

Soap

Soap emulsifies the oil and grease that make dirt cling to fabrics and finished surfaces, and helps to carry it away. There are in general two types of soap. One is the mild, neutral type used for toilet purposes and on fine fabrics. The other contains varying proportions of alkaline salts to produce a better suds in hard water and to aid in the cleansing action. The latter type is commonly used for laundry and dishwashing.

Most surfaces in the home should be washed only with mild, neutral soap. Soaps containing free alkali or large amounts of alkaline salts may be even more injurious to linoleum, paint, varnish, and lacquer than they are to the skin. Ordinary laundry soap and home-made soaps often contain sufficient free alkali to make their continued use on hard surfaces inadvisable. If more drastic cleaning action is needed than neutral soap and water alone supply, it is safer to add a small quantity of one of the alkaline salts, which also have value as cleansing agents.

In hard-water localities, it may be advisable to use one of the sulfated fatty alcohols in place of soap, or a hexametaphosphate or tetrasodiumpyrophosphate detergent mixture (sold under brand names) with soap for washing upholstery and rugs, although they are more expensive than mild, neutral soap alone.

Alkalis Many of the alkali cleaning materials are less expensive when bought as such in bulk.

Trisodium phosphate is a moderately strong alkaline salt and one of the most effective in cleansing action. It is seldom sold by its chemical name, so it is well to ask grocers who carry cleansing agents to find out which contains trisodium phosphate. When bought in drug stores or chemical supply houses it may be more expensive. A half tablespoon to a gallon of water generally is sufficient to remove any dirt that cannot be loosened with mild soap and water alone. A larger amount will injure surfaces on which it is used; trisodium phosphate in strong, hot solutions is used as a paint remover. Hence some authorities are reluctant to advise it for household use because some persons act on the assumption that if a little is good a lot must be better.

Washing soda (also called modified soda) is a mildly alkaline salt combining sodium bicarbonate and sodium carbonate. Two tablespoons to a gallon of water are sufficient. Sal soda (sometimes called washing or soda crystals) contains about 40 percent of sodium carbonate and about 60 percent of chemically combined water. It will liquify at high temperatures or humidity, and is expensive when its high water content is considered.

Borax is a mildly alkaline salt and is not very efficient as a cleaning agent. Four tablespoons to a gallon of water are required.

Ammonia may be bought at a drug store in liquid form which is a solution of the gas in water. If water equal to three times the volume of the strong ammonia water is added to it, the same strength will be obtained as household ammonia. The latter is mostly water and the cloudy appearance usually results from the addition of a small amount of soap; it is an expensive way to buy ammonia for cleaning purposes.

Lye, which commonly is caustic soda, is often used to clean drain pipes. However, to prevent the caustic soda from combining with grease and forming hard soap that will clog the pipes, the pipes must be flushed immediately with plenty of hot water. Lye will also damage the glaze on most vitreous china plumbing fixtures and on enameled iron, even that with an acid-resisting finish. Lye is poisonous and injurious to the skin and must be handled with great care.

Acids

Bisulfate of soda is used in some preparations for removing the deposits that discolor vitreous china toilet bowls and render them unsanitary. Hydrochloric acid also may be used for this purpose in a 10- to 15-percent solution. These are strong acid compounds and like lye are poisonous, and must be kept out of the reach of children. They will injure enameled iron that is not of the acid-resisting type.

Abrasives

Scouring powders and metal polishes owe their effectiveness largely to the action of abrasives. Any abrasive wears down the surface on which it is used, the wear increasing with the amount of pressure applied in rubbing, the type and fineness of the abrasive, and the frequency of application. Consequently, it is well to try first to remove dirt and grease with warm water, soap, trisodium phosphate, or one of the other alkaline salts. Then it is a good rule to start with the finest and mildest abrasives and use a more severe one only when the polishing cannot be accomplished with less drastic action.

The mildness of an abrasive is determined both by the shape of the particles and by their fineness. Some abrasives, such as diatomaceous earth and feldspar, have particles smooth enough in shape to diminish their abrasive action. Diatomaceous earth in a fine grade is well adapted to polishing a soft metal such as silver, while a similarly fine whiting has less abrasive action and takes much longer to do the same polishing job. Such abrasives as volcanic ash, pumicite, and the coarser silicas are much more severe.

Metal polishes on the market combine abrasives with other substances. Thin polishes are wasteful. Silver polishes usually are pastes made with diatomaceous earth, soap, water, and perhaps a little wax, scented oil, and coloring matter. Some metal polishes are made with fine silica, which has sharper particles than diatomaceous earth, combined with such ingredients as water, soap, glycerin, ammonia, oil, or a flammable petroleum product. Sometimes acids are added to loosen the tarnish, and these ruin some metals and will damage most of them unless thoroughly washed off. Since acids cannot be packaged in tin, a polishing compound in a tin container assures freedom from them.

Some manufacturers claim that their polishes can be used on all metals. If they are adapted to cleaning copper and brass, they are generally too abrasive for silver because it is a softer metal. While a silver polish may be used on other metals, it usually takes longer than a polish adapted to the particular metal. Special polishes are made for silver, copper and brass, and pewter. These are the only metals in the home on which polish needs to be used.

Many recipes are in circulation for compounding polishes and similar household supplies in the home, but they do not always give satisfactory results. When the ingredients are bought in small quantities they are likely to be expensive, and some, such as diatomaceous earth, are known by a variety of names and are difficult to obtain in local stores. Abrasives are graded in the wholesale trade by fineness, and the homemaker has no way of knowing whether she is getting as fine an abrasive as is necessary for making polishing compounds.

Scouring powders may be of feldspar sold under a brand name, or the commoner volcanic ash or pumicite. Feldspar in a fine grade is less abrasive to the surfaces of plumbing fixtures and metals than the volcanic-ash preparations. Many scouring powders have soap and an alkaline salt added to the abrasives.

Steel wool is another type of abrasive, consisting of fine strands of steel. The finest is No. 00 and is adapted to cleaning some kitchen utensils. It is often sold with a cake of soap, or as steel wool mixed with soap. When straight steel wool is used, the hands may need protection with old gloves to prevent the fine strands from penetrating the skin. Stainless steel wool does not rust