid.— $\text{H}_2 \text{ C}_2 \text{ H}_2 \text{ O}_4$ or $\text{H}_2 \text{ Cl}$.

Source—Juice of limes, tamarinds, lemons, citrons, etc. Lemon juice (off.) contains 7-11% $\text{H}_2 \text{ Cl}$. Mist. Potassi Citrat. Syrupus Limonic.

Drug Juice—commercial source of $\text{H}_2 \text{ Cl}$. Clarified by boiling, neutralized + Ca CO_3 + Ca (HCl) boiled, washed hot, the $\text{Ca}_2 2 \text{ Cl}$ washed with hot water and decomposed with $\text{H}_2 \text{ SO}_4$.

$\text{Ca}_2 2 \text{ Cl} + 3 \text{ H}_2 \text{ SO}_4 = 3 \text{ Ca SO}_4 + 2 \text{ H}_2 \text{ Cl}$ —Citric acid.

$2 \text{ H}_2 \text{ Cl} + \text{Fe}_2 6 \text{ HO} = 4 \text{ H}_2 \text{ O} + 2 \text{ Fe Cl}$ Ferri Citras. Liquor Ferri Citrat.

Sol. $\text{Fe Cl} + \text{Am HO} = \text{Ferri et Ammonii Citras}$.

Ferri et Am. Cit. 35 parts, Strychnine 1 part and $\text{H}_2 \text{ Cl}$ 1 part = Ferri et Strychnine Citras.

65 Am. et Fe Cl , 12 Quinine, 28 $\text{H}_2 \text{ Cl}$, 30 Alc. $\text{H}_2 \text{ O}$ q.s. = Liquor Ferri et Quinine Citrat.

Ferri Cit. 80, Quinine 12, $\text{H}_2 \text{ O}$ q.s. = Ferri et Quinine Citras.

$\text{H}_2 \text{ Cl} + 2 \text{ KH CO}_3 = \text{K}_2 \text{ Cl}$ (Potassi Citras). (Liquor Potassi Citrat) + $2 \text{ CO}_2 + 2 \text{ H}_2 \text{ O}$.

$2 \text{ H}_2 \text{ Cl} + 3 \text{ Li}_2 \text{ CO}_3 = 2 \text{ CO}_2 + 3 \text{ H}_2 \text{ O} + 2 \text{ Li}_2 \text{ Cl}$ —Lithi Citras.

15 Mag. Carb., 15 $\text{H}_2 \text{ Cl}$, 80 Sp. Add $\text{Ca}_2 2 \text{ KHCO}_3$, $\text{H}_2 \text{ O}$ q.s. = Liquor Magnesi Citrat.

11 Mag. Carb., + 40 $\text{H}_2 \text{ Cl}$ + 37 Na HCO_3 + 5 No. 33 Sugar + Alc. q.s. and $\text{H}_2 \text{ O}$ q.s. = Magnesi Citras Granulata.

$\text{H}_2 \text{ Cl} + \text{BiONO}_3 = \text{HNO}_3 + \text{H}_2 \text{ O} + \text{Bi Cl}$ —Bismuthi Citras.

$\text{Bi Cl} + \text{Am. HO} = \text{Bismuthi et Ammonii Citras}$.

8 $\text{H}_2 \text{ Cl}$, 8 $\text{H}_2 \text{ O}$, 4 Spts. Lincoln, 99 Spts. = Syrupus Acidi Citrici.

Malic Acid.— $\text{H}_2 \text{ C}_4 \text{ H}_2 \text{ O}_5$ — $\text{H}_2 \text{ Ma}$.

Source—Juice of apples, gooseberries, *chamisso* stalks, etc.

$\text{Pb}_2 2 \text{ Ma}$ insoluble in Am. HO, $\text{Pb}_2 2 \text{ Cl}$ and Pb Ta soluble.

$\text{Ca}_2 \text{ Cl}$ insoluble in KHCO_3 , Ca Ta soluble in KHO .

VOLATILE OILS.

Mostly liquids lighter than water, odorous, volatile, distil with water, little soluble in water, soluble in strong alcohol, ether, chloroform, benzole and fixed oils. Carminatives and stimulants.

Those marked Aq. are officinal in Aquæ; Sp. in Spiritus; Tr. in Trochisci; Pil. in Pilulæ.

CLASS 1. TERPENES. $C_{10}H_{16}$. BINARY (2 ELEMENTS).

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Amber.	Oleum Succini.	Fossil resin,—Amber	So. E. Eu.
“ Bergamot.	“ Bergamii. Spt.Odoratus	Citrus Bergamia.	do. Italy.
“ Bitter Orange. Bigarade. Seville.	“ Aurantii Cor- ticis. Elix.Au., Spts. Au. Spts.Myrciæ.	Citrus Vulgaris, Amara (peel).	So.Eu., W.I.&c.
“ Sweet Orange. Portugal “			
		Citrus Aurantium (peel).	do.
“ Neroli. Orange Flowers.	“ Aurantii Florum. Spts.Odoratus.	Flowers of both named var. O.	do.
“ Black Pepper.		Piper nigrum (fruit).	Tropics.
“ Copaiba.	“ Copaibæ.	By dist.from Copai- ba with H_2O .	S. A.
“ Cajeput.	“ Cajuputi.	Melaleuca Cajuputi (leaves).	E. I. $C_{10}H_{16}$ H_2O .
“ Cubebs.	“ Cubebæ.	Cubeba officinalis (unripe fruit).	E. I.
“ Fir.		Abies balsamea.	N. A.
“ Galbanum.		Galbanum—gum- resin, from Ferula galbaniflua.	No. Persia.
“ Hemlock. Spruce.		Abies canadensis (branches).	U. S.
“ Juniper.	“ Juniperi. Sp.&Co.Sp.	Juniperus commu- nis (berries).	N. A. and Eu.
“ Lavender.	“ Lavandulæ. Tr.Lav.Co.	Lav. vera. (flowers and plant).	Eng., France.
“ Lavender Flowers.	“ Lavandulæ Florum. Spts. Lavand. “ Odoratus. “ Ammon.Aro.	Fresh Lavender.	“ “
“ Lemon.	“ Limonis. Sp. Am. Aro. Spts. Odoratus.	Citrus Limonem.	So. Eu.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Sage.	Oleum	Salvia officinalis.	Eu. and U. S.
" Savin.	" Sabinæ.	Juniperus sabina (branches).	" "
" Turpentine,	" Terebinthinæ Lin. Canth. Lin. Tereb.	From Pines.	" "

CLASS 2. OXYGENATED. ($C_{10}H_{16}$ OXYDIZED?) TERNARY.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Anise.	Oleum Anisi. Aq., Sp., Tr. Opii Camph.	Seeds of Pimpinella anisum and Illicium anisatum.	So. and Cen. Eu., E. Asia. $C_{10}H_{16}$ & anethol $C_{10}H_{12}O$.
" Arbor Vitæ. White Cedar (Thujæ).		Thuja occidentalis (branches).	N. A.
" Bay. Wild Clove. } " Cin'amon. }	" Myrciæ. Spts. Myrciæ.	Myrcia acris (leaves).	W. I. and Venezuela. Like Oil Cloves.
" Bayberries.		Laurus nobilis.	Lavant.
" Camphor.		Camph. officinarum.	E. I.
" Canada Erigeron.	" Erigerontis.	Erig. Canadense (flowering herb).	U. S.
" Caraway.	" Cari. Sp. Junip. Co.	Carum carui (seed).	Temp. Lat. $C_{10}H_{16}$ Carvene $C_{10}H_{14}O$ Carvol.
" Cassia.	" Cinnamomi. Aq., Sp.	Cinnamomum aromaticum (Cassia-bark).	China, etc.
" Cinnamon.	" Cinnamomi. Aq. and Sp.	Cin. zeylanicum (Ceylon cin.-bark).	Ceylon.
" Cloves.	" Caryophylli.	Eugenia caryophyllata (flower buds).	E. I. (Eugenic Acid or Eugenol $C_{10}H_{12}O_2$ Ter- pene $C_{10}H_{16}$.)
" Coriander.	" Coriandri.	Seeds of Coriandrum sativum.	Temp. Lat.
" Dill (anethi).		Anethum graveolens (fruit).	So. Eu. Asia Minor.
" Eucalyptus.	" Eucalypti.	Eucal. globulus (leaves).	Australia. Tasmania.
" Fennel.	" Fœniculi. Aq. and Sp. Jun. Co.	Fœniculum vulgare (fruit).	So. Eu. (com- position like Anise).

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Caranum.			
Rose Geranium		<i>Andropogon scho-</i>	India (some what
Roshe or		<i>andropogon</i>	like oil of rose).
Rose Oil			
Cinger-			
gram			
Citronella		<i>Andropogon</i>	India.
		(do.)	
Leaves			
Geranium			
Verbena		<i>Andropogon</i>	India.
Indian Me-		(do.)	
lissa			
Ginger.		<i>Zingiber officinale</i>	Asia, Af., W. I. (C ₁₅ H ₁₅ R ₂ O)
Hedera	Olum Hederae.	<i>Hedera pulegio-</i>	U. S.
Panayrol.		ides (herb).	
Hedera		<i>Morinda pinnata</i>	U. S.
		(herb).	H. C. & Taymoh.
Hysop.		<i>Hysopus officinalis</i>	So. Ea.
Levant.		(herb).	
Wormwood.		<i>Santolina -</i> under-	Asia.
		panked flowers of	
		<i>Antennaria rina.</i>	
Myrrh.		<i>Balanocedron</i>	So. Arabia.
		myrrh.	
Oreganum		<i>Oreganum vulgare</i>	Asia, Ea., U. S.
Sweet Marjo-			
rum.			
Peppermint.	<div> Menthac. Piperita. Aq. Sp. Troch. Pl. Rhel. Co. </div>	<div> <i>Mentha Peppita</i> (herb). </div>	<div> C. S. (Menthol or menthyl) C₁₀ H₁₆ O & C₁₁ H₁₈ China (Menthol). </div>
Chinese.			
Pimenta	Pimenta.	<i>Eugenia pimenta</i>	W. I., Ea. & So.
Allspice.	Spts. Myrica. " Arctost. Asia	(fruit).	Am. (Like oil cloves.)
Red Cedar.		<i>Juniperus Virginiana</i>	N. A.
Rose.	Rosa.	<i>Rosa damascena</i>	Turkey.
Rosemary.	Rosmarini. Lia. Saponia. Spts. Odoratus. Tr. Lac. Co.	<i>Rosmarinus offic-</i> nalis (tops).	So. France, Italy.
Rue.	Ruta.	<i>Ruta graveolens</i>	So. Ea.
		(herb).	
Wormwood.		<i>American chameli-</i>	So. Af., Ea., U. S.
		um (herb).	

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Sage	Oleum	<i>Salvia officinalis</i>	So. and U. S.
"Sassa.	"Sassapar.	<i>Juniperus sibirica</i> (branches)	" "
"Turpentine	"Terebinthina	From Pines. Lin. Canth. Lin. Tereb.	" "

CLASS 2. OXYGENATED. ($C_{15}H_{11}O$ OXYDIZED) TERPENE.

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Anise	Oleum Anisi.	Seeds of <i>Pimpinella anisum</i> and Tr. Grd. Camph. <i>Volcanum insula</i>	So. and Cen. So. E. Asia $C_{15}H_{11}O$ method $C_{15}H_{11}O$
"Arbores. Vio.		<i>Thuja occidentalis</i> (branches)	N. A.
"Roe. Wild Clove	Myrdin.	<i>Myrica xyle</i> (leaves)	W. I. and Venezuela.
"Carum.	Sp. Myrdin.		Like Oil Clove
"Bayberry.		<i>Laurus nobilis</i>	Lavani.
"Camphor.		<i>Camphor officinarum</i>	E. I.
"Canada Erigeron.	"Erigeron.	<i>Erig. Canadense</i> (flowering herb)	U. S.
"Caraway.	"Car.	<i>Carum carvi</i> (seed)	Temp. Lat. $C_{15}H_{11}O$ Carvene $C_{15}H_{11}O$ Carvol.
"Cassia.	"Cinnamom.	<i>Cinnamomum aromaticum</i> (Cassia-bark)	China, etc.
"Cinnamon.	"Cinnamom.	<i>Cin. zeylanicum</i> (Ceylon cin. bark)	Ceylon.
"Cloves.	"Caryophyll.	<i>Eugenia caryophyll.</i> (flower buds)	E. I. (Eugenic Acid or Eugenol $C_{15}H_{11}O$ $H_{11}O$ Terpene $C_{15}H_{11}O$)
"Coriander.	"Coriandri.	Seeds of <i>Coriandrum sativum</i>	Temp. Lat.
"Dill (aneth).		<i>Anethum graveolens</i> (fruit)	So. En. Asia Minor.
"Eucalyptus.	"Eucalypt.	<i>Eucal. globulus</i> (leaves)	Australia. Tasmania.
"Fennel.	"Foeniculi.	<i>Foeniculum vulgare</i> (fruit)	So. En. (com- position like Anise).

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Geranium. } Rose Gera- nium. } Roshe or Rose Oil. } Ginger- grass. }		Andropogon schœ- nanthus (grass).	India (somewhat like oil of rose).
" Citronella.		Androp. nardus (do.).	India.
" Lemon Grass. } Verbena. } Indian Me- lissa. }		Androp. citratus (do.).	(do.)
" Ginger.		Zingiberis officinalis	Asia, Af., W. I. (C ₁₀ H ₁₆ H ₂ O.)
" Hedeoma. Pennyroyal.	Oleum Hedeomæ.	Hedeoma pulegio- ides (herb).	U. S.
" Horsemint.		Monarda punctata (herb).	U. S. H. C. & Thymol.
" Hyssop. Levant.		Hyssopus officinalis (herb).	So. Eu.
" Wormseed.		Santonica — unex- panded flowers of Artemisia cina.	Asia.
" Myrrh.		Balsamodendron myrrha.	So. Arabia.
" Origanum. Sweet Marjo- ram.		Origanum vulgare.	Asia, Eu., U. S.
" Peppermint.	{ Menthæ. Piperitæ. Aq. Sp. Troch. Pil. Rhei. Co.	Mentha Peperita (herb).	U. S. (Menthol ormintcamphor. C ₁₀ H ₂₀ O & C ₁₀ H ₁₈).
" " Chinese.			China (Menthol).
" Pimento. Allspice.	" Pimentæ. Spts. Myrciæ. " Ammon. Aro.	Eugenia pimenta (fruit).	W. I., Cen. & So. Am. (Like oil cloves.)
" Red Cedar.		Juniperus virginiana	N. A.
" Rose.	" Rosæ.	Rosa damascena.	Turkey.
" Rosemary.	" Rosmarina. Lin. Saponis. Spts. Odoratus. Tr. Lav. Co.	Rosmarinus offici- nalis (tops).	So. France, Italy.
" Rue.	" Rutæ.	Ruta graveolens (herb).	So. Eu.
" Wormwood.		Artemisia absinth- ium (herb).	No. Af., Eu., U. S.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Wormseed.	Oleum Chenopodii.	Chenopodium anthelminticum (fruit)	U. S.
" Jaborandi.		Pilocarpus pennatifolius.	So. Am. (contains C ₁₀ H ₁₆ , &c.)
" Nutmeg.	" Myristicæ. Spts. "	Kernels of fruit of Myristica fragrans.	E. & W. I., S. A. & c. (do.)
" Parsley.		Petroselinum sativum (root & seed).	So. Eu. (do.)
" Sassafras.	" Sassafras. Tro. Cubeb.	Sassafras officinale (roots).	No. Am. (do.)
" Spearmint.	" Menthæ Viridis. Aq. Sp.	Mentha viridis (herb).	U. S. (do.)
" Thyme.	" Thymi.	Thymus vulgaris.	Eu. (do. & thymol)

CLASS 3. PRODUCED BY REACTIONS. COMPLEX.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Birch.		Betula lenta.	U. S. (Like gaultheria.)
" Bitter Almonds.	Oleum Amygdalæ Amaræ. Aq.	Amygdalus communis (Amara) (fruit).	W. Asia.
" Gaultheria. Wintergreen. Checkerberry }	Oleum Gaultheriæ. Tro. Morph. et Ipec. Spts. Gaulth.	Gaultheria procumbens.	U. S.
" Mustard.	Oleum Sinapis Volatile. Lin. Sinapis Comp.	Sinapis nigra.	Eu., As., U. S.

CLASS 4. SULPHURETTED OILS. (POLYNARY.)

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Assafoetida.		Assafoetida (Gum resin from Ferula narthex).	Asia.
" Garlic.		Allium sativum (bulb).	Temp. climes.
" Mustard.	Ol. Sinapis Volatile. Lin. Sinapis Comp.	Sinapis nigra (seed).	Eu., Asia, U. S.
" Armoracia. Horse Radish.		Cochlearia armoracia (root).	Eu. and N. Am.
" Reseda. Mignonette.		Reseda odorata (root).	Eu. and U. S.

UNCLASSIFIED.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Ammoniac.		Ammoniac (Gum-resin from Dorema ammoniacum).	Persia, Tartary.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Canada.		<i>Asarum canadense</i> (root).	N. A.
Snake-root.			
Wild Ginger.			
" Camphor.		<i>Ascaridacampa</i> (root).	So. Asia, N. A.
" Sweetflag.			
" Cassia.		<i>Cassia corymbosa</i> (root).	Egypt, So. Ea.
" Sassafras.	Oilum Santali.	<i>Santalum album</i> (wood).	So. India and E. I.
" Valerian.	" Valeriana.	<i>Valeriana officinalis</i> (root).	Ea. and U. S.

The following drugs depend principally upon volatile oils for medicinal action. They are best used in infusion. They may be made into E. exts. by reprecipitation. Alcoholic menstrua.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Horse Balm.		<i>Cedronella canadensis</i> (herb).	N. A.
Buchu.	Buchu. Pl. E. A.	<i>Hartwegia betulina</i> , <i>H. crenolata</i> , <i>H. parvifolia</i> (leaves).	So. Af.
Summer Savory.		<i>Satureia hortensis</i> .	So. Ea.
Yerba Buena.		<i>Monarda Douglasii</i> .	Cal., Utah.
Masterwort.		<i>Imperatoria nigrifolia</i> .	So. and Cen. Ea.
Oris root.		<i>Iris Flo. (root)</i> .	Ea.
(Langel.		<i>Laurus nobilis</i> .	Ea.
(Sweet Bay.		<i>Cassia and Indica</i> .	
(Water Cream.		<i>Nasturtium offic.</i>	Ea., Asia, Am.
(Nasturtium.		<i>isole (plant)</i> .	
Elder-blossoms.	Sambucus.	<i>Samb. canadensis</i> .	N. Am.
Goldasterod.		<i>Koeleria alba</i> .	N. S.
Tansy.	Tanacetum.	<i>Tanacet. vulgare</i> .	U. S.

REACTIONARY DRUGS.

CLASS L. PRODUCING H. CY. BY REACTION BETWEEN AMYGDALIN AND KUTLERIN.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Bitter Almonds.	<i>Amygdala Amara</i> .	<i>Amygdalus com-</i>	Ea., W. Ea.
(Comp. Am. and Eff.)	Oil in Syr. Am.	<i>munis (amaru)</i> .	

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Wormseed	Oleum Chenopodii	Chenopodium anthelminticum (fruit)	E. S.
" Jalapine	"	Phacelia pumila (seeds)	So. Am. (do.)
" Mustard	" Myristica Spts."	Kernels of fruit of E. & W. I. S. A. S.	(do.)
" Radish	"	Petroelinum sativum (root & seed)	So. Eu. (do.)
" Sassafras	" Sassafras Tea, Cuba	Sassafras officinale (root)	No. Am. (do.)
" Spearmint	" Mentha Viridis Aq. Sp.	Mentha viridis (herb)	U. S. (do.)
" Thyme	" Thym. "	Thymus vulgaris	Eu. (do. & S. Am.)

CLASS 3. PRODUCED BY REACTIONS. COMPLEX.

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Birch	"	Betula lenta	U. S. (Like Gaultheria)
" Bitter Almonds	Oleum Amygdali Amara Aq.	Amygdalus communis (Almonds) (fruit)	W. Asia
" Gaultheria Wintergreen Checkerberry	Oleum Gaultheria Tro. Marsh. et Ipec. Spts. Gaulth.	Gaultheria procumbens	U. S.
" Mustard	Oleum Sinapis Volatile. Lin. Sinapis Comp.	Sinapis nigra	Eu., As., U. S.

CLASS 4. SULPHURETTED OILS. (POLYMER)

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Asafetida	"	Asafetida (Gum resin from Ferula purpurea)	Asia
" Garlic	"	Allium sativum (bulb)	Temp. climate
" Mustard	Oil Sinapis Volatile. Lin. Sinapis Comp.	Sinapis nigra (seed)	Eu., Asia, U. S.
" Anemone Horra Radish	"	Cochlearia armoracia (root)	Eu. and N. Am.
" Rensel Mignonette	"	Ranunculus odoratus (root)	Eu. and U. S.

ANEMONE

Common Name	Off. Name	Botanical Source	Geog. Source
Oil of Anemone	"	Anemone (Gum resin from the root anemone)	Persia, Tartary

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Oil of Canada Snakeroot. Wild Ginger.		Asarum canadense (root).	N. A.
" Calamus. Sweet-flag.		Acorus calamus (root).	Eu., Asia, N. A.
" Cumin.		Cuminum cyminum (fruit).	Egypt, So. Eu.
" Sandal.	Oleum Santali.	Santalum album (wood).	So. India and E. I.
" Valerian.	" Valerianæ.	Valeriana officinalis (root).	Eu. and U. S.

The following drugs depend principally upon volatile oils for medicinal action. They are best used in infusion. They may be made into fl. exts. by repercolation. Alcoholic menstua.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Horse Balm.		Collinsonia canadensis(herb).	N. A.
Buchu.	Buchu. Fl. Ext.	Barosma betulina. B. crenulata. B. serratifolia (leaves).	So. Af.
Summer Savory.		Satureja hortensis.	So. Eu.
Yerba Buena.		Micromeria Douglassii.	Cal., Utah.
Masterwort.		Imperatoria ostruthium.	So. and Cen. Eu.
Orris root.		Iris. Flor. (root).	Eu.
{ Laurel.		Laurus nobilis	Eu.
{ Sweet Bay.		(leaves and fruit).	
{ Water Cress.		Nasturtium offici-	Eu., Asia, Am.
{ Nasturtium.		nale (plant).	
Elder-flowers.	Sambucus.	Samb. canadensis.	N. Am.
Goldenrod.		Solidago odora.	U. S.
Tansy.	Tanacetum.	Tanacet. vulgare.	U. S.

REACTIONARY DRUGS.

CLASS 1. PRODUCING H. CY. BY REACTION BETWEEN AMYGDALIN AND EMULSION.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Bitter Almonds. (Cont.Am.and Em.)	Amygdala Amara. Off. in Syr. Am.	Amygdalus com- munis (amara).	So. W. Eu.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Sweet Almonds. (Cont. Emulsin.)	Amygdala Dulcis. Syr. and Mist.	Amygdalus com- munis (dulcis).	Jordan, Malaga = Hard-shelled. Valencia = Soft- shelled.
Cherry Laurel. (Aq. Lauro-cerasi.)		Prunus lauro- cerasus.	Asia and Eu.
Peach meats.		Amygdalus persica.	Temp. climes.
Wild Cherry.	Prunus Virginiana.	Cerasus serotina	N. Am.
Black "	Inf., Syr., Fl. Ext.	(bark).	
H Cy. produced in conjunction with oil of bitter almonds.			

Cyanogen, the acid radical, exists in H Cy and all cyanides (as K Cy); in cyanates (K Cy O); in cyanurets (as $K_3 Cy_3 O_3$); in fulminates ($K_2 Cy_2 O_2$); in sulphocyanides (K Cy S); in ferrocyanides ($K_4 Fe'' Cy_6$); in ferricyanides ($K_3 Fe''' Cy_6$); nitro-prussides ($Na_2 (NO) Fe'' Cy_5$).

H Cy, off., as Acidum Hydrocyanicum Dilutum, obtained by distilling $K_4 Fe'' Cy_6 + H_2 SO_4$ or by mixing Ag Cy with H Cl. Off. strength 2%.

CLASS 2. PRODUCING OIL OF WINTERGREEN (METHYL-SALICYLATE.)

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Name.</i>	<i>Geog. Source.</i>
Gaultheria.	Gaultheria.	Gaultheria pro-	No. Am.
Dewberry.	Syr. Sars. Co.	cumbens (leaves).	
Boxberry.			
Teaberry.			
Checkerberry.			
Wintergreen.			
Black Birch.		Betula lenta (bark	No. Am.
Cherry "		and leaves) (gaul-	
Sweet "		therin and un-	
		known ferment).	

Of kindred character are :—

Meadow Sweet.		Spirea ulmaria.	Eu.
Heliotrope.		Heliotropium	In., Eu., Am.
		corymbosum.	

Salicylic Acid, from Indigo, Salicin, Populin, etc., by treating with fused K HO.

Also, carbolic acid neutralized with Na HO, the carbolate of sodium dried, heated and treated with dry CO_2 to form $Na_2 Sal.$, $Na_2 CO_3$ and free carbolic acid. $Na_2 Sal.$ decomposed with H Cl. and the Sal. Acid purified by dialysis.

CLASS 3. PRODUCING ACRID OILS.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
White Mustard.	Sinapis alba.	Sinapis alba (seed).	So. Eu., U. S., W. Asia.

The glucoside *Sinalbin* + (ferment) myrosin, = Sinapina.

Bisulphate (Vol. Alk.) + glucose + *Acrinyl Sulphocyanate*.

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
Black Mustard.	<i>Sinapis nigra</i> , Chart. Sinapis.	<i>Sinapis nigra</i> (seeds).	So. Eu., W. Asia, U. S.
Sinapis (the glucoside myrosin and acid, <i>potassio</i> + (ferment) myrosin = Potassic Oil of Mustard (Ain) Sulphocyanide $\text{C}_2\text{H}_4\text{CNS}_2$, etc.			
Horseradish.		<i>Corallorhiza arvensis</i> (seeds).	Eu., U. S.
Mignonette.		<i>Arundo sativata</i> (seeds).	Eu., U. S.
Shepherd's Pursh.		<i>Capsella bursa-</i> <i>pastoris</i> .	Eu.
Cress.		<i>Lepidium sativum</i> , etc.	Eu. and Am.
Bitter Cresswort.		<i>Barb. amara</i> .	Eu. and Am.
Also the wild mustard and the radishes.			

DRUGS CONTAINING VOLATILE OIL AND RESIN.

CLASS I. AROMATIC FERUGS.

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
Benzoin.		<i>Styracis benzoin</i> (from bark and fruit).	Eu. and U. S.
Canada Snake-root.		<i>Asarum canadense</i> (rhizome & roots).	" "
Wild Ginger.			
Calamus.	Calamus.	<i>Acrostichum</i> (root).	N. Am., N. Asia.
Sweet Flag.	Pl. Ext., Vin., Rhei.		
Cassia.		<i>Cassia alba</i> (bark).	W. I.
White-cedar.			
Wild Cinnamon.			
Cascarilla.	Cascarilla.	<i>Croton eluteria</i> (bark).	" "
Clove.	Caryophyllus, Tr. Rhei. Aro., Vin., Opil. Syr. Rhei. Aro., Tr. Lav. Co.	<i>Eugenia caryophyl-</i> <i>lata</i> (unsprayed flowers).	E. I., W. I., etc.
Cardamom.*	Cardamomum, Tr. Card., Tr. Rhei., " " Co., Dulcis. Vin. Aloes, Pr. Aromat., Ext. Coloc. Co., Tr. Gent. Co.	<i>Alstonia Carda-</i> <i>momum</i> (fruit).	India.

* Contains no resin, but volatile fixed oil.

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
Bitter Almonds. (Cont. Emulsion.)	<i>Amigdalæ Dulcis</i> and Mist.	<i>Amigdalæ com- nensis</i> (dulcis).	Jordan, Malaga = Hand-dried. Valencia = soft- shelled.
Cherry Laurel. (Aq. Lauro-cerasi.)		<i>Prunus lauro- cerasus</i> .	Asia and Eu.
Peach meats.		<i>Amigdalus persica</i> .	Temp. China.
Wild Cherry.	<i>Prunus Virginiana</i> .	<i>Cerasus serotina</i> (bark).	N. Am.
Black "	Int., Syn., Fl. Est.		

H Cy. produced in conjunction with oil of bitter almonds.

Cyanogen, the acid radical, exists in H Cy and all cyanides (as K Cy) in cyanates (K Cy O); in cyanurets (as K₂ Cy₂ O₂); in fulminates (K₂ Cy₂ O₃); in sulphocyanides (K Cy S); in ferrocyanides (K₄ Fe⁺ Cy₆); in ferricyanides (K₃ Fe⁺ Cy₆); nitroprussides (Na₂ (NO) Fe⁺ Cy₅).

H Cy, off., as *Acidum Hydrocyanicum Dilutum*, obtained by distilling K₄ Fe⁺ Cy₆ + H₂ SO₄ or by mixing Ag Cy with H Cl. Off. strength 2%.

CLASS 2. PRODUCING OIL OF WINTERGREEN (METHYL-SALICYLATE)

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
Gaultheria.	<i>Gaultheria</i> .	<i>Gaultheria pro- cumbens</i> (leaves).	N. Am.
Dewberry.	Syn. <i>Sax. Co.</i>		
Rosberry.			
Teaberry.			
Checkerberry.			
Wintergreen.			
Black Birch.		<i>Betula lenta</i> (bark and leaves) (gau- therin and un- known ferment).	N. Am.
Cherry "			
Sweet "			

Of kindred character are—

Meadow Sweet.	<i>Spiraea ulmaria</i> .	Eu.
Hellebore.	<i>Helleborem corymbosum</i> .	In., Eu., Am.

Salicylic Acid, from Indigo, Salicin, Poplar, etc., by treating with acid K HO.

Also, carbolic acid neutralized with Na HO, the carbolate of sodium dried, heated and treated with dry CO₂ to form Na₂ Sal., Na₂ CO₃ and free carbolic acid. Na₂ Sal. decomposed with H Cl, and the Sal. Acid purified by dialysis.

CLASS 3. PRODUCING ACRID OILS

Common Name.	Off. Name.	Botanical Source.	Geog. Source.
White Mustard.	<i>Sinapis alba</i> .	<i>Sinapis alba</i> (seeds).	So., Eu., U. S., W. Asia.

The glucoside *Sinapisin* + (ferment) myrosin, = *Sinapisin*.

Bisulphate (Vol. Alk.) + glucose + *Arrested Sulphuric acid*.

<i>Common Name.</i>	<i>Off. Name.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Black Mustard.	Sinapis nigra. Chart. Sinapis.	Sinapis nigra (seed).	So. Eu., W. Asia, U. S.

Sinnigrin (the glucoside myromic acid and potassium)+ (ferment) myrosin
= *Volatile Oil of Mustard* (Allyl Sulphocyanide C_3H_5CNS), etc.

Horse Radish.		Cochlearia armor- acia (root).	Eu., U. S.
Mignonette.		Reseda odorata (root).	Eu., U. S.
Shepherd's Purse.		Capsella bursa- pastoris.	Eu.
Cress.		Lepidum sativum, etc.	Eu. and Am.
Bitter Candytuft.		Iberis amara.	Eu. and Am.

Also the wild mustard and the radishes.

DRUGS CONTAINING VOLATILE OIL AND RESIN.

CLASS 1. AROMATICS PROPER.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Benzoin. Spice bush.		Benzoinum odori- ferum (bark and fruit).	Can. and U. S.
Canada Snake-root. Wild Ginger.		Asarum canadense (rhizome & rootlets).	" "
Calamus. Sweet Flag.	Calamus. Fl. Ext., Vin. Rhei.	Acorus calamus (root).	N. Am., N. Asia.
Canella. Whitewood. Wild Cinnamon.		Canella alba (bark).	W. I.
Cascarilla.	Cascarilla.	Croton eluteria (bark).	"
Cloves.	Caryophyllus. Tr. Rhei. Aro., Vin. Opii. Syr. Rhei. Aro., Tr. Lav. Co.	Eugenia caryophyl- lata (unexpanded flowers ¹).	E. I., W. I., etc.
Cardamom.*	Cardamomum. Tr. Card., Tr. Rhei., " " Co., " " Dulcis. Vin. Aloes, Pv. Aromat., Ext. Coloc. Co., Tr. Gent. Co.	Elettaria Carda- momum (fruit).	India.

* Contains no resin, but contains fixed oil.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Cinnamon Ceylon.	Cinnamomum. Tr. Cinnam.,	Cinnamomum. Zeylanicum.	Ceylon.
Do., Chinese. Cassia.	Pv. Arom., Tr. Rhei. Aro., Tr. Lav. Co., Syr. Rhei. Aro., Tr. Catechu Co.	Cin. aromaticum (inner bark).	China.
Ginger.	Zingiberis. Tinct. Zing., Fl. Ext. " Troch. " Oleores " Syr. " Acid Sul. Aro., Vin. Aloes, Pv. Arom., Pv. Rhei. Co.	Zingiberis officinale (root).	Asia., E. and W. I.
Liatris. Deer's tongue.		Liatris odoratissima	N. A. (root and leaves).
Mace.	Macis.	Arillus of Nutmeg.	E. and W. I., So. Am.
Mountain Balm. Consumptive's Weed.		Eriodyction californicum (leaves).	Cal.
Nutmeg.*	Myristica. Tr. Rhei. Aro., Pv. Aromat., Syr. Rhei. Aro., Tr. Lav. Co., Troch. Mag., Troch. Sod. Bicarb. Acet. Opii.	Myristica fragrans (kernel of seed).	E. and W. I., So. Am.
Pimento. Allspice.	Pimenta.	Eugenia pimenta (unripe berries).	W. I., Cent. Am., etc.
Sassafras.	Sassafras. Dec. Sars. Co., Syr. " " Fl. Ext. " "	Sassafras officinalis (bark of root).	U. S.

CLASS 2. CONTAIN VOL. OIL AND PUNGENT RESIN.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Cubebs.	Cubeba. Tinct., Fl. Ext., Troch., Oleoresin.	Cubeba officinalis (Piper Cubeba) unripe fruit.	E. I.
Cypripedium. Ladies Slipper. American Valerian.	Cypripedium. Fl. Ext.	Cypripedium pubescens (root).	Can. and U. S

* Contains no resin, but contains fixed oil.

Chinese Name	Officinal	Botanical Name	Orig. Locality
Grindelia	Grindelia	Grindelia robusta	California, etc.
Resin leaf	Fl. Extr.	Grindelia robusta	
Lavishum		Lavishum robusta	So. Cal.
Levage		Lavishum robusta	
Pepper	Piper	Piper nigrum	W. I.
	Onoclea	Onoclea sensibilis	

Class 3. Conary Vol. On. and Arum Root.

Chinese Name	Officinal	Botanical Name	Orig. Locality
Alisma		Alisma plantago	Eu. and N. Am.
Water Plantain		Alisma plantago	
Anacardium		Anacardium occidentale	Tropical Am.
Cashew Nut		Anacardium occidentale	Eu. Am.
Amica Floera	Amica Floera	Amica montana	Eu.
	Trich. Andromeda		
	Pteris		
Amica Root	Amica Radix	Amica	Eu.
	Thunb. Extr. Fl. Extr.		
	Leaf		
Arum		Arum	N. Am.
Indian Turnip		Arum (tuber)	
Asclepias		Asclepias tuberosa	Cal. U. S.
Pink colored		Asclepias tuberosa	
Pinkish Root	As. Spica	Asclepias tuberosa	U. S.
		(root)	
Artemisia		Artemisia	Eu. and Am.
House Balm		Artemisia	
Burns Pasture		Burns pasture	Eu.
Shepherd's Purse			
American Camphor	Camphor Ameri-	Camphor	So. U. S.
Can	Can		
Indian Camphor	Camphor India	Camphor	E. I.
	Ext. Fl. Extr. Trich.		
Dracopis		Dracopis	N. Am.
Shank Calcege		Dracopis	
Galega		Galega	Eu. Cal.
Rat Indian		Galega	
Catarrh Root		Galega	
Glechoma		Glechoma	Eu. N. S.
Ground Ivy		Glechoma	
Hemileum		Hemileum	U. S.
Cowparadip		Hemileum	
Matterwort		Hemileum	
Isatis	Isatis	Isatis	Asia U. S.
Elecampane		Elecampane	

Common Name	Official	Botanical Source	Geog. Source
Cinnamon	Cinnamomum	Cinnamomum	Ceylon
Ceylon	Tr. Cinnam.	Zingiberaceae	
Indo-Chinese	Pv. Aram.,	Cit. anisatum	China
Cassia	Tr. Rhel. Aram., Tr. Lav. Co., Syr. Rhel. Aram., Tr. Catechu Co.	(Inner bark)	
Ginger	Zingiber	Zingiber	Asia, E. and W. I.
	Thact. Zing., Pl. Ext. "	officinale (root)	
	Trach. "		
	Olacina "		
	Syr. "		
	Acid Sol. Aram., Via. Aram., Pv. Aram., Pv. Rhel. Co.		
Lemon, Dyer's tongue.		Limonium odoratissimum N. A.	
Mace	Macha	(root and leaves)	
		Arillus of Nutmeg	E. and W. I., So. Am.
Mountain Balm, Consumptive's Weed		Eucalyptus radiata	Cal.
		radix (leaves)	
Notting.*	Myrtica	Myrtica fragrans	E. and W. I., So. Am.
	Tr. Rhel. Aram., Pv. Aram., Syr. Rhel. Aram., Tr. Lav. Co., Trach. Mac., Trach. Sol. Benth. Acet. Ophi.	(Aromatic wood)	
Pimento	Pimenta	Eugenia pimenta	W. I., Cent.
Allspice		(leaves berries)	Ant. sp.
Sassafras	Sassafras	Sassafras officinalis	U. S.
	Dec. Sassa. Co., Syr. " Pl. Ext. "	(bark of root)	

CLASS 2. Contains Vol., Oil, and Powdery Resin.

Common Name	Official	Botanical Source	Geog. Source
Cubeb.	Cubeba. Thact., Pl. Ext., Trach., Olacina.	Cubeba officinalis (Piper Cubeba) unripe fruit.	E. I.
Cypripedium, Ladies Slipper, American Valerian.	Cypripedium Pl. Ext.	Cypripedium pa- vescens (root)	Can. and U. S.

* Contains no resin, but contains fixed oil.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Grindelia. Resin leaf.	Grindelia. Fl. Ext.	Grindelia robusta (leaves and tops).	California, etc.
Levisticum. Lovage.		Ligusticum levis- ticum (root).	So. Eu.
Pepper.	Piper. Oleoresin.	Piper nigrum (unripe berries).	E. and W. I.

CLASS 3. CONTAIN VOL. OIL AND ACRID RESIN.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Alisma. Water Plantain.		Alisma plantago (rhizome).	Eu. and N. Am.
Anacardium. Cashew Nut.		Anacardium occi- dentale (fruit).	Tropical Am., Eu., Af.
Arnica Flowers.	Arnicae Flores. Tinct. Arnicae Florum.	Arnica montana.	Eu.
Arnica Root.	Arnicae Radix. Tinct., Ext., Fl. Ext., Emp.	do.,	do.
Arum. Indian Turnip.		Arisæma or Arum triphyllum (tuber).	N. Am.
Asclepias. Flesh colored.		Asclepias incarnata (rhizome & rootlets).	Can., U. S.
Pleurisy Root.	Asclepias.	Asclepias tuberosa (root).	U. S.
Armoracia. Horse Radish.		Cochlearia armor- acia (root).	Eu. and Am.
Bursa Pastoris. Shepherd's Purse.		Bursa pastoris.	Eu.
American Canna- bis.	Cannabis Amer- icana.	Cannabis sativa (flowering tops).	So. U. S.
Indian Cannabis.	Cannabis Indica. Ext., Fl. Ext., Tinct.	Can. sativa (flower- ing tops of female plant).	E. I.
Dracontium. Skunk Cabbage.		Dracontium fœti- dum, Ictodes fœtidus (root).	N. Am.
Galangal. East Indian Catarrh Root.		Alpinia officinarum (rhizome).	So. China.
Glechoma. Ground Ivy.		Glechoma heder- acea (leaves).	Eu., N. A.
Heracleum. Cow-parsnip. Masterwort.		Heracleum lanatum (root, leaves and fruit).	U. S.
Inula. Elecampane.	Inula.	Inula helenium (root).	Asia. U. S.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Matico (Leaves).	Matico. Fl. Ext., Tinct.	Artanthe elongata. Piper angustifolium.	Trop. Am.
Myrica. Bayberry bark. Wax Myrtle.		Myrica cerifera.	New Eng.
Pellitory.	Pyrethrum. Tinct.	Anacyclus pyrethrum (root).	N. W. Af.
Persian Insect Powder Flowers. Dalmation do.		Pyrethrum roseum and carneum. Pyreth cinerariæ- folium.	W. Asia. Dalmatia.
Para-cress. Spilanthus.		Spilanthus oleracea (herb).	So. Am., India.
Prickly Ash. Toothache tree. Angelica " Suterberry.	Xanthoxylum. Fl. Ext.	Xanthoxylum fraxineum. X. carolinianum (bark).	N. A.
Winter's Bark. Wintera.		Drimy's Winteri.	So. Am.
Zedoary.		Curcuma zedoaria (rhizome).	Ind. & E. I.
Paradise Seed. Guinea Grains. Malegueta pepper		Amomum granum-paradisi.	W. Af.

DRUGS CONTAINING VOL. OIL, BITTER-PRINCIPLE AND EXTRACTIVE.

Mostly aromatic, bitter drugs, consequently both tonic and stimulant. Some contain tannin enough to render them astringent. Some, as hops, lupulin, serpentaria, scutellaria, valerian and cimicifuga, are sedative. They yield much of their activity to boiling water, and are adapted to infusion. Alcohol sp. gr. 835 best general menstruum for Fl. Ext. Repercolation best method.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Absinthium. Wormwood.	Absinthium. Vin. Arom.	Artemisia absinth- ium (leaves&tops)	N. Af., Eu. As., U. S.
Southernwood. Old Man. Boy's-love.		Artemisia abrota- num (herb).	do.
Mugwort.		Artemisia vulgaris (herb).	do.
Tarragon.		Art. dracunculus.	Siberia, Tart. & So. Eu.
Roman Wormwood.		Art. ponticum.	do. & U. S.

<i>Camissonia Nuttallii</i>	Officinalis	<i>Antennaria dioica</i>	Gen. Antenn.
Yarrow		<i>Antennaria dioica</i>	Am. Ea.
		(herb.)	
<i>Albizia</i>		<i>Albizia glandulosa</i>	China, Ea.
Tree of Heaven		(herb.)	U. S.
Chinese Sumach			
Rayweed		<i>Androsace officinalis</i>	N. Am.
		(herb.)	
Hogweed		<i>Androsace canadensis</i>	N. Am.
		(herb.)	
Angelica		<i>Archangelica americana</i>	N. Am.
		(root)	
		<i>Arch. officinalis</i>	Ea.
		(root)	
Angustura		<i>Galipea cuneata</i>	Sp. Am.
		(bark)	
Chamaemelum	Antennaria	<i>Antennaria officinalis</i>	So. & W. Ea.
(Rogosa)		(flower)	
Chamaemelum	Matricaria	<i>Matricaria chamomilla</i>	Ea.
(German)		(herb.)	
False Sannaparilla		<i>Aralia nudicaulis</i>	U. S. & U. S.
		(root)	
Aralia bark		<i>Aralia nudicaulis</i>	So. U. S.
		(bark)	
Bitter Orange peel	Amur	<i>Citrus vulgaris</i>	E. & W. I.
	China	(fruit)	So. Ea. etc.
	Tr. Am. Am. Fl.		
	Ea. "		
	Tr. Cent. Co.		
	" Clock, Co.		
Calendula	Calendula	<i>Calendula officinalis</i>	So. Ea.
Marigold	Flac. Calend.	(flowering herb.)	
Carthamus (?)		<i>Carthamus tinctorius</i>	Ea.
Safflower		(herb.)	
Am. Saffron			
Cassia		<i>Nepeta cataracta</i>	A. Ea. U. S.
Cassia		(herb.)	
Cassia		<i>Mentha or Anthriscus</i>	Ea. & N. Am.
Mayweed		<i>officinalis</i>	
		(herb.)	
Crocus	Crocus	<i>Crocus sativus</i>	Ea. & U. S.
Saffron	Flac. Croc.	(herb.)	
Ficaria		<i>Erig. heterophyllum</i>	Can. & U. S.
Erigeron		" <i>Phileas officinalis</i>	
		(herb. and root)	
Canada Scabiosa		<i>Erigeron canadensis</i>	N. Am.
" <i>Erigeron</i>			
Life Everlasting		<i>Trifolium repens</i>	Ea. & U. S.
Gnaphalium		(herb.)	

<i>Common Name</i>	<i>Officinal</i>	<i>Botanical Source</i>	<i>Geog. Source</i>
Mastic (Gum)	Mastic.	<i>Amurto-chiagatai</i> .	Trop. As.
Myrica.	Fl. Ext. Thirt.	<i>Piper nigrum</i> Linn.	
Myrtle-bark.		<i>Myrica caribaea</i> .	New Eng.
Wax Myrtle.			
Pellitory.	Pyrethrum.	<i>Anacardium</i>	N. W. Af.
	Thirt.	<i>pyrethrum</i> (root).	
Pyrethrum Insect		<i>Pyrethrum roseum</i>	W. Asiz.
Powder Flowers.		and <i>carneum</i> .	
<i>Dalmatien</i> do.		<i>Pyrethrum cinerariae-</i>	Dalmatia.
		<i>folium</i> .	
Pain-tree.		<i>Spilanthes olivacea</i>	So. Am., India.
Spilanthes.		(herb).	
Prickly Ash.	Xanthoxylum.	* <i>Xanthoxylum</i>	N. A.
Touchsensitive tree.	Fl. Ext.	<i>fraxinum</i> .	
Angelica "		<i>X. carolinianum</i>	
Strawberry.		(bark).	
Winter's Bark.		<i>Limon's Winterb.</i>	So. Am.
Winterb.			
Zedoary.		<i>Centrosema sedaria</i>	Ind. & E. I.
		(rhizome).	
Parishia Seed.		<i>Annonum</i>	W. Af.
China Grains.		<i>gracile-paradisi</i>	
Malegueta pepper			

DRUGS CONTAINING VOL. OIL, BITTER-PRINCIPLE
AND EXTRACTIVE.

Mostly aromatic, bitter drugs, consequently both tonic and stimulant. Some contain tannin enough to render them astringent. Some, as hops, lupulin, serpentaria, scutellaria, valerian and carduus, are sedative. They yield much of their activity to boiling water, and are adapted to infusion. Alcohol sp. gr. 835 best general menstruum for Fl. Ext. Repercolation best method.

<i>Common Name</i>	<i>Officinal</i>	<i>Botanical Source</i>	<i>Geog. Source</i>
Absinthum.	Absinthum.	<i>Artemisia absinth-</i>	N. Af., Eu.
Wormwood.	Vin. Arom.	<i>ian</i> (leaves & tops)	As., U. S.
Southernwood.		<i>Artemisia abrot-</i>	do.
Old Man.		<i>um</i> (herb).	
Boy's-love.			
Mugwort.		<i>Artemisia vulgaris</i>	do.
		(herb).	
Parragon.		<i>Art. dracuncul.</i>	Siberia, Tart.
			& So. Eu.
Roman Wormwood.		<i>Art. ponticum.</i>	do. & U. S.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Yarrow.		<i>Achillea millefolium</i> (herb).	Am., Eu.
Ailanthus. Tree of Heaven. Chinese Sumach.		<i>Ailanthus glandu- losa</i> (bark).	China, Eu., U. S.
Ragweed.		<i>Ambrosia trifida</i> (herb).	N. Am.
Hogweed.		<i>Amb. artemisiæfolia</i> (herb).	N. Am.
Angelica.		<i>Archangelica atro- purpurea</i> (root). <i>Arch. officinalis</i> (root).	N. Am. Eu.
Angustura.		<i>Galipea cusparia</i> (bark).	So. Am.
Chamomile. (English.)	<i>Anthemis.</i>	<i>Anthemis nobilis</i> (flowers).	So. & W. Eu.
Chamomile. (German.)	<i>Matricaria.</i>	<i>Matricaria chamo- milla</i> (herb).	Eu.
False Sarsaparilla.		<i>Aralia nudicaulis</i> (root).	Can. & U. S.
Aralia bark.		<i>Aralia spinosa</i> (bark).	So. U. S.
Bitter Orange-peel.	<i>Aurantii Amari</i> Cortex. Tr. Aur. Am., Fl., Ext. " " Tr. Gent. Co., " Cinch. Co.	<i>Citrus vulgaris</i> (rind).	E. & W. I., So. Eu., etc.
Calendula. Marigold.	<i>Calendula.</i> Tinct. Calend.	<i>Calendula officinalis</i> (flowering herb).	So. Eu.
Carthamus (?) Safflower. Am. Saffron.		<i>Carthamus tincto- rius</i> (florets).	Eu.
Catnep. Catmint.		<i>Nepeta cataria</i> (herb).	As., Eu., U. S.
Cotula. Mayweed.		<i>Maruta</i> or <i>Anthemis</i> <i>cotula</i> (herb).	Eu. & N. Am.
Crocus. Saffron.	<i>Crocus.</i> Tinct. Croci.	<i>Crocus sativus</i> (stigmas).	Eu. & U. S.
Fleabane Erigeron.		<i>Erig. heterophyllum</i> " <i>Philadelphicum</i> (leaves and tops).	Can. & U. S.
Canada fleabane. " Erigeron.		<i>Erigeron canadense.</i>	N. Am.
Life Everlasting. Gnaphalium.		Different species of <i>Gnaphalium.</i>	Eu. & U. S.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Hops.	Humulus. Tinct. Humuli.	Humulus lupulus (strobiles).	Temp. climes.
Hypericum. St. John's Wort.		Hypericum perforatum (herb).	Eu., N. Af., U. S.
Iberis (cont. sulph. oil and amorph. bit. prin. Lepidin).		Lepidium iberis (plant).	S. E. Siberia.
Leonorus. Motherwort.		Leonorus cardiaca (herb).	Eu., N. As., N. Am.
Leptandra. Culver's-root. Black-root.	Leptandra. Ext. and Fl. Ext.	Leptandra virginica (root and rootlets). Bit. prin. cryst. glucoside.	Can., U. S.
Lupulin (bit. prin. lupamaric acid).	Lupulinum. Fl. Ext., Oleoresin,	Glandular powder from hops.	Temp. climes.
Lycopus. Bugleweed.		Lycopus virginicus (herb).	Can. & U. S.
Magnolia. Sweet Bay. Beaver tree. Swamp Sassafras.	Magnolia.	Magnolia glauca (bark).	East. U. S.
Horehound. (Cryst. bit. prin.)	Marrubium.	Marrubium vulgare (herb).	As., Eu., Am.
Origanum. Wild Marjoram.	Origanum. Vin. Arom.	Origanum vulgare (herb).	do.
Parthenium. Feverfew.		Pyrethrum parthenium (herb).	Eu.
Bitter Polygala. " Milkwort.		Polygala rubella (herb).	U. S.
Black Snakeroot. " Cohosh. Cimicifuga.	Cimicifuga. Fl. Ex., Tinct.	Cimicifuga racemosa (root and rootlets).	Can. & U. S.
Juniper berries.	Juniperus.	Juniperus communis (fruit).	Eu. & Am.
Santonica. Levant Wormseed.	Santonica. Source of Santonin.	Unexpanded flowers of Artemisia cina.	As.
Sage.	Salvia. Vin. Arom.	Salvia officinalis (herb).	U. S.
Skullcap.	Scutellaria. Fl. Ext.	Scutellaria lateriflora (herb).	N. Am.
Savine (?).	Sabina. Fl. Ext., Cerate.	Tops of Juniperus sabina.	Eu., Am.
Serpentaria. Virginia Snake-root.	Serpentaria. Fl. Ext., Tinct., Tr. Cinch. Co.	Aristolochia serpentaria (root).	U. S.
Simaruba.		Sim. officinalis (bark of root).	S. Am.

Common Name	Officinal	Botanical Source	Gen. Name
Plakowit	Spargelia	<i>Spargelia anglica</i>	Sp.
Spargelia	Fl. Sp.	Sp.	
Maryland Milk			
Worm Grass			
Valerian (Eng. L.)	Valeriana	<i>Valeriana officinalis</i>	Val.
	E. Val.		
Teuchium	Tr. Val., Tr. Val.	<i>Teuchium officinale</i>	Te.
Germander	Am., Alb. Val.	Teuchium	

NATURAL OLEORINS AND KINDRED COMPOUNDS
OR DERIVATIVES

Common Name	Officinal	Botanical Source	Gen. Name
Terpenites	Terbinthina	<i>Pinus palustris</i>	Pin.
Common Frankincense	Resp. Guttat.		
Wahne Pitch			
Tar	Pin. Lign.		
	Syrup and Ung.	St. Ann. Res.	
Black Pitch	Pin. Canadensis	<i>Abies balsamea</i>	Ab.
Can. Is. pitch	Resp. Pin. Can.		
Burgundy	Pin. Burgundica	<i>Abies balsamea</i>	Ab.
	Resp. Burg.		
	Cum.		
	Cant.		
	Emp.		
	Frut.		
	Emp. Guttat.		
	Isol.		
	Emp. Opt.		
Pin-Halam	Terbinthina	<i>Abies balsamea</i>	Ab.
Canada balsam	Canadensis		
Can. Turpentine	Querc. Can.		
	Collod. Florida		
Venice		<i>Arct. Resinosa</i>	Ar.
Terbinthina V.			
China Terp.		<i>Pinus sylvestris</i>	Pin.
Mastic	Mastiche		
	Pin. Aloni et Mastiche		
Chilman		<i>Pinus Canadensis</i>	Pin.
Indian Frankincense			
Copaiba	Copaiba	<i>Copaiba Lapa</i>	Cop.
	Massa Copaiba		
Ambra		<i>Ambr. opus</i>	Am.
Sandalum			

<i>Common Name.</i>	<i>Official.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Hops.	<i>Humulus</i> Thick. Humul.	<i>Humulus lupulus</i> (herb.)	Temp. climate
Hypericum St. John's Wort.		<i>Hypericum perforatum</i> (herb.)	Eu., N. A., U. S.
Hieracium esch. and anemph. his prin. Lepidif.		<i>Lepidium ibericum</i> (plant)	S. E. Siberia.
Leporeum. Motherwort.		<i>Lemonum cardiacum</i> (herb.)	Eu., S. As., N. Am.
Lepanthes Cancer's root. Black-tooth.	<i>Leptandra</i> Ext. and Fl. Ext.	<i>Leptandra virginica</i> (root and rootlets). Ext. prin. cryst. glu- coside.	Can., U. S.
Lepula Gt. prin. hypomelic acid.	<i>Lepidum</i> Fl. Ext., Oleoresin.	Glandular powder from hops.	Temp. climate.
Lycopus Bugleweed.		<i>Lycopus virginicus</i> (herb.)	Can. & U. S.
Magnolia. Sweet Bay. Beaver tree. Sweet Magnolia.	<i>Magnolia</i>	<i>Magnolia glauca</i> (bark).	East. U. S.
Horchound. (Cryst. lat. prin.)	<i>Marrubium</i>	<i>Marrubium vulgare</i> (herb.)	As., Eu., Am.
Origanum. Wild Marjoram.	<i>Origanum</i> Vin. Atom.	<i>Origanum vulgare</i> (herb.)	As.
Pyrethrum. Feverfew.		<i>Pyrethrum parthe- num</i> (herb.)	Eu.
River Polygala. Milkwort.		<i>Polygala rubella</i> (herb.)	U. S.
Black Snakeroot. " Capuch. Cnicifraga.	<i>Cnicifraga</i> Fl. Ex., Thist.	<i>Cnicifraga racemosa</i> (root and rootlets).	Can. & U. S.
Juniper berries.	<i>Juniperus</i>	<i>Juniperus communis</i> (fruit).	Eu. & Am.
Santolice. Levant Wormseed.	<i>Santolice</i> Source of Santolice.	Unexpanded flowers of <i>Artemisia</i> sp.	As.
Sage.	<i>Salvia</i> Vin. Atom.	<i>Salvia officinalis</i> (herb.)	U. S.
Skullcap.	<i>Scutellaria</i> Fl. Ext.	<i>Scutellaria lateri- flora</i> (herb.)	N. Am.
Savine (S).	<i>Sabina</i> Fl. Ext., Ceram.	Tops of <i>Juniperus</i> <i>sabina</i> .	Eu., Am.
Serpentaria. Virginia Snake- root.	<i>Serpentaria</i> Fl. Ext., Thist., Fr. Cinch. Co.	<i>Aristolochia serpen- taria</i> (root).	U. S.
Sassafras.		<i>Sis. officinalis</i> (bark of root).	S. Am.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Pinkroot. Spigelia. Maryland Pink. Worm-grass.	Spigelia. Fl. Ext.	Spigelia marilandica (root).	U. S.
Valerian (Eng.).	{ Valeriana. El. Ext.,	Valeriana officinalis (root).	Eu., U. S.
Teucrium. Germander.	{ Tr. Val., Tr. Val. Am., Abs. Val.	Different varieties Teucrium.	Eu.

NATURAL OLEORESINS AND KINDRED BODIES OR DERIVATIVES.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Turpentine. Common Frank- incense. White Pitch.	Terebinthina. Emp. Galbani.	Pinus palustris, etc.	So. U. S.
Tar.	Pix Liquida. Syrup and Ungt.	do. By dest. dist.	do.
Hemlock-pitch. Canada-pitch.	Pix Canadensis. Emp. Picis Can.	Abies canadensis.	No. U. S. & Can.
Burgundy "	Pix Burgundica. Emp. Picis Burg., " " Cum. Canth., Emp. Ferri., Emp. Gal- bani, Emp. Opii.	Abies excelsa.	Eu.
Fir-Balsam. Canada-balsam. Can. Turpentine.	Terebinthina Canadensis. Charta Canth. Collod. Flexile.	Abies balsamea.	No. U. S. & Can.
Venice " Terebinthina Ve- neta.		Larix Europœa.	So. & S.W. Eu.
Chian Turp.		Pistacia terebinthus.	Scio., So. Eu.
Mastic.	Mastiche. Pil. Aloes et Ma- stiches.	" lentiscus.	do. & E. I.
Olibanum. Indian Frankin- cense.		Boswellia Carterii.	So. Arabia.
Copaiva.	Copaiba. Massa Copaibæ.	Copaifera Langs- dorffii, etc.	So. Am.
Amber. Succinum.		Coniferæ, now ex- tinct (?).	So. E. Eu.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Strassburg Turp.		<i>Abies pectinata.</i>	Eu.
Hungarian "		<i>Pinus pumilio.</i>	Eu.
Carama.		<i>Icica carama.</i>	Cent. & S. Am.
Tacamahaca.		<i>Elaphruim tomento-</i> <i>sum, &c.</i>	So. Am.
Anime.			So. India.
Spruce Gum.		<i>Abies Nigra</i> & <i>Abies</i> <i>Alba.</i>	No. Am.

DERIVATIVES AND ALLIED BODIES.

From Turpentine—*Oleum Terebinthinæ* (off.) (Lin. Canth. and Lin. Tereb.) *Resina* (off.) (*Ceratum Resinæ*, *Emp. Resinæ*, etc.)

From Canada-pitch—or from branches of tree *Abies Canadensis*—Oil of Hemlock or Oil of Spruce.

From Fir-balsam—Oil of Fir.

From Copaiva—*Oleum Copaibæ* (off.), *Resina Copaibæ* (off.).

From *Wood Tar*, subjected to distillation.

Light Oil of Wood Tar—Acetic Acid, Acetone, Methylic-alcohol, Toluol, Xylol, Cumol, Eupion, etc.

Heavy Oil of Wood Tar—*Creasotum* (a complex body), small quantities of Carbolic Acid, Naphthalin, Paraffin, etc. (*Aq. Creasoti*, off.).

Residue—Black-pitch.

From *Coal Tar*, separated in hydraulic main.

Light Oil of Coal Tar—Benzole, Toluol, Xylol, Cumol, etc.

Heavy Oil of Coal Tar—Cresylic Acid, Naphthalin, Anilin, Paraffin, etc., etc., and *Acidum Carbolicum* (off.) (*Ungt. Acid. Carbol.*).

Residue—Coal-Tar pitch, asphalt.

From Crude Petroleum—Rock Oil.

Rhigolene, Gasoline, C. B. A. Naphthas, (*Benzinum* off.) Kerosene, Heavier Paraffins (Spindle Oil, Vaseline, Cosmoline, Deodoroline, Paraffin Wax), etc., etc., and *Petrolatum* (off.).

From Amber,—Oil of Amber—Succinic Acid.

RESINS, GUM RESINS AND BALSAMS.

Resins.—When pure, mostly brittle solids, softening by heat; not volatile; mostly heavier than water; but little soluble in water; soluble in alcohol, ether, benzole, chloroform and volatile oils; many soluble in aqueous alkalies.

Gum Resins.—Resins associated with gum. Separated by fusion and use of proper solvents.

Myrica, etc. - Resins associated with volatile oils. Separated by distillation with water.

Balsams - Oleoresins associated with largely or completely acids.

Almonds, menstruum for liniments or other purposes, interchangeable with Aquae, Decocta, Infusa, etc.

Common Name.	Official.	European Name.	Geog. Source.
Pero Balam.	Balsamum Peru- vianum.	Masticia Peruviana.	Peru, Am.
Tolu "	Balsamum Tolu- itanum.	Myrrorina Toluifera.	Col. Am., Columbia.
	Tr. Tolu and Syr. Tolu.		
Benzoin.	Benzoinum.	Syrum benzoicum.	Barro, Saba- ra, Malacca.
	Adeps Benz. Tinct. and Co. Tinct.		
Storax.	Styrac.	Liquidambar styrac- iflua.	S. W. Asia Hond.
Balm of Gilead Buds.		Trichostema am- biguum.	Ch. A.
Poplar			
Sweet Gum.		Liquidambar styrac- iflua.	Fl. Ind. W. I.
Liquidambar.			

new resins.

Common Name.	Official.	European Name.	Geog. Source.
Gamboge.	Gambogi Resina.	Gambogia officinalis.	India, S. W. I.
	Tr. and Am. Tr.		
	Ph. Am. Co.		
Gamboge, *	Cambogia.	Cambogia officinalis.	India, S. W. I.
	Ph. Cath. Co.		
Scammony.	Scammonium.	Convolvulus scam- monia.	S. W. Asia Hond.
Myrrh.	Myrrha. Tr. Myrrh.	Balsamum Myrrhae.	S. W. Asia Hond.
	Tr. Al. and Myrrh.		
	Ph. "		
	Mut. Peru Co.		
	Ph. "		
	" Gallani "		
	" Khel "		
True Balm of Gilead.		Albid Species.	Ch.
Opobalsamum.			
Bellina.			W. Africa.
Ammoniac.	Ammoniacum.	Elaeagnus agaveoides.	Peru and Yamou.
	Exp. Am., Exp.		
	Am. C. Hyd.		
	Mut. Am.		

Common Name	Officinal	Botanical Source	Geog. Source
Sassafras Tree		<i>Abies pectinata</i>	Eu.
Huacahua		<i>Pinus paniculata</i>	Eu.
Cassia		<i>Albizia coriaria</i>	Cent. & S. Am.
Tacamahaca		<i>Euphorbia tomentosa</i> , etc.	So. Am.
Anise			So. India
Spruce Gum		<i>Abies Nigra</i> & <i>Abies</i> <i>Alba</i>	No. Am.

DERIVATIVES AND ALLIED BODIES.

From Turpentine—Oleum Perubanthense (off.) (Illa. Canth. and Lin. Terch.) Resina (off.) (Ceratium Resin, Emp. Resin, etc.)

From Canada-pitch—or from branches of tree *Abies Canadensis*—Oil of Hemlock or Oil of Spruce.

From Fir-balsam—Oil of Fir.

From Copaira—Oleum Copalivum (off.), Resina Copalivum (off.).

From Wood Tar, subjected to distillation.

Light Oil of Wood Tar—Acetic Acid, Acetone, Methylalcohol, Toluol, Xylol, Camphor, Turpene, etc.

Heavy Oil of Wood Tar—Creosotum (a complex body), and quantities of Carboic Acid, Naphthalin, Paraffin, etc. (Aq. Creosoti, off.).

Residue—Black-pitch.

From Coal Tar, separated in hydraulic main.

Light Oil of Coal Tar—Benzole, Toluol, Xylol, Camphor, etc.

Heavy Oil of Coal Tar—Creosylic Acid, Naphthalin, Anthra. Paraffin, etc., etc., and Acidum Carbohydricum (off.) (Ungt. Acid. Carboli.).

Residue—Coal-Tar pitch, asphalt.

From Crude Petroleum—Rock Oil.

Kerosene, Gasoline, C. R. A. Naphthalin, (Benzole off.) Kerosene,

Heavier Paraffins (Spermaceti Oil, Vaseline, Camelline, Deodorine, Paraffin Wax), etc., etc., and Petrolatum (off.).

From Amber—Oil of Amber—Succinic Acid.

RESINS, GUM RESINS AND BALSAMS.

Resins.—When pure, mostly brittle solids, softening by heat; not volatile; usually heavier than water; but some soluble in water; soluble in alcohol, ether, benzole, chloroform and volatile oils; many soluble in aqueous alkalies.

Gum Resins.—Resins associated with gums. Separated by fusion and use of proper solvents.

Oleoresins.—Resins associated with volatile oils. Separated by distillation with water.

Balsams.—Oleoresins associated with benzoic or cinnamic acids.

Alcohol, menstruum for tinctures or fluid extracts. Incompatible with Aquæ, Decocta, Infusa, etc.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Peru Balsam.	Balsamum Peruvianum.	Myroxylon Pareiræ.	Cent. Am.
Tolu “	Balsamum Tolutanum. Tr. Tolu and Syr. Tolu.	Myroxylon toluifera.	So. Am., Colombia.
Benzoin.	Benzoinum. Adeps Benz., Tinct. and Co. Tinct.	Styrax benzoin.	Borneo, Sumatra, Siam, &c.
Storax.	Styrax. Tr. Benz. Co.	Liquidamber orientalis.	S. W. Asia Minor.
Balm of Gilead Buds. Poplar “		Populus balsamifera or candicus.	U. S.
Sweet Gum. Liquidamber.		Liquidamber styraciflua.	N. Am., So. U. S.

GUM RESINS.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Guaiac.			
Lignum-vitæ Resin. Tree of Life “	Guaiaci Resina. Tr. and Am. Tr. Pil. Ant. Co.	Guaiacum officinale.	W. I., San Domingo, Hayti. (?)
Gamboge.	Cambogia. Pil. Cath. Co.	Garcinia Hamburii.	Siam, Campodia, Cochin China.
Scammony.	Scammonium. Resina Scammonii.	Convolvulus scammonia.	Asia Minor. Greece.
Myrrh.	Myrrha. Tr. Myrrh., Tr. Al. and Myrrh., Pil. “ “ Mist. Ferri Co. Pil. “ “ “ Galbani “ “ Rhei “	Balsamodendron myrrha.	E. Africa. Arabia.
True Balm of Gilead. Opobalsamum.		Allied Species.	do.
Bdellium.		“ “	W. Africa.
Ammoniac.	Ammoniacum. Emp. Am., Emp. Am. c̄ Hyd. Mist. Am.	Dorema ammoniacum.	Persia and Tartary.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Galbanum.	Galbanum. Pil. Galb. Co. Emp. Galb.	<i>Ferula galbaniflua.</i>	N. Persia.
Asafetida.	Asafoetida. Emp. Asafoet. Tr. Asaf., Mist. Asaf., Mist. Mag. et Asaf., Emp. Asaf., Pil. Asaf., Pll. Al. and Asaf., Pil. Galbani Co.	<i>Ferula narthex.</i>	Persia, Afghanistan,
Euphorbium.		<i>Euphorbia resini-fera.</i>	Atlas Mts., Morocco.
Opopanax.		<i>Opopanax chironium.</i>	So. Europe.
Sagapenum.		Some variety of <i>Ferula.</i>	Persia.
Hedera. Ivy Gum.		<i>Hedera helix.</i>	Levant, So. Europe.

RESINS AND RESINOUS DRUGS OWING THEIR ACTIVITY TO RESINS.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Agaric Alba. White Agaric.		Fungus growing on Larch trees.	Cent. and So. Eu., W. Asia.
Koosso. Cusso. Kousso.	Brayera. Fl. Ext. Bray. Infus. "	<i>Brayera anthelmin- tica.</i> (Female inflores- cence.)	Abyssinia.
Blue Cohosh. Squaw-root. Pappoose-root.	<i>Caulophyllum.</i>	<i>Caulophyllum tha- lictroides</i> (rhi- zome)	U. S.
Wild Ipecac. Large flowering Spurge.		<i>Euphorbia corollata</i> (root).	U. S.
Carolina Ipecac. Ipecac Spurge.		<i>Euphorbia ipecac- uanha</i> (root).	U. S.
Cotton Root Bark.	<i>Gossypii Radicis</i> Cortex. Fl. Ext.	<i>Gossypium herba- ceum</i> (bark).	Sub-tropical climates.
Jalap.	Jalapa. Resin, Abstract, Pulv. Jalap. Co.	<i>Exogonium purga</i> (tuber).	Mexico.
Man-root. Wild Jalap. " Potato.		<i>Ipomœa pandurata</i> (tuber).	U. S.
Turpeth root.		<i>Ipomœa turpethum</i> (root).	India.
Labdanum.		<i>Cistus creticus</i> (resin).	Greece and Levant.

Common Name	Origin	Botanical Source	Geog. Source
Lacca		Resin produced by insects of India, China	H. I.
Succ. lac.			
Seed-lac.			
Grain-lac.			
Sericeo.			
Myrrour.	Myrrour.	Diospyros guianensis	Europe, Asia
	Fl. Ind. Myrrour.	" Myrrour, etc.	India.
	Peru.		
	Fl.		
	Dec. Ind. Co.		
	Fl. Ind. "		
	Lic. Simple "		
Mandrake.	Podophyllum.	Podophyllum pel-	U. S.
	Against Podoph.	latum (rhizome	
	Fl. Podoph.	and rootlets).	
	Peru.		
	Fl. Ind. "		
Dragon's Blood.		Calceolaria draco.	E. I., America
Polio. Draconis.		(Climbing plant.)	
		(Retic. exudes	
		open fruit.)	
Kamala.	Kamala.	Mallotus philippi-	Amboina, E.
Kamala.		anus (powder	China, S.
Podoph.		and bark from	Amboina, India.
		exposed).	
Thapsa.		Thapsa gorgonea.	S. Europe, N.
			Asia.
Eleal.		Derived from dif-	India, S. E.
		ferent localities	Amboina.
		species.	
Saccharic.		Callitriche quadric-	N. W. Africa.
		ata.	

ALKALOIDAL DRUGS.

An Alkaloid is one of a group of organic bodies containing Nitrogen, their solutions having an alkaline reaction, capable of uniting with acids to form salts. Or, Alkaloids are alkali-like bodies, containing Nitrogen, mostly of vegetable origin, usually the active principle of the drug furnishing them, often dangerous poisons, generally acrid to taste to which are surface and strong irritants, as uric acid, strychnine, etc., etc. They are usually little soluble in water, but are soluble in alcohol, have bitter taste, no odor. They are ppt. by tannin, mercuric chloride, acetic acid, phospho-molybdic acid, phosphotungstic acid, solution of iodine and potassium iodide, etc. Estimated by ppt. by tannin, followed moist ppt. with CaCO_3 , drying, extracting with alcohol, chloroform, ether, etc. and evaporating solvent. Also, by agitating acid and alkaline solutions successively with alcohol, chloroform, ether, benzene, etc., and evaporating solvents.

<i>Common Name.</i>	<i>Officials.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Galbanum.	Galbanum. Ph. Galb. Co. Emp. Galb.	<i>Ferula galbanifera.</i>	Persia.
Asafetida.	Asafetida. Emp. Asafet. Tr. Asaf. Mat. Asaf. Mat. Mag. of Asaf. Emp. Asaf. Ph. Asaf. Ph. Al. and Asaf. Ph. Galban. Co.	<i>Ferula aschbacheri.</i>	Persia, Afghanistan.
Euphorbia.		<i>Euphorbia resinifera.</i>	Atlas Mts., Morocco.
Opopanax.		<i>Opopanax chironium.</i>	So. Europe.
Sagapenum.		Some variety of <i>Ferula</i> .	Persia.
Hedera. Ivy Gum.		<i>Hedera helix.</i>	Levant, So. Europe.

SPICES AND RESINOUS DRUGS OWING THEIR ACTIVITY TO RESINS.

<i>Common Name.</i>	<i>Officials.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Agaric Alba. White Agaric.		Pepper growing on Larch trees.	Cent. and So. E. of W. Asia.
Koussou. Cayou. Koussou.	Brayera. Fl. Ext. Bray. Infus. "	<i>Brayera anthelmintica.</i> (Fruits influence resin.)	Abyssinia.
Blue Cohosh. Squaw root. Pappoose-root. Wild Ipecac. Large flowering Sauge. Carolina Ipecac. Ipecac Spurge. Cotton Root Bark.	<i>Caulophyllum</i> . <i>Gossypii Radicle</i> . Cortex. Fl. Ext.	<i>Caulophyllum thalictroides</i> (scholae). <i>Euphorbia corollata</i> (root). <i>Euphorbia speciosa</i> (root). <i>Gossypium herbaceum</i> (bark). <i>Eragrostis pectinacea</i> (rhiz.).	U. S. C. S. C. S. Sub-tropical climates. Mexico.
Jalap.	Jalape. Resin, Abstract. Puls. Jalap. Co.		
Man-root. Wild Jalap. " Potato. Turpeth root.		<i>Ipomoea pandurata</i> (rhiz.). <i>Ipomoea tupaethom</i> (root). <i>Cleome cretica</i> (seed).	U. S. India. Greece and Levant.
Lobdanum.			

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Geog. Source.</i>
Lacca. Stick-lac. Seed-lac. Grain-lac. Shellac.		Resin produced by punctures of insects, <i>Coccus lacca</i> .	E. I.
Mezereum.	Mezereum. Fl. Ex. Mezerei, Ungt. " Ext. " Dec. Sars. Co. Fl. Ext. " " Lin. Sinapis "	<i>Daphne mezereum</i> . " <i>laureola</i> , etc. (bark).	Europe, Asia Minor.
Mandrake.	Podophyllum. Abstract Podoph. Ext. Podoph. Res. " Fl. Ext. "	<i>Podophyllum peltatum</i> (rhizome and rootlets).	U. S.
Dragon's Blood. Resina Draconis.		<i>Calamus draco</i> . (Climbing Palm.) (Resin exudes upon fruit.)	E. I., Borneo, Sumatra.
Kameela. Kamala. Rottlera.	Kamala.	<i>Mallotus philippinensis</i> (powder and hairs from capsules).	Australia, E. China, So. Arabia, India.
Thapsia.		<i>Thapsia garganica</i> .	So. Europe, N. Africa.
Elemi.		Derived from different botanical sources.	Mexico, Manila, Brazil, etc.
Sandarac.		<i>Callitris quadrivalvis</i> .	N. W. Africa.

ALKALOIDAL DRUGS.

An Alkaloid is one of a group of organic bodies containing Nitrogen, their solutions having an alkaline reaction, capable of uniting with acids to form salts. Or, Alkaloids are alkali-like bodies, containing Nitrogen, *mostly* of vegetable origin, usually the active principle of the drug furnishing them, often dangerous poisons, general antidotes to which are emetics and strong astringents, as tannic acid, strong tea, coffee, etc. They are usually little soluble in water, but are soluble in alcohol; have bitter taste, no odor. They are ppt. by tannin, mercuric chloride, auric chloride, picric acid, phosphomolybdic acid, phosphotungstic acid, solution of iodine and potassic iodide, etc. Estimated by ppt. by tannin, triturating moist ppt. with Pb. CO_3 , drying, extracting with alcohol, chloroform, ether, etc., and evaporating solvents. Also, by agitating acid and alkaline solutions successively with alcohol, chloroform, ether, benzole, etc., and evaporating solvents.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Aconite Root.	Aconitum (root).	Napellina, Aconel-	Petit's $\frac{1}{200}$ gr.*
" Leaves.	Abst. Aconiti.	la, Lycotonina,	Duquesnel's $\frac{1}{125}$
[Aconitum napel-	Ext. "	Pseudaconitia.	grain. Merck's,
lus.]	" " Fluidum.	Aconitina or Aco-	from Himalaya
Asia and Europe.	Tinct. "	nitia.*	Root, $\frac{1}{100}$ gr.
			Merck's <i>common</i>
			$\frac{1}{10}$ grain. Freid-
			lander's (?) $\frac{1}{2}$ gr.
Akazga Bark.		Akazgina.	Like Strychnina.
Boundou. Ikaja.			
[Unknown variety			
of Strychnos.]			
West Africa.			
Alstonia.		Ditamina.	Bitter tonic and
Dita Bark.			intermittent.
[Alstonia scholaris.]			
Philippine Islands.			
Andira.		Jamaicina.	Identical with
Cabbage Tree		Lurinamina.	Berberina.
Bark.			
[Andira inermis.]			
W. I. and So. Am.			
Antiaris.		Antiarina.	Dangerous poi-
[Gum resin from			son. Like phy-
Antiaris toxicaria,			sostigmina or
the Upas tree.]			eserina. Dose,
Java.			$\frac{1}{65}$ to $\frac{1}{12}$ grain.
Argemone.		Morphina.	
Prickly Poppy.			
[Argemone Mexi-			
cana.]			
Mex. and W. I.			
Baptisia.		Baptisina.	Emetic Bitter.
Wild Indigo.			
[Baptisia tinctoria.]			
(Tops and bark.)			
New Eng.			
Belladonna.	Belladonnæ Folia.	Atropina.	Stimulant Nar-
Deadly Night-	Ext. Bell. Alc.		cotic, Antispas-
shade.	Tinct. "		modic. Dose,
[Atropa belladon-	Ungt. "		$\frac{1}{100}$ to $\frac{1}{25}$ grain.
na.] (Root and	Belladonnæ Radix.		
leaves.)	Abs. Bell., Emp. Bell.		
Eu. and U. S.	Ext. " Fl., Lin. "		
	Atropina and Atro-		
	pinæ Sulph.		
Barberry Bark.		Berberina.	Alterative tonic.
[Berberis vulgaris.]			2 to 5 grains.
As., Eu. and Am.			

<i>Cornus, Alnus and related and other sources.</i>	<i>Others.</i>	<i>Almonds.</i>	<i>Drugs and Uses.</i>
Acorn Bark. " Leaves. [<i>Quercus asper-</i> [<i>lea</i> .] Asia and Europe.	Argentan roots. Abst. Accord. Ext. " Fl. Ind. Ind. Thick. "	Napellina, Accord- b. Lycopodium, Parasitica. Acorn-bark of <i>Al-</i> nus.	Pell's 1/2 gr. Bouquet's 1/2 grain. Merck's from Himalaya Root 1/2 gr. Merck's common 1/2 grain. Fried- lander's 1/2 gr. Like Strychnine.
Alanga Bark. Bouquet's 1/2 gr. [Unknown variety of Strychnine.] West Africa.		Alangina.	
Almond. Tina Bark. [<i>Almond scholaria</i> .] Philippine Islands.		Ditamba.	Bitter tonic and intermittent.
Andra. Cal Sage Tree Bark. [<i>Andra barba</i> .] W. I. and So. Am.		Jamaica. [<i>Andra</i> .]	Identical with Berberina.
Antaria. [Sum resin from Antaria toxicaria, the Upas tree.] Java.		Antaria.	Dangerous poi- son. Like phy- sostigmine or strychnine. Dose, 1/2 to 1/2 grain.
Argemone. Prickly Puff. [<i>Argemone Mex-</i> [<i>icana</i> .] Mex. and W. I.		Morphina.	
Baptista. Wild Indigo. [<i>Baptista tinctoria</i> .] [Tops and bark.] New Eng.		Baptista.	Romatic Bitter.
Belladonna. Deadly Night- shade. [<i>Atropa belladon-</i> [<i>na</i> .] (Root and leaves.) Eu. and U. S.	Belladonna Folia. Ext. Bell. Alc. Thick. " Ungt. " Belladonna Radix. Abst. Bell. Prop Bell. Ext. " Fl. Ind. Atropina and Atro- pine Sulph.	Atropina.	Stimulant Nar- cotic, Antispas- modic. Dose, 1/2 to 1/2 grain.
Berberis Bark. [<i>Berberis vulgaris</i> .] As. Eu. and Am.		Berberina.	Alterative tonic. 2 to 5 grains.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Calisaya Bark. [Cinchona calisaya.] Red Bark. [Cinchona succirubra.]	Cinchona Flava. Ext., Fl. Ext., Tinct. Cinchona Rubra. Tinct. Cinchon. Comp.		
Colchicum. Meadow Saffron. [Colchicum autumnale.] (Corm.) (Seed.) Europe.	Colchici Radix. Ext. Colch. Rad. " " " Fl. Vin. " " Colchici Semen. Ext. Colch. Sem. Fl. Tinct. " " Vin. " "	Colchicina.	Narcotic, diuretic. Dose, $\frac{1}{100}$ to $\frac{1}{100}$ grain. Dose of drug, 2 to 8 grains.
Corydalis. Turkey Corn. [Dicentra canadensis.] (Tubers.) N. America.		Corydalina. (Amorphous.)	Tonic, diuretic, alterative. Dose of drug, 10 to 30 grains.
Curare. Wourari, etc. So. Am. Arrow Poison. (Prepared from a variety of Strychnos, etc.)		Curarina.	Antispasmodic, and powerful nervous sedative. Dose of drug, $\frac{1}{10}$ grain. Dose of Alkaloid, $\frac{1}{100}$ to $\frac{1}{30}$ grain.
Larkspur Seed. [Delphinium consolida.] Eu. and U. S.		Delphinina. Staphisaina.	Acrid, narcotic poison. Dose, $\frac{1}{2}$ gr. Used mostly externally.
Duboisia. [Duboisia myoporioides.] (Leaves). Australia.		Duboisina.	Like Atropina. Dose $\frac{1}{60}$ grain.
Bittersweet. [Solanum dulcamara.] (Young branches.) Eu. and U. S.	Dulcamara. Ext. Dulc. Fl.	Solanina. (?) (May be a glucoside.) Dulcamarin is a glucoside.	Tonic-sedative.
Sassy Bark. Mancona Bark. [Erythrophloeum guineense.] Cent. and W. Af.		Erythrophloeina. (Crystalline.)	Acrid narcotic.
Coca Leaves. [Erythroxylon coca.] So. Am.	Erythroxylon. Fl. Ext.	Cocaina. (Crystalline.) Hygrina. (Volatile.)	Diuretic, stimulant. Resembles tea and coffee. Dose of Cocaina $\frac{1}{3}$ to 1 grain.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Plough.</i>	<i>Alfalfa.</i>	<i>Time and Use.</i>
<i>Fumitory.</i> [<i>Fumaria officinalis</i>] (Root.) Europe.		<i>Fumitory.</i> [<i>Fumaria officinalis</i>]	<i>Fumitory and Fumic.</i> (Liquor) [<i>Fumic.</i>]
<i>Yellow Jasmine.</i> [<i>Gelsemium sempervirens</i>] (Root.) So. U. S.	<i>Gelsemium.</i> Fl. Ex. and Tinct.	<i>Gelsemium.</i> [<i>Gelsemium sempervirens</i>]	<i>Argemone seedling.</i> [<i>Argemone</i>]
<i>Guarana.</i> [<i>Paullinia</i>] A paste from seeds of <i>Paullinia</i> was India.	<i>Guarana.</i> Fl. Ex.	<i>Guarana.</i> [<i>Paullinia</i>]	<i>Cordell's wine.</i> [<i>Cordell's</i>]
<i>Goldenrood.</i> [<i>Hydrastis canadensis</i>] (Rhizome and rootlets.) Can. and U. S.	<i>Hydrastis.</i> Fl. Ex. and Tinct.	<i>Hydrastis.</i> [<i>Hydrastis</i>]	<i>Antiseptic.</i>
<i>Hemlock.</i> [<i>Thymus</i>] [<i>Thymus</i>] (Leaves.) So. U. S. etc.	<i>Hemlock.</i> [<i>Thymus</i>]	<i>Hemlock.</i> [<i>Thymus</i>]	<i>Wine.</i>
<i>Cassia.</i> [<i>Cassia</i>] [<i>Cassia</i>] So. U. S.		<i>Cassia.</i> [<i>Cassia</i>]	
<i>Ignatia.</i> [<i>Struthium ignatium</i>] (Seed.) Phil. Is. and Ceylon China.	<i>Ignatia.</i> [<i>Struthium ignatium</i>]	<i>Ignatia.</i> [<i>Struthium ignatium</i>]	<i>Nervous.</i>
<i>Ipecac.</i> [<i>Cephaelis ipecacuanha</i>] (Root.) So. Am.	<i>Ipecacuanha.</i> [<i>Cephaelis ipecacuanha</i>]	<i>Ipecacuanha.</i> [<i>Cephaelis ipecacuanha</i>]	<i>Nervous.</i>
<i>Laburnum.</i> [<i>Cytisus laburnum</i>] (Bark and seeds.) So. Am.	<i>Laburnum.</i> [<i>Cytisus laburnum</i>]	<i>Laburnum.</i> [<i>Cytisus laburnum</i>]	<i>Nervous.</i>

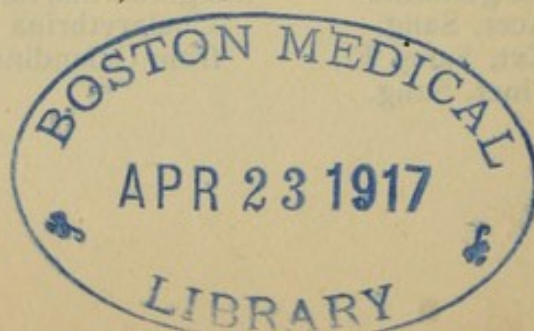
<i>Common Name and Botanical name Gen. Scarc.</i>	<i>Officinal</i>	<i>Alkaloids</i>	<i>Dose and Use.</i>
Calceola Bark. [<i>Calceola calceola</i> & Red Bark. [<i>Calceola sandwicensis</i> .] Medicinal.	<i>Calceola Flava</i> . Ext., Fl. Ext., Tinct. <i>Calceola Rubra</i> . Tinct. <i>Calceola</i> . Comp.		
Colchicum. Meadow Saffron. [<i>Colchicum autumnale</i> .] (Medicinal.) Europe.	<i>Colchicum Barba</i> . Ext. Colch. Rad. " " " " Fl. Vin. " " " Colchicid Semen. Ext. Colch. Semen. Fl. Tinct. " " " Vin. " " "	<i>Colchicina</i> .	Narcotic, diuretic. Dose, 1/2 to 1 grain. Dose of drug, 2 to 8 grains.
Corydalis. Turkey Corn. [<i>Dicentra canadensis</i> .] (Fabiana.) N. America.		<i>Corydallina</i> . (Amorphous.)	Tonic, diuretic, alterative. Dose of drug, 10 to 20 grains.
Cera. Woolfat, etc. So. Am. Arrow Poison. (Prepared from a variety of <i>Styracina</i> , etc.)		<i>Cera</i> .	Antispasmodic, and powerful nervous sedative. Dose of drug, 1/2 grain. Dose of Alkaloid, 1/16 to 1/8 grain.
Larkspur Seed. [<i>Delphinium consolida</i> .] Eu. and U. S.		<i>Delphinina</i> . <i>Strophodina</i> .	Acrid, narcotic poison. Dose, 1 gr. Used mostly externally.
Duboisia. [<i>Duboisia myoporioides</i> .] (Laves.) Australia.		<i>Duboisina</i> .	Like Atropina. Dose 1/16 grain.
Bittersweet. [<i>Solanum dulcamara</i> .] (Young branches.) Eu. and U. S.	<i>Helleborus</i> . Ext. Dole. Fl.	<i>Solanina</i> . (?) May be a glucoside. <i>Dulcamarina</i> is a glucoside.	Tonicardiac.
Sassy Bark. Macona Bark. [<i>Erythrophloeum guineense</i> .] Cent. and W. Af.		<i>Erythrophloeina</i> . (Crystalline.)	Acrid narcotic.
Coca Leaves. [<i>Erythroxylon</i> .] (Coca.) So. Am.	<i>Erythroxylon</i> . Fl. Ext.	<i>Cocaine</i> . (Crystalline.) <i>Erythroxylon</i> . (Volatile.)	Diuretic, stimulant. Resembles tea and coffee. Dose of Cocaine 1/4 to 1 grain.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Fumitory. [Fumaria officinalis.] (Plant.) Europe.		Fumarina. (Crystalline.)	Tonic and diuretic. (Like dandelion.)
Yellow Jasmine. [Gelsemium sempervirens.] (Root.) So. U. S.	Gelsemium. Fl. Ext. and Tinct.	Gelseminina. (Like Aconitina in action.)	Arterial sedative. Dose $\frac{1}{60}$ grain.
Guarana. Paullinia. A paste from seeds of Paullinia sorbilis. So. Am.	Guarana. Fl. Ext.	Caffeina. (Yields 5%.)	Cerebral stimulant. Dose of drug 10 to 60 grs.
Goldenseal. [Hydrastis canadensis.] (Rhizome and rootlets.) Can. and U. S.	Hydrastis. Fl. Ext. and Tinct.	Hydrastina. (White.) Berberina. (Yellow.)	Astringent, tonic.
Henbane. [Hyoscyamus niger.] (Leaves.) Eu., U.S., etc.	Hyoscyamus. Abst., Ext. Hyos. Alc., Ext. Hyos. Fl., Tinct. Hyoscyaminæ Sulph.	Hyoscyamina.	Narcotic. $\frac{1}{80}$ to $\frac{1}{24}$ grain.
Cassena. Yaupon [Ilex cassine.] So. U. S.		Caffeina. (0.122 %.)	
Ignatia. [Strychnos ignatii.] Bean of St. Ignatius. (Seeds.) Phil. Is. and Cochin China.	Ignatia. Abst. Ignatie. Tinct. "	Strychnina. Brucina.	Nervous stimulant. Irritant-poison. Dose, Strych., $\frac{1}{80}$ to $\frac{1}{20}$ gr. Dose, Brucia, $\frac{1}{4}$ to 1 gr.
Ipecac. [Cephaelis ipecacuanha.] (Root.) So. Am.	Ipecacuanha. Ext. Ipecac. Fl. Pv. " et Opii. Tinct. " Troch. " " Morph. et Ipecac. Syrup Ipecac., Vinum "	Emetina. (1 to 2 %.)	Emetic in dose of $\frac{1}{8}$ to $\frac{1}{4}$ grain. Diaphoretic in dose of $\frac{1}{120}$ to $\frac{1}{30}$ gr.
Laburnum. Bean Trefoil. [Cytisus laburnum.] (Bark and seeds.) So. Eu.		Citysina. (Crystalline.)	Acrid, bitter, sedative. Dose, $\frac{1}{2}$ grain.

<i>Common Names and Botanical and Germ. Names</i>	<i>Officinal</i>	<i>Alkaloids</i>	<i>Dose and Use</i>
Opium. [Concrete juice from capsules of <i>Papaver somniferum</i> .] Asia, etc.	Trach. & Ac. of Opil. Thebaine. Morphine. Morph. Acet. " Sulph. " Hydrochlor. Phlv. Morph. Co., Trach. Morph. et Ipec. Apomorphine Hydrochloras.	Narcosis, and 12 other alkaloids. Amorphina, from Morph. + HCl + heat. Morphia. (From capsules.)	Convulsifer and anesthetic. Dose, 1 to 1 gr. Hypnotic. Dose, 1 to 2 grs. Emetic. Dose, 1/2 to 1 gr.
Poppy. [<i>Papaver somniferum</i> .] (Capsules, leaves and flowers.)			
Paroira Brava. [<i>Chondrodendron tomentosum</i> .] (Roots) Brazil, Peru, etc.	Paroira. Fl. Ext.	Peleteria or Camp- peline, obtained with Berberina.	Drug, or 20 to 25 micrograms. Dose, 32 to 64 grs.
Calabar Bean. [<i>Physalisguia ver- naxina</i> .] (Seed.) W. A.	Physalisguia. Ext. and Thact. Pavonilguia Saffoyas.	Physalisguia or Karia. Calabarina.	Artificial and nar- cotic sedative. Dose, 1 to 1/2 gr. Trach. Dose, 1 to 2 gr.
Jaborandi. [<i>Pilocarpus penna- stotus</i> .] (Leaves.) So. Am.	Pilocarpus. Fl. Ext. Pilocarpus Hydro- chloras.	Pilocarpina.	Stimulant. Diaphoretic. Dose, 1 to 1 gr.
Shrubby Treelet. [<i>Ptelea-trifoliata</i> .] (Bark.) N. Am.		Berberina.	Bitter tonic.
Pepper. Black Pepper, [<i>Piper nigrum</i> .] (Unripe fruit.) E. and W. I.	Piper. Oleores. Piperis. Piperina.	Piperina.	Anodyne. Dose, 1 to 2 grs.
Sabadilla. Cevadilla. [<i>Asagrostis officio- sima</i> .] (Seeds.) Mex. and No. Am.	Veratrina. Ungt. Veratrina.	Veratrina.	Acrid, irritant poison. Not much used in- ternally. Dose, 1/4 to 1/2 grain.
Sanguinaria. Bloodroot. [<i>Sanguinaria cana- densis</i> .] (Rhiz- ome.) Can. and U. S.	Sanguinaria. Acet. Sang. Ext. Sang. Fl. Thact. Sang.	Sanguinaria, like Chelerythrin from Celandine.	Stimulant, expecto- rant and rhu- matic. 1 to 2 gr. Dose of drug, 1 to 10 grs.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Opium. [Concrete juice from capsules of Papaver somni- ferum.] Asia, etc.	Troch. Glyc. et Opii, Thebaina. Morphina, Morph. Acet., " Sulph., " Hydrochlor., Pulv. Morph. Co., Troch. Morph. et Ipec., Apomorphinae Hydrochloras.	Narceina, and 12 other alkaloids. 'Amorphina, from Morph. + H Cl + heat. Morphia. (From capsules.)	Convulsifier and suporific. Dose, $\frac{1}{8}$ to $\frac{3}{4}$ gr. Hypnotic. Dose, $\frac{1}{2}$ to 2 grs. Emetic. Dose, $\frac{1}{60}$ to $\frac{1}{10}$ gr.
Poppy. [Papaver somni- ferum.] (Capsules, leaves and flowers.)			
Pareira Brava. [Chondodendron tomentosum.] (Root.) Brazil, Peru, etc.	Pareira. Fl. Ext.	Pelosina or Cissam- pelina identical with Berberina.	Drug is an as- tringent diuretic. Dose, 30 to 60 grs.
Calabar Bean. [Physostigma vene- nosum.] (Seed.) W. Af.	Physostigma. Ext. and Tinct. Physostigminae Salicylas.	Physostigmina or Eserina. Calabarina.	Arterial and ner- vous sedative. Dose, $\frac{1}{60}$ to $\frac{1}{12}$ gr. Tetanic. Dose, $\frac{1}{8}$ to $\frac{3}{4}$ gr.
Jaborandi. [Pilocarpus penna- tifolius.] (Leaves.) So. Am.	Pilocarpus. Fl. Ext. Pilocarpinae Hydro- chloras.	Pilocarpina.	Sialogogue. Diaphoretic. Dose, $\frac{1}{8}$ to $\frac{3}{4}$ gr.
Shrubby Trefoil. [Ptelea-trifoliata.] (Bark.) N. Am.		Berberina.	Bitter tonic.
Pepper. Black Pepper. [Piper nigrum.] (Unripe fruit.) E. and W. I.	Piper. Oleores. Piperis. Piperina.	Piperina.	Antiperiodic. Dose, 1 to 8 grs.
Sabadilla. Cevadilla. [Asagraea officin- alis.] (Seeds.) Mex. and So. Am.	Veratrina. Ungt. Veratrinæ.	Veratrina.	Acrid, irritant poison. Not much used in- ternally. Dose, $\frac{1}{30}$ to $\frac{1}{12}$ grain.
Sanguinaria. Bloodroot. [Sanguinaria cana- densis.] (Rhi- zome.) Can. and U. S.	Sanguinaria. Acet. Sang. Ext. Sang. Fl. Tinct. Sang.	Sanguinarina, like Chelerythrina from Celandine.	Stimulant, expec- torant and nar- cotic, $\frac{1}{8}$ to $\frac{1}{4}$ gr. Dose of drug, 1 to 10 grs.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Scoparius. Broom. [Sarthothamnus sco- parius.] (Tops.) Eu.		Sparteina. (Vol. Alk.)	Diuretic. Sedative.
Sarracenia. Pitcher-plant. Diff. var. of Sar. growing in U. S.		Sarracenina, from Sar. purpurea.	Bitter Tonic.
Sophora. [Sophora speciosa.] (Seeds.) Texas.		Sophorina.	Very poisonous. (One bean kills a man.)
Thornapple. [Datura stramo- nium.] (Leaves and seed.) U. S.	Stramonii Folia. " Semen. Fxt., Fl. Ext., Tinct.	Daturina. Like Atropia, but twice as strong.	Narcotic. Dose, $\frac{1}{120}$ to $\frac{1}{30}$ gr Leaves or root, Dose, 2 gr. Seeds, 1 gr.
Tobacco. [Nicotiana taba- cum.] (Leaves.) All Temp. climates.	Tabacum.	Nicotina. (Vol. Alk.)	Narcotic, emetic, sialogogue. $\frac{1}{120}$ to $\frac{1}{30}$ grain.
Yew. [Taxus baccata.] (Leaves.) Eu.		Taxina.	Acrid poison. Dose of drug, 1 to 5 grs.
Tea. [Camellia thea.] (Leaves.) So. E., As.		Theina. Identical with Caffeina, 1.5 to 4 %.	Cerebral stimu- lant, sedative, etc. $\frac{1}{5}$ grain.
Theobroma. Cacao. [Theobroma cacao.] (Seeds.) Trop. Am.		Theobromina. Identical with Caffeina.	Like last, but stronger.
White Hellebore. [Veratrum album.] (Rhizome.) Eu., As., West U. S.		Jervina and Veratralbina.	Irritant poison. Dose of drug, 1 to 2 grs.
American Helle- bore. Green Hellebore. [Veratrum viride.] (Rhizome.) U. S.	Veratrum Viride. Fl. Ext., Tinct.	Jervina and Veratroidina.	do.



<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinal.</i>	<i>Alkaloids.</i>	<i>Dose and Use.</i>
Yellow Root, [<i>Xanthoxylum</i> spp. folia.] (Rhinamo and root.)		Berberins.	Water tonic.
U. S.			
Stevetact Seed. Staphisagria.	Staphisagria.	Delphinium.	Acrid, narcotic, poison. Dose of drug 4 grains.
[<i>Delphinium</i> staphisagria.]			
So. Ea.			
Paraguay Tea, [<i>Ilex paraguay- ensis</i> .] (Leaves.)		Caffeine, 16 g.	
Brazil and Arg- Republic.			
Coco Bark, Source unknown.		Vol. alk.	
So. Am.			

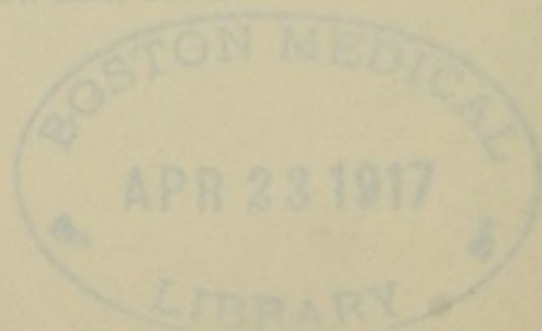
FATTY BODIES AND DERIVATIVES.

Fatty Bodies are mostly composed ethers, consisting of fatty acids united to the alcohol base, Glyceryl or Propenyl C_3H_7 . Hence they are some-
times called glycerides. Insoluble in water, sparingly soluble in Alcohol,
very soluble in ether, turpentine, benzole and CS_2 . Cannot be distilled un-
changed. Stearin = glyceryl + stearic acid. Myristin = do. + myristic
acid. Palmitin = do. + palmitic acid. Olein = do. + oleic acid. Olein
+ HNO_3 = Elaidin = glyceryl + elaidic acid.

THE FOLLOWING ARE SALTS OF GLYCERYL:

<i>Common Name.</i>	<i>Officinal.</i>	<i>Source.</i>	<i>Composition.</i>
Sweet Almond Oil.	<i>Oleum Amygdale</i> Expression. <i>Ungt. Aquæ Rosæ.</i> <i>Ol. Phosphoratum.</i>	From bitter and sweet almonds by expression. So. Ea.	Glyceryl and Oleic Acid.
Beane Oil. Gingelly Oil. Tead Oil.	<i>Oleum Sesami.</i>	<i>Sesamum Indicum</i> (seed). U. S., etc.	Mostly Glyceryl + Oleic, but con- tains some Pal- mitic & Stearic Acids.
Caster Oil.	<i>Oleum Ricini.</i>	<i>Ricinus communis</i> (seed). U. S., etc.	Glyceryl + Ricin- oleic Acid.
Cod Liver Oil.	<i>Oleum Morrhue.</i>	Cod-fish, <i>Gadus</i> <i>Morrhua</i> .	Glyceryl + Oleic, with some Pal- mitic & Stearic Acids.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Official.</i>	<i>Alkaloids.</i>	<i>Dose and Use.</i>
Scoloparia. Broom. [Scoloparia scoparia.] (Trop.) Eu.		Spartaine. (V. & Alk.)	Diuretic. Sedative.
Sarcocolla. Purpurapha. Dill. var. of Sat. growing in U. S.		Sarcocolla, from Sat. purpurea.	Bitter Tonic.
Sophora. [Sophora speciosa.] (Seeds.) Trop.		Sophorina.	Very poisonous. (One bean kills a man.)
Thornapple. [Lonicera stramo- nium.] (Leaves, Fl., Fr., Tinct.) U. S.	Stramonii Folia. " Semen. " (Leaves, Fl., Fr., Tinct.)	Daturina. Like Atropia, but twice as strong.	Narcotic. Dose, $\frac{1}{16}$ to $\frac{1}{8}$ gr. Leaves or root, Dose, 2 gr. Seeds, 1 gr.
Tobacco. [Nicotiana taba- cum.] (Leaves.) All Temp. climates.	Tabacum.	Nicotine. (Vol. Alk.)	Narcotic, emetic, stologogue. $\frac{1}{16}$ to $\frac{1}{8}$ grain.
Yew. [Taxus baccata.] (Leaves.) Eu.		Taxina.	Acrid poison. Dose of drug, 1 to 5 gra.
Tea. [Camellia thea.] (Leaves.) So. E., As.		Theina. Identical with Caffeina, 1.5 to 4 %	Cerebral stim- ulant, sedative, etc. $\frac{1}{2}$ grain.
Theobroma. Cacao. [Theobroma cacao.] (Seeds.) Trop. Am.		Theobromina. Identical with Caffeina.	Like last, but stronger.
White Hellebore. [Veratrum album.] (Rhizome.) Eu., As., West U. S.		Jervina and Veratralbina.	Irritant poison. Dose of drug, 1 to 2 gra.
American Helle- bore. Green Hellebore. [Veratrum viride.] (Rhizome.) U. S.	Veratrum Viride. Fl. Ext., Tinct.	Jervina and Veratroidina.	do.



<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Alkaloids.</i>	<i>Doses and Uses.</i>
Yellow Root. [Xanthorrhiza apii- folia.] (Rhizome and root.) U. S.		Berberina.	Bitter tonic.
Stevesacre Seed. [Delphinium staphisagria.] So. Eu.	Staphisagria.	Delphinina.	Acrid, narcotic, poison. Dose of drug $\frac{1}{2}$ grain.
Paraguay Tea. • [Ilex paraguay- ensis.] (Leaves.) Brazil and Arg. Republic.		Caffeina, 1.6 %.	
Coto Bark. Source unknown. So. Am.		Vol. Alk.	

FATTY BODIES AND DERIVATIVES.

Fatty Bodies are *mostly* compound ethers, consisting of fatty acids united to the alcohol base, Glyceryl or Propenyl $C_3 H_5$. Hence they are sometimes called glycerides. Insoluble in water, sparingly soluble in alcohol, very soluble in ether, turpentine, benzole and $C S_2$. Cannot be distilled unchanged. Stearin = glyceryl + stearic acid. Margarin = do. + margaric acid. Palmitin = do. + palmitic acid. Olein = do. + oleic acid. Olein + $H N O_3$ = Elaidin = glyceryl + elaidic acid.

THE FOLLOWING ARE SALTS OF GLYCERYL:

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Sweet Almond Oil.	Oleum Amygdalæ Expressum. Ungt. Aquæ Rosæ. Ol. Phosphoratum.	From bitter and sweet almonds by expression. So. Eu.	Glyceryl and Oleic Acid.
Benne Oil. Gingelly Oil. Teal Oil.	Oleum Sesami.	Sesamum indicum (seeds).	Mostly Glyc. + Oleic, but con- tains some Pal- mitic & Stearic Acids.
Castor Oil.	Oleum Ricini.	Ricinus communis (seeds). U. S., etc.	Glyc. + Ricino- leic Acid.
Cod Liver Oil.	Oleum Morrhuæ.	Cod-fish, Gadus Morrhua.	Glyc. + Oleic, with some Pal- mitic & Stearic Acids.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Croton Oil.	Oleum Tiglii.	Croton tiglium (seeds). So. India.	Glyc. + a number of fatty acids.
Fixed Oil of Mustard.		Sinapis alba & Sin. nigra (seeds).	Glyc. + Oleic & Erucic Acid.
Ground Nut Oil. Peanut Oil.		Arachis hypogæa. Af., S. A. & S. U. S.	Glyc. + Oleic and other acids.
Linseed Oil.	Oleum Lini.	Linum usitatissimum (seed). All temp. countries.	Glyc. + Linoleic Acid.
Bayberry Tallow. " Wax.		Myrica cerifera (berries). U. S.	Glyc. + Palmitic Acid. Fuses 116-120° F.
Cacao Butter.	Oleum Theobroma.	Theobroma Cacao (seeds). So. Am., etc.	Glyc. + Stearic and some Palmitic and Oleic Acid.
Cocoanut Oil. Oleum Cocois.		Cocos nucifera (seeds). All trop. countries.	Glyc. + Palmitic, Myristic, Lauric and other acids. Fuses at 73.4° F.
Fixed Oil of Nutmeg.		Myristica fragrans (seeds). India, etc.	Glyc. + Myristic Acid. Fuses at 113° F.
Galam Butter. Shea "		Lucuma Parkii (seeds). Cent. Af.	Glyc. + Palmitic and some Oleic Acid. Fuses at 109° F.
Illupie Oil. Indian Oil. Bassia Oil.		Bassia longifolia (seeds). India.	do.
Kokum Butter. Garcinia Oil. Mangosteen Oil.		Garcinia purpurea, etc. (seeds). Singapore.	Glyc. + Stearic, Myristic and Oleic Acid.
Lard.	Adeps. " Benzoinatus. Ceratum, Unguentum. Ceratum Resinæ, etc.	Prepared abdominal fat of Sus Scrofu.	Glyc. + Stearic and Oleic Acid. Fuses at 95° F.
Olive Oil. Sweet Oil.	Oleum Olivæ. Emp. Plumbi. Ungt. Diachylon. Cerat Camphoræ.	Olea Europea, etc. (fruit). Levant, etc.	Glyc. + Oleic, with very little Palmitic Acid.
Cotton Seed Oil.	Oleum Gossypii Seminis. Lin. Ammoniaë Lin. Calcis. Lin. Camphoræ. Lin. Plumbi Subacet.	Gossypium herbaceum (seed). Sub-tropical climes.	Glyc. + Oleic Acid.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Palm Oil.		Elais guineensis grain. W. Africa.	Glyc. + Palmitic and Oleic Acid. Fuses at 81° F.
Suet.	Servant. Ungt. Fish Lip. " Hydrargyr.	Abdominal fat of Ovis Arles.	Glyc. + Stearic Acid. Fuses at 130° F.
Lard Oil.	Oleum Adipos. Ungt. Hyd. N.	From lard by ex- position at low temperatures.	Glyc. + Oleic Acid.

BODIES NOT CONTAINING GLYCERYL.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Bee's Wax.	Cera Alba. Ceraum. Cerat. Cetacei. Ungt. An. Rosae. Cera Flavæ. Ungtatum. Ungt. Acid. Carboli. Ungt. Hyd. Ox. Flem. Ungt. Hyd. Ox. Rub. Ungt. Menthol. Cerat. Resinæ. " Ext. Canth. " Canth.	Honeycomb of Apis Mellifica.	Mixed w. My- ricic + Palmitic Acid. White Wax fuses at 149° F. Yel- low at 145 to 147° F.
Spermaceil.	Cetaceum. Ungt. An. Rosae. Cerat. Cetacei.	Sperm Whale. Phocaena Macro- cephala. Pacific ocean.	Cetyl + Palmitic Acid. Fuses at 112° F.
Sperm Oil.		From the fat of do.	

DERIVATIVES.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Oleic Acid.	Acidum Oleicum. Hydrargyr. Olee- tum. Veratrinæ Olea- tum.	Any of the fixed oils.	

Soaps are compounds of the fatty acids with *inorganic* bases. Or, soaps are fatty bodies with glyceryl replaced by metallic bases.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Ammonia Lin- iment. Hartshorn Lin- iment. Volatile Liniment.	Linimentum Am- monia.	Aq. Ammon. 80. Ol. Cassia. Sem. 70.	Ammonia Soap.

<i>Common Name.</i>	<i>Official.</i>	<i>Source.</i>	<i>Composition.</i>
Cotton Oil.	<i>Oleum Tigli.</i>	<i>Erbium tiglium</i> (seeds). So. India.	Glyc. + a number of fatty acids.
Fixed Oil of Mustard.		<i>Sinapis alba</i> & <i>Sin. nigra</i> (seeds).	Glyc. + Oleic & Erucic Acid.
Ground Nut Oil.		<i>Arachis hypogaea.</i>	Glyc. + Oleic and other acids.
Peanut Oil.		At. S. A. & S. U. S.	
Linseed Oil.	<i>Oleum Lini.</i>	<i>Linum catharticum</i> (seed). All temp. countries.	Glyc. + Linoleic Acid.
Bayberry Tallow.		<i>Myrica cerifera</i> (berries). U. S.	Glyc. + Palmitic Acid. Fuses at 116-120° F.
Wax.			
Cacao Butter.	<i>Oleum Theobroma.</i>	<i>Theobroma Cacao</i> (seeds). So. Am., etc.	Glyc. + Stearin and some Palmitic and Oleic Acid.
Cocoanut Oil.		<i>Cocos nucifera</i> (seeds). All trop. countries.	Glyc. + Palmitic, Myristic, Lauroic and other acids. Fuses at 73.4° F.
<i>Oleum Cocos.</i>			
Fixed Oil of Nutmeg.		<i>Myristica fragrans</i> (seeds). Indo, etc.	Glyc. + Myristic Acid. Fuses at 118° F.
Galah Butter.		<i>Lucuma Parkii</i> (seeds). Cent. Af.	Glyc. + Palmitic and some Oleic Acid. Fuses at 109° F.
Shea "			
Illupie Oil.		<i>Bassia longifolia</i> (seeds). India.	do.
Indian Oil.			
Bassia Oil.			
Kokum Butter.		<i>Garcinia purpurea</i> , etc. (seeds). Singapore.	Glyc. + Stearic, Myristic and Oleic Acid.
Garcinia Oil.			
Mangosteen Oil.			
Lard.	<i>Adips.</i> " <i>Hemolauris.</i> <i>Ceratum Unguicatum.</i> <i>Ceratum Eboris</i> , etc.	Prepared abdominal fat of <i>Sus Scrofa</i> .	Glyc. + Stearic and Oleic Acid. Fuses at 95° F.
Olive Oil.	<i>Oleum Oliva.</i>	<i>Olea Europaea</i> , etc. (fruit).	Glyc. + Oleic, with very little Palmitic Acid.
Sweet Oil.	<i>Emp. Plumbl.</i> <i>Ungt. Diachylon.</i> <i>Cerat. Camphorae.</i>	<i>Laurus</i> , etc.	
Cotton Seed Oil.	<i>Oleum Gossypii Seminis.</i> <i>Lin. Ammoniac.</i> <i>Lin. Calcis.</i> <i>Lin. Camphorae.</i> <i>Lin. Plumbi Subacet.</i>	<i>Gossypium herbaceum</i> (seed). Sub-tropical climes.	Glyc. + Oleic Acid.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Palm Oil.		Elais guineensis (fruit). W. Africa.	Glyc. + Palmitic and Oleic Acid. Fuses at 81° F.
Suet.	Sevum. Ungt. Picis Liq. " Hydrargyri.	Abdominal fat of Ovis Aries.	Glyc. + Stearic Acid. Fuses at 120° F.
Lard Oil.	Oleum Adipis. Ungt. Hyd. Nit.	From lard by expression at low temperatures.	Glyc. + Oleic Acid.

BODIES NOT CONTAINING GLYCERYL.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Bee's Wax.	Cera Alba. Ceratum. Cerat. Cetacei. Ungt. Aq. Rosæ. Cera Flava. Ungentum. Ungt. Acid Carbol. Ungt. Hyd. Ox. Flav. Ungt. Hyd. Ox. Rub. Ungt. Mezerei. Cerat. Resinæ. " Ext. Canth. " Canth.	Honeycomb of Apis Mellifica.	Melyssyl or Myricyl + Palmitic Acid. White Wax fuses at 149° F. Yellow at 145 to 147° F.
Spermaceti.	Cetaceum. Ungt Aq. Rosæ. Cerat. Cetacei.	Sperm Whale. Physeter Macrocephalus. Pacific ocean.	Cetyl + Palmitic Acid. Fuses at 112° F.
Sperm Oil.		From the fat of do.	

DERIVATIVES.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Oleic Acid.	Acidum Oleicum. Hydrargyri Oleatum. Veratrinæ Oleatum.	Any of the fixed oils.	

Soaps are compounds of the fatty acids with *inorganic* bases. Or, soaps are fatty bodies with glyceryl replaced by metallic bases.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Ammonia Liniment. Hartshorn Liniment. Volatile Liniment.	Linimentum Ammoniaë.	Aq. Ammon. 30. Ol. Gossyp. Sem. 70.	Ammonia Soap.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Composition.</i>
Castile Soap.	Sapo. Emp. Saponis. Lin. Saponis.	Ol. Olivæ q.s. Liq. Sodæ q.s.	Soda Soap. Mottling due to presence of iron.
Green Soap.	Sapo Viridis. Tr. Saponis Viridis.	Fixed Oil q.s. Liq. Potassa q.s.	Potash Soap.
Lead Plaster. Simple Diachylon. Litharge Plaster.	Emp. Plumbi. (The base of many other plasters.) Ungt. Diachy- lon.	Ol. Olivæ 60. Plumbi Oxidum 32. Aq. q.s.	Lead Soap.
Lin. Subacet Lead.	Lin. Plumbi Suba- cetatis.	Liq. Plumb. Suba- cet 40. Ol. Gossyp. Sem. 60.	Lead Soap.
Lime Liniment. Carron Oil.	Lin. Calcis.	Liq. Calcis. Ol. Gossyp. Sem. āā.	Lime Soap.

GLYCERIN.

Propenyl or Glyceryl Alcohol, or Glyceryl Hydroxide, $C_3H_5 3HO$.
The sweet principle of fats. Separated in process of saponification by
means of alkalies, or by super-heated steam. Sp. gr. 125. Useful as a
solvent and preservative. Glycerine + H_2SO_4 = Sulpho-glyceric Acid.
Glycerine + HNO_3 (and H_2SO_4) = Nitro-glycerin or glonoin.

Nitro-glycerin + infusorial earth, etc., = Dualin, Dynamite, etc.

Glyc. 90, Starch 10 = Glyceritum Amyli = Plasma.

" 55, Yolk of Egg 45 = " Vitelli = Glyconin.

Glycerin is used in Mucil. Trag., in many of the Extracta, Extracta
Fluida, Tincturæ, etc.

GLUCOSIDAL DRUGS.

Depending wholly or in part on glucosides for their activity. Glucosides
are proximate principles that yield by decomposition glucose and some other
body. Some of the class are soluble in water, some in alcohol and others
in ether. They are mostly harmless bitters, but some few are active poisons.
Mostly free from N. Those containing N. are marked (N).

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Glucosides.</i>	<i>Doses and Uses.</i>
Apple Tree Bark. Pyrus malus. (Temp. lat.)		Phlorizin.	10 to 20 grs. Tonic.
Ash Bark. Fraxinus excelsior. (Eu.)		Fraxin.	Tonic.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinal</i>	<i>Alimentary</i>	<i>Diuretic and Other</i>
Aspen Bark.		Populus.	Tonic. Febr.
American Poplar.			
Quiver Leaf.			
Populus tremuloides.			
(No. Am.)			
Bearberry.	Uva Ursi.	Aronia.	Tonic. Dia. Ast.
Mountain Cran-	Fl. Ext.		Diuret. Fl. Ext.
berry.			M. 20-30.
Universal Vine.			
Arctostaphylos			
Ursula.			
(No. Am.)			
Bitter Almonds.	Amygdala Amara.	Amygdala.	17 grs. water 10
Amygdalus commu-	Syrup.	(No.)	grs. 11 Cy Dil.
nis (Europe).			
(No. W. E.)			
Bittersweet.	Dulcamara.	S. iamb. (N.)	Tonic. Ab. Dia.
Woody Nightshade.	Fl. Ext.	9.	Sed. Diuret. Fl.
Solanum dulcamara.			Ext. 3ss 5.
(Eu., No. Af., As., Am.)			
Black Hellebore.		Helleborus.	Purgative. Tonic
Helleborus niger.			Comp. 4-5 grs.
(Eu.)			
Blackthorn Bark.	Frangula.	Frangula.	La. affec. Diuret.
Eu. Blackthorn.	Fl. Ext.		Fl. Ext. 5.
Rhamnus Frangula.			
(No. Af., Ea.)			
Blackthorn Berries.		Xanthoxan-	Diuret. Sp. Black-
Rhamnus cathartica.		thin.	thorn Berries.
(No. As. Ea., U. S.)			5-5r.
Bony Root.	Bryonia.	Bryonia.	Hyd. Cath.
Bryonia alba.	Tinct.		Diuret. Comp. 20-
dioica.			40 grs.
(Eu.)			
Cahira Root.		Calochia.	Tonic. Dia. Diuret.
Gnecocca racemosa.			1ss 10 grs. 2-3
(So. Florida and So.			grs. 5 grs.
Am.)			
Cyclamen Root.		Cyclasia.	Diuret. Tonic.
Cyclamen europaeum.			Comp. 5 grs.
(So. Eu.)			
Colewort.	Colewort.	Colewort.	Purgative. Tonic.
Butter Apple.	Ext. Comp. Ext.		Comp. 20 grs.
Citrullus Colocynthis.			
(Cent. and W. Asia,			
So. Eu.)			

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source.</i>	<i>Compounds.</i>
Castile Soap.	Sapo. Emp. Saponis. Lin. Saponis.	Ol. Olive q.s. Liq. Soda q.s.	Soda Soap. Mottling due to presence of iron.
Green Soap.	Sapo Viridia. Tr. Saponis Viridia.	Pixed Oil q.s. Liq. Potass q.s.	Potash Soap.
Lead Plaster. Simple Diachylon. Litharge Plaster.	Emp. Plumbi. (The base of many other plasters.) Ungt. Diachy- lon.	Ol. Olive 60. Plumbi Oxidum 32. Aq. q.s.	Lead Soap.
Lin. Salsac Lead.	Lin. Plumbi Suba- cetatis.	Liq. Plumb. Suba- cet 40. Ol. Gossyp. Sem. 60.	Lead Soap.
Lime Liniment. Carroll Oil.	Lin. Calcis.	Liq. Calcis. Ol. Gossyp. Sem. 33.	Lime Soap.

GLYCERIN.

Propenyl or Glyceryl Alcohol, or Glyceryl Hydroxide, $C_3H_7O_2$.
The sweet principle of fats. Separated in process of saponification by
means of alkalis, or by super-heated steam. Sp. gr. 1.25. Useful as a
solvent and preservative. $Glycerine + H_2SO_4 =$ Sulpho-glyceric Acid.
 $Glycerine + HNO_3$ (and H_2SO_4) = Nitro-glycerin or Glycerin.
Nitro-glycerin + infusorial earth, etc., = Dextrin, Dynamite, etc.
Glyc. 90, Starch 10 = Glyceritum Amyli = Plasma.
" 55, Yolk of Egg 45 = " Virelli = Glyconia. @
Glycerin is used in Mucil. Trag., in many of the Extracta, Extracta
Fluida, Tincturae, etc.

GLUCOSIDAL DRUGS.

Depending wholly or in part on glucosides for their activity. Glucosides
are proximate principles that yield by decomposition glucose and some other
body. Some of the class are soluble in water, some in alcohol and others
in ether. They are mostly harmless bitters, but some few are active poisons.
Merely free from N. Those containing N. are marked (N).

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Glucosides.</i>	<i>Dose and Use.</i>
Apple Tree Bark. <i>Pyrus malus.</i> (Comp. Int.)		Phloridin.	15 to 20 grs. Tonic.
Ash Bark. <i>Fraxinus excelsior.</i> (Eu.)		Fraxin.	Tonic.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Glucosides.</i>	<i>Doses and Uses.</i>
Aspen Bark. American Poplar. Quiver Leaf. Populus tremuloides. (No. Am.)		Populin.	Tonic. Feb.
Bearberry. Mountain Cran- berry. Universe Vine. Arctostaphalos Uva-ursi. (No. Am.)	Uva Ursi. Fl. Ext.	Arbutin.	Tonic. Diu. Ast. Dose, Fl. Ext., M. 20-60.
Bitter Almonds. Amygdalus commu- nis (amara). (So. W. Eu.)	Amygdala Amara. Syrup.	Amygdalin. (N.)	17 grs. yields 50 grs. H Cy Dil.
Bittersweet. Woody Nightshade. Solanum dulcamara. (Eu., No. Af., As., Am.)	Dulcamara. Fl. Ext.	Solanin. (N.) (?)	Tonic. Alt. Diu. Sud. Dose, Fl. Ext., 5ss 3j.
Black Hellebore. Helleborus niger. (Eu.)		Helleborein.	Purgative. Dose drug, 5-20 grs.
Buckthorn Bark. Eu. Buckthorn. Rhamnus Frangula. (No. Af., Eu.)	Frangula. Fl. Ext.	Frangulin.	Laxative. Dose, Fl. Ext., 3j.
Buckthorn Berries. Rhamnus catharticus. (No. As., Eu., U. S.)		Xantharham- nin.	Dose, Syr. Buck- thorn Berries, 3j-3jv.
Bryony Root. Bryonia alba. " dioica. (Eu.)	Bryonia. Tinct.	Bryonin.	Hyd. Cath. Dose, drug, 10- 40 grs.
Cahinca Root. Chiococca race- mosa. (So. Florida and So. Am.)		Cahinchin.	Tonic, Lax., Diu. Dose, drug, 5 to to 15 grs.
Cyclamen Root. Cyclamen europeum. (So. Eu.)		Cyclamin.	Drast. purg. Dose, drug, 5 grs.
Colocynth. Bitter Apple. Citrullus Colocynthis. (Cent. and W. Asia, So. Eu.)	Colocynthis. Ext., Comp. Ext.	Colocynthin.	Purgative. Dose, drug, 2-5 grs.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Glucosides.</i>	<i>Doses and Uses.</i>
Elaterium. From juice of Ecbal- ium Elaterium. Squirting Cucumber. (So. Eu.)	Elaterinum. Trituratio Elate- rini.	Elaterin.	Hyd. cath., Diu. Elaterium, $\frac{1}{8}$ – $\frac{1}{4}$ gr. Elaterin, $\frac{1}{20}$ – $\frac{1}{10}$ gr. Trit. Elat., $\frac{1}{2}$ – $\frac{1}{8}$ gr.
Foxglove. Digitalis purpurea. (Temp. lat., Eu., No. Am.)	Digitalis. Abst., Ext., Fl. Ext., Infus., Tinct.	Digitalin.	Circ. stim., Diu. Dose, leaves, 1 gr. Digitalin, $\frac{1}{60}$ – $\frac{1}{30}$ gr.
Horse Chestnut. Æsculus hippocasta- num. (Temp. climes.)		Æsculin.	Tonic, Feb. Dose, bark, 3j. Æsculin, 5 grs.
Jalap. Exogonium purga. (See also resinous drugs.) (Mex.)	Jalapa. • Resin, Abst., Pulv. Jalap. Co.	{ Jalapin. { Convolvulin.	Hyd. cath. Dose, drug, 10–20 grs. Resin, 3 to 6 grs.
Liquorice Root. Sweet stick. Glycyrrhiza glabra. (So. Eu., N.W. Asia.)	Glycyrrhiza. Ext., Ext. Glyc. Purum, Fl. Fxt., Pulv. Glyc Co., Glycyrrhizinum Ammon.	Glycyrrhizin.	Demul. Lax.
Monesia Bark. Chrysophyllum gly- cyphlœum. (So. Am.)		Glycyrrhizin and Saponin.	Stim. Ast. Dose, drug, 3 to 20 grs.
Mustard. (See React. Drugs.)		Myronic Acid.	
Mezereon Bark. (See Resin. Drugs.)		Daphnin.	
Nutgalls. Excrescences on Quer- cus infectorius. (So. E. Eu., etc.)	Galla. Tinct., Ungt., Acid. Tannic.	Gallo-tannin. (Tannic Acid.) Also in oak bark, etc.	Astringent. Dose, 3–10 grs.
Oak Bark (Black). Quercus tinctoria. (U. S.)		Quercitrin.	Ast.
Sarsaparilla Root. Smilax officinalis. (So. Am.)	Sarsaparilla. Dec. Sars. Co., Fl. Ext., Fl. Ext. Sars. Co., Syrup Sars. Co.	Parillin.	Alterative. Dose, drug, 3j– 3ij.
Senega Root. Polygala Senega. (No. Am.)	Senega. Abst., Fl. Ext., Syr., Syr. Scillæ Co.	Polygalic Acid (or Senegin).	Stim. Exp. Diu. Dose, root, 10– 20 grs.

<i>Common Name and Definition of and Geog. Source.</i>	<i>Officinal</i>	<i>Character</i>	<i>Dose and Uses.</i>
Senna. Cassia acutifolia. (No. E. A.)	Senna. Cassia Fl. Ex., Comp. Ind. Spt., Felt. Oly. Co., Syrup Sars. Co.	Carbolic Acid. (S.)	Carbolic. Dose, never 5-20.
Soapwort. Bouncing Bet. Saponaria officinalis. (U. S.)		Saponin.	Alterative.
Soap Bark. Quillaja Saponaria. (No. Am.)	Quillaja.	Sapona.	Alterative.
Scammony. [See Resin. Drugs.]		Scammony. (Same as Jalapa.)	
Trailing Arbutus. Eugenia repens. (No. Am.)		Arbutin.	Tonic. Dis. Art. Dose, drug, 5g.
Willow Bark. Salix alba, etc. (Temp. lat.)	Salix. Salicinum.	Salicin.	Tonic. Feb. Dose, salicin, 10-20 grs.
Glucoside of animal origin. (From wing cases of insects.)		Cicin. (U. S.)	

ASTRINGENT DRUGS NOT BEFORE MENTIONED.

Depending for principal activity upon the presence of some form of tannic acid or gallic acid, but also possessing other properties.

<i>Common Name</i>	<i>Character</i>	<i>Botanical Source and % of tannin, etc.</i>	<i>Geog. Source.</i>
Agaric.		Agaricus campestris. (herb). 4-75 %	Eu., No. Am.
Alder Bark.		Alnus Serotina. 4%	U. S.
Alum Root.		Hemlock mucronata. 15 to 20 %	No. Am.
Araca Nut. Butea nut.		Araca Catechu (tree). 14 %	E. I.
Distort. Snakeweed.		Polygonum bistorta (rhizome). 21 %	As., Eu., Am.
Blackberry.	Rubus. Rub. Rubi Fl.	Rubus villosus (bark of root).	No. Am.
Catechu. Cutch Terra Japonica	Catechu. Tr. Catechu Co. Terra Catechu	Acacia Catechu (resin from wood). 25 to 30 %	E. I.

<i>Common Name and Botanical and Geog. Source</i>	<i>Officinals</i>	<i>Glucosides</i>	<i>Dose and Use</i>
Elatium. From juice of Echall- um Elaterium. Squirting Cucumber. (So. Ea.)	Elatium. Trituratio Elate- rii.	Elataria.	Hyd. cath. Dose. Elatium, 1-2 gr. Elataria, 1-2 gr. Trit. Elat., 1-2 gr.
Foxglove Digitalis purpurea. (Temp. lat., Ea., No. Am.)	Digitalis. Abst., Ext., Fl. Ext., Infus., Tinct.	Digitalis.	Circ. stim., Dia. Dose, leaves, 1 gr. Digitalin, 1/2 - 1/3 gr.
Horse Chestnut. Aesculus hippocasta- num. (Temp. clima.)		Aescula.	Tonic, Feb. Dose, bark, 5. Aescula, 3 grs.
Jalap. Exogonium purga. (See also resins and drugs.) (Mex.)	Jalapa. Resin, Abst., Pulv. Jalap. Co.	Jalapin. Convolvulin.	Hyd. cath. Dose. drug, 10-20 grs. Resin, 3 to 6 grs.
Liquorice Root. Sweet-stick. Glycyrrhiza glabra. (So. Ea., N.W. Asia.)	Glycyrrhiza. Ext., Ext. Glyc. Paring. Fl. Ext., Pulv. Glyc. Co., Glycyrrhizium Ammon.	Glycyrrhizin.	Demul. Lax.
Monsala Bark. Chrysophyllum gly- cyphitum. (So. Am.)		Glycyrrhizin and Saponin.	Stim. Ast. Dose, drug, 3 to 20 grs.
Mustard. (See React. Drugs.)		Myronic Acid.	
Myrror Bark. (See Resin. Drugs.)		Daphnin.	
Nutgalls. Excrescences on Quer- cus infectiorum. (So. E. Ea., etc.)	Galls. Tinct., Ungt., Acid. Tannic.	Gallo-tannin. (Tannic Acid.) Also in oak bark, etc.	Astringent. Dose, 3-10 grs.
Oak Bark (black). Quercus tinctoria. (U. S.)		Quercetin.	Ast.
Sarsaparilla Root. Smilax officinalis. (So. Am.)	Sarsaparilla. Dec. Sars. Co., Fl. Ext., Fl. Ext. Sars. Co., Syrup Sars. Co.	Parilla.	Alterative. Dose, drug, 31- 51.
Senega Root. Polygala Senega. (No. Am.)	Senega. Abst., Fl. Ext., Syz., Syz. Scilla Co.	Polygalic Acid. (or Senegalin.)	Stim. Exp. Dia. Dose, root, 10- 25 grs.

<i>Common Name and Botanical and Geog. Source.</i>	<i>Officinals.</i>	<i>Glucosides.</i>	<i>Doses and Uses.</i>
Senna. Cassia acutifolia. (No. E. Af.)	Senna. Conf., Fl. Ext., Comp. Inf., Syr., Pulv. Glyc. Co., Syrup Sars. Co.	Cathartic Acid. (N.)	Cathartic. Dose, leaves, 3ss-3jj.
Soapwort. Bouncing Bet. Saponaria officinalis. (U. S.)		Saponin.	Alterative.
Soap Bark. Quillaia Saponaria. (So. Am.)	Quillaia.	Saponin.	Alterative.
Scammony. (See Resin. Drugs.)		Scammonin. (Same as Jalapin.)	
Trailing Arbutus. Epigœa repens. (No. Am.)		Arbutin.	Tonic, Diu. Ast. Dose, drug, 3j.
Willow Bark. Salix alba, etc. (Temp. lat.)	Salix. Salicinum.	Salicin.	Tonic. Feb. Dose, Salicin, 10-30 grs.
Glucoside of animal origin. (From wing cases of insects.)		Chitin. (N.)	

ASTRINGENT DRUGS NOT BEFORE MENTIONED.

Depending for principal activity upon the presence of some form of tannic acid or gallic acid, but often possessing other properties.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source and % of tannin, etc.</i>	<i>Geog. Source.</i>
Agrimony.		Agrimonia eupatoria (herb). 4.75 %.	Eu., No. Am.
Alder Bark.		Alnus Serrulata. 4 %.	U. S.
Alum Root.		Heuchera americana. 15 to 20 %.	No. Am.
Areca Nut. Betel-nut.		Areca Catechu (seed). 14 %.	E. I.
Bistort. Snakeweed.		Polygonum bistorta (rhizome). 21 %.	As., Eu., Am.
Blackberry.	Rubus. Ext. Rubi Fl.	Rubus villosus (bark of root).	No. Am.
Catechu. Cutch. Terra Japonica.	Catechu. Tr. Catechu Co. Trochis. Catechu.	Acacia Catechu (ext. from wood). 20 to 50 %.	E. I.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source and % of tannin, etc.</i>	<i>Geog. Source.</i>
Ceanothus. Red root. New Jersey tea.		Ceanothus ameri- canus (root). 9 %.	No. Am.
Chimaphila. Prince's Pine. Wintergreen. Pipsissewa.	Chimaphila. Fl. Ext.	Chimaphila umbel- lata (plant). 5 %. (Also contains arbu- tin.)	No. Am.
Cranesbill root.	Geranium. Fl. Ext.	Geranium macula- tum. 13 to 17 %.	No. Am.
Condurango.		Pseusmagenuetus equatorium (bark). 12 %.	Peru.
Galls. (See Glucosidal Drugs.)			
Gambir. Pale Catechu.		Uncaria Gambir (ext. from leaves and young shoots). 36 to 40 %.	E. I.
Hardhack. Steeple bush. Whitecap.		Spirea tomentosa (root and herb).	No. Am.
Garcinia. Mangosteen.		Garcinia mangostana, etc. (bark and fruit rind).	E. I.
Kino.	Kino. Tr. Kino.	Pterocarpus Marsu- pium. (Inspissated juice from incisions in trunk.)	India.
Logwood.	Hæmatoxylon. Ext. Hæmatoxyli.	Hæmatoxylon cam- pechianum (heart wood).	Cent. Am. and W. I.
Myrobalans.		Terminalia chebula (fruit). 40 %.	India.
Oak Bark.	Quercus Alba.	Quercus alba (bark).	Temp. lat.
Persimmons.		Diospyros virginiana (unripe fruit).	U. S.
Pomegranate Rind.		Punica Granatum (rind of fruit). 28 %.	So. W. Asia.
Pomegranate Bark.	Granatum.	Punica Granatum (bark of root). 22 %.	So. W. Asia.
Rhatany.	Krameria. Ext., Fl. Ext., Tinct.	Krameria triandria. Krameria tomentosa.	Peru.
Pale Rose Leaves.	Rosa Centifolia. Aq., Syr. Sars. Co.	Rosa centifolia (petals).	W. Asia, etc.
Red Rose Leaves.	Rosa Gallica. Conf., Fl. Ext., Syr., Mel., Pil. Aloës et Myrrh.	Rosa Gallica (petals).	So. Eu., etc.

Common Name, and	Official.	Botanical Source, and % of minimum, etc.	Geog. Source.
Sassafras.	Rhus Glabra. Ext. Rhus Glabra Fl.	Rhus glabra. Oregon.	Ind. Am.
Sweet Fern, Fern Gale.		Composita distinct from Thymus and Sage. 8%	Cal. & N. S.
Witch Hazel.	Hamamelis. Ext. Hamamelidis Fl.	Hamamelis virginica. (Japan). 8%	Can. & U. S.

UNCLASSIFIED DRUGS.

Common Name, and Geog. Source.	Official.	Botanical Source.	Analysis.
Alder Bark. Black Alder. (U. S.)	Prinos.	Prinos verticillato. Can.	Bitter, green, and red. Toxic and ext. Dose, 30 to 60 grs.
Aloe. (S. A. and W. Arabia.)	Aloe. Aloe Purif. Ext. Aloes Aquo- sum.	Aloe Socotrina (Lampyrus) (juice of leaves).	Bitter green, a re- sin. Dose, 10 to 30 grs. (Cathartic, Dose, 3-10 grs.)
Purified Aloe.	Aloe Purificata. Ph. Al., Ph. Al. et Acal., Ph. Al. et Ferr., Ph. Al. et Mast., Ph. Al. et Myrrh., Tr. Aloes, Tr. Al. et Myrrh., Vin Aloes, Tr. Benz. Co.	Pure Aloe.	
Asarabacca. (North India, Cult. So. U. S.)	Asarabacca.	Melex Asarabacca (bark of root).	Bitter resin. (P. " plantain) (P. Cath. Exert. Antidote.
Black Haw. (U. S.)	Viburnum. Fl. Ext.	Viburnum prunifolium (bark).	Bitter resin. (P. Tonic Acid. Tonic. Antispas- modic. Dose, Fl. Ext. 3-5).
Blue Flag. (U. S.)	Iris. Ext., Fl. Ext.	Iris versicolor (rhizome and rootlets).	Resin. Alka- loid (P.). Cath. Emul., Alk., Dia. Dose, 10 to 20 grs. Dose, Irisin, the resin- oid or oleum, 3 to 4 grs.

Common Name.	Officinals.	Botanical Source and % of Tannin, etc.	Geog. Source.
Ceanothus. Red root. New Jersey tex.		Ceanothus ameri- canus (root). 9 %	No. Am.
Chimaphila. Prince's Pier. Wintergreen. Pipsissewa.	Chimaphila. Fl. Ext.	Chimaphila umbel- lata (plant). 3 %. (Also contains arbu- tin.)	No. Am.
Crooshill root.	Geranium. Fl. Ext.	Geranium macula- tum. 12 to 17 %	No. Am.
Condurango.		Pseudeugenaria equatoriana (bark). 12 %	Peru.
Galls. (See Glucosidal Drugs.)			
Gambir. Fale Catechu.		Uncaria Gambir (ext. from leaves and young shoots). 35 to 40 %	E. I.
Hardhack. Steeple bush. Whiterap.		Spiraea tomentosa (root and herb).	No. Am.
Garcinia. Mangosteen.		Garcinia mangostana, etc. (bark and fruit rind).	E. I.
Kino.	Kino. Tr. Kino.	Pterocarpus Marsu- pium. (Inexplicated juice from incisions in trunk.)	India.
Logwood.	Hæmatoxylin. Ext. Hæmatoxylin.	Hæmatoxylin cam- pechianum (heart wood).	Cent. Am. and W. I.
Myrobalans.		Terminalia chebula (fruit). 40 %	India.
Oak Bark.	Quercus Alba.	Quercus alba (bark).	Temp. lat.
Perseemonch.		Diospyros virginiana (unripe fruit).	U. S.
Pomegranate Rind.		Punica Granatum (rind of fruit). 28 %	So. W. Asia.
Pomegranate Bark.	Granatum.	Punica Granatum (bark of root). 22 %	So. W. Asia.
Rhatany.	Krameria. Ext. Fl. Ext. Tinct.	Krameria triandra. Krameria tomentosa	Peru.
Pale Rose Leaves.	Rosa Centifolia. Aq., Syr., Sara. Co.	Rosa centifolia (petals).	W. Asia, etc.
Red Rose Leaves.	Rosa Gallica. Conf., Fl. Ext., Syr., Mel., Fil., Alcohol & Myrrh.	Rosa Gallica (petals).	So. Ea., etc.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Botanical Source and % of tannin, etc.</i>	<i>Geog. Source.</i>
Sumach.	Rhus Glabra. Ext. Rhois Glabræ Fl.	Rhus glabra (berries).	No. Am.
Sweet Fern. Fern Gale.		Comptonia aspleni- folia (leaves and tops). 8 %.	Can. & U. S.
Witch Hazel.	Hamamelis. Ext. Hamamelidis Fl.	Hamamelis virginica (leaves). 8 %.	Can. & U. S.

UNCLASSED DRUGS.

<i>Common Name and Geog. Source.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Alder Bark. Black Alder. (U. S.)	Prinos.	Prinos verticilla- tus.	Bitter prin. and ast. Tonic and ast. Dose, 30 to 60 grs.
Aloes. (E. Af. and W. Arabia.)	Aloe. Aloe Purif. Ext. Aloës Aquo- sum.	Aloe Socotrina. (Inspissated juice of leaves).	Bitter prin., a re- sin (?). (Soca- loin.) Cathartic. Dose, 2-10 grs.
Purified Aloes.	Alœ Purificata. Pil. Al., Pil. Al. et Asaf., Pil. Al. et Ferri, Pil. Al. et Mast., Pil. Al. et Myrrh, Tr. Aloës, Tr. Al. et Myrrh, Vin Aloës, Tr. Benz. Co.	From Aloe.	
Azedarach. (North India. Cult. So. U. S.)	Azedarach.	Melia Azedarach (bark of root).	Bitter resin (?). " alkaloid (?). Cath., Emet., Anthel.
Black Haw. (U. S.)	Viburnum. Fl. Ext.	Viburnum pruni- folium (bark).	Bitter resin (?). Tannic Acid. Ton. Antispas. Nerv. Dose, Fl. Ext. 3j-3ij.
Blue Flag. (U. S.)	Iris. Ext., Fl. Ext.	Iris versicolor (rhizome and rootlets).	Resin. Alka- loid (?). Cath. Emet., Alt., Diu. Dose, 10 to 20 grs. Dose, Irisin, the resin- oid or oleoresin, 3 to 4 grs.

<i>Common Name and Geog. Source.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Butternut. (U. S.)	Juglans. Ext.	Juglans cinerea (inner bark of root).	Bitter Extrative, etc. Cathartic, Alt. Dose, Ex., 5 to 20 grs.
Cassia Fistula. Purging Cassia. (Trop. countries. India, W. I., etc.)	Cassia Fistula. Conf Semæ.	Cassia Fistula (fruit).	Laxative. Dose, 3ij +.
Chestnut Leaves. (Eu. and No. Am.)	Castanea. Fl. Ext.	Castanea vesca (leaves).	(?). Used for whooping cough. Dose, Fl. Ext. 20 to 60 m.
Chiretta. Chirata. (No. Ind.)	Chirata. F. Ext., Tr.	Ophelia Chirata (entire plant).	Neut. bitter prin. Chiratin. A bitter acid— ophelic. Tonic. Dose, Fl. Ext., 20 to 60 m.
Corn Smut. (Temp. climes.)	Ustilago.	Ustilago Maydis (fungi grown upon Zea Mays).	Sclerotic acid (?). Alkaloid (?). Abortifacient. Dose, 10-60 grs.
Couch-grass. Quick-grass. (Eu., U. S.)	Triticum. Fl. Ext.	Triticum repens (rhizome).	(?). Diuretic. Dose, Fl. Ext., 3j +.
Dandelion. (Temp. climes, etc.)	Taraxacum. Ext., Fl. Ext.	Taraxacum Dens- leonis (root).	Bitter neut. prin. Taraxacin. Tonic, Diu., Aper. Dose, drug, 3j +.
Dogwood. (U. S.)	Cornus. Fl. Ext.	Cornus Florida (bark of root).	Bitter neut. prin. Cornin. Tonic and ast. Dose, Fl. Ext. 20-60 m.
Ergot. (Temp. climes.)	Ergota. Ext., Fl. Ext., Vin.	The sclerotium of the fungus Clavi- cips purpurea, re- placing the grain of Secale cereale.	Sclerotic Acid, Ergotinine (?), Scleromucin, Ecboline. Abor- tifacient, etc. Dose, 3ss-3ij.
Fig. (So. Eu.)	Ficus. Conf. Sennæ	Fleshy receptacle of Ficus Carica.	Sugar and gum.
Gentian. (Eu.)	Gentiana. Ext., Fl. Ext. Tr. Gent. Co.	Gentiana lutea (root).	Bitter principle. Gentio-picrin. Tonic. Dose, Fl. Ext. 30-60 m.

Common Name and Geog. Source.	Officinals.	Botanical Source.	Activity.
Gua Powder. Araroba. (Brazil, So. Am.)	Chrysogobium, a mixture of prothi- mate principles, commonly known as chro- phanic acid. Ungt. Chrysogob- ium.	Gua powder is a substance found deposited in the wood of the tree of Araroba.	Purgative. Toxic. Dose, 5-25 grs. Used externally, in skin diseases.
Gutta-Percha. (E. I.)	Gutta-Percha. Liq. Gutta-Percha.	Concrete exudation of <i>Hevea</i> <i>Gutta</i> .	Externally.
Lactucarium. (Eu.)	Lactucarium. Fl. Est., Syr.	Concrete milk juice of <i>Lactuca</i> <i>virga</i> .	Bitter prin., lac- tate acid, etc. Reperit. Dose, Fl. Est. 5-10 m.
Male Fern. (Eu., As., No. Am., W. U. S.)	Aspidium. Oleros. Aspid.	<i>Aspidium</i> Felix- mas. <i>Aspidium</i> margi- ale (rhizome).	Olerosin. Neco- sity for tape worm. Dose, Oleros. 5-10 grs.
Pansy. Violet.	<i>Viola</i> Yedoidor.	<i>Viola</i> bracteata (flowering herbs).	Laxative.
Pumpkin Seed.	Papa.	<i>Cucurbita</i> Papa (seed).	Emic. For tape worm. Dose, 5 grs of seeds.
Poke Berry. Garget.	<i>Phytolacca</i> Berca.	<i>Phytolacca</i> decan- dra.	Emet., Purg., Narc. (?)
Poke Root. Garget. *	<i>Phytolacca</i> Radia.	<i>Phytolacca</i> decan- dra.	Emet., Purg., Nar. (?). Dose, 1-5 grs.
Picrotoxin.	<i>Picrotoxylon</i> .	Neut. prin., from seeds of <i>Anamirta</i> <i>paniculata</i> . (India.) (<i>Coeculus</i> Indi- cus. Fish berries.)	Acrid narcot. Dose, 1/4-1 gr.
Poison Oak. (No. Am.)	<i>Rhus Toxicoden- dron</i> .	<i>Rhus Toxicoden- dron</i> fresh leaves.	Toxicodendric Acid. Stim. narcot.
Pulsatilla. (Eu., Temp. climates.)	<i>Pulsatilla</i> .	<i>Anemone</i> Pulsa- tilla. <i>Anemone</i> pratensis (herb).	Acrid neut. prin. <i>Anemotin</i> . Em- menagogue, etc. Dose, drug, 2-3 grs.
Quassia. Bitter Ash. (W. I.)	<i>Quassia</i> . Ext., Fl. Est., Tr.	<i>Picrasa excelsa</i> (wood).	Bitter neut. prin. Quassia. Tonic. Dose, Fl. Est., 5-10 m.

<i>Common Name and Geog. Source.</i>	<i>Official.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Butternut. (U. S.)	Juglans. Ext.	Juglans cinerea (inner bark of root).	Bitter. Extensive. etc. Cathartic. Alt. Dose, Ex., 5 to 20 grs.
Cassia Fistula. Purgine Cassia. (Trop. countries. India, W. I., etc.)	Cassia Fistula. Conf. Sennae.	Cassia Fistula (fruit).	Laxative. Dose, 3j +.
Chestnut Leaves. (Eu. and No. Am.)	Castanea. Fl. Ext.	Castanea vesca (leaves).	(?). Used for whooping cough. Dose, Fl. Ext. 20 to 60 m.
Chiretta. Chirata. (N. Ind.)	Chirata. F. Ext., Tr.	Opbellea Chirata (entire plant).	Neut. bitter prin. Chiratin. A bitter acid- opbelleic. Tonic. Dose, Fl. Ext., 20 to 60 m.
Corn-Smut. (Temp. climes.)	Ustilago.	Ustilago Maydis (fungi grown upon Zea Mays).	Sclerotic acid (?). Alkaloid (?). Abortifacient. Dose, 10-60 grs.
Conch-grass. Quick-grass. (Ex., U. S.)	Triticum. Fl. Ext.	Triticum repens (rhizome).	(?). Diuretic. Dose, Fl. Ext., 3j +.
Dandelion. (Temp. climes, etc.)	Taraxacum. Ext., Fl. Ext.	Taraxacum Dens- leonis (root).	Bitter neut. prin. Taraxacin. Tonic, Diu., Aper. Dose, drug, 5j +.
Dogwood. (U. S.)	Cornus. Fl. Ext.	Cornus Florida (bark of root).	Bitter neut. prin. Cornin. Tonic and aper. Dose, Fl. Ext. 20-60 m.
Ergot. (Temp. climes)	Ergota. Ext., Fl. Ext., Vin.	The sclerotium of the fungus Clav- iceps purpurea, re- placing the grain of Secale cereale.	Sclerotic Acid, Ergotinine (?), Scleromucin, Ecboline. Abor- tifacient, etc. Dose, 3ss-3ij.
Fig. (So. Eu.)	Ficus. Conf. Sennae	Fleshy receptacle of Ficus Carica.	Sugar and gom.
Gentian. (Eu.)	Gentiana. Ext., Fl. Ext. Tr. Gent. Co.	Gentiana lutea (root).	Bitter principle. Gentio-pharm. Tonic. Dose, Fl. Ext. 30-60 m.

<i>Common Name and Geog. Source.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Goa Powder. Araroba. (Brazil, So. Am.)	Chrysarobinum, a mixture of proximate principles, commonly known as chrysophanic acid. Ungt. Chrysarobini.	Goa powder is a substance found deposited in the wood of the trunk of Andria Araroba.	Purgative. Dose, 5-25 grs. Used externally, in skin disorders.
Gutta-Percha. (E. I.)	Gutta-Percha. Liq. Gutta-Perchæ.	Concrete exudation of Isonandra Gutta.	Externally.
Lactucarium. (Eu.)	Lactucarium. Fl. Ext., Syr.	Concrete milk juice of Lactuca virosa.	Bitter prin., lactic acid, etc. Soporific. Dose, Fl. Ext. 5-30 m.
Male Fern. (Eu., As., No. Af., W. U. S.)	Aspidium. Oleores. Aspidii.	Aspidium Felix-mas. Aspidium marginale (rhizome).	Oleoresin. Remedy for tape worm. Dose, Oleores, 3ss-3j.
Pansy. Violet.	Viola Tricolor.	Viola tricolor (flowering herb).	Laxative.
Pumpkin Seed.	Pepo.	Cucurbita Pepo (seed).	Resin. For tape worm. Dose, 3jss of seeds.
Poke Berry. Garget.	Phytolaccæ Bacca.	Phytolacca decandra.	Emet., Purg., Narc. (?)
Poke Root. Garget.	Phytolaccæ Radix.	Phytolacca decandra.	Emet., Purg., Nar. (?). Dose, 1-5 grs.
Picrotoxin.	Picrotoxinum.	Neut. prin., from seeds of Anamirta paniculata. (India.) (Cocculus Indicus. Fish berries.)	Acrid narcot. Dose, $\frac{1}{60}$ - $\frac{1}{8}$ gr.
Poison Oak. (No. Am.)	Rhus Toxicodendron.	Rhus Toxicodendron (fresh leaves).	Toxicodendric Acid. Stim. narcot.
Pulsatilla. (Eu., Temp. climes.)	Pulsatilla.	Anemone Pulsatilla. Anemone pratensis (herb).	Acrid neut. prin. Anemonin. Emenagogue, etc. Dose, drug, 2-3 grs.
Quassia. Bitter Ash. (W. I.)	Quassia. Ext., Fl. Ext., Tr.	Picræna excelsa (wood).	Bitter neut. prin. Quassin. Tonic, Dose, Fl. Ext., 5-10 m.

<i>Common Name and Geog. Source.</i>	<i>Officinals.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Queen's Root. Stillingia. (U. S.)	Stillingia. Fl. Ext.	Stillingia sylvatica (root).	Vol. oil, etc. (?). Alt., Emet., Cath. Dose, powder, 15-30 grs.
Rhubarb. (Ind., China, etc.)	Rheum. Ext., Fl. Ext., Pil., Syr., Tinct., Vin., Pil. Rhei Co., Pulv. Rhei Co., Syr. Rhei Aro., Tr. Rhei Aro., Tr. Rhei Dulc.	Rheum officinale, etc.	Resinous prin. Phæoretin and Erythretin. Also, Emodin and Chrysopha- nic acid, etc. Cath. and Ast. Dose, 5 to 15 grs.
Raspberry. (Temp. climes.)	Rubus Idæus. Syr.	Rubus idæus (fruit).	Acid flavor.
Red Saunders. (India.)	Santalum Rubrum. Tr. Lav. Co.	Pterocarpus santa- linus (wood).	Res. col. matter. Santalin. For color.
Squill. (So. Eu.)	Scilla. Acet., Syr., Fl. Ext., Tr., Syr. Scil. Co.	Urginea Scilla (sliced bulb).	Bit. prin, scilli- tin, oil, etc. (?). Expec., Diu., Emet. Dose, 1-3 grs.
Thoroughwort. Boneset. (U. S.)	Eupatorium.	Eupatorium perfo- liatum (leaves and flowering tops).	Bitter prin. Tonic Diaph. Dose, 20-30 grs
Wahoo. Burning bush. (U. S.)	Euonymus. Ext.	Euonymus atropur- pureus (bark).	Bitter prin. Euonymin, Lax- ative, etc. Dose, 3ss-3j.
Yellow Dock.	Rumex. Fl. Ext.	Rumex crispus, etc. (root).	(?). Tonic, Alt., Ast. Dose, Fl. Ext., 3ss-3j.
Vanilla. (W. I., Mex., S. A.)	Vanilla. Tr., Trochis. Ferri.	Vanilla planifolia (fruit).	Bitter extractive, vanillin, etc. Flavor, stim.

ANIMAL DRUGS NOT BEFORE MENTIONED.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source and Use.</i>
Ambergris. (Ambra Grisea).		A morbid product of the sperm whale—Physeter macrocephalus. Antispasmodic. Dose, 5-10 grs.

Common Name.	Officinals.	Source and Use.
Cantharis. Spanish Fly.	Cantharis. Cerat., Cerat. Ext. Cantl., Charis Canth., Colod. can Canth., Lin. Canth., Rasp. Pich can Canth., Ther.	Cantharis vesicatoria. Internally, powerful stimulant in urinary and genital organs in small dose. Is large, irritant poison. Externally, vesicant. Acute cathartics, a heat. pris., white and cyst.
Castor.		Castor—Castor Bean. (Seed perfoliate follicles and more ten.) Dose. 5 to 10 grains.
Cochlear.	Cochlear.	Dried fronds of Cochlearia Cant. (Colum.)
Egg Albumen. (Albumen Ovi.)	Test Solution of Albumen.	White of egg of Gallus Bankiva, var domesticus.
Egg Yolk.	Yolkum. Glaucina Virens Mise. Chlorid.	Yolk of egg, do.
Gelatin. Gelatina. Glutin.		From bone cartilage, hile, etc., etc. tendon, etc. Best sort = gelatin. Power sort = gelatin. Used for cast plaster, capsules, etc. Dose 10 to 20 gr.
Isinglass. Fish glue.	Isinglass. Egg Isinglass. Test Sol. Gelatin.	Secretory product of rayfish. Dose 10 to 20 gr.
Milk. (Lac.)		Milk of Cow (Bos taurus) or do.
Musk.	Muscone. Ther. Muscone.	Musk of musk deer (Moschus moschiferus). Dose 10 to 20 gr.
Ox gall. Bov. bile.	Fel Bovis. Fel Bovis Lycopodium. Fem. Fel Bovis Parthenon.	Gall of cow (Bos taurus). Thick and black. Dose 5 to 10 gr.
Pepsin.	Pepsinum Bact. rubrum. Liquor-Pepsini.	Enzyme extract of gastric juice, derived from various mammals at the stomach of the dog (Canis). Dose 5 to 10 gr.
Pancreatin.		From pancreatic juice (pancreas) of dog (Canis).
Rennet.		Usually from stomach of calf (Bos taurus) valued, dried, etc.

<i>Common Name and Orig. Source</i>	<i>Official.</i>	<i>Botanical Source.</i>	<i>Activity.</i>
Queen's Root. Stillingia. (U. S.)	Stillingia. Fl. Ext.	Stillingia sylvatica (root).	Vol. oil, etc. (B). Alt., Emet., Cath. Dose, powder, 15-30 grs.
Rhubarb. (Ind., China, etc.)	Rheum. Ext., Fl. Ext., Fl., Syr., Tinct., Vin., Pl. Rhei Co., Pulv. Rhei Co., Syr. Rhei Aro., Tr. Rhei Aro., Tr. Rhei Dulo.	Rheum officinale, etc.	Resinous prin. Phenocetic and Erythrocetin. Also, Emodin and Chrysophan- ic acid, etc. Cath. and Ast. Dose, 5 to 15 grs.
Raspberry. (Temp. climes.)	Rubus Idem.	Rubus Idem (fruit).	Acid flavor.
Red Saunders. (India.)	Santalum Rubrom. Tr. Lav. Co.	Pterocarpus santal- inus (wood).	Res. col. matter. Santalalin. For color.
Squill. (So. Ea.)	Scilla. Azel., Syr., Fl. Ext., Tr., Syr. Scil. Co.	Urginea Scilla (sliced bulb).	Bil. prin., scilli- tin, oil, etc. (B). Expect., Dia., Emet. Dose, 1-3 grs.
Thoroughwort. Eupacat. (U. S.)	Eupatorium.	Eupatorium perfo- liatum (leaves and flowering tops).	Bitter prin. Tonic Diaph. Dose, 30-30 grs.
Wahoo. Burning bush. (U. S.)	Euonymus. Ext.	Euonymus atropur- pureus (bark).	Bitter prin. Euonymin. Lax- ative, etc. Dose, 3ss-3j.
Yellow Dock.	Rumex. Fl. Ext.	Rumex crispus, etc. (root).	(B). Tonic, Alt., Ast. Dose, Fl., Ext., 3ss-5j.
Vanilla. (W. I., Mex., S. A.)	Vanilla. Tr., Troch. Ferri.	Vanilla planifolia (fruit).	Bitter extractive, vanillin, etc. Flavor, stim.

ANIMAL DRUGS NOT BEFORE MENTIONED.

<i>Common Name.</i>	<i>Official.</i>	<i>Source and Use.</i>
Ambergris. (Membra Grisea).		A morbid product of the sperm whale—Physeter macrocephalus. Antispasmodic. Dose, 3-10 grs.

<i>Common Name.</i>	<i>Officinals.</i>	<i>Source and Use.</i>
Cantharis. Spanish Flies.	Cantharis. Cerat., Cerat. Ext. Canth., Charta Canth., Collod. cum Canth., Lin. Canth., Emp. Picis cum Canth., Tinct.	Cantharis vesicatoria. <i>Internally</i> , powerful stimulant to urinary and genital organs in small doses. In large, irritant poison. <i>Externally</i> , vesicant. Activity— cantharidin, a neut. prin., white and cryst.
Castor.		Beaver—Castor fibre. (Dried preputial follicles and secre- tion.) Nerv. stim. Dose, 10 grains.
Cochineal.	Coccus.	Dried female of Coccus Cacti. (Color.)
Egg Albumen. (Albumen Ovi.)	Test Solution of Albumen.	White of egg of Gallus Bankiva, var domesticus.
Egg Yolk.	Vetellus. Glyceritum Vitelli Mist. Chlorof.	Yolk of egg, do.
Gelatin. Gelatina. Glutin.		From bone cartilage, hide trimmings, tendons, etc. Best sort = gelatin. Poorer sort = glue. Used for court plaster, capsules, pill coat- ing, etc., etc.
Isinglass. Fish-glue.	Ichthyocolla. Emp. Ichthyocollæ. Test Sol. Gelatin.	Swimming bladders of sturgeons. Acipenser Hugo.
Milk. (Lac.)		From cow,—Bos Taurus. Nutrient, etc.
Musk.	Moschus. Tinct. Moschi.	Musk deer,—Moschus moschiferus. Dried secretion of preputial folli- cles. Nerv. stim. and antispas. Dose, 10 grs.
Ox gall. Beef bile.	Fel Bovis. Fel Bovis Inspissa- tum. Fel Bovis Purifica- tum.	Gall of ox—Bos Taurus. Tonic and laxative. Dose, 5 to 10 grs.
Pepsin.	Pepsinum Saccha- ratum. Liquor Pepsini.	Digestive principle of gastric juice, obtained from mucous membrane of the stomach of the hog (etc.). Digestive. Dose, 5 to 30 grs.
Pancreatin.		From pancreatic juice (pancreas of Bos Taurus).
Rennet.		Usually fourth stomach of calf (Bos Taurus), salted, dried, etc.



