SAPO KALINUS.
Potash Soap.

Synonym.—Linseed Oil Soap.

Potash soap may be prepared by the following process:—Heat 40 of linseed oil to about 70° on a water-bath, dissolve 9 of potassium hydroxide in 45 of water, heat the solution to 70°, and mix thoroughly with the oil; then add 4 of alcohol, mix, and continue the heat, without stirring (transferring to a sand bath, if necessary), until a small portion of the mixture is found to dissolve in boding water without the separation of oily drops. Finally, allow the product to cool, and transfer it to suitable vessels. Sapo Kalinus is official in the German Pharmacopoeia, and corresponds to Sapo Mollis, U.S.P. It occurs as a soft, unctuous, yellowish-brown mass, with a characteristic odour and an alkaline taste. The aqueous solution is nearly clear and shows an alkaline reaction to litmus. When dissolved in hot alcohol, not more than 3 per cent. of insoluble residue should remain.

Soluble in water (1 in 4), alcohol (1 in 1).

Action and Uses. — Potash soap is used in the preparation of liquid Soaps which are preferred by some surgeons to the preparations of green soft soap for use to cleanse the skin.

SAPO MOLLIS, B.P.
Soft Soap.

Soft soap, Sapo Viridis or Green Soap, is prepared by heating olive oil with potassium hydroxide and water, and allowing the mixture to cool. It occurs as a yellowish-green, sometimes yellowish-white or yellowish-brown, almost odourless, plastic, and unctuous mass, and is usually transparent. The tint of soft soap depends on the olive oil employed in making it, but copper compounds and chlorophyll are sometimes added to produce an artificial green colour. Hence the B.P. test against copper. Sapo Mollis, U.S.P., is made from linseed oil (see Sapo Kalinus).

Soluble in water (1 in 4), yielding a clear or nearly clear solution; it is more soluble in boiling water (1 in 1), and almost entirely soluble in alcohol (1 in 1).

Constituents.—This soap consists chiefly of potassium oleate, but also contains the glycerin formed in making it.

Action and Uses.—Soft soap is employed in the preparation of various liniments, its solution in dilute alcohol forming a suitable lubricant for rubbing sprains and bruises. A strong solution in alcohol (2 parts in 3) is much used as a liquid shampoo to cleanse the scalp previous to the application of antiseptic lotions. Such a solution is also employed by surgeons to cleanse the skin, or an ethereal solution of soft soap may be used. Soft soap is used to remove incrustations in chronic, scaly, skin diseases, such as psoriasis. A solution (1 in 30 to 40 of warm water) is employed as a rectal enema to remove impacted faeces.

Clock Cleaning Solution

Oleic acid is the hardest to find of the three chemicals ordinarily used in the ammoniated aqueous solution used for clock cleaning and brass brightening. 26% aqueous ammonia is still available at most chemical supply houses. (13% household ammonia, available in supermarkets, cannot be effectively used as a substitute for the "real thing," even if double the prescribed amount is used.) Acetone is available cheaper from paint stores or outlets such as K-mart at a lower price than from chemical supply houses. Oleic acid, also known as 'olive Elaine oil' (sp?), is, I have heard, used in many soap products, and is used in the manufacture of margarine. Despite these widespread uses it is rarely stocked by local chemical suppliers since demand for small amounts is too low to justify inventorying it.

No Oleic acid? Use, TA DAAAH, Murphy's Oil soap, available in supermarkets, and used to clean churches of all denominations, as well as cherished furniture. While Murphy makes cleanliness a virtue, and cleans up in the process, our clocks can be saved from perdition by the same proportions of Murphy's soap as the amount of oleic acid called for in the clock cleaning solution clung to by so many who share Murphy's proclivity for cleanliness. It's a little known aspect of Murphy's Law.

Do not succumb to the temptation to use laundry or dish detergent as a substitute for oleic acid in the usual clock cleaning solution. For reasons I do not understand, detergent in place of "soap" will pit, darken the brass in a variegated form, and will generally ruin the finish on brass clock parts.

The traditional mixture of the now not-always-acclaimed ammoniated cleaning solution is as follows:
Added to one gallon of cold water:
4 oz. oleic acid (Use Murphy's Oil Soap)
8 oz. Acetone
12 oz. 26% Ammonium Hydroxide

Things to know when mixing these chemicals: put the oleic acid or its surrogate into a quart bottle. Add the acetone. Take this solution outside and pour in the requisite amount of ammonia. Be careful not to sniff the ammonia, and stay upwind of the ammonia as you pour it. Even the fumes are so strong that they can "sting" the skin. It is wise to wear rubber gloves while pouring the ammonia. When the ammonia "hits" the mixture of oleic acid and acetone, a large lump of soapy curds will form in the quart jar. Add a little water if you wish, then cap the jar loosely, set it aside and let the entire mixture go into solution. This usually takes about two hours, and the mixture is best left outside while this transition takes place. After, the compound will have a clear "honey" look, and it is ready to mix with the recommended gallon of water.

Actually, if the solution is to be used in an ultrasonic cleaning machine, it is best to dilute it with an additional quart of water. This lessens the possibility of frosting the surface of some kinds of antique cast brass, and the aggressive action of the ultrasonic machine will more than make up for the weaker character of the solution. For ordinary soaking, the ratio of one gallon of water to the prescribed solution is appropriate.

With any cleaning solution that has the strength and cleaning power of this or any other effective solution, thorough rinsing is important. Aqueous or "water-based" solutions as well as non-aqueous solutions need to be thoroughly rinsed away with appropriate solvents to prevent a residue from forming on the metal which will continue the "cleaning," or possibly corrosive effects that will occur under the right atmospheric conditions. The specific rinse for the solution described above is COLD water. No aqueous solution should be heated, and the rinse must be cold so that there is a minimum of evaporation of the solution as parts are removed from the cleaning solution, and the rinse. Heated parts will tarnish from evaporation and drying of either the cleaning solution or the possibly mineral-laden water rinse.

To limit the spotting and staining effect of a water rinse it should be followed with either an alcohol rinse dried with boxwood or metal finisher's sawdust, or, in most circumstances, a blast of compressed air. On cold parts, the condensation of water from a blast of air is minimal, and residual water trapped in tiny crevices can be removed with a blast of warm air from a parts dryer, a hair dryer, or heated air from the ductwork of a hot air system used to heat a workshop.