

most people spend. Every article of merchandise that is salable is sold either to supply an absolute need or a desire for greater comfort. "Mortgaged dollars" buy necessities; "free dollars" buy comforts or luxuries. The sales appeal is different in each case. The seller must decide under which heading each article belongs, and treat it accordingly, from both buying and selling viewpoints. For example, epsom salt used as a drug comes under the heading of necessities—all drugs of proven value purchased as household remedies can be thus classified. There can be no question as to what kind of epsom salt to buy. Only U. S. P. quality will be satisfactory, no matter whether the trade is rich or poor. On the other hand, face powder would be classed as a luxury, and the kind or quality of face powder to be purchased for sale in any given locality is determined by the class of trade or, in other words, the supply of "free dollars."

Experience is the greatest factor entering into a consideration of the goods to be handled in any establishment. To gain this experience, constant study of the quality of goods must be coupled with constant study of the people who trade at the store. Trade journals, as well as popular magazines and newspapers, make it possible to add the experience of others to your own.

DENTIFRICE FORMULAS FOR THE NATIONAL FORMULARY.

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In view of the enormous demand for dentifrice preparations and of the fact that nearly all manufacturers of pharmaceuticals and many retail pharmacists have their "own" formulas for such products, it seems remarkable that there are no official dentifrice formulas. Physicians and dentists, who might desire to prescribe a non-proprietary non-secret mouth wash, tooth powder or tooth paste, and pharmacists, who wish to put up such preparations, ought to be accommodated by a formula, if not in the Pharmacopoeia, at least in the National Formulary. Such formulas ought not only to be as good as, but better than the various proprietary preparations on the market, because they should have behind them the combined wisdom of the medical and pharmaceutical professions. The subjoined study of the subject is offered—not, of course, with any pretense at possession of such knowledge—but to serve as a basis for discussion, criticism, and possibly final elaboration of suitable formulas.

The multiplicity of recipes available in literature makes necessary the development of fundamental principles for guidance in the construction of the formulas.

1. It is an established fact that the mouth cannot possibly be disinfected: for bacteria have a greater resistance against chemicals than the cells of the body. Killing the bacteria would mean killing the cells with which they are in intimate contact, and destroying the lining membrane of the mouth. This is, of course, out of the question. Although it is possible to tolerate in the mouth antiseptic solutions in such concentration as to inhibit the growth of bacteria, such bacteriostatic (germ growth inhibitive) solutions are of value only as long as they are present in sufficient concentration, which, in case of the mouth, is possible for a negligibly short period only, as nobody would care to keep his mouth filled with fluid for any considerable time. *Attempts at imparting antiseptic properties to dentifrices are therefore unscientific.* They are also inexpedient, owing to the bad taste, offensive odor or toxic properties possessed by most of the active agents of this class.

2. To inhibit the growth of bacteria in the mouth and thus prevent dental decay, the presence of culture medium should be minimized by cleanliness. Hence, the efficiency of a

dentifrice depends upon its detergent qualities, and soap is a universally desirable ingredient. In tooth powders and pastes, a powder free from grittiness, such as prepared chalk, is the second chief constituent.

3. Alkali is of no advantage, as—though granting dental decay to be due to acid—the alkali cannot possibly be made to stay in the mouth long enough to do any appreciable good.

4. Pleasant odor, taste and appearance are the chief desiderata for these preparations. The more pleasant they are, the more faithfully will they be employed. Peppermint, by reason of the refreshing coolness it leaves in the mouth, is perhaps the single most desirable flavor for mouth preparations. As there are persons who dislike this flavor, it is good policy to disguise it by means of other essential oils such as those of cassia and of cloves, thus producing a "bouquet" which not only is more generally liked, but also palls less readily upon the palate than a single decided flavor. A mild degree of sweetness is generally enjoyed. This should be imparted to a mouth preparation by benzosulphinide rather than sugar, as the latter might furnish pabulum for the growth of bacteria. A pretty pink or red color adds to the attractiveness of the preparation.

We, therefore, propose the following formula for consideration:

TINCTURA DENTIFRICIA.

LIQUID DENTIFRICE.

Soap, dried and granulated.....	60.0	Gm.
Benzosulphinide.....	2.0	Gm.
Basic fuchsin.....	0.02	Gm.
Oil of cassia.....	5.0	Cc.
Oil of peppermint.....	5.0	Cc.
Oil of cloves.....	10.0	Cc.
Alcohol.....	750.0	Cc.
Water, to make.....	1000.0	Cc.

Dissolve the soap in the alcohol with the aid of gentle heat on a water-bath, add the benzosulphinide, basic fuchsin, and the volatile oils, and finally enough water to make the product measure 1000 Cc. Agitate the mixture, set it aside in a cool place for twenty-four hours, and then filter.

A few drops of this tincture added to a little water to be used as a mouth-wash.

PULVIS DENTIFRICIUS.

DENTIFRICE POWDER.

Benzosulphinide.....	0.25	Gm.
Solution of carmine.....	2.00	Cc.
Oil of cassia.....	0.50	Cc.
Oil of peppermint.....	0.50	Cc.
Oil of cloves.....	1.00	Cc.
Soap, dried and granulated.....	10.00	Gm.
Prepared chalk.....	90.00	Gm.

Reduce the soap and the chalk to a fine powder, mix them thoroughly with each other and with the other ingredients, and finally pass the powder through a No. 60 sieve.

Tooth-pastes are perhaps more generally employed than all other dentifrice preparations combined. However, at the present moment, we hesitate advocating the inclusion in the National Formulary of a formula for such paste, as it is more troublesome to prepare on a small scale than are the other forms, and it requires being dispensed in collapsible tubes. It might be well just now to postpone the addition of a dentifrice paste to the National Formulary, until a trial of the simpler preparations has shown the justification of their introduction into the Formulary, and a demand for the tooth-paste formula arises.