

Observations on Some British Pharmacopœial Preparations.

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The following suggestions for additional tests and descriptions, which the author is of opinion might be usefully included in the next British Pharmacopœia were read before the Pharmaceutical Society of Great Britain at an evening meeting.

Aloes.—No chemical test is official for distinguishing between the two varieties of aloes. Cold nitric acid produces a fugitive red color when added to powdered Barbados aloes, while Socotrine aloes, when so treated, gives no coloration until warmed, when it turns reddish brown. Also—it might be added—the surface of hepatic aloes is invariably covered with minute wrinkles, and the odor of either variety becomes much more marked if gently breathed upon.

Balsam of Tolu is occasionally mixed with common turpentine, but its presence may be readily demonstrated if, after adding strong sulphuric acid to the suspected sample, sulphur dioxide is given off, accompanied by blackening—whereas pure balsam only turns cherry red.

Buchu.—Although it is mentioned that buchu leaves are marked on their margins with oil glands, yet stress might be laid on the fact that one gland is situated on each serrature, and especially one at the apex. *Empleurum serrulatum*, which somewhat resembles *Barosma serratifolia*, has no gland at the actual apex.

Catechu and Scammony.—The percentage of ash yielded by these substances is not specified. Catechu is required to be entirely soluble in boiling water. This it rarely, if ever, is, a more or less turbid mixture being generally produced. Some impurity is invariably present, and it would be well to limit the ash to 6 per cent., as is now done by the German Pharmacopœia. Scammony is notoriously adulterated; even the prefix "virgin" is not always a guaranty of its purity, and the limit of ash would be an additional safeguard, 3 per cent. being looked upon as the maximum.

Poppy Capsules.—When poppy capsules are used for extract and for syrup they are directed to be freed from the seeds. Should not this direction be extended to the decoction? As it stands the capsules are ordered to be bruised, which implies that the seeds are to be used as well. It is, I know, urged by some that a little of the oil is removed from the seeds and remains suspended in the mucilaginous liquid. This may be so to a small extent, but I think it must be a very small one, and it seems doubtful if any special therapeutic value can be accredited to it. Moreover, poppy capsules are so often broken in storage and transit that most of the seeds escape, and frequently the decoction is prepared with anything but the fair percentage that belong to a capsule.

Digitalis.—Everyone knows the difficulty experienced at times in distinguishing broken specimens of dried leaves. *Digitalis*, for instance, is common in certain parts of the country, and many pharmacists no doubt have the leaves collected and dried under their own supervision. This is as it should be, but unfortunately it cannot always be done, and then one has to fall back on dried material, obtained as a rule in a more or less broken and crumpled condition. Under such circumstances, a detailed acquaintance with the leaf is desirable, and it might usefully be noted that in foxglove leaves the veins run well down into the petiole, thus distinguishing them at once from numerous possible substitutes, including the not uncommon one of *Inula Conyza*.

Plasters.—In several of the official plasters curd soap has been substituted for hard soap, and I have to strongly advocate a return to the latter. According to Dr. Paul, powdered curd soap contains from twice to three times as much water as most other soaps, and whether it is due to this fact or not, certain plasters made with it are not as easy to roll into sticks as they were formerly. *Emplastrum plumbi* and *emplastrum resine* are notable examples of this alteration for the worse. I also have to suggest the addition of a little rubber to the principal bases, to counteract the tendency to crack when kept spread. A process involving little trouble is to dissolve the rubber in chloroform and anhydrous wool-fat, in a wide-mouthed bottle, fitted with a long upright condenser, applying just sufficient heat to keep the mixture gently boiling; one part of rubber and two parts of wool-fat are good proportions. The semi-fluid mixture should not be added to the other ingredients until nearly cool, when if well stirred, the chloroform is soon dissipated. A little extra care has perhaps to be taken in the manipulation, as if a heat much exceeding 200° F. is used to melt the plaster, the rubber has a slight tendency to come out in lumps. This, however, is no disadvantage, as ever practical plaster spreader is much too wise to use a greater heat than that afforded by a water-bath. I have here *emplastrum ferri* and *emplastrum picis*, to which only half per cent. rubber and one of wool-fat were added, and yet they are at this length of time still sufficiently pliable to admit of being rolled up and sent out in a cylindrical case without cracking, an operation to which few, if any, pharmacopœial plasters would submit to half an hour after solidification had taken place. Rubber is now so extensively employed by large plaster spreaders that no serious objection is likely to be lodged against its introduction, particularly as the quantity would be so small.

Extracts. The solid extracts are mostly ordered to be evaporated to a suitable consistence for forming pills, or else to the consistence of a soft extract. This

leaves a good deal to the discretion of the operator. If an extract is to be really of a consistence for pill making it must be hard indeed, as a fact very few extracts could be made into pills without the aid of some addition, and they are very rarely so prescribed. Would it not be better to order all the solid extracts to be evaporated to a soft consistence, say that of fresh honey, for it is obvious that both requirements cannot be complied with. With regard to those intended for pill making, it has been my own experience that the official ones are better evaporated fairly low down, and while still warm sufficient finely sifted alther or sugar of milk stirred in, to bring the whole up to pillular consistence when cold. An ordinary extract requires about ten per cent. of moisture to be driven off, and replaced with an equivalent quantity of some inert powder to effect this. There are however, three the extract of colocynth, rhubarb and cascara—which even if treated as described are a constant source of trouble to the dispenser. These, it is suggested, should be evaporated at a proper temperature to dryness, and either be brought up to the weight or kept as "species," the equivalent of which is to be used instead of the soft extract.

Extract of Nux Vomica and Opium.—These are both adjusted to definite strengths, the finished product varying considerably in consistence, which alters still farther on prolonged keeping. This renders the standardizing abortive, and it is suggested that these two also should be evaporated to complete dryness, and adjusted with sugar of milk.

Extractum Bala Liquidum already contains about 20 per cent. of rectified spirit, but it is insufficient to prevent the tendency to decomposition during very warm weather. In hot climates it is a common practice to add a little chloroform or salicylic acid to preparations whose keeping properties are not of the best, but I doubt if such a procedure is admissible in England, although on some of our summer days the thermometer may register an almost tropical temperature.

Extractum Cinchona Liquidum.—Our present process for this liquid extract is undoubtedly a vast improvement over the old method of exhaustion with distilled water, but even now the alkaloids are only partially removed, and serious loss, with consequent increase in the cost of production, is the result. After several trials I have found that the best results are obtained by percolating at an elevated temperature. The apparatus employed is simply an ordinary percolator provided with a hot water jacket, and can easily be fitted up in any laboratory. The coarsely powdered drug is moistened and packed in the percolator, the hot menstruum being poured on until the liquid begins to drop, when the orifice is closed and the whole allowed to macerate at a temperature of about 150° F. for twenty-four hours, when percolation is allowed to proceed (still maintaining the tempera-