whole appears to be dissolved, forming an opaque, yellowish solution, but by rest the greater part is deposited, and not more than one-third is actually dissolved; its solubility, however, in water may be increased by trituration with camphor or an alkali; rectified spirit dissolves it, and the resulting tincture, when diluted, becomes turbid, although no precipitate occurs. MED. USES. Stimulant, as in *Form.* 103. Expectorant, 132, 133, 138. Emmenagogue, 95, 98, 99. It is also tonic, and agrees with some constitutions better than any of the bitters. FORMS OF EXHIBITION. No form is so eligible as that of substance. DOSE, gis. x to 3j. The alkalies, in their crystalline state, when triturated with myrrh, reduce it to the form of a tenacious fluid. OFFICINAL PREPARATIONS. *Tinct. Myrrh.* L.E.D. *Tinct. Aloes et Myrrh.* E. *Tinct. Aloës Ætherea.* E. *Mist. Ferri comp.* L. (G L) *Pil. Aloes cum Myrrha*, L.E.D *Pil. Ferri cum Myrrha.* L. *Pil. Galb. comp.* L.D. (B) *Pil. Assafœtid. comp.* E. (B) *Pil. Rhei. comp.* E. (G) ADULTERATIONS. It is subject to a variety of frauds, being frequently mixed with adventitious gums, which are to be detected by their foreign odour, their white or dark colour, and by their opacity.

NUX VOMICA. (Strychnus Nux Vomica.)

Nux Vomica.

This seed has not at present a place in the British pharmacopœiæ; it presents however several points of interest to the physiologist, the physician, and the chemist. Its virulent action upon animals has been long known; and it has been administered in combination with gentian in intermittents,* (*Ludovic Phar.* p. 113,) and as a narcotic in mania; it also constituted an ingredient in the famous *Electuarium de ovo*, (*Ph. Angl. p. 263.*) *Nux vomica has been said to produce benefit in the plague*; the German writers have strongly commended it in mania, epilepsy, and hydrophobia; as well as in chronic rheumatism, gout, scrophula, lues venera, and cutaneous eruptions; in Sweden it is stated to have displayed very beneficial effects in Dysentery. Dr. Fourquier has lately introduced its use in the Hopital de la Charité, in cases of partial paralysis, and it is said, with very great success.† The value of the practice has been since confirmed by the experiments of Dumeril, Majendie, Hebreard, Husson, and Asselin. The dose is four or five grains of the powder in pills, during the day. The French codex contains two alcoholic extracts of this substance; the one prepared with a strong spirit (22, 32, Beaumé, i. e. from sp. gr. ·915 to ·856,) is much more active and powerful than that made with a weak spirit. (12, 22, Beanmé, i. e. from sp. gr. ·985 to ·915.)

M. M. Pelletier and Caventou have discovered in this substance, a peculiar proximate principle, to which its virulence is owing; it was named *Vauqueline*, in honour of the celebrated French philosopher, but in deference to the opinion of the French Academy of Sciences, the discoverers have substituted the name *Strychnia*, because "a name dearly loved, ought not to be applied to a noxious principle"! ‡

* Sir Hans Sloane published a Paper in the Philosophical Transactions, No. 249, Vol. xxi. p. 44, entitled "An account of the Nux Pepita, or St. Ignatius's Bean (Ignatia Amara, Lin.) A Simple in common use in the Philippine Islands, as a Tonic medicine."

† That the active principle of the Nux Vomica expends its virulence upon the spinal marrow has been already noticed. (*See* page 136.)

‡ M. Henry has given us the most simple formula for the preparation of this substance. It consists in boiling Nux Vomica in water, and evaporating the decoction

(*Annales de Chimie, vol.* 8 to 10) Strychnia is highly alkaline, and crystallizes in very small four-sided prisms, terminated by four-sided pyramids; its taste is insupportably bitter, leaving a slight metallic flavour, and is so powerful as even to be perceptible when a grain is dissolved in eighty pounds of water;* it has no smell; is not changed by exposure to the air, nor is it either fusible or volatile, for when submitted to the action of heat, it only fuses at the moment of its decomposition which takes place at a temperature inferior to that which destroys most vegetable substances; it is so extremely active and violent, that in doses of half a grain it occasions serious effects, and in larger ones convulsions and death; it is perhaps the most powerful,† and next to hydro-cyanic acid, the most rapid of poisons; notwithstanding its strong taste, it is very sparingly soluble in water, requiring 6667 parts of that fluid for its solution at 50, and 2500 at 212°. It is very soluble in alcohol, but unlike most of the other vegetable alkalies, is nearly insoluble in æther; with acids it forms neutral and crystallizable salts; these salts as well as their base, have the singular property of becoming blood-red by the action of concentrated nitric acid. The alcoholic solution of Strychnia has the property of precipitating the greater number of metallic oxides from their acid solutions. It is precipitated by alkalies and alkaline earths. Strychnia exists in native combination in the Strychnus with an acid which has some analogy with the malic, and which Pelletier and Caventou propose to call the *Igasuric acid*, from the Malay name for the bean of St. Ignatius,‡ (Strychnus Ignatius,) in which its properties were first examined. In conformity with such views, the active principle of the tribe of Strychni is an *Igasurate of Strychnia;*—a fact which suggests the existence of a most singular and striking analogy between the chemical constitution of these narcotico acrid bodies§ and that of opium. The recent experiments of Pelletier have shewn, moreover, that besides Strychnia, the Nux Vomica contains *Brucia*, an alkaline body which had been previously discovered in spurious Angustura. Its properties are similar to those of Strychnia, but it is less active. Being much more soluble in alcohol than *Strychnia*, if care be taken to crystallize the latter several times in alcohol, it will be separated, the *Brucia* remaining in the *mother waters*. Strychnia has been given in doses of one-twelfth of a grain, but it is a most dangerous remedy, and is liable to occasion tetanic convulsions. It has been said, however, to prove serviceable in cases of Epilepsy that had resisted every other method of cure. Dr. Fleming informs us that the Hindoos of upper India are in the habit of adding Nux Vomica in the

until it acquires the consistence of Syrup; lime is then added, which unites with the acid, and liberates the Strychnia; which may then be separated by means of alcohol, from which it may be obtained by crystallization.

* Ann: de Chimie et de Phys. x. 153.

† M. Majendie has killed a dog with one eighth of a grain, and the editor of the Edinburgh Med: and Surg: journ: has seen one die in two minutes after the injection of one sixth of a grain into the cavity of the pleura. The celebrated Java poison owes its activity to Strychnia.

‡ Strychnia was obtained from the beans of St. Ignatius by the following process: a portion of the beans being grated was heated in a close vessel, under pressure, with sulphuric æther, by which an oily matter was dissolved; the residuum then yielded by the action of alcohol, a yellowish brown, very bitter substance, which being boiled in pure magnesia and filtered, the colouring matter was washed out, and the Strychnia and magnesia, in a state of mixture, remained on the filtre. The strychnia was then separated by alcohol, and thus obtained in a state of great purity.

§ See note under the article Opium.

process of distilling Arrack, for the purpose of rendering the spirit more intoxicating. The London Porter brewers have been accused of the same pernicious practice.

OLEA DESTILLATA. L. Ol Volatilia. E.

Ol. Essentialia. D.

Distilled, Volatile, or Essential Oils.

The British pharmacopœiæ direct them to be obtained by distillation only; the French codex orders several of them to be prepared by expression. Qualities. *Form*, liquid, sometimes viscid; *specific grav.* various; oil of turpentine, which is the lightest, being only 0·792, whilst the oil of cloves, cinnamon, and allspice, exceed 1·030, and that of sassafras, which is the heaviest, amounts to 1·094: these latter oils hold resin in solution, and of course sink in water. *Odour*, penetrating and fragrant; *Taste*, acrid; they are volatilized at a temperature somewhat below that of boiling water; they are very inflammable. Solubility. Very soluble in alcohol, forming what are termed in perfumery *Essences;* in water they are very sparingly soluble; the solutions are known in pharmacy under the title of *distilled water;* they are also dissolved by æther, and the *fixed* oils; when digested with ammonia, some of the less odorous acquire a considerable degree of fragrance, whilst on the contrary, fixed alkalies universally impair their odour; they are rapidly decomposed by nitric and sulphuric acids, and their action is sometimes attended with instant inflammation. Volatile oils, from continued exposure to the air, absorb oxygen, and become resinous, by which they lose their volatility, fragrance, and pungency, hence they should be preserved in small opaque phials, completely full and well stopped. Med. Uses. They act as powerful stimulants and aromatics; they remove nausea and flatulence, correct the griping of certain purgatives, and cover the offensive taste of various remedies. See *Aquæ destillatæ*. They, moreover, have the property of defending certain animal and vegetable preparations from mouldiness. This curious fact has been already noticed, *see* page 181. The following is a list of the species admitted into our British pharmacopœiæ; those designated in *italics* are principally for internal use. Olea *Anisi*, *Anthemidis*, *Cari*, *Juniperi*. Lavandulæ, *Menthæ Piperitæ*, *Menthæ viridis*, Origani, *Pimentæ*, *Pulegii*, *Rosmarini*, *L.* Olea Volatilia, *Juniperi communis*, Juniperi Sabinæ, Lavandulæ Spicæ, Lauri Sassafras, *Menthæ Piperitæ*, *Myrtæ*, *Pimentæ*, *Pimpinellæ Anisi*, Rorismarini Officinalis. E. Olea *Juniperi*, *Pimento*, Corticis et Ligni Sassafras, *e Seminibus Anisi*, *Cari*, et *Fœniculi dulcis*, Florum Lavendulæ. Foliorum Sabinæ, *Herbæ florescentis Menthæ Sativæ*, Origani, *Pulegii*, *Rorismarini*, *Rutæ*, D. Adulterations. *Fixed Oils* may be detected by moistening writing paper with the suspected article and holding it before the fire: if the oil be entirely essential, no stain of grease will remain; as castor oil is more soluble in spirit than the others, it is the one generally selected for this fraudulent purpose, and the addition of alcohol restores the sophiscated oil to its proper degree of consistency. *Alcohol* is discovered by adding water, which, if it be present, occasions a milkiness, and at the same time, an increase of temperature; a decrease of bulk also takes place, which may easily be ascertained by measuring the oil and water separately, and then transferring them, in a state of mix-

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