

ANTISEPTIC LIQUIDS, POWDERS AND TABLETS.*

BY B. E. HÖCKERT.

During the last thirty years or so, a class of preparations has come into use intended to treat ailments of the mucous membrane. In the general trade and in the price lists of the pharmaceutical manufacturing houses appear a number of such preparations in the form of liquors, powders and tablets. Of course I am speaking of the many antiseptic preparations now in use. Three of them—all liquids—are now official in our Pharmacopœia. At least two of them were made official with the intention of having several preparations of this kind, of known standard formulas, always obtainable by physicians and their patients. While the official preparations are largely employed, the demand for the proprietary preparations is very much larger, and tablets and powders are generally preferred to the liquid preparations. One cause for this may be that the tablets and powders are dissolved at home and the application of them is more economical than the liquid preparations, but by conferring with patients on this subject I have been informed that they consider the dry preparations, to be mixed with water by the patients themselves, much more effective than those dispensed in liquid form. I have, from their first appearance, been very much interested in those preparations, and have always made them myself for personal use. Many experiences have taught me the reason for the dry preparations being the most popular and, I dare say, it is because the solutions made at home from them are free from alcohol, glycerin and coloring matter.

There are on the market to-day two distinct classes of antiseptic preparations—the alkaline and the acid ones. The former are the most numerous and the most used, and so I shall consider them first. The base in all of them is strong alkaline salts, such as potassium bicarbonate or sodium bicarbonate; in addition sodium borate, sodium chloride, sodium benzoate, sodium salicylate and, as a rule, eucalyptol, menthol, methyl salicylate and thymol. Some manufacturers make minor changes in composition, but these are not of very great significance. The liquid preparations contain, besides water, glycerin and alcohol, and occasionally some coloring matter. Preparations vary somewhat in composition, but conform quite closely.

These preparations are intended, first, to thoroughly cleanse the mucous membrane of the organ they are applied to, generally the nose, throat or vagina; therefore, they must be strongly alkaline. This, of course, is somewhat objectionable to some people, but if they are to do the work for which they are intended, it cannot be helped or overcome. The second effect is to allay inflammation and irritation of the mucous membrane, and they must be antiseptic; this is the purpose of the borate, benzoate, salicylate and the antiseptic aromatics. Many people object to the taste of these preparations, some even are nauseated by the use of them; sodium benzoate is the probable cause, and this effect is difficult, if not impossible, to overcome. Some propose eliminating one or the other of the antiseptic aromatics and salts. The most objectionable ingredient is, without doubt, thymol. It may be omitted and a very small amount of oil of cloves added instead; thereby the flavor will be very much improved; by omission of the menthol the taste is not improved and the Eucalyptol is too valuable an antiseptic to be omitted.

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I present a formula for an antiseptic powder that, in my opinion, leaves little to be desired:

Sodium Bicarbonate.....	Gm.	50.00
Sodium Chloride.....	Gm.	25 00
Sodium Biborate.....	Gm.	25.00
Sodium Benzoate.....	Gm.	5.00
Sodium Salicylate.....	Gm.	5.00
Eucalyptol.....	Gm.	1 00
Menthol.....	Gm.	1.00
Methyl Salicylate.....	Cc	1.00
Oil of Cloves.....	Cc	0.30

Half a teaspoonful in a glass of water will make a pleasant mouth wash and gargle, and a good nasal spray. For a douche about one teaspoonful to a pint of water is very effective.

The Liquor Antisepticus Alkalinus of the National Formulary is a very good preparation; the red color is objectionable and should be eliminated. The amount of glycerin is still too large and ought not to be more than 3 percent. The alcohol can be cut down to 5 percent. or less. If the taste is objectionable, the oil of thyme can be displaced by the same amount of oil of cloves.

The second class of antiseptic preparations I have not seen in dry form, although some such preparation may be on the market.

I make for the hospital here one such dry preparation, which is generally used for douches; occasionally it has been given to patients for use as a mouth wash and a gargle. Here is the formula:

Boric Acid.....	Gm.	125
Benzoic Acid.....	Gm.	15
Sodium Biborate.....	Gm.	40
Eucalyptol		
Menthol		
Methyl Salicylate, of each...	Gm.	1

The present formula of the National Formulary for Antiseptic Solution is not a good one. First, the amount of alcohol is ten times as large as necessary, then the benzoic acid has been changed to sodium benzoate and sodium salicylate. The formula I use is as follows:

Acid Boric.....	Gm.	30
Acidum Benzoic.....	Gm.	3
Sodium Biborate.....	Gm.	10
Eucalyptol		
Menthol		
Methyl Salicylate		
Thymol, of each.....	Gm.	1
Alcohol.....	Cc	30
Glycerin.....	Cc	30
Water to make.....	Cc	1000

This makes a most excellent mouth wash and gargle; diluted with equal parts water it is a good nasal spray, and douche. If the taste is not satisfactory, the thymol can be displaced by oil of cloves, 0.30 cc.

I have made many experiments with antiseptic preparations and one of the very best is Dobell's Solution, N. F. A culture from germs found in the mouth is excellent to test the value of an antiseptic; the growth in such a culture was stopped by half its quantity Dobell's Solution. It requires equal parts of the Antiseptic Solution after above formula, double the quantity of the culture of the Antiseptic Solution of the National Formulary, but only equal parts of the Antiseptic Solution U. S. P. VIII. The Alkaline Antiseptic Solution is considerably less effective as an antiseptic, but is effective as a cleanser.

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THE HOSPITAL PHARMACY.*

BY W. H. FORD.

The Pharmacy at Lakeside Hospital is one of its busiest units. We have developed it during the past few years into a producing pharmacy, rather than a distributing depot for popular pharmaceuticals. The School of Pharmacy is now taking up much of this work and during the next year will not only give to their student-body real experience in quantity production of medicinal preparations, but give to the hospital a better quality and standard of supplies at a reduced cost.

The work of producing for the various wards and services, their medical supplies, is a real work requiring the strictest attention; comprising as it does a daily average of 250 patients, it really represents the demands on a retail drug store of 250 families.

The morning work is devoted to filling requisitions from wards and operating rooms. Requisitions coming to the pharmacy must have been passed by the supervisor of nurses, and assistant director—no goods are furnished without their O. K. Requisitions are made in duplicate, original is retained by the pharmacist and duplicate returned with goods to be checked by the nurse receiving on the ward.

Narcotics are furnished in quantities of 25 tablets, pills, etc., only. Each 25 tablets or pills is accompanied by a slip containing spaces for 25 entries. Entries on the slip must be made by nurse administering, time given, name of patient, name of nurse and medical service. No further supplies are furnished until this slip is returned to the pharmacy, signed by the head nurse in charge of the ward, with each tablet or pill accounted for. Each slip is numbered as sent out and a record is kept allowing us to tell in a few moments the narcotics on any given ward, and also simplifies stock keeping.

The hospital management has cooperated with the pharmacy in reducing to the minimum the prescribing and use of liquors in the hospital. Although a nominally 300-bed hospital our request and Government permit allows us 10 gallons of whisky and 5 gallons each of port and sherry wine every 3 months. This amount has never been exceeded and the use has fallen to such an extent that during the month of July just past, the total amount of stimulants furnished all the wards was 1080 cc of whisky and 250 cc of port wine. These were used almost

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