

ALIEN PROPERTY CUSTODIAN

SOAPS

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Alien Property Custodian

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It is common practice, in the manufacture of certain ordinary quality soaps, to incorporate in the paste a filling of more or less finely ground natural barium sulphate. This addition simply forms a filler which does not improve the quality of the soap, having just the reverse effect.

The addition of certain mineral or other substances to soaps offers however an undisputable advantage if it is carefully made, and it is known that the qualities of soaps are improved by the addition of very fine mineral substances such as osmotic kaolin or bentonite which are now commonly used for the manufacture of soaps, products of the saponification of vegetable or animal oils or fats, or products obtained by the saturation of oleic, palmitic or stearic acids with potash or soda.

But none of the substances hitherto used for this purpose has given entirely satisfactory results and this is more particularly the case of barium sulphate such as it has been used, that is to say in the form of ground natural barium sulphate. Even with a grinding which is carried farther than is possible in practice and after screening, the particles of natural barium sulphate have a crystalline form with sharp edges that exert an abrasive action on the skin, which differentiates it under the microscope from artificial or precipitated barium sulphate.

The essential qualities required of a filling material in order to improve soap are:

1. Fineness which increases the active surfaces, while preventing the formation, on the skin or the objects, of a "film" formed by the soap itself, and which thus enables the dirt to be coated and a better cleansing to be effected, as well as a more complete and easier rinsing;
2. Unctuousness that gives an agreeable sensation to the skin;
3. Whiteness and brightness (or absence of colouring) required for the good appearance of the soaps;
4. Non-toxicity;
5. Inertness with respect to the chemical constituents of the soap so that the added substance does not affect the preservation and the stability of said soap;
6. Homogeneity;
7. Shape of the particles as nearly as possible that of a sphere (maximum area) if they are crystalline, but more particularly devoid of sharp edges or points that may injure the skin and produce tiny sores into which the soapy micellae or the products of hydrolysis penetrate;
8. Possibility of obtaining a filling material

which is very uniform as regards the whole of its qualities and even, optionally, of as great a chemical purity as possible.

Precipitated barium sulphate, which is a well-defined product that can be obtained at will in variable degrees of fineness and purity, possesses all these qualities as is proved by microscopical examination, its property in certain cases of even passing through paper filters, its use, by ingestion, for radiography, its absorbing power used in the manufacture of lacs, its insolubility, its whiteness, its brightness.

The present invention has for its object the use, for the improvement of soaps, of precipitated barium sulphate (precluding natural barium sulphate) of a size smaller than 10 microns and, preferably, of the order of 4 microns; it also covers the new industrial product formed by a soap in which such a precipitated barium sulphate has been incorporated.

It is found, when precipitated barium sulphate whereof the size of the particles is smaller than 10 microns, particularly if the precipitate has not been dried, is incorporated in any soap in the presence or not of triethanolamine palmitate, stearate or oleate emulsions or of the substance known in the trade by the name of "Tylose", that the soap thus obtained possesses a greater lathering power, faculty of cleansing the skin, linen or other materials, and softening power than those of the original soap. The colour of the latter is improved and if the original soap caused some pricking of the skin, this is very greatly decreased or even eliminated, as also is the adherence to basins or to razor blades.

According to whether it is proposed to obtain a soap for cleansing linen, the skin, the teeth, a shaving soap, a shampoo, a product for cleaning metals, glass, china, etc. or an industrial or pharmaceutical soap, it is possible to incorporate different quantities (varying from 1 to 90%) of the precipitated barium sulphate described above.

This incorporation may be effected in all soaps by any means and at any instant of the manufacture according to the requirements or the conveniences of same. For example, it is possible to make the addition before the saponification, or at the instant when salting out is effected before the addition of salt, or in the yet liquid soap paste, or even by dissolving an already made soap in a suitable quantity of water which is then evaporated until the required concentration is obtained, or in any other manner, even with a powdered soap. It would also be possible to incorporate the precipitated and dried barium sul-

phate in a powdered soap intended to be sold in that form.

An embodiment of the invention will now be described solely by way of example.

Start from an original soap having the following composition:

	Per cent
Moisture -----	25.83
Anhydrous fatty acids -----	63.40
Combined alkali -----	8.50
Free alkali -----	0.24
Sodium chloride -----	0.54
Glycerine -----	1.08
Sundry and losses -----	0.41
	100.00

In order to effect the incorporation of the precipitated barium sulphate, dissolve 100 parts of this soap in 250 parts of water in the hot state.

Mix separately 25 parts of barium sulphate in the form of a paste (average size of the particles: 4 microns) with 0.5 to 1 part of the above soap,

then add 20 parts of triethanolamine stearate emulsion containing 16% of fatty acid.

Introduce this mixture slowly into the soap in the hot state while stirring.

5 Then concentrate to the desired consistency. Pour or mould into cakes.

The barium sulphate may be precipitated either before it is introduced into the mass intended to form the soap, or during the manufacture of the soap. In the latter case, products are incorporated in the mass in question, which are capable of producing precipitated barium sulphate.

10 The soap obtained according to the invention distinguishes very sharply in its properties from the known soap filled with natural barium sulphate, owing to the fact that precipitated barium sulphate, the use of which forms the fundamental feature of the invention, has absolutely different properties from those of the natural sulphate, even very finely ground.

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