

How Ointments Should be Made.*

By ALFRED I. COHN, Ph. G., New York.

Almost every pharmacist holds the belief that he has an especially good method of preparing ointments, and that his preparations cannot be excelled, yet an examination of specimens of ointments obtained from various sources will exhibit remarkable differences in appearance, smoothness, etc. Some will be found to be granular; in others, particles of the medicinal substance incorporated will be clearly visible, or felt on rubbing between the fingers; others will be "off color"—all due to improper methods of manipulation. As a matter of fact, all kinds and shades of differences will be observed.

The production of an unobjectionable proper ointment depends first on the kind and quality of the fat employed, and, secondly, on the careful prosecution of a suitable process for the incorporation of the medicinal ingredient or ingredients.

Perhaps the most important, if not the most frequently used, of all the fats used in the preparation of ointments is lard. The quality of that which is ordinarily supplied in meat markets, groceries, etc., is, however, unfortunately very poor. Not infrequently it presents a decidedly soggy appearance, is very soft, if not mushy, particularly in warm weather, and generally has an unpleasant odor. The employment of such a lard, whether bought in bulk, or put up in the familiar tin cans under the designation "leaf lard," will never enable an operator to produce a superior ointment. Moreover, an ointment made from this kind of lard invariably becomes rancid quickly, and consequently is bound to entail considerable loss in the course of the year by reason of the quantity of spoiled material thrown away.

The only method whereby this loss, as well as the annoyances occasioned by it, can be minimized, if not avoided, is to render your lard yourself, and thus assure at the same time the securing of superior results. The rendering of lard presents no difficulty whatever, and may be easily accomplished as follows:

HOW TO RENDER LARD.

Secure any suitable quantity of the abdominal fat of the hog, and cut up into small pieces. After freeing these, so far as is possible, from the membranous parts, wash them thoroughly in a liberal

allowance of very luke-warm water, until practically all soluble substances present have been washed out. Then introduce the fat, together with a little water, into a suitable vessel, preferably of the kind known as "enamelled" or "granite" iron, and heat over a naked fire until all the fat has been melted. As the water evaporates it should be replaced, otherwise there is danger of the fat becoming too highly heated, and thus acquiring more or less color, and perhaps an unpleasant odor. The writer has found it advisable to add to the melting fat a few pieces of peeled, raw potato, as the final product is thereby greatly improved. In fact, lard which has already become partially rancid may frequently be reclaimed and made perfectly sweet, or, at least, very greatly improved, by remelting it with a few pieces of potato, and continuing the heat until the pieces have become crisp or "fried." Too great a heat must be carefully avoided in order to prevent the possible discoloration above noted. If desired, the fat may be tried out on a water-bath, in which case it will be unnecessary to add any water to the fat. The melted fat is allowed to stand for ten or fifteen minutes, and is then strained through a piece of cloth preferably of flannel. The water present will have settled out during the standing, and may be readily removed after the lard has solidified.

The product, when cold, should be transferred to stone-ware jars, care being of course taken not to incorporate any of the separated water. The jars should be well covered and kept in as cool a place as possible. To further protect the lard from undue exposure to air, and consequently rancidity, it is well to pour a layer of water or glycerin about an inch in depth on the surface of the lard.

Lard so prepared and kept has a peculiar firmness, crispness, and pleasant odor, which are entirely lacking in the article bought ready-made. It is not nearly so prone to become rancid, and ointments prepared from it are superior in every respect.

So far as the incorporation of medicinal substances with lard is concerned, this must be varied according to the nature of the substances. This brings us to the discussion of the second requisite for the preparation of a good ointment.

PREPARATION OF OINTMENTS.

The method of incorporation employed depends largely upon the physical char-

acteristics of the medicinal substances for the elaboration of a suitable process. For instance, let us take zinc ointment, which is, perhaps, as much as any, a source of considerable trouble in its manufacture. Many processes have been proposed for the purpose of obtaining a perfectly smooth product. Of all the processes tried none has given such uniformly good and reliable results in the writer's hands as the following, which has been employed for many years:

OINTMENT OF ZINC OXID.

Triturate the zinc oxid with a little alcohol, which promptly breaks up all lumps; then add a little castor oil, and continue the trituration until the mixture is perfectly smooth, and no gritty particles are felt under the pestle. To this mixture is now added the benzoinated lard previously melted on a water-bath, and stir until cold, frequently scraping the sides of the mortar with a flexible spatula. It sometimes happens that some gritty particles are encountered in the zinc oxid used, which are not reduced by the alcohol, and which cannot be all crushed by the pestle. In this case it is necessary to strain the still fluid mixture of zinc oxid and lard through a piece of cheese-cloth. This procedure will, however, rarely be necessary if a good quality of zinc oxid has been employed. The little alcohol used is rapidly driven off by the heated lard during the trituration; the small quantity of castor oil can scarcely be objected to, as in the proportion present, about four or five drams to the pound of ointment, it has no action even on the most sensitive skin.

BENZOINATED LARD.

Benzoinated lard is another ointment which presents difficulties in the way of obtaining a nice product. The pharmacopoeial process is not a perfectly desirable one, inasmuch as a prolonged heat (two hours) is necessary for the complete exhaustion of the benzoïn, because the latter cakes together and becomes hard. The process used by the writer has given most excellent results, and its use for a long time has demonstrated its efficiency. It is as follows:

Prepare a concentrated tincture from the benzoïn ordered, and pour it over some clean, washed, and well-dried gravel, evaporate the solvent, and inclose the benzoïn-bearing gravel then in a piece of suitable fabric—woollen cloth, muslin, cheese-cloth, etc. Suspend the bag thus made in the lard heated on a

* Merck's Report.