

a wide shallow vessel, and heated by means of boiling water saturated with sea salt, is to be reduced to the consistence of honey. The mass when cold, is to be put into glazed earthen vessels, and moistened with strong alcohol."

The juices of fresh vegetables obtained by expression contain, besides the sap of which they chiefly consist, mucilage, fecula, extractive matter, and the other proper juices of the plant. When newly expressed these matters are mixed together, and form a viscid heterogeneous fluid, which gradually separates, by rest, into two parts; the one formed of a deposit of all the insoluble components of the juice generally involved in mucilaginous matter; the other a clear liquor consisting of water holding some mucilage in solution, with the acids and salts, if any, and other soluble principles of the juice. As the clear liquor is that which is wished to be obtained for medical use, it is separated by first decanting it from the deposit, then filtering it repeatedly through a linen cloth, and adding about one-fortieth part of its weight of alcohol; after which it is allowed to remain at rest for some time, and again filtered previous to being put into the bottles in which it is intended to be preserved. The bottles should be kept in a cool cellar, and sunk up to the neck in sand.

Various other methods, also, are employed for depurating vegetable juices; but as these preparations are now almost obsolete, we do not think it necessary to detail them. By whatever means they are prepared, vegetable juices undergo chemical changes, and spontaneous decompositions from keeping, which must necessarily affect their virtues as medicines. They are therefore properly rejected from all the pharmacopœias.

The articles given in the Edinburgh Pharmacopœia under the title *Succi spissati* being associated by the London College with the extracts, and the difference between these preparations being scarcely sufficient to constitute a generic distinction, we have thought it proper not to alter the London arrangement in this respect, and have therefore placed the whole under the title *Extracts*.

GUM RESINS.

GUMMI-RESINÆ. Lond.

"Separate OPIUM very carefully from all extraneous matters, particularly those adhering to its outside. Let it be kept in a soft state fit for forming pills; and in a hard state,

such as can be produced by drying it in the heat of a water-bath, capable of being rubbed into powder.

"Those GUM-RESINS are to be preferred, which can be selected in such a state of purity as to require no purification. If, however, they appear to be less pure, boil them in water until they soften, and express them by a press through a hempen bag: then set them aside, that the resinous part may subside. Pour off the supernatant fluid, and evaporate it by the heat of a water-bath, adding the resinous part towards the end of the operation, and mixing it intimately with the gummy part so as to form one mass.

"Those GUM-RESINS which easily liquefy are to be purified by putting them into an ox bladder, and holding them in boiling water until they become soft enough to be freed from their impurities by pressing them through a hempen bag.

"Dissolve the BALSAM OF STORAX in rectified spirit, and strain it; then distil off the spirit by a gentle heat, until the balsam acquire a proper consistence."

Gum-resins which require to be treated in the above manner are unfit for internal use, and should be kept chiefly for forming plasters and for other external purposes. The degree of heat, although not more than sufficient for the liquefaction of the substances, is nevertheless enough to dissipate many of their odorous and volatile principles, and occasion some changes of composition. The directions for the treatment of opium are sufficient for freeing it from all the grosser impurities; and as the remedy remains unaltered, its strength is preserved unimpaired; whereas when spirit is employed, as was formerly ordered in the London Pharmacopœia, and is still by the Dublin College, it always suffers in efficacy.

OPIUM PURIFICATUM. Dub.¹ *Purified Opium.*

"Take of opium cut into small pieces, *one pound*; proof spirit, *twelve pints*. Digest with a gentle heat and frequent agitation, until the opium be dissolved; then filter the solution through paper, and distil it from a retort to separate the spirits; pour out the residuary liquor, and evaporate it until the extract be of a proper thickness. Purified opium must be kept in two states; one *soft*, proper for forming pills, and one *hard*, capable of being reduced to powder."

STYRAX PURIFICATA. Dub.² *Purified Storax.*

"Digest the storax in tepid water until it softens; then press it in a press between iron plates heated with boiling water; and finally, separate it from the water."

In this process a considerable part of the benzoic acid of the

¹ Opium pur (F.) Mohnsaft (G.) Oppio puro (I.) Opio puro (S.)

² Styra in Körnern (G.) Storace depurato (I.)

storax is dissipated by the heat of the iron plates, and the efficacy of the remedy consequently diminished. Hence the directions of the London College for purifying this substance are to be preferred.

OLEA EXPRESSA.

EXPRESSED OILS.

VEGETABLES yield two distinct species of oil, one of which is volatile at a high temperature, but the other cannot be volatilized without suffering decomposition. The first of these is termed *Volatile Oils*, the second, *Fixed Oils*; a name properly adopted by the Edinburgh College, and more suitable than *Expressed Oils*, the epithet given to this class of substances by the London and the Dublin Colleges.

FIXED OILS are obtained from fruits and seeds either by expression or decoction with water. The dicotyledons or seeds with two seed-lobes yield the greatest portion of oil. When the first process is employed, the fruit or seed is put into a strong hempen or hair bag, and subjected to the press; during the action of which the oil is forced out, generally combined with some other of the vegetable principles, which are afterwards separated by subsidence. The process is facilitated, and the quantity of oil increased, by heating the plates of the press, or previously roasting the seeds; but the oil thus obtained is more liable to become rancid, and hence the cold-drawn oils are always preferred for medicinal purposes. When the oil is to be obtained by decoction, the fruits or seeds are to be bruised previously to being boiled; and the oil which is separated is to be skimmed off from the surface of the water on which it swims.

Fixed oils have different degrees of consistence; they are, 1. Fluid at the ordinary temperature of the atmosphere, congealing in a temperature a little higher than the freezing point of water. 2. Concrete at the ordinary temperature of the atmosphere, and require a higher degree for their liquefaction. The first are denominated *fluid oils*; the second, *vegetable butters*.

1. Fluid fixed oils are generally inodorous and nearly insipid, or have a mild taste. They are transparent, viscid so as to run in streaks upon the sides of glass vessels, and have generally a slight tinge, which may be removed by digestion with charcoal. They are generally lighter than water, but differ