

are to be washed in hard water borax is one of the best alkalis use for softening the water.

Ammonia is a good alkali. It is a very volatile substance and consequently should be used only when the process is to be conducted quickly. It is better and cheaper to use the full strength ammonia from the druggists' and then dilute it, than to buy the article known as household ammonia, which is of unknown strength.

Water can be softened by exposure to air and sun for several days. This method is not used much in households as the expenditure of time is often considered unwarranted. The only satisfactory method of getting rid of iron is to add washing soda to the water and then let the water settle for five or six days before using. Organic material may be precipitated by the use of alum. Sediment must be allowed to settle.

TO SOFTEN THE WATER

TEST:—Water is soft when a lather of soap remains on top five minutes. An experienced person can tell by the feel. 1. For each gallon of water use two tablespoons of solution, made by dissolving 1 lb. of washing soda, in 1 qt. of boiling water. This solution should be bottled and kept on hand as it is a useful cleansing agent. 2. For each gallon of water, use a quarter (1-4) tablespoon of caustic soda or lye dissolved in one cup of water. 3. For each gallon of water use 1 tablespoon borax dissolved in one cup of water. If water is very hard increase the amount of alkali used. Use test.

To remove organic matter: For each gallon, use 1 tablespoon of a mixture containing 2-3 borax and 1-3 alum. When water is very scarce alum is sometimes used to precipitate the dirt. The water is filtered and used again.

METHODS OF WASHING ARE:—1. Chemical. 2. Mechanical. 3. Combinations of chemical and mechanical. The chemical method saves labor but the difficulty is in getting a chemical which will dissolve dirt and at the same time not dissolve the fibres. This excludes from the legitimate methods such things as strong alkalis, acids or chlorine except in the case of unusually dirty clothing, when the mechanical method of rubbing would wear clothes quite as much as the weakening of the fibres by the chemical. Gasoline, turpentine, kerosene and paraffin wax will dissolve dirt without injuring the fabric, but each has its disadvantage. Gasoline is particularly good for soaking clothes when one wishes to wash without boiling. It is possible to use it