on certain types of skins The choice of a good soap is best left to the medical department or other qualified department In particular, soap should.

1. Be freely soluble in hard or soft, cold or hot water.
2. Remove fats, oils, and other soil without harming the skin.
3. Leave the natural fats and oils in the skin.
4. Contain no harsh abrasives or irritant scrubbers.
5. Be handy to use if in cake form or flow easily through soap dispensers if in granulated or powder form.
6. Stay insect-free.
7. Retain its properties in use

A large number of cases of industrial dermatitis are reported to be caused not by substances used in processes, but by materials used to *remove* those substances An untrained worker may wash his hands in those cleaning agents which are most available and work the fastest—often dermatitis-producing solvents. To combat this practice, a sufficient number of conveniently located soap-dispensing units containing properly selected cleansing agents should be installed in on-the-job washing areas and in shower rooms Where soap-dispensing units are furnished, workers should be required to use them

Evaluating the Hazard

Evaluation of environmental exposures requires teamwork by several professional disciplines no single group can solve all the many problems presented by occupational disease For example, the engineer ordinarily collects atmosphere samples in the field for subsequent chemical analyses In many cases, however, the chemist must go into the field to assist with the collection of samples and to advise on the chemical aspects of the particular problem under study

The evaluation of an industrial health hazard requires some knowledge of toxicology and an understanding of the concepts involved in the use of threshold limit values and maximal acceptable concentrations.

The following material* in this section on the significance and application of industrial hygiene standards is adapted from a paper presented by V K. Rowe at the 1963 National Safety Congress.

Comparing recommended limits

Threshold limit values (TLV) and maximal allowable, acceptable, or permissible concentrations (commonly referred to as MAC) are guides to be used in controlling the degree of exposure to certain airborne contaminants in the environment of workmen exposed seven to eight hours per day, five days per week for an indefinite period of time They definitely do not represent a fine line between safe and hazardous concentrations The threshold limit values as published by the American Conference of Governmental Industrial Hygienists (see Table 40-B in the next chapter) in essence refer to values obtained by *time-weighting* the exposure over a seven- to eight-hour day Maximal acceptable, allowable, or permissible concentrations are *maximum* values below which normal fluctuation should occur (see Table 40-B in the next chapter, "Elements of Industrial Toxicology") The degree to which excursions above this maximum are permissible depends on the normal baseline of average exposure intensity and the consequences of exceeding the maximum The ACGIH threshold limit committee states that care must be taken to avoid exceeding certain TLV's because of the possibility of acute effects

The MAC may further be defined as the concentration below which there is little likelihood of any significant acute or chronic effect This concentration is fairly easy to determine from animal experiments and observations on human subjects But the time-weighted average or TLV is more difficult to define because, in reality, it is an expression of opinion as to how much below the maximum the average should be This opinion must be based on several factors

First, such an average concentration should be one which in all probability will not cause significant adverse effects even though the exposure is over a prolonged period of time Second, it should include

National Safety Congress Transactions, 12 33-36, 1963.