

CHAP. I.

PREPARATIONS OF SOME SIMPLE MEDICINES.

THE first Chapter in the Edinburgh Pharmacopœia is a miscellaneous one, including under this title, a few preparations which could not well be placed under the other chapters. I have added to it some similar preparations from the London and Dublin Pharmacopœias.

HERBARUM ET FLORUM EXSICCATIO. Drying of Herbs and Flowers.

“ Herbs and Flowers are to be dried with the gentle heat of a stove, or a common fire, in such a quantity that the drying may be performed as quickly as possible. Their virtues are thus best preserved, the mark of which is their retaining completely their native colour. The leaves of hemlock, and others containing a subtile volatile matter, are, immediately after drying, to be rubbed to powder, and kept in glass vessels well stopt.” Directions nearly similar are given by the Dublin College.

By drying herbs and flowers, or expelling a great part of the water they contain, those spontaneous chemical changes which are favoured by humidity are prevented,

and they are rendered capable of being preserved. The more quickly they are dried, they retain in general their virtues more completely, care only being taken that too much heat be not applied, as part of their volatile principles would be dissipated, and their flavour and medicinal qualities impaired. Even when dried, they suffer some changes in keeping, probably from the action of the air and light; and some do so more rapidly than others. Hemlock, in particular, has its colour and odour impaired in a very short time; it is therefore necessary to exclude it from the air, and likewise from exposure to light.

SCILLA MARITIMA EXSICCATA. Dried Sea Squill.

“Cut the root of the sea squill, its outer covering having been removed, transversely, into thin slices, and dry it by a gentle heat. The mark of its being properly dried is, that while it is rendered friable it retains its bitterness and acrimony.”

By drying, the squill loses about four-fifths of its weight, and with very little diminution of its powers, if too much heat has not been applied. It is in this state that squill is commonly employed in medicine, and for other pharmaceutic preparations. It requires to be kept in a dry place, as otherwise it regains its softness, and is liable to become mouldy.

PULPARUM EXTRACTIO. Extraction of Pulps.

Those fruits which afford a pulp, if they are unripe, or if ripe and dry, boil with a little water, that they may

become soft. Then express the pulp through a hair-sieve, and boil it with a gentle heat in an earthen vessel, stirring it frequently that it may not burn, until it attain the consistence of honey.

The pulp of cassia fistula is to be boiled from the bruised pod; and then by evaporating the water, to be reduced to the due consistence. The pulps of ripe and fresh fruits are to be pressed through a sieve, without previous boiling.

These directions are given principally for the preparation of the pulps of several fruits which enter into the composition of the Electuary of Senna. Pulps are seldom otherwise medicinally employed, and they cannot be long preserved unchanged.

THE following general directions are given in the London Pharmacopœia, for collecting the vegetable articles of the Materia Medica.

“VEGETABLES are to be gathered from the soil and situations where they spontaneously grow, at a dry season, and not moistened with rain or dew: they ought to be collected annually, and if they have been kept for a longer period, ought to be rejected.”

“ROOTS, in general, are to be dug up before their stalks or leaves shoot forth.”

“BARKS ought to be collected at that season at which they are most easily separated from the wood.”

“LEAVES are to be gathered after the flowers have unfolded, and before the seeds have ripened.”

“FLOWERS are to be collected recently blown.”

“SEEDS are to be taken when they are ripe, and before they begin to fall from the plant. They ought to be preserved in the seed vessels.”

PREPARATION OF VEGETABLES. Pharm. Lond.

“VEGETABLES, soon after they are collected, those excepted which are to be used in the recent state, are to be spread out lightly, so as to dry as quickly as possible, with a heat so gentle, that their colour may not change; they are then to be kept in proper vessels, or situations where the access of light and humidity may be excluded.”

“ROOTS, which are ordered to be kept fresh, ought to be buried in dry sand. The root of squill, before drying it, is to be cut transversely into thin slices, the outer dry layers being removed.”

“PULPY FRUITS, if they are not ripe, or, if ripe and dry, are to be exposed in a damp place until they become soft, then press out the pulp through a hair-sieve, afterwards boil with a gentle heat, stirring frequently; lastly, dissipate the water by the heat of a water bath, until it has become of the proper consistence.”

“On the pods of cassia bruised, pour boiling water, so as to wash out the pulp, which press first through a sieve with large holes, afterwards through a hair-sieve,

then evaporate the water by the heat of a water-bath, until the pulp attain the proper consistence."

"Press the pulp or juice of ripe and fresh fruits through a sieve, without any previous boiling."

OF GUM-RESINS. Pharm. Lond.

"Separate OPIUM carefully from extraneous substances, especially on its external surface. Let it be kept in the state of Soft Opium, fit for forming pills; and Hard Opium, rendered so by having been dried in the heat of a water-bath, so that it can be rubbed to powder."

"Those GUM-RESINS are to be accounted of the best quality, which can be selected so pure, as to require no purification. If they appear to be less pure than this, boil them in water until they become soft, and press them by a press through an hempen bag; then put them aside, that the resinous part may subside. The liquor above being poured off, evaporate it by the heat of a water-bath, adding towards the end of the evaporation the resinous part, and mixing it thoroughly with the gummy part into one mass."

"Those GUM-RESINS which melt easily may be purified by being put into an ox bladder, and kept in boiling water until they become soft, so that they may be separated from the impurities by being pressed through an hempen cloth."

"The BALSAM of STORAX is to be dissolved in rectified spirit, and strained; the spirit is then to be distilled with

a gentle heat, until the balsam become of the proper consistence."

These directions, for the purification of GUM-RESINS, are the most proper perhaps that can be given; but they are omitted by the Edinburgh College, as it is always preferable to use them medicinally, only when in that state in which they do not require purification; for, however cautiously the operation may be performed, they are always liable to suffer some change, either from the dissipation of volatile principles, or from changes of composition in those which are fixed. The process is admissible, therefore, only with regard to gum-resins, which are to be applied externally, as ammoniac or galbanum, when they are to form the basis of plasters. STORAX is a substance so rarely employed in medicine, that the ordering it to be purified may be regarded as superfluous. The Dublin College have ordered its purification, by digesting it in water with a gentle heat, and pressing it when soft between plates of iron, made hot in boiling water,—a process which must dissipate its odorous matter, on which all its powers depend. The directions given by the London College with regard to OPIUM, are preferable to a process formerly admitted, and which is to be afterwards noticed, as being retained in the Dublin Pharmacopœia, in which opium is dissolved in proof spirit, and the tincture strained, and again evaporated to the due consistence,—a process in which the opium always sustains a diminution of power.

PREPARATIONS FROM ANIMALS. Pharm. Lond.

ADEPS PRÆPARATA. Prepared Lard.

“Cut the fat into small pieces; then press it, liquefied by a gentle heat, through linen.”

SEVUM PRÆPARATUM. Prepared Suet.

“Cut suet into pieces; then press it, melted by a gentle heat through linen.”

The design of these processes is to free the fat from the membranous fibres intermixed with it; but, as it is generally prepared before it is brought to the shops, the Edinburgh College have omitted the directions they formerly gave. If the heat be raised too high, the fat acquires a brown colour and empyreumatic smell; it is therefore usually melted with a little water, by which this is prevented.

CORNU USTUM. Burnt Horn. Ph. Lond. (Pulv. Cornu Cerv. Ust. Ph. Dub.)

“Burn pieces of horn in an open fire, until they become perfectly white; then rub them to powder, and prepare them in the same manner that chalk is prepared.”

The base of horn, like that of bone, consists of phosphate of lime, or at least it is this earthy compound that remains when bones are burnt, mixed with a little carbonate and sulphate of lime; and in the bones of some animals, phosphate of magnesia and fluuate of lime. The gelatin of

the horn or bone is decomposed during the burning; its carbonaceous matter partly remains, giving a black colour, but by continuing the heat, this also is burnt out. The phosphate of lime is a substance apparently altogether inert, though, from a theoretical view as to the cause of rickets and mollities ossium, it has been proposed to be given as a remedy in these diseases. It is used to reduce substances which are rather soft and tenacious, as opium, to powder, being rubbed along with them; and its powder is sometimes employed as a dentifrice.

SPONGIA USTA. Burnt Sponge. *Ph. Lond.* (*Pulvis Spongiæ Ustæ, Ph. Dub.*)

“Cut sponge into pieces; and bruise it, so that it may be freed from adhering extraneous bodies; then burn it in a close iron vessel, until it become black and friable; lastly, rub it into a very fine powder.”

Burnt sponge has been celebrated as a remedy in bronchocele, and in scrofulous affections of the glands, given in a dose from 20 to 30 grains. It consists chiefly of carbonate of soda and carbonaceous matter; but it has been stated as a reason for its being retained in the London Pharmacopœia, that it produces effects as a medicine, which are not to be obtained from a mixture of the alkali and charcoal alone.

Burnt sponge has likewise a place in the Dublin Pharmacopœia, being prepared in a similar manner; and the following preparation is likewise inserted, which probably affords an analogous product.

PULV. QUERCUS MARINÆ. Powder of Sea Oak, or Sea Wrack. Pharm. Dub.

“ Take of sea wrack with its vesicles any quantity. Free it from its impurities and dry it; then put it into an iron pot or crucible with a perforated cover, and expose it to the fire, until the vapour which arises ceases, and the mass become of a dull red. Reduce the carbonaceous residuum to powder, and preserve it in close vessels.”

TESTÆ PRÆPARATÆ. Prepared Shells. Pharm. Lond.

“ Wash the shells previously freed from impurities with boiling water; then prepare them in the manner ordered with regard to chalk.”

This process is designed to give a carbonate of lime purer than the prepared chalk. The product is at least more smooth, and free from the coarser earthy matter diffused through chalk. It contains too a portion of animal matter, probably gelatin, but so highly indurated as not to be easily extracted by water, and not to be liable to spontaneous decomposition.

UNDER this Chapter, the Edinburgh College have inserted a preparation of sulphur, the Washed Sulphur; to which may be added, the Precipitated Sulphur of the London Pharmacopœia.

SULPHUR SUBLIMATUM LOTUM. Washed Sublimed Sulphur.

“Take of Sublimed Sulphur, one pound; Water, four pounds. Boil the sulphur for a short time in the water, then pour off this water, and adding cold water wash away all the acid; lastly, dry the sulphur.” A similar process has a place in the Dublin and London Pharmacopœias.

The sublimation of sulphur is usually conducted on a large scale, and the vapours of the sulphur, which first rise, receiving a little oxygen from the atmospheric air of the subliming vessel, or of the chamber in which they are condensed, a slight degree of acidity is liable to be acquired, which it is the object of this process to remove. Any acidity, however, is so slight, that it is scarcely perceptible in the sublimed sulphur of the shops; the process is therefore superfluous, and is never attended to.

SULPHUR PRÆCIPITATUM. Precipitated Sulphur. Pharm. Lond.

“Take of Sublimed Sulphur, one pound; Lime recently prepared, three pounds. Boil the sulphur and the lime together in water; strain the liquor through paper, and drop into it muriatic acid, as much as may be sufficient to precipitate the sulphur. Lastly, pouring water on this frequently, wash it until it remain tasteless.”

The sulphur is in the first stage of this process combined with the lime; and, at the same time, as always

happens when sulphur is enabled to act on water, by the resulting affinity of an alkaline base, a decomposition of a portion of the water takes place; its oxygen unites with a little of the sulphur, and forms sulphuric acid, with which part of the base combines; the hydrogen of the decomposed water unites with another portion of sulphur, forming sulphuretted hydrogen, and this enters into combination with the remaining sulphur, and base, and by its affinity prevents any farther decomposition. The solution, therefore, neglecting the small portion of sulphate which it may contain, is a ternary compound of sulphur, sulphuretted hydrogen, and the alkaline or earthy base. When an acid is added, it combines with the base, and precipitates the sulphur, while the small quantity of sulphuretted hydrogen is disengaged in the elastic form. In the present process, therefore, the solution obtained by boiling the lime and sulphur, is a compound of these with sulphuretted hydrogen, what may be named a Sulphuretted Hydro-sulphuret of Lime. On adding muriatic acid, it combines with the lime; and this muriate of lime being very soluble, remains dissolved in the water; the sulphuretted hydrogen is disengaged; and the sulphur being insoluble is precipitated.

The process, under this point of view, may be supposed to have no object, as the sulphur is merely recovered; and it cannot indeed be said to have much advantage. The precipitated sulphur, however, is of a whiter colour than sublimed sulphur, and is therefore preferred in

making sulphur ointment, the only purpose to which it is applied. This whiteness may be owing either to its state of aggregation, or to its combination with a little water, for the yellow colour is restored on melting it. That it is owing to the presence of water, is rendered probable, from the same whiteness being produced by dropping water on melted sulphur, or receiving the vapours of sulphur in a vessel filled with watery vapour. Common sulphur, it appears from recent experiments, contains hydrogen with a little oxygen; and it is not improbable, that precipitated sulphur may contain a larger proportion of hydrogen, which it may attract in its precipitation. The whiteness of the precipitated sulphur of the shops is usually increased by precipitating the solution of the sulphuretted hydro-sulphuret of lime, not by muriatic, but by sulphuric acid, the sulphate of lime being thrown down, intimately mingled with the sulphur. This renders it less fit for internal administration.