to the percolator of suitable capacity, the bottom of which is covered with a picce of fine muslin, which has been washed; close the air outlet of the receiver, and pour on to the calumba root a mixture of 5 ounces of S. V. R. and 2 ounces water. Allow this to thoroughly permeate and swell out the root, and then add a further portion of 5 ounces spirit and 3 ounces water, and allow to macerate for two days. Allow this to percolate through, and then repercolate with the same, remembering the injunction not to let the liquid fall below the top of the marc; now pour on 21 ounces spirit and 11 ounces water, reserving 1 ounce of water to displace the spirit with ; when this has passed through add just sufficient water to make the percolate measure 191 ounces; put this to one side and continue percolation with water until the calumba is exhausted. Evaporate this watery percolate to half an ounce, and when cold add to the reserved portion, which should measure ex-The only tincture actly 20 ounces. under this group calling for special note is Tr. opii. Use a coarsely-powdered opium, which digest for half an hour in hot water before placing in the percolator (of course using the water as a portion for percolating with), and then proceed as above.

We are now come to Group 3.-Compound tinctures. The same process is employed as for simple tinctures. The preparation of the drugs and the order in which they are packed in the percolator have much to do with the ease or otherwise with which the process will be effected, and also with the resulting product. All these compound tinctures differ in some minor respects from each other; we will, therefore, consider them separately in the order in which they occur. The first is Tinct. cardam. co. The best plan, after opening the raisins, is to boil them in a portion of the water until the fruity pulp is detached from the skin; then rub through a sieve. By this means the seeds and tough enveloping skin are left behind, and only the useful portion enters into the making. The ingredients being all prepared, pack into the percolator in the following order : At the bottom place the broken cinnamon bark, cochineal, cardamoms, and carraways, and proceed as directed for Tr. calumbre, using the watery solution of raisins in place of a corresponding portion of water.

Tinct. Ginchonæ Co.—I find the most satisfactory results if the ingredients are placed in the following order: Saffron, orange-peel, scrpentary root, cochineal, and lastly the cinchona.

Tinct. Gentian. Co.-Unless the gentian root is very dry, it is much easier to cut small than to bruise, as it simply flattens out, without breaking it at all soft. Pack orange-peel, cardamoms, gentian.

Tinct. Rhæi.—Instead of powdering the rhubarb root, a much better plan is to soak it in boiling water until quite soft, then cut very small; use the water in which it has been soaked in place of water for macerating and percolating with. Pack first the saffron, coriander, cardamoms and rhubarb, and proceed as for the others.

The last of No. 3 group is tincture of senna. In preparing this tincture let the raisins be prepared in the same way as for tincture of cardamoms. Place the bruised cornander at the bottom of the percolator, the mixed senna and carraway seeds above, and proceed as directed for Tr. card. co.

The next and last group we must notice under the divisions A. B. and C.

A. This division includes three only, the first and last of which call for little comment. Tr. catechu should be treated similarly to Tr. myrrh.; macerate for the specified time and then transfer to cylindrical percolator and displace with water.

B. Inst. opti ammoniata, commonly known as Scotch paregoric. My experience of this has been that it is practically obsolete. Tinct. lobelia actheris and valerian, amm. may both be prepared in the same way as simple rectified tinctures as directed under Group 2.

C. These are all simple mixtures, and call for no special note, coming more under the province of dispensing.

As mentioned in the earlier part of this paper, a tincture prepared from a standardised extract, as nux vomica, may be regarded as a typical high-class pharmacentical preparation. But why should not all tinctures of simple drugs be prepared in a similar manner, more especially those possessing more powerful properties, as aconite, belladonna, digitalis, ergot, hyoscyamus, jaborandi, opium, &c.? For some years now I have prepared Tr. camph. co. from Tr. opii and sp. camph., thus always ensuring a definite strength of morphia with the additional advantage of being prepared in a few minutes, a saving of both time, trouble and waste. The addition of 40 m. sacch, ust, to the gallon gives that color which pleases the public eye.

There is always room for improvement, and even those who have but little opportunity for practical pharmacy or research may, if they will only keep eye and car attentive, observe and note daily something new, which, if followed up, will lead to some real advantage or improvement in pharmacy, and that is what we are all striving for. Our calling has many troublesome details and drawbacks, but if we will make use of every opportunity which offers we may all leave it better than we found it, and not regret having been a private in the army of pharmacists. —British and Colonial Druggtst.

Laboratory Notes.

Potassium Stearate in Turpentine Linimonts.

BY F. C. J. FORD.

Read before the British Pharmacentical Conference.

The compounds of stearic acid with the alkali metals possess in a high degree the property of forming gelatinous solutions

with water, the presence of a very small proportion of dissolved stearic soap being sufficient to render a liquor almost solid. It was thought that this might be turned to account in the preparation of a liniment containing turpentine and ammonia as its chief constituents, which, after repeated trials with sapo mollis, had proved unsatisfactory, and had invariably separated. Potassium stearate in solution was at first used, but with little success. When, however, stearic acid was dissolved in the turpentine, and the mixture of ammonia and distilled water added, agitation instantly produced a milk white emulsion of admirable consistence, and showing no tendency to separate. ln this case the large excess of ammonia exerted no disturbing influence, but appeared rather to increase the emulsivo powers of the stearate. The proportion of stearne acid necessary for a given quantity of turpentine varies from 1 to 2 per cent., according to the amount of water present, increased water requiring a larger proportion of stearic acid. The acid should be melted on a water bath, a little turpentine added, the mixture warmed till clear, and then poured into the remainder of the turpentine.

The same process may be applied to the preparation of lin. terebinth., B. P., the formula for which would stand as follows:

Melt the stearic acid, with a little of the turpentine, on a water bath, and add to the remainder in which the camphor has been previously dissolved. Mix the solution of potash and distilled water in a bottle of sufficient capacity, add the turpentine solution, and shake vigorously for a few seconds. The result of this formula is a milk white liniment, which is always of uniform consistence and does not separate. The advantage of employing definite materials, as liquor potasso and stearic acid, in place of the sapo mollis of the present official formula, with its varying precentage of water and free alkali, is obvious, ensuring, as it does, a liniment which is always of uniform con-sistence and appearance. The small quantity of stearic soap required to effect the emulsification of the turpentine, and the case and rapidity with which the liniment can be prepared, are additional points in favor of this formula. One grain of stearic acid requires about 3 minims of liq. potassæ for neutralization. This corresponds to the formation of the neutral potassium stearate, and is the proportion which succeeds best with ol. terebinthinæ.

It has been shown that with the official process slight variations in manipulation, even with the same materials, will produce widely differing results, but working in several different ways with stearic soap, I have not succeeded in altering the character of the liniment.