

maniacal and apoplectic cases; and as an alterative in cutaneous eruptions. It is given in doses of $\mathfrak{m}$ v. to $\mathfrak{m}$ x. but it is a very unmanageable remedy, producing sometimes the most violent effects.

TINCTURA ZINGIBERIS. Lond. Dub. TINCTURA AMOMI ZINGIBERIS. Edin. *Tincture of Ginger.*

"Take of ginger root sliced, *two ounces*; proof spirit, *two pints*. Macerate for fourteen days, (seven days, *Dub. Edin.*) and filter."

This tincture possesses all the pungency of the ginger, and is useful as a stimulant and carminative, in atonic gout, when it attacks the stomach, in flatulent colic, and as a corrigent to griping purgatives.

ÆTHEREA.

PREPARATIONS OF ETHER.

THE action of the strong acids on alcohol produces an order of compounds, which possess both important chemical properties, and medicinal virtues. These are named ETHERS, and agree in certain general properties, but vary in some of their qualities according as they are produced from different acids. They are all extremely volatile, and require to be preserved in closely stoppt phials.¹ The following are medicinally used.

ÆTHER SULPHURICUS. Lond. *Sulphuric Ether.*²

"Take of rectified spirit, sulphuric acid, of each, *one pound and a half*. Pour the spirit into a glass retort, and add the acid gradually to it, shaking it frequently, and taking care that the temperature of the mixture do not exceed 120° , until it be completed. Then cautiously place the retort in a sand-bath, previously heated to 200° , that the liquor may boil as quickly as possible, and the ether pass into a tubulated receiver to which another receiver is adapted, which is to be cooled by ice or water. Distil until a heavier fluid begins to pass over, which is seen in the bottom of the receiver below the ether. Pour on the liquor which remains in the retort twelve fluid ounces more of rectified spirit, and distil another portion of ether in a similar manner."

¹ The phial proposed by Dr. Dewar is the best for this purpose. It consists of a stoppt phial, having a circular rim round its shoulder, not rising quite so high as the mouth of the bottle, and a glass cup with a heavy bottom, which when inverted over the mouth of the phial into mercury, poured into the rim, hermetically closes it. *Annals of Phil.* vol. x. p. 20.

² Ether (F.) Schwefelätther (G.) Etere (I.)

Edinburgh.

"Take of sulphuric acid, alcohol, of each, *thirty-two ounces*. Pour the alcohol into a glass retort, capable of sustaining a sudden heat; then pour the acid on it in an uninterrupted stream. Mix them gradually by frequent and gentle agitation; then immediately distil from a sand-bath, previously heated for the purpose, into a receiver kept cold with water or snow. Let the fire be so regulated that the fluid may boil as soon as possible, and continue to boil until sixteen ounces shall have distilled over; then let the retort be removed from the sand-bath.

"To the distilled liquor, add two drachms of potash; then distil again from a high retort, with a very gentle heat, into a receiver kept cold, until ten ounces have passed over.

"If sixteen ounces of alcohol be added to the residuary acid after the first distillation, and the distillation repeated, ether will be reproduced. And this may be often repeated."

*ÆTHER RECTIFICATUS. Lond. Rectified Ether.**

"Take of sulphuric ether, *fourteen fluid ounces*; fused potash, *half an ounce*; distilled water, *two fluid ounces*. First dissolve the potash in the water, and add the ether to it, shaking them well together, until they be mixed; lastly, in a heat of 120°, distil from a large retort into a cold receiver twelve fluid ounces of rectified ether."

ÆTHER SULPHURICUS. Dub. Sulphuric Ether.

"Take of sulphuric ethereal liquor, *twenty fluid ounces*; sub-carbonate of kali dried and in powder, *two drachms*. Mix them, and distil from a high retort by means of a very gentle heat, into a receiver kept cold, twelve fluid ounces. The specific gravity of this fluid is to that of distilled water, as 765 to 1000."

The admixture of alcohol and sulphuric acid produces an almost instantaneous formation of ether, which is made sensible by the odour of the mixture; while by the mutual action of the spirit and the acid on each other a considerable evolution of caloric takes place, and the temperature of the mixture is raised to 180°. Whatever can encourage these effects in the first instance is to be avoided, as by the sudden rise of temperature, and the disengagement of ethereal vapours before the apparatus be adjusted, not only is the retort in danger of being broken, but a considerable waste of product also takes place. The directions of the Dublin College, therefore, to heat the spirit before pouring on the acid, are evidently improper; and the least objectionable mode for forming the mixture is undoubtedly that of the London College, if the retort be cooled

* Ether vitriolicus, P. L. 1787.

after the addition of each portion of the acid. The retort should be thin, and the sand-bath previously heated to 208° , so that the liquor may boil immediately; for the ether is formed, and distils over at this temperature: whereas, by gradually raising the heat to this point, part of the alcohol comes over unaltered. The ether, as it distils, is condensed in the cool receivers, in the form of a colourless, limpid, transparent fluid; but towards the end of the operation a white vapour also comes over, on the appearance of which the distillation should be stopt. The receivers ought to be ample, and kept cool with ice or snow, or cold water, which we have found to be preferable to ice or snow. The best mode of applying it is to lay narrow shreds of woollen cloth over the receivers, with one end of each immersed in a vessel of cold water placed higher than the receivers, by which means the water is made to trickle constantly over them; and, by the evaporation which it suffers, the receivers are kept in a sufficiently low temperature, and at the same time, the nature of their contents is distinctly seen, which cannot be conveniently done when they are immersed in snow or ice, or even water. The luting which answers best in this operation is common paste, spread on slips of cloth, first applied, and then surrounded with pieces of wet bladder.

The product of the first distillation, is sulphuric ether combined with water, some alcohol, and a small portion of sulphureous acid, forming an impure ether of the specific gravity $\cdot 768$; and that of the second distillation, or after the addition of a new portion of alcohol, is a similar ether of the specific gravity $\cdot 807$: on mixing these, a fluid of the specific gravity $\cdot 788$ is obtained, which is the unrectified ether of the present London Pharmacopœia.¹ By the rectification of this ether according to the directions of the British Colleges, it is deprived of the sulphureous acid and nearly all the water, and its specific gravity reduced to $\cdot 732$, or when highly rectified to $\cdot 725$; but it still contains some water and alcohol, as ether of a specific gravity so low as $\cdot 632$ in the temperature of 60° has been² obtained. The use of the alkali in the rectification is, by its affinity for the acid and the water, to separate and detain these; and this is still more completely accomplished by the addition of a portion of black oxide of manganese, which, by affording oxygen to

¹ *London Medical Review*, April 1810, p. 163.

² Lowitz procured ether of this gravity by the following process. To ether reduced to $\cdot 746$ specific gravity by means of subcarbonate of potash in the usual method, he added as much dry powdered muriate of lime as it would dissolve. On standing, the mixture separated into two parts; the alcohol holding the salt in solution sunk to the bottom; the ether swam on the surface. When separated from the inferior liquor, its specific gravity was now only $\cdot 632$ in the temperature of 60° . *Thomson's Chemistry*, 4th ed. ii. 443.

the sulphureous acid, converts it into sulphuric acid, and thus renders it perfectly fixed at the temperature employed.

The theory of the formation of ether is still unsettled. It has been contended, that the balance of affinities between the constituents of the alcohol is broken by the acid, the oxygen of which attracting a portion of the hydrogen of the alcohol forms water; while a portion of its carbon, at the same time set free, forms the residuary black matter found in the retort; and, by a new combination of the remaining hydrogen, carbon, and oxygen, the ether is produced. This explanation, however, which supposes a partial decomposition of the acid, has been denied by Fourcroy and Vauquelin, who, from a series of very ingenious experiments¹, concluded, that the acid suffers no decomposition, except towards the end of the process, which is to be attributed to the carbonaceous matter collected in the retort; but that it produces the decomposition of the alcohol without being itself decomposed, by the exertion alone of a disposing affinity. The ether, according to them, is the result of the new combination of the components of the alcohol, part of its oxygen and hydrogen first combining to form water, and a large portion of its carbon being separated without entering into any new combination; so that ether differs from alcohol only in containing a greater proportion of hydrogen and oxygen, and a smaller proportion of carbon. Several objections have been raised to this theory; but, as in a work of this nature it is not necessary to enter minutely into theoretical discussions, I shall only observe, that the most probable opinion is, that the sulphuric acid acts merely by abstracting water from the alcohol, neither transferring any thing to, nor further decomposing it; or, that ether is merely alcohol deprived of one half its water. The sulphureous and carbonic acids, and the charry residue formed in the process, are produced by the decomposition of a portion of the alcohol, by the acid; but this decomposition is not essential for the formation of ether. According to the experiments on which this opinion is founded, alcohol consists of 100 of olefiant gas and 50 of water. Ether consists of 100 parts of olefiant gas and 25 of water. According to Saussure, jun. the ultimate components of 100 parts of ether are, 67.98 of carbon, 14.40 of hydrogen, and 17.62 of oxygen.

Qualities.—Ether has a fragrant penetrating odour, and a hot pungent taste. It is colourless and perfectly limpid; and is the most volatile of liquids, drying immediately if poured on the hand, and producing a great degree of cold by its evaporation. It boils in the open air at 98°, and in vacuo at a temperature considerably below the common freezing point;

¹ *Annales de Chimie*, xxiii. 203.

and, but for the pressure of the atmosphere, would always be in a gaseous form. When cooled down to -46° , ether congeals in brilliant transparent plates. It is extremely inflammable, taking fire on the approach of any ignited body, a circumstance which requires to be attended to in pouring it from one phial to another by candle-light. During its combustion carbonic acid is formed, and traces of charcoal are left behind. It unites with alcohol in every proportion, and also readily mixes with ammonia; but ten parts of water take up only one of ether. It dissolves volatile oils, bitumens, camphor, extractive, and resins. It is decomposed by sulphuric acid.

Medical properties and uses. — Sulphuric ether is stimulant, narcotic, and antispasmodic. In its operation it resembles alcohol, but is more diffusible, and its effects are less permanent. It is beneficially employed as a cordial in typhoid and low fevers, particularly when nausea, subsultus tendinum, and other spasmodic symptoms are present. As an antispasmodic, it relieves the paroxysm of spasmodic asthma, whether it be taken into the stomach, or its vapour only be inhaled into the lungs; in which latter form it is also useful in simple dyspnoea and in catarrh. Much caution, however, is required in inhaling the vapour of ether, as the imprudent inspiration of it has produced lethargic and apoplectic symptoms. It is employed with advantage in hysteria, tetanus, cramp of the stomach, hiccough, and in cholera morbus, to check the vomiting; and also allays the violence of sea-sickness. The usual dose of sulphuric ether is from f_{3fs} . to f_{3ij} .; but it has been given in much larger doses with the most beneficial effects; and in all cases the dose must be repeated at short intervals to produce the full effect of the remedy. As an external application, ether acts either as a stimulant or a refrigerant, according to the mode in which it is applied. The first takes place when it is prevented from evaporating, by being confined over the spot to which it is applied; in which case it often proves useful in relieving head-ach and other muscular pains: and from its refrigerant effect produced by its rapid evaporation, it is applied to burns, and to assist in the reduction of strangulated hernia. We have seen it produce almost immediate relief in ear-ach, when dropped into the external meatus.

Official preparation. *Spiritus Aetheris sulphurici*. L.

OLEUM ÆTHEREUM. Lond. *Ethereal Oil*.¹

After the distillation of sulphuric ether, distil again the remaining liquor with a gentle heat, until a black froth swells up; then immediately remove the retort from the fire. To

¹ Oleum Vini, P. L. 1787. Huile douce de vin (F.) Oleo dolce di Vino (I.)

the liquor in the retort add water sufficient that the oily part may float upon it. Let this be skimmed off, and as much lime-water be added to it as will neutralize any acid it may contain; and shake them together. Lastly, take off the ethereal oil after it has separated."

LIQUOR ÆTHEREUS OLEOSUS. Dub. *Oily Ethereal Liquor.*

"Take what remains in the retort after the distillation of sulphuric ether. Distil to one half, by a moderate heat."

The product of both of these processes is a thick oily matter, of a yellow colour, less volatile than ether, soluble both in ether and alcohol; but insoluble in water. Its nature is not clearly ascertained: for, although Fourcroy and Vauquelin consider it as similar to ether, and differing from it principally in containing a larger proportion of carbon; yet other chemists maintain that it is merely a compound of ether and sulphureous acid: but with regard to either of these opinions, it is still necessary to suspend our judgment. It can be obtained more directly, although less economically, by distilling ether with a portion of sulphuric acid. It is used only for the preparation of the compound spirit.

Official preparation. *Spiritus Ætheris compositus.* L. D.

SPIRITUS ÆTHERIS AROMATICUS. Lond. *Aromatic Spirit of Ether.*¹

"Take of cinnamon bark bruised, *three drachms*; cardamom seeds powdered, *a drachm and a half*; long pepper powdered, ginger-root sliced, of each, *a drachm*; spirit of sulphuric ether, *a pint*. Macerate for fourteen days in a stopped glass bottle, and strain."

ÆTHER SULPHURICUS CUM ALCOHOLE AROMATICUS. Edin. *Aromatic Sulphuric Ether with Alcohol.*

"Take of cinnamon bark bruised, cardamom seeds bruised, each *an ounce*; long pepper bruised, *two drachms*; sulphuric ether with alcohol, *two pounds and a half*. Digest for seven days, and filter through paper."

These preparations do not differ in their medicinal properties from the former; the aromatics rendering them only a little more grateful.

*SPIRITUS ÆTHERIS NITRICI.*² Lond. *Spirit of Nitric Ether.*

"Take of rectified spirit, *two pints*; nitric acid (by weight), *three ounces*. Add the acid gradually to the spirit, and mix them, taking care that the temperature, during the mixture,

¹ Elixir Vitrioli dulce, P. L. 1745.

² Spiritus Nitri dulcis, P. L. 1745. Spir. Ætheris nitrosi, P. L. 1767. Alcool éthereux par l'acide nitrique (F.) Atherischer salpeterspiritus (G.) Spirito di nitro dolce (I.)

does not exceed 120° ; then distil, by a gentle heat, twenty-four fluid ounces."

SPIRITUS ÆTHERIS NITROSI. Edin. *Spirit of Nitrous Ether.*

"Take of alcohol, *three pounds*; nitrous acid, *one pound*; pour the alcohol into a large phial placed in a vessel full of cold water, and add the acid gradually, with frequent agitation. Let the phial be slightly corked, and placed in a cool place for seven days; then distil the liquor by the heat of boiling water, into a receiver kept cool with snow or water, as long as any spirit comes over."

SPIRITUS ÆTHEREUS NITROSUS. Dub. *Nitrous Ethereal Spirit.*

"Add to the matter which remains after the distillation of nitrous ether, the rectified spirit of wine, employed in that operation for condensing the elastic vapour, and distil to dryness, with the greater heat of a water-bath. Mix the distilled liquor with the alkaline liquor which remains after the separation of the nitrous ether, and also add as much dry subcarbonate of kali as shall be sufficient to saturate the predominant acid; which is to be determined by the test of litmus. Lastly, distil by the medium heat of a water-bath, as long as any fluid comes over. The specific gravity of this liquor is to that of distilled water, as 850 to 1000."

The products of the London and Edinburgh processes are in every respect the same; but the former is to be preferred on account of the length of time required by the latter. The small quantity of acid in proportion to the alcohol employed permits the mixture to be effected without any violent action taking place, or the evolution of much heat, provided the acid be added in small quantities and at intervals, and each portion be thoroughly mixed with the alcohol before another be added. The heat employed for the distillation should not exceed 212° , and it should be stopped as soon as twenty-four fluid ounces come over; for when it is longer continued the product becomes coloured, and contains too much free acid.¹ The theory of the operation, inasmuch as relates to the production of the nitric ether, which is thus obtained in combination with a large proportion of unchanged alcohol and a small proportion of nitric acid, is the same as that already detailed; and the entire product has the same relation to nitric ether as spirit of sulphuric ether has to sulphuric ether.

The product obtained by the first part of the Dublin process is analogous to the above. The acid which the residue of the

¹ *London Medical Review*, April 1810, p. 154.

distillation of nitrous ether contains, and the alcohol already impregnated with a small portion of that fluid, when mixed and heated, act reciprocally on each other, and a compound of nitric ether, unchanged alcohol, and free acid, distils over; but the alkali, with which it is mixed before the second distillation, removing the acid, its properties, both as a chemical compound and as a remedy, must be necessarily altered. The products of the former processes are those which have been longest known and most extensively employed.

Qualities. — Spirit of nitric ether, as procured by the London or the Edinburgh process, has an extremely fragrant odour, and a pungent acidulous taste. It is very volatile and inflammable; soluble in water and in alcohol; and strikes a deep olive with solution of green sulphate of iron.

Medical properties and uses. — Spirit of nitric ether is refrigerant, diuretic, and antispasmodic. It has long been employed under the title of *Sweet Spirit of Nitre*, as a grateful refrigerant, and to quench thirst in febrile affections; for which purpose the dose is from $\mathfrak{mxx}$. to $\mathfrak{mxi}$. given in a cupful of water, or any other appropriate vehicle. In larger doses it acts as a gentle stimulant to the stomach, relieving nausea and flatulence; and also determines to the kidneys, increasing the flow of urine; on which account it is advantageously prescribed as an auxiliary to other diuretics in dropsical complaints.

SPIRITUS ÆTHERIS SULPHURICI. Lond. *Spirit of Sulphuric Ether.*

“Take of sulphuric ether, *half a pint*; rectified spirit, *a pint*. Mix them.”

ÆTHER SULPHURICUS CUM ALCOHOLE. Edin. *Sulphuric Ether with Alcohol.*

“Take of sulphuric ether, *one part*; alcohol, *two parts*. Mix them.”

LIQUOR ÆTHEREUS SULPHURICUS. Dub. *Sulphuric ethereal Liquor.*

“Take of rectified spirit of wine, sulphuric ether, of each, *thirty-two ounces*. Let the spirit heated to 120° be poured into a glass retort fit to bear a sudden heat, and add the acid in an uninterrupted stream; let them be gradually mixed, and by means of a quick and sufficiently powerful heat, distil twenty ounces of the liquor into a receiver kept cool.

“If sixteen ounces of rectified spirit of wine be poured on the residuary acid in the retort, more sulphuric ethereal liquor will be obtained by repeating the distillation.”

In the old method of preparing this spirit by distilling the charge for sulphuric ether by a slow and gradually increased heat, an alcoholized ether was obtained, owing to part of the

alcohol first passing over unaltered before the ether was formed, the specific gravity of which was $\cdot 768$; but the gravity of the above mixture is $\cdot 816$, showing that it contains considerably less ether in combination with the alcohol.

Medical properties and uses.—It may be used for the same purposes as the ether; but it is necessarily much less active. The dose is from $\text{f}\text{3j}$. to $\text{f}\text{3ij}$. An useful gargle for slight inflammation of the fauces is prepared by adding $\text{f}\text{3j}$. of this spirit to $\text{f}\text{3vj}$. of barley-water, sweetened with fziv . of syrup of marsh-mallows.

SPIRITUS ÆTHERIS SULPHURICI COMPOSITUS. Lond. *Compound Spirit of Ether.*

“Take of spirit of sulphuric ether, a pint; ethereal oil, two fluid drachms. Mix them.”

This is intended as a substitute for the *Anodyne Liquor of Hoffmann*; and, besides being stimulant and antispasmodic, it is supposed to possess anodyne properties. It is an useful addition to tincture of opium, when given with the intention of procuring sleep; and often prevents the opium from exciting the nausea which it is apt to produce in some habits. The dose is from $\text{f}\text{3fs}$. to $\text{f}\text{3ij}$. in any appropriate vehicle.

ÆTHER NITROSUS. Dub. *Nitrous Ether.*

“Take of nitrate of kali, dried and coarsely powdered, a pound and a half; sulphuric acid, a pound; rectified spirit of wine, nineteen fluid ounces. Put the nitrate of kali into a tubulated retort, placed in a bath of cold water, and pour upon it in small quantities, and at intervals, the sulphuric acid and the spirit previously mixed together, and allow the mixture to become cold. Without any external heat, or at least a very gentle one, (such as may be communicated by the addition of a little tepid water to the bath,) an ethereal liquor will begin to distil. In a short time the heat of the retort will spontaneously increase, and a considerable ebullition take place, which must be moderated by adding some cold water to the bath. The receiver must also be kept cool with water or snow, and furnished with a proper apparatus for transmitting the very elastic vapour (arising from the mixture with great force if the heat be too much increased) through a pound of rectified spirit of wine in a phial which is to be kept cold.

“The ethereal liquor, thus spontaneously distilled, is to be put into a glass phial, fitted with a ground glass stopper, and as much subcarbonate of kali, dried, and in powder, is to be added as is necessary to neutralize the acid, closing the phial after each addition of the kali, and determining the neu-

¹ Alcool éthereux par l'acide sulphurique (F.) Atherischer Schwefeleigent Liquor (G.) Anodino minerale dell' Hoffmann (L.)

tralization by the test of litmus: about a drachm of salt is generally sufficient for this purpose; and in a short time the nitrous ether will rise to the surface, and is to be separated by means of a funnel.

"If the ether is required to be very pure, distil it again from a water-bath, at a temperature of 140° , to one half. Its specific gravity is to that of distilled water, as 900 to 1000."

The action of nitric acid on alcohol is so violent, that the formation of ether which it affords, has always been regarded as a process of great difficulty, to obviate which many ingenious plans have been suggested. The operation which has been just described is admirably adapted for procuring it with facility and safety. It was contrived by Woulfe, and was found by Pelletier to succeed better than any other. The sulphuric acid and the spirit must be mixed with the same degree of caution as is necessary in preparing sulphuric ether; and the receiver must be larger, and kept perfectly cool, with the apparatus, described in the formulæ, attached to it, which should be kept cool by a mixture of snow or ice and muriate of lime.

In the above process, the nitrate of potash is first decomposed, and nitric acid formed, which acts upon the alcohol as it evolves. The theory of this action is very obscure: but from a number of well contrived experiments Thenard was led to draw the following conclusions. Both the acid and the alcohol are decomposed; the oxygen of the former combines with a large proportion of the hydrogen, and a small quantity of the carbon of the alcohol, and thence result, "1st, Much water and nitrous oxide, and small quantities of carbonic acid, nitrous acid, and nitric oxide. 2dly, The separation of a small quantity of nitrogen, and the formation of much nitric ether by the combination in large quantity of the two elements of the nitric acid, with the alcohol from which the large proportion of hydrogen and small proportion of carbon have been abstracted. 3dly, The formation of acetic acid, and of a matter disposed to pass to the state of charcoal, by the combination, in certain proportions, of the hydrogen and carbon of the alcohol with the oxygen of the nitric acid."

Qualities.—Nitrous, or rather nitric ether has a strong ethereal odour, but is less fragrant than sulphuric ether. Its taste is strong and peculiar; and its colour slightly yellow, probably arising from the presence of a small portion of nitric oxide. When highly rectified, its specific gravity is 0.866¹: it is more volatile than sulphuric ether, boiling at a tempera-

¹ Murray's Chemistry, 2d ed. iv. 447.

² Duncan, New Edinburgh Dispensatory, 5th ed. 567.

ture of 70° , and consequently producing a greater degree of cold by its evaporation; and is very inflammable. It requires 48 parts of water for its solution, but combines with alcohol in every proportion; and readily absorbs nitrous and acetic acids, both of which acids are formed in it when it is kept for some time. According to the analysis of Thenard, the constituents of 100 parts of nitric ether are 48.52 of oxygen, 28.45 of carbon, 14.49 of azote, and 8.54 of hydrogen: but this analysis is liable to some exceptions.

Medical properties and uses. — Nitric ether, although introduced into the Dublin Pharmacopœia, has not yet been generally used in practice; but it is probable that its properties are the same as those of sulphuric ether, and consequently it is applicable to the same cases.

VINA.

WINES.

WINE acts upon vegetable substances in nearly the same manner as diluted spirit, dissolving such of their proximate principles as can be taken up by water and alcohol when combined: hence it has been long used as a menstruum for extracting the active parts of medicinal vegetables; and the solutions thus formed have been denominated *Medicated Wines*. As a solvent, however, it is liable to the objection of inequality of strength; and owing to the spontaneous decomposition which it undergoes from exposure to the air, it is still more objectionable, this change being likely to take place sooner when it is imbued with principles all of which tend to hasten the fermentative process. To remedy these disadvantages in this class of preparations, Parmentier has proposed¹, that instead of preparing medicated wines in the usual method, the alcoholic tinctures well prepared should be added to wine in given quantities; by which means, he contends, the preparations are less nauseous, and, what is a still greater advantage, are always of a determinate strength. The British Colleges, however, still order medicated wines to be prepared after the old method. They should be kept in very well corked bottles, and in a cool situation. By the general term Wine, the London College means to designate Sherry Wine.

VINUM ALOES. Lond. *Wine of Aloes.*²

“Take of extract of spiked aloës, eight ounces; canella bark,

¹ *Annales de Chimie*, lii, 46.

² Vin d'Aloë (F.) Vino Aloetico (I.)