

CHAP. VI.

EMULSIONES.—EMULSIONS.—MISTURA.—MIXTURES.

EMULSIONS are preparations in which the expressed oil of the seeds or kernels, from which they are made, is diffused through water by the medium of the sugar, mucilage, and fecula, which the seeds contain. They may be made from lintseed, from the seeds of the poppy, and from other oily seeds: but they are always ordered to be prepared from almonds, as being free from any disagreeable flavour or taste. They are always opaque and milky. As the oil is merely diffused through the water, it gradually separates and rises towards the surface. The fluid beneath is like whey in its appearance, and it soon becomes acescent from the slow fermentation of the saccharine matter. The addition of vinous spirits, or of any weak acid, decomposes emulsions, separating the oil. In prescribing them, therefore, it is necessary to avoid combining with them any tincture, or any substance having acidity.

EMULSIO AMYGDALÆ COMMUNIS. Almond Emulsion.

(Mist. Amygdalæ, *Ph. Lond.*—Lac Amygdal. *Dub.*)

“ Take of Sweet Almonds, one ounce; Water, two

pounds and an half; beat the blanched almonds carefully in a stone-mortar, adding the water gradually, then strain."

The almonds are blanched, or freed from their thin rhind, by keeping them a minute or two in boiling water, when the rhind is easily detached. They require to be well beat as the water is added. The emulsion is used as a diluent and demulcent in catarrh and gonorrhœa, or during the application of a blister, being drunk *ad libitum*, and it is more grateful than any other preparation.

EMULSIO GUMMI MIMOSÆ NILOTICÆ, *vulgo Emulsio Arabica*. Arabic Emulsion. (*Emulsio Arabica, Ph. Dub.*)

"This is made in the same manner, adding, while beating the almonds, two ounces of mucilage of gum Arabic."

It is used in the same cases as the preceding, and from the addition of the mucilage is supposed to have rather more demulcent power.

EMULSIO CAMPHORATA. Camphor Emulsion.

"Take of Camphor, one scruple; blanched Sweet Almonds, two drachms; Refined Sugar, one drachm; Water, six ounces: Let it be made in the same manner as the Almond Emulsion."

Camphor is less apt to occasion nausea or uneasiness at the stomach when given in a liquid than when in a solid form; and this is one of the best forms of preparation, the camphor being completely diffused. Its dose is

two ounces, but as this narcotic is not much employed internally in modern practice, the camphor emulsion is not often prescribed.

MISTURA.—MIXTURES.

To the preparations named Emulsions, the London College have extended the general name of Mixture, which is employed in Pharmacy to denote those preparations in which different ingredients are mingled together in the liquid form, or in which solid substances are diffused through liquids by the medium of mucilaginous or saccharine matter. And under this name of Mixture are inserted several compound medicines, both in the London and Dublin Pharmacopœia, of which it is necessary to take notice. Some of these had formerly a place in the Edinburgh Pharmacopœia; but they have been discarded, probably from the consideration that they must always be prepared extemporaneously, and may therefore be varied according to the intention of the prescriber.

MISTURA AMMONIACI. Gum Ammoniac Mixture. Ph. Lond. (*Lac Ammoniac. Ph. Dub.*)

“Take of Gum Ammoniac, two drachms; Water, half a pint. Triturate the ammoniac with the water poured on it gradually until they are intimately mixed.” In the Dublin Pharmacopœia, one drachm of Gum Ammoniac is

diffused by trituration in eight ounces of Pennyroyal Water, and the mixture is strained through a linen cloth.

In these mixtures the resinous matter is suspended in the water by the medium of the gum, and a milky liquor is formed. From this the resin subsides slowly. Under this form this gum-resin is sometimes prescribed as an expectorant, the dose of the mixture being from half an ounce to an ounce.

MISTURA ASSAFOETIDÆ. Assafoetida Mixture. Ph. Lond. (*Lac Assafoetidæ, Ph. Dub.*)

“ Take of Assafoetida, two drachms ; Water, half a pint. Rub the assafoetida with the water added gradually until they are perfectly mixed.” In the Dublin Pharmacopœia, one drachm of Assafoetida is diffused by trituration in eight ounces of Pennyroyal Water.

The resin of the assafoetida is in this mixture likewise suspended in the water by the medium of the gum. It is a form under which this foetid drug is prescribed in the hysteric paroxysm, from half an ounce to an ounce being given and repeated at short intervals.

MISTURA CAMPHORÆ. Camphor Mixture. Ph. Lond. (*Mistura Camphorata, Ph. Dub.*)

“ Take of Camphor, half a drachm ; Rectified Spirit, ten minims ; Water, a pint. Rub the camphor first with the spirit, then add the water gradually, and strain.” In the Dublin Pharmacopœia, the preparation is a little different ; one scruple of Camphor being rubbed with ten

drops of rectified spirit; half an ounce of refined sugar being added, and a pound of water, and the liquor being strained through a linen cloth.

Boiling water was formerly ordered in making this mixture, by which much of the camphor was volatilized, and very little dissolved. Even at a low temperature, the water scarcely dissolves any appreciable quantity, and it can be regarded only as receiving odour and some degree of taste, without any such impregnation as shall communicate to it medicinal efficacy.

MISTURA CORNU USTI. Mixture of Burnt Horn. Ph. Lond. (Decoctum Cornu Cervini. Decoction of Hartshorn, *Ph. Dub.*)

“Take of Burnt Horn, two ounces; Gum Arabic in powder, one ounce; Water, three pints. Boil down to two pints, stirring constantly; then strain.”

This is an absurd preparation, introduced at a time when the principles of Pharmacy were nearly unknown, and retained merely from the influence of habit. The burnt hartshorn, (which is chiefly phosphate of lime), is perfectly insoluble in water; the gum alone therefore is dissolved; the hartshorn, by the continued boiling, is diffused, and kept suspended by the mucilaginous liquid; but this might equally be done without this operation; and when done it can communicate to the preparation no medicinal power.

MISTURA CRETÆ. Chalk Mixture. *Ph. Lond. & Dub.*

“ Take of Prepared Chalk, half an ounce ; Refined Sugar, three drachms ; Gum Arabic in powder, half an ounce ; Water, a pint. Mix them.”

The chalk is in this mixture suspended by the mucilage ; it is taken as an antacid in the dose of one or two ounces occasionally ; but it may be doubted whether the mucilage and sugar will not rather be injurious in that state of the stomach which generates acidity.

MISTURA FERRI COMPOSITA. Compound Mixture of Iron. *Ph. Lond.*

“ Take of Myrrh in powder, one drachm ; Sub-carbonate of Potash, twenty-five grains ; Rose Water, seven fluidounces and a half ; Sulphate of Iron in powder, one scruple ; Spirit of Nutmeg, half-a-fluidounce ; Refined Sugar, a drachm. Rub the myrrh with the sub-carbonate of potash and the sugar, and, during the rubbing, add first the rose water, and the spirit of nutmeg, and afterwards the sulphate of iron. Put the mixture immediately into a proper glass vessel, which stop closely.”

This, with a few trivial alterations, is the celebrated Antihectic Mixture of Griffith ; which, as first invented, was undoubtedly an unchemical mixture, the prescriber not being aware of the changes produced in the active ingredients by their mutual action, but which, in practice, was found possessed of peculiar advantages. The sulphate of iron, it is obvious, is decomposed by the sub-carbonate of potash, the sulphuric acid combining with

the potash, while the carbonic acid unites with the oxide of iron. The carbonate of iron which is formed is diffused in the mixture along with the myrrh, and both are probably kept more completely suspended by an excess of alkali. This chalybeate proves much less irritating than the sulphate of iron, producing no unpleasant effect on the stomach, and at the same time it is more active than the common carbonate or rust of iron, in which the iron is at the maximum of oxidation, while, in the present preparation, it is at the minimum, is in a different state of aggregation, and probably combined with a larger quantity of carbonic acid. To preserve it in this low state of oxidation, it is ordered to be kept in a bottle closely stopt; but as iron has a strong tendency to pass to a more highly oxidated state, and suffers this change very rapidly from the action of the air, it is preferable that the preparation should be always extemporaneously made. Griffith's Mixture was employed as a remedy in hectic fever, in chlorosis, and other diseases in which iron is given as a tonic. The mixture of the London Pharmacopœia, which is nearly of the same strength, may be given in the same cases in a dose of an ounce once or twice a day.

MISTURA GUAIACI. Guaiac Mixture. Ph. Lond.

“ Take of the Gum-Resin of Guaiac, a drachm and a half; Refined Sugar, two drachms; Mucilage of Gum Arabic, two fluidrachms; Cinnamon Water, eight fluidounces. Rub the guaiac with the sugar, then with

the mucilage, adding gradually, while these are rubbed together, the cinnamon water."

This may be a convenient form for the exhibition of guaiac, though there appears to be no great advantage in multiplying these extemporaneous prescriptions.

MISTURA MOSCHI. Musk Mixture. Ph. Lond.

"Take of Musk, Gum Arabic, Refined Sugar, of each one drachm; Rose Water, six fluidounces. Rub the musk with the sugar, then with the gum, and add gradually the rose water."

The same observation applies to this as to the preceding preparation. Its dose, when it is prescribed, is an ounce, or an ounce and a half.