

There is no infallible remedy in dealing with this class of swindlers. All one can do is beware.

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The foregoing brings up the question whether the pharmacist is required to treat all who come to him for aid. He most assuredly is not. He, at least, has the same liberty of action as has the physician. The courts have gone so far as to say that a physician is not liable for arbitrarily refusing to respond to a call, even though he is the only physician available. But the druggist, as well as the physician, if he does undertake to treat a patient, must use reasonable skill and diligence in so doing, and he may not cease such treatment until it is safe to do so. The fact that his services may be gratuitous has no bearing upon the case.

In other words the Good Samaritan has a perfect legal right to pass by on the other side, if he so chooses. But if he elects to get down from his beast and minister to the sufferer, then he must remain with him and use all the skill at his command—and if he is a professional man must use reasonable professional skill—in treating the man's injuries.

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To what extent may a pharmacist give medical advice? Rulings on this question are not uniform in all the states. A leading Massachusetts case lays down the principle that "If a pharmacist sells medicine, receiving payment therefor, and gives advice gratuitously as to the use to be made of it, he is not holding himself out as a physician." The various licensure acts, however, are more and more tending to restrict the legal limits of such advice.

COMMENTS ON THE OINTMENTS OF U. S. P. X AND N. F. V.*

BY NORMAN H. TAGG.

The Revision Committee of the U. S. P. X has made more changes in ointment formulae than any preceding committee in the revision of the Pharmacopœia.

Of the twenty official ointments in the U. S. P. IX, eighteen were admitted to the U. S. P. X, Stramonium and Citrine Ointments being deleted. Of the remaining eighteen, only four appear in the U. S. P. X without change of formula. Of these four whose formulae are unchanged, two appear with new titles, leaving only two ointments in the present U. S. P. having the same formulae and titles as in the U. S. P. IX.

In the N. F. IV there were twelve ointments. To these twelve, seven have been added, while none were deleted, making a total of nineteen official ointments in the N. F. V. Of the twelve original N. F. IV ointments, eleven appear in the N. F. V without change; the one change being Calamine Ointment and this is a minor change due to replacement of white wax with yellow in the U. S. P. X Simple Ointment.

Due to the many changes in the formulae of the U. S. P. and N. F. ointments, the writer believes a résumé of the changes, additions and deletions may prove

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interesting, and it is the hope of the writer that he may be able to suggest some changes in the present formulae which may prove useful in both small and large production.

To illustrate my meaning, a pharmacist may make a pound of Sulphur Ointment U. S. P. X, which contains a lard base. This ointment is kept in a refrigerator or cupboard away from heat and light. In the average store this pound of ointment will last about thirty days. During that time, stored under the conditions mentioned above, it will not become rancid nor develop a granular consistency. Consequently the ointment is in a usable condition.

The manufacturer, on the other hand, will probably make a thousand pounds of the same ointment. It is packaged and sent out to the many jobbers and branch houses. En route the ointment is exposed to changing temperature conditions: from extreme cold in the north to extreme heat in the south. It is then stored away in stockrooms until sold, which means, no doubt, two or three months from the date of manufacture to the time it is actually delivered to the retail pharmacist. The pharmacist, upon receipt of the ointment, is often compelled to either rework it or return it to the manufacturer, who must meet the expense of having the ointment returned, and have the customer dissatisfied and disgruntled.

The dispensing pharmacist, in this "customer a minute age," with its modern efficiency, high wages and quick turnovers, cannot keep men in the laboratory manufacturing small lots of ointments for stock, when they are more urgently needed in the front of the store, or at the prescription counter. Since more ointments are made by manufacturers than by retail pharmacists, the keeping qualities, tendency to rancidity and granulation should, next to the therapeutic properties, be given the most consideration.

The proper base for ointments, of course, must vary according to the therapeutic needs, but for general purposes the writer believes a base composed of equal parts of petrolatum and woolfat is the most desirable one. The controversy as to the absorption value of woolfat and lard seems to be one of opinion only; many eminent dermatologists prefer woolfat, while others insist upon lard. For manufacturing purposes woolfat is preferred, since it is just as easily absorbed and from the standpoint of stability and appearance the resulting ointments are superior.

Let us consider some changes in the formulae of the U. S. P. X ointments.

Beginning with **Simple Ointment**; the U. S. P. IX formula calls for twenty per cent white wax and eighty per cent benzoinated lard. In the present edition yellow wax replaces the white wax. The reason for this change is hard to fathom, since the U. S. P. IX Ointment is a better looking ointment on account of its snow-white color and when used as the base for Tannic and Gall Ointment, it gives a more pleasing appearance. The difference in cost of the ointment, on account of the white wax, is so slight that this could not fairly be given as an excuse for the change.

Boric Acid Ointment was changed from a paraffin and white petrolatum base to a yellow wax and amber petrolatum base. This change has lowered the cost of the ointment considerably without affecting its therapeutic properties, but the present ointment does not seem to be popular with physicians and the consumers who have always known Boric Acid Ointment or Borated Petrolatum to be a white ointment. The explanation of the color change is understood by

pharmacists, but not so readily by the public. For this reason many manufacturers are still marketing the U. S. P. IX Ointment in preference to the present one.

Tannic Acid Ointment now has a darker appearance due to the change in Simple Ointment. The same objection to color change is made, as in the case of Gall Ointment.

Rose Water Ointment remains the same as heretofore, although the synonym Cold Cream has been dropped. On account of its tendency to become rancid, Rose Water Ointment U. S. P. is not marketed on a large scale. Packaging in collapsible tubes immediately after manufacture will greatly retard deterioration, but most manufacturers prefer to market the cheaper and more stable product demanded by the consumer.

Belladonna Ointment U. S. P. X is vastly superior to the U. S. P. IX Ointment. The old base of lanolin, benzoinated lard has been replaced by woolfat and petrolatum, with yellow wax to harden. The U. S. P. IX Ointment became granular and caused much trouble to the manufacturer, while the present ointment will remain in good condition indefinitely and is much lower in cost than the old one.

Chrysarobin Ointment base was changed from benzoinated lard to hydrous woolfat. The old ointment granulated and was unsightly, while the present ointment does not possess these disagreeable features.

Gall Ointment, like Tannic Acid Ointment, is darker in color than the ointment of U. S. P. IX, due, as stated before, to the base of Simple Ointment.

The change in the **Stronger Mercurial Ointment**, better known, perhaps, as fifty per cent Mercurial Ointment, does not, in our opinion, make an ideal preparation. Commercially the ointment cannot be marketed satisfactorily with the present base of suet and lard. There is always beadiness, granulation and separation; the metallic mercury having a greater tendency to settle in this base than in one composed of wax and woolfat. Oleic acid expedites the extinguishment of the mercury as quickly as oleate of mercury and is to be preferred.

Blue Ointment was changed from sixty per cent stronger Mercurial Ointment and forty per cent petrolatum to sixty per cent stronger Mercurial Ointment and twenty per cent each of petrolatum and lard. The change was no doubt made to increase the absorption properties, but woolfat would probably have answered the same purpose and given an ointment of much finer appearance. The method of making mild Mercurial Ointment from the stronger ointment is no doubt welcomed by the dispensing pharmacist.

The only change in **Ammoniated Mercury Ointment** is the replacement of water with liquid petrolatum. This change adds considerably to the appearance of the ointment and insures a proper sub-division of the ammoniated mercury. As shown in this ointment, a small percentage of liquid petrolatum in any petrolatum-woolfat base gives the ointment a gloss and "finish" which is quite desirable. The use of woolfat in this formula is preferred by many to the official hydrous woolfat.

The strength of **Yellow Oxide of Mercury Ointment** was reduced from ten per cent to one per cent. Since most of this ointment is used for ophthalmic purposes, the change is a good one. The base was changed from equal parts of

petrolatum and hydrous woolfat to ten per cent hydrous woolfat and eighty-eight per cent petrolatum, with one per cent liquid petrolatum, replacing ten per cent water. Most ophthalmologists desire an ointment in which the yellow mercuric oxide is finely sub-divided in a base which, placed on the eye, leaves only a thin coating of the medicament. For this reason they prefer a base for this ointment which has a low melting point, and which will almost entirely disappear upon application to the eye. Consequently a base containing more liquid petrolatum and more woolfat with less petrolatum would be more desirable.

Iodine Ointment was unsatisfactory when made according to the U. S. P. IX. The change in the present revision from lard to woolfat is a decided improvement and produces an ointment of fine appearance and keeping qualities.

Iodoform Ointment base has been changed from benzoinated lard to woolfat and petrolatum and gives a superior product.

Phenol Ointment, originally made with benzoinated lard, is now made with yellow wax and amber petrolatum. In addition to giving the ointment more stability, the color change in this case is an improvement. The public will not be so apt to confuse this ointment with Zinc Ointment or other white ointments. The change also appreciably reduced the cost of the ointment.

Tar Ointment is much improved in appearance when made according to the U. S. P. X. The U. S. P. IX ointment became granular, changed color and was very unsatisfactory. Made according to the U. S. P. X, with petrolatum replacing lard, it is quite satisfactory and cheaper.

Diachylon Ointment remains the same, except that it has been renamed and is now officially known as Lead Oleate Ointment.

Unfortunately no change was made in the formula for **Sulphur Ointment**. As before stated, manufacturers are continuously having trouble with this ointment when made according to the official formula. The ointment granulates and separates, making it an unsatisfactory ointment to market on a large scale. The U. S. P. Committee on ointments probably had the same opinion of this ointment, for as far as the third proof of this revision, the lard base had been replaced with petrolatum. For some reason they decided against the change and the lard base was retained. Wax and woolfat could replace the lard very nicely and not affect its medicinal value to any extent and give a more desirable ointment.

Zinc Oxide Ointment has been changed from lard to paraffin and white petrolatum. The change speaks for itself and will no doubt make the U. S. P. X Ointment more popular with the trade than was its predecessor. The present formula could be improved in appearance by replacing some of the paraffin with liquid petrolatum. The ointment as now prepared seems too stiff. Liquid petrolatum would soften and also give a better finish to the ointment.

In the N. F. V, **Sulphonated Bitumen Ointment** has been added, the formula for which is simple and makes a satisfactory ointment.

The base of **Calamine Ointment** has been changed a trifle by the use of U. S. P. X Simple Ointment. The change, however, affects only the color of the ointment.

Camphor Ointment remains the same although hydrous woolfat might well replace part of the lard.

Capsicum Ointment has been added and the formula insures a satisfactory ointment.

Mothers' Salve remains the same and needs no comment.

Calomel Ointment has been added to the present N. F. V. There has been considerable demand for this ointment and the formula adequately meets the requirements.

Citrine Ointment deleted from the U. S. P. IX now appears in the N. F. V without change in the formula. This ointment is unsatisfactory on account of granulation and color change. However, we have no constructive improvement to offer.

Red Oxide Mercury Ointment remains the same, but liquid petrolatum is suggested to replace the water in the formula. The former makes a more attractive ointment.

Stainless Iodine Ointment is an addition and should prove popular with the public. The formula is satisfactory.

Compound Tar Ointment, Lead Iodide and Potassium Iodide Ointments are retained without change. By replacing the lard in these formulae with woolfat more stable ointments could be made.

Compound Resorcin Ointment remains the same and is satisfactory, aside from its color changes, which cannot well be avoided.

Mustard Ointment has been added to the present N. F. V. Replacing the lard by white petrolatum would not affect its therapeutic value, and it would be more stable.

Stramonium Ointment deleted from the U. S. P. IX is added to the N. F. V. By substituting petrolatum for the lard, a much more attractive ointment may be made, in fact the present U. S. P. formula for Belladonna Ointment is a fitting model for this ointment.

Alkaline Sulphur Ointment and Compound Sulphur Ointment are two unsatisfactory ointments when made according to the present formulae. Both have a tendency to granulate and separate. Petrolatum replacing the lard would improve the appearance considerably, although the question as to whether the change would prove therapeutically beneficial is doubtful.

Ointment of Veratrine and Zinc Stearate are seldom made in large quantities, having a limited use. The formula of the latter produces a somewhat stiffer ointment than would seem necessary. A small quantity of liquid petrolatum in the base would be an improvement.

Commerce Year Book, 1926, Volume 2—Foreign.—This volume is compiled by the Bureau of Foreign and Domestic Commerce, Julius Klein, Director, and has to do, as the name indicates, with foreign commerce. The price of this volume is \$1.25 and may be obtained from the Government Printing Office. *Commerce Year Books, U. S. and Foreign* contain information in convenient form and unobtainable elsewhere without considerable search.

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