DEFENDANT'S EXHIBIT 34

*Reprinted from the A. M. A. Archives of Industrial Health*
*September 1959, Vol. 20, pp. 268-270*
*Copyright 1959, by American Medical Association*

SUPERSEDED

# Threshold Limit Values for 1959

*Adopted at the 21st Annual Meeting of the American Conference of Governmental Industrial Hygienists, Chicago, April 25-28, 1959*

Threshold limits should be used as guides in the control of health hazards and should not be regarded as fine lines between safe and dangerous concentrations. They represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect. The values listed refer to time weighted average concentrations for a normal work-day. The amount by which these figures may be exceeded for short periods without injury to health depends upon a number of factors such as the nature of the contaminant, whether very high concentrations even for short periods produce acute poisoning, whether the effects are cumulative, the frequency with which high concentrations occur, and the duration of such periods. All must be taken into consideration in arriving at a decision as to whether a hazardous situation exists. Special consideration should be given to the application of these values in the evaluation of the health hazards which may be associated with exposure to combinations of two or more substances.

Threshold limits are based on the best available information from industrial experience, from experimental studies, and, when possible, from a combination of the two. These values are based on various criteria of toxic effects or on marked discomfort; thus, they should not be used as a common denominator of toxicity, nor should they be considered as the sole criterion in proving or disproving diagnosis of suspected occupational diseases.

These limits are intended for use in the field of industrial hygiene and should be employed by persons trained in this field. They are not intended for use, or for modification for use, in the evaluation or control of community air pollution or air-pollution nuisances.

These values are reviewed annually by the Committee on Threshold Limits for changes, revisions, or additions as further information becomes available. The Committee welcomes the suggestion of substances to be added to the list and also comments, references, or reports of experience with these materials.

Received for publication May 1, 1959.

## RECOMMENDED VALUES

### Gases and Vapors

| Substance | PPM* | Approx. Mg. per Cu. M.† | Substance | PPM* | Approx. Mg. per Cu. M.† |
|---|---|---|---|---|---|
| Acetaldehyde | 200 | 360 | Allyl propyl disulfide | 2 | 12 |
| Acetic acid | 10 | 25 | Ammonia | 100 | 70 |
| Acetic anhydride | 5 | 20 | Amyl acetate | 200 | 1,050 |
| Acetone | 1,000 | 2,400 | Amyl alcohol (isoamyl alcohol) | 100 | 360 |
| Acetylene tetrabromide | 1 | 14 | Aniline | 5 | 19 |
| Acrolein | 0.5 | 1.2 | Arsine | 0.05 | 0.2 |
| Acrylonitrile | 20 | 45 | Benzene (benzol) | 25 | 80 |
| Allyl alcohol | 5 | 12 | Benzyl chloride | 1 | 5 |
| Allyl chloride | 5 | 15 | | | |