SUMMARY AND CONCLUSION

The life of textile depends to a large extent on how well it is cleaned after use. Cleaning refers to soil removal which gets accumulated on the material during use and even otherwise, if it is not stored properly. Cleaning of cloths becomes necessary in order to make them last long and appear fresh and bright.

The importance of clean clothes was realised long back and various materials like aritha (soap-nut) and white clay were used to wash clothes. Later, people started washing clothes with soap. It was only after the second world war (1939-45) that detergents entered the market, and today we find numerous brands of detergents easily available for domestic laundering. The consumer faces a problem to select the right detergent for the various types of fabrics being used by him. Not only this, the price difference between detergents is also to be noted. There are cheaper ones like Nirma and Hipolin and there are costly ones like Ariel and Surf. The costlier ones are 6 to 7 times costlier so it is a matter of great concern to find out which is the best choice.
Thus the present study was planned with the following objectives

1. To survey various brands of detergents used by housewives in Vallabh Vidyanagar, Gujarat and to observe the procedure used for cleaning their clothes from day to day.

2. To observe any side effects resulting from the use of various brands of detergents studied.

3. To compare the effect of soiling on cotton, polyester, and cotton/polyester blend.

4. To determine the efficiency of selected brands of detergents from the point of view of removal of soil from fabrics made of cotton, polyester and cotton/polyester blend.

For the study, cotton, polyester and cotton/polyester fabric samples were soiled with 0.25%, 0.5%, 0.75% and 1.00% artificially prepared soil in the laboratory and then the samples were hand washed and machine washed in eight different brands of detergents at four different concentration viz. 0.25%, 0.5%, 0.75% and 1.00%.

The result obtained from the study reveals that a majority of the respondents used hand washing technique for laundering. All the respondents used detergent cakes as well as powders for laundering.

Nirma was the most preferred brand by the respondents (28%), followed by Hipolin (16%) and Ariel (16%). The least preferred was Surf Excel (4%). The survey revealed that the cheapest of all the
detergents was Nirma and the costliest one was Ariel Microshine. No side effects were reported by the respondents with prolonged use of the detergent.

Reflected light index was used as a basis to evaluate soiling and cleaning of fabrics. In all the three types of fabrics, with the increase in soil concentration the fabric become more black. At lower concentration of soil (0.25%) cotton fabric appears more black as it reflects the least amount of light; but as the concentration of soil increase, polyester fabric appears the darkest.

On comparing hand washing and machine washing, all the hand washed samples were better clean than machine washed ones. Once a sample is soiled, it will not become completely cleaned even with high concentration of detergent. Comparing the values of washed cotton samples with washed polyester and blend (cotton/polyester) samples, it is clear that all the various brands of detergent were capable of cleaning cotton fabric better, followed by cotton/polyester blend and then polyester.

On comparing the values of reflected light index of all washed samples, cleaning with Ariel Microshine gave the maximum light reflection. Wheel and Rin gave the poorest performance for machine washing. For hand washing also Rin was the poorest followed by Nirma and Surf. The following can be concluded from the present study:
(1) Most of the detergent available in the market give good cleaning results for hand laundering in comparison to machine laundering.

(2) Even at a lower concentration of soil cotton fabrics appear more dirty but as the concentration of soil increases, polyester fabric appear more dirty.

(3) All the eight brands of detergents studied, were capable of cleaning cotton fabric better followed by cotton/polyester blend and then polyester.

(4) Ariel Microshine was capable of best cleaning results but it is one of the costliest detergent in the market. Wheel, Rin, Nirma and Surf are poor cleansers. Hipolin could be the right bargain as it is one the cheapest in the market and has good cleansing power.