

3M

In response to you and your workers
The first maintenance-free



Ready-to-use

ORGANIC

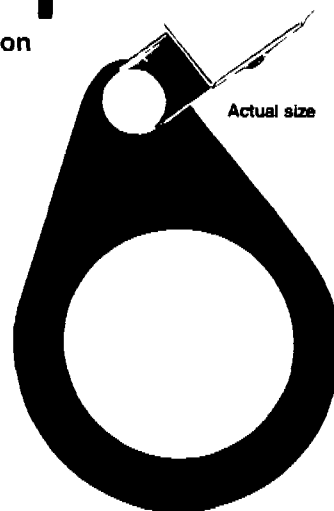
VAPOR

Lightweight, pumpless

MONITOR

Internal desorption

Conventional analysis



Actual size

3M 100966

3M Brand ORGANIC VAPOR MONITOR 3500

Makes monitoring easier for everyone involved from planning through purchase through analysis

3M Brand Organic Vapor Monitor 3500 is maintenance-free. An economic and time-saving benefit for those who must allocate budget to buy the monitor as well as for those who must administer the program.

For wearers, it's lightweight, self-contained and comfortably worn on the collar to measure T.W.A. concentrations over a period of 8 hours or less. Compact, lightweight design helps assure worker acceptance.

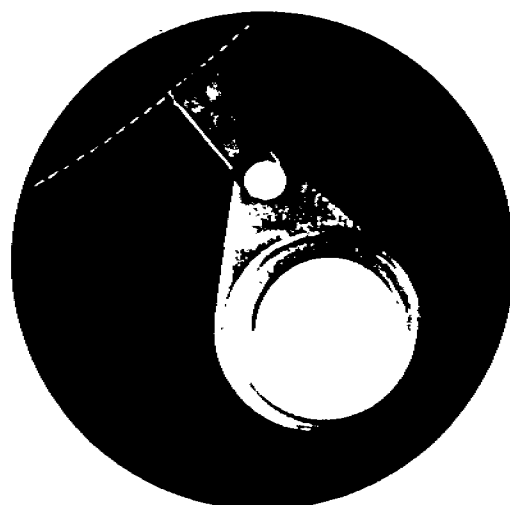
Finally, for laboratory personnel, there's the ease and accuracy of analysis. (Desorption is performed inside the monitor.) 3M provides complete calculation data to your laboratory. 3M also offers a specialized analysis for the monitor.

3500 offers a unique combination of benefits, and there's at least one benefit for everyone involved in the overall monitoring cycle from purchase through analysis.



Ready-to-use

- No equipment preparation or calibration. Saves time, labor and money.
- No spare parts inventory to tie up capital and space.
- Maintenance-free, single use unit. No cleaning or worry about contamination hold-over.
- Low initial cost.
- Exceeds OSHA accuracy requirements.
- Will measure recommended compounds at their action levels or below.



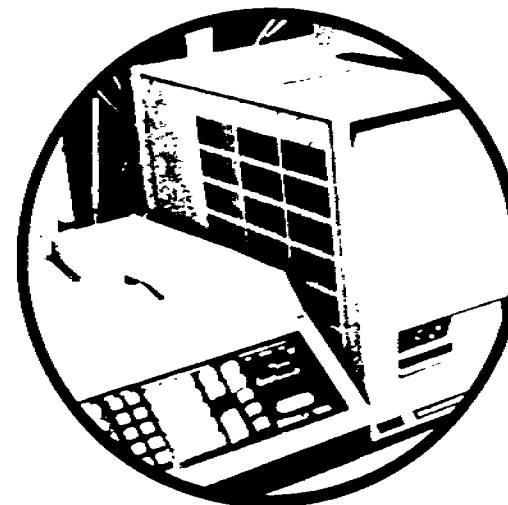
Lightweight, pumpless

- Self-contained. No expensive pumps. No interference with normal work procedure.
- Conveniently clips to collar close to breathing zone. Provides precise measurement of personal exposure.
- Vapors sampled at constant rates.
- Simplified monitoring procedure. Hygienist can work through trained aides in remote locations.
- Lower hygienist cost per sample. In cases of an on-location hygienist, a greater number of samples can be taken in a given period.



Internal desorption

- Sample is sealed within monitor to prevent unintentional contamination after the monitoring period.
- Desorption occurs in the closed monitor. Eliminates potential inaccuracies due to sorbent transfer.
- Eliminates time in handling and analysis preparation.



Conventional analysis

- Uses conventional gas chromatographic analysis as outlined in NIOSH Physical & Chemical Analytical Method 127.
- To speed and assure analysis consistency, 3M offers an Analytical Service or can provide complete standardized calculation data, including sampling rate and recovery coefficient. To obtain this information for your laboratory, complete and send the request card contained in every monitor shipping box.



3M Brand Organic Vapor Monitor

Purchases Necessary

Monitors

Monitoring Procedure

1. Remove monitor from pouch and record time.
2. Affix to wearer.
3. Record end time and sampling conditions.
4. Cap monitor and package for shipment to lab for analysis.

Analysis & Calculation

Use 3M Analysis Service or:

1. Add solvent and transfer to vial
2. Analyze
3. Compute weight of compound and convert to ppm using data supplied by 3M.

3M 100967

3M 100968

Low flow pump and carbon tubes

Purchases Necessary

1. Pump
2. Battery Charger
3. Pumpcase
4. Tubes
5. Tube Holder
6. Bubble Flow Calibrator
7. Stopwatch
8. Replacement Parts

Preparation For Monitoring

1. Charge pump
2. Calibrate pump & set flow rate

Monitoring Procedure

1. Affix to wearer.
2. File & break tube ends.
3. Mount tube in holder.
4. Turn pump on.
5. Record start time, data & pump index #
6. Record sampling conditions.
7. Remove & turn pump off.
8. Record end time, data & index #.
9. Make label & identify tube.
10. Cap ends.
11. Package for shipment.

Preparation For Analysis

1. Label 2 vials.
2. File & break tubes.
3. Remove wadding
4. Transfer back up carbon to vial #1.
5. Remove wadding.
6. Transfer main carbon to vial #2.

Analysis and Calculation

1. Inject solvent to vials 1 & 2.
2. Analyze vials 1 & 2.
3. Compute volume of air sampled.
4. Compute weight of compound.
5. Compute ppm over period of exposure.

3M 100969

Package closure



Pour spout

Closure cap

Monitor with clip

Foil-lined package

Monitoring



1. Start time is recorded on the back of the monitor.



2. The monitor is worn as close as possible to the breathing zone to provide the best possible monitoring of personal exposure.



3. After exposure, the end time is recorded.



4. The white face and retaining ring are removed after monitoring.



5. The closure cap is snapped into place and the ports are firmly closed.



6. Specific data and comments are written on the package.



7. The monitor is placed inside the package which is folded and sealed with the closure tube.

Analysis

The sealed, foil-lined package can be sent to 3M for monitor analysis (see back cover for details), or be forwarded for analysis by your own laboratory or local analytical service. If you prefer to use sources other than 3M, complete qualification and calculation data can be provided for a variety of compounds including but not limited to:

Acetone	Hexane
Acrylonitrile	Methyl Ethyl Ketone
Benzene (Resolution to 0.1 ppm)	Styrene
Carbon Tetrachloride	Toluene
Chloroform	Trichloroethylene
Ethyl Acetate	Vinyl Chloride
Heptane	Xylene



1. As the first step in analysis, the eluent is injected through the center port.



2. The port is closed. The sample is desorbed for 1/2 hour with occasional gentle agitation.



3. Both ports are opened and the pour spout can be inserted. The solution is poured into the sampler vial.



4. Sample analysis is by conventional gas chromatography and use of the 3M qualification data.

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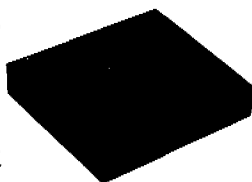
Backed by the expertise
of 3M —

MONITOR ANALYTICAL SERVICE

The easy, accurate system

The same expertly staffed and fully equipped laboratory which developed the 3500 Organic Vapor Monitor can also provide complete gas chromatographic analysis.

The complete 3M package is offered for your convenience. It provides an economical and efficient means to get results quickly and accurately.



The corrugated shipping box in which the monitors are initially packaged is also a ready-to-use return mailing carton to 3M. Monitors are packaged ten to a box.

72-Hour Lab Turnaround Time

At 3M, samples will be carefully analyzed and you can be confident of the results. A written confidential report on each monitor will be quickly returned to you. 3M offers 72-hour lab turnaround time. The reports will also be kept on file for your future reference.



IMPORTANT NOTICE TO PURCHASER

THE FOLLOWING WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. 3M OH & SP products sold will meet the physical standards and properties set forth in the applicable product specification data sheets issued by 3M. 3M's only obligation under this warranty shall be to replace such quantity of 3M OH & SP products proved to be defectively manufactured by failing to meet the aforementioned specification data sheets, and to be responsible for any third party personal injuries directly caused by said defects. Except as provided above, 3M shall not be liable or responsible for any loss, damage, or liability, direct, indirect, incidental, special or consequential, arising out of the sale, use or misuse of, or the inability to use products by the user.

ANOTHER STEP TOWARDS BETTER OCCUPATIONAL HEALTH AND SAFETY

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Litho in U.S.A. with 3M BRAND Photo Offset Plates, Film and Chemicals

Occupational Health and Safety Products Division/3M

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