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DETERGENT CLOTH

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My invention aims to provide an improved form of chemically impregnated cleaning cloth or the like, having a detergent action and particularly adapted for wiping or rubbing off dirt, grease spots, stains, etc., from the skin and from other surfaces.

A feature of the cleaning cloth is that no water need be supplied when it is used, as the impregnated cloth is capable of retaining sufficient water or moisture to effect the desired cleansing in conjunction with the chemicals present.

Another and very important feature is that the cloth may be used for cleansing the skin without producing any injurious effects. On the contrary, such use may actually be beneficial to the skin, as the impregnated cloth has a microbicidal action and softens the skin.

The cleaning cloth will remove practically all types of objectionable matter, such as dirt, oil, grease, soot, tar, ink, paint, and a wide variety of stains. Thus it is particularly adapted to the needs of travelers and motorists. It not only removes such matter from the skin, but can be used for cleaning clothes, upholstery, rugs, cushions, velvet, leather, etc. Delicate fabrics are neither burned nor harmed in any way by its use.

The cloth is also very good for cleaning and polishing glass, such as bathroom mirrors, shop-windows, windshields, etc. Wiping the glass also has the effect of preventing drops of moisture from being condensed thereon, a particular advantage with respect to bathroom mirrors and windshields, for example.

The dirty materials removed are absorbed by the cloth and do not cause dirtying of the next surface to which applied.

The mixture employed for impregnating the cloth contains as the basic ingredients: 15–85 parts, by weight, or trisodium phosphate; 85–15 parts of glycerin, relative to the amount of trisodium phosphate; and 2–150% of borax relative to the amount of trisodium phosphate.

Instead of glycerin, I may employ equivalent water soluble hygroscopic polyhydric alcohols, such as glycol, and all of these equivalents are included within the term "glycerin" as herein used.

For the purpose of modifying the alkalinity of the mixture and obtaining an improved cleansing effect, 2–200% potassium or sodium carbonate, and 2–50% of sodium metasilicate, relative to the amount of trisodium phosphate, are preferably added. The carbonate and metasilicate may be used separately or together.

I also prefer to add 2–50% of sodium thiosulfate or hyposulfite, relative to the amount of trisodium phosphate, for increasing the usefulness of the mixture for removing certain kinds of stains, particularly fruit and iodine stains.

The mixture is heated to dissolve together the ingredients, with or without the addition of a small amount of water, and the resulting solution is used to impregnate absorbent cloth material.

When I refer to "cloth" it will be understood that I do so for reasons of convenience and intend to include not only absorbent cloth material proper, but similar absorbent materials as well, such as unsized paper, chamois skin, sponge, etc., which are adapted for wiping and rubbing.

The more absorbent the cloth is the better, in order that it hold the detergent composition in greatest amount and thus possess the greatest cleansing capacity. Cotton towelling, for example, is particularly suitable.

The impregnated cloth is normally intended to contain a small amount of water sufficient to maintain the cloth in moist or damp condition, and when in this condition no water need be supplied when it is used. This water may be introduced into the impregnating composition, in which it is soluble, or may be applied to the cloth after impregnation. The exact amount of water to be used depends on the absorption of the cloth, on the amount of glycerin, and on the humidity at the locality where used. Preferably, the water is present in such amount that the cloth will be stably saturated; meaning that there will be no marked and rapid drying out, due to substantial equilibrium of vapor pressure with that of the atmosphere, and that on the other hand there is about as much water present as can be held without drying.

The glycerin or equivalent hygroscopic material in the composition makes possible the holding of water in the cloth without drying out, and at the same time the glycerin or the like overcomes the somewhat harsh and deleterious action which the trisodium phosphate would otherwise have on the skin.

The cloth is preferably cut in convenient shape for use, such as a square, and kept in folded condition in a substantially moisture proof packet or container, which may be made of water-proofed "cellophane", or rubber, for example.

Drying out of the cloth does not destroy its usefulness, and in such case it may be moistened and its usefulness fully restored. In dry climates particularly, it may be necessary in some instances to moisten the portion of the cloth used

(over)

for rubbing or wiping at the time of use in order to secure the best effect.

It is obvious that the cloth may be impregnated without addition of water, the cloth being moistened by the purchaser or user.

Example

This example illustrates a preferred detergent composition for use in impregnating cloth to obtain a cleansing cloth in accordance with my invention. The following substances, in about the proportions indicated, are mixed and dissolved together:

	Parts
Trisodium phosphate	40
Glycerin	30
Borax	20
Sodium thiosulfate	15
Sodium carbonate	15
Sodium metasilicate	10

A small amount of water is added, either before or after impregnation of the cloth, so that the impregnated cloth will be in moist or damp condition, as previously described.

What I claim is as follows:

1. A reusable absorbent cleansing cloth alkaline in reaction and maintained moist by glycerine, said cloth being impregnated with a detergent composition substantially free from soap and oil and having as its essential ingredients: 15–85 parts, by weight, of trisodium phosphate, 85–15 parts of glycerin, and borax in amount equal to 2–150% of the trisodium phosphate.

2. A reusable absorbent cleansing cloth alkaline in reaction and maintained moist by glycerine, said cloth being impregnated with a detergent composition substantially free from soap and oil and having as its essential ingredients: 15–85 parts, by weight, of trisodium phosphate, 85–15 parts of glycerin, and borax in amount equal to 2–150% of the trisodium phosphate; and sufficient water to dampen the cloth without rapid drying occurring.

3. A reusable absorbent cleansing cloth alkaline in reaction and maintained moist by glycerine, said cloth being impregnated with a detergent composition substantially free from soap and oil and having as its essential ingredients: 15–85 parts, by weight, of trisodium phosphate, 85–15 parts of glycerin, and by weight relative to the trisodium phosphate, 2–150% of borax and 2–50% of sodium metasilicate; and sufficient water to render the cloth moist without rapid drying occurring.

4. A reusable absorbent cleansing cloth alkaline in reaction and maintained moist by glycerine, said cloth being impregnated with a detergent composition substantially free from soap and oil and having as its essential ingredients: 15–85 parts, by weight, of trisodium phosphate, 85–15 parts of glycerine, and by weight relative to the trisodium phosphate, 2–150% of borax and 2–50% of a material of the class consisting of sodium thiosulphate and sodium hyposulfate; and sufficient water to render the cloth moist without rapid drying occurring.

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