The 3M™ Diffusion Monitor is a sampling device designed to measure average concentrations of certain contaminants over a measured time interval. It can be used for either personal or area monitoring. As a personal monitor, it is worn near the breathing zone of individuals exposed to potentially hazardous environments. When used as an area monitor, hang it away from walls, corners, table tops, or other regions where the air movement in the room may be limited.

**Product Information**

3500 and 3510 organic vapor diffusion monitors contain a single charcoal adsorbent pad. The 3500 monitor is designed to be analyzed by the user or by an independent laboratory. The 3510 includes a prepaid analysis for up to three compounds per monitor.

3520 and 3530 organic vapor diffusion monitors contain two charcoal adsorbent pads for increased capacity. The 3520 monitor is designed to be analyzed by the user or by an independent laboratory. The 3530 includes a prepaid analysis for up to three compounds per monitor.

3M Monitor prepaid analysis services will be provided by an American Industrial Hygiene Association (AIHA®) Accredited Laboratory. Confidentiality of customer analysis results will be maintained. The list of the compounds which are included in the prepaid analysis service for the 3510 and 3530 monitors is given in the User Instructions. Up to 3 compounds may be selected from this list for analysis. A written report will be quickly returned to document the results of the analysis.

Meets current OSHA accuracy requirements for 8-hour sampling which are +/- 25% at 1.0 ppm, +/- 35% at 0.5 ppm. Also meets accuracy requirements for short-term exposure limit (STEL) sampling of +/- 35% at 5.0 ppm.

Meets accuracy of +/- 25% for many organic vapors. Please see 3M Technical Data Bulletins for more information.

Store in an area free of organic vapors.

**Shelf life is 18 months from date of manufacture. Expiration date is printed on packaging in MM_YY format.**

Sampling times will vary according to contaminant concentrations and environmental conditions such as humidity. Sampling times should be selected for comparison with appropriate exposure limits. For details on appropriate compounds and sampling times, refer to the Organic Vapor Sampling and Analysis Guide.

For more information, please call 3M Technical Service at 1-800-243-4630 or see the User Instructions.
Sampling Instructions

1. Remove the diffusion monitor from the can.

2. Before monitoring, record the following information in your data log and on the enclosed form:
   1) monitor serial number, 4) temperature and relative humidity,
   2) sampling date, 5) compounds to be analyzed,
   3) employee or area ID,

3. Record the date, employee or area ID and sampling start time on the monitor label (Fig. 1).

4. Monitor can be used as an area or personal sampler. For personal sampler attach the monitor near employee breathing zone (Fig. 2). When used as an area monitor, hang it away from walls, corners, table tops, or other regions where the air movement in the room may be limited.

5. After sampling period is ended, remove plastic ring and white film from the monitor (Fig. 3).

   MOVE TO STEP 6 IMMEDIATELY.

6. 3500/3510: Snap elution cap (with plugs) onto main monitor body (Fig. 4). Be sure the two port plugs are secured. Record final sampling time on the back of monitor. Monitor is now ready for shipment.

   3520/3530: Snap elution cap (with plugs) onto the top of the primary body (Fig. 5). Separate the primary body and secondary body sections. Snap the bottom cup (no plugs) into the bottom of the primary section (Fig. 6). Snap elution cap on the secondary body. Monitor is now ready for shipment.

   NOTE: The primary and secondary sections should have the same identification numbers.

7. Return monitor and short plastic straw to can and close with plastic lid provided.

8. 3500 or 3520: Monitors do not include prepaid analysis; therefore, DO NOT RETURN TO 3M FOR ANALYSIS. Please see www.aiha.org for a list of AIHA® accredited laboratories. A detailed analysis procedure is available from 3M.

   3510 or 3530: Send monitor plus completed analysis request form to:
   Pace Analytical Services, Inc.
   Industrial Hygiene Division
   1800 Elm St., Suite 1830
   Minneapolis, MN 55414

Good industrial hygiene practice indicates that a blank monitor be included with each set of samples to check for any contamination of the samples. The blank is a monitor which has been handled in the same manner as the sample monitors, but has not been exposed to the atmosphere in the area being monitored.

NOTE: Certain compounds (e.g. acetone, methyl ethyl ketone, vinyl acetate, etc.) may show a decreased recovery when sampled in high relative humidity. Refrigerate and/or expedite for analysis to help ensure accurate results.
**Reading the Report**

The "Concentration" Column (circled) is where you will find the average concentration based upon the amount found by the lab and the time that you reported. This average may be converted to an 8-hour time weighted average if you wish to compare it against an 8-hour exposure limit.

**Scenario 1:**
Sample was for 6 hours and worker was NOT exposed to contaminants for the remaining 2 hours. The 8-hour TWA may be determined using the following equation:

(Report Concentration x 6 hours) 
8 hours

**Scenario 2:**
Sample was for 6 hours, but worker has the same exposure for the remaining 2 hours. Since the exposure in the remaining 2 hours is the same, the report concentration will be the same as the 8-hour TWA.

Exposure levels may be entered into the 3M™ Select Software on 3M.com/ServiceLifeSoftware to determine appropriate respirator choices or to help determine cartridge change schedules.

**Your returned Monitor Analysis Report will look like this:**

<table>
<thead>
<tr>
<th>User Identification</th>
<th>Monitor Code</th>
<th>Sampling Date</th>
<th>Sampling Time</th>
<th>Weight, mg/m³</th>
<th>Concentration, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee #1</td>
<td>AA0002</td>
<td>9/9/15</td>
<td>480 min.</td>
<td>7.73</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.01</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21.3</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.00</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.88</td>
<td>&lt;2.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.94</td>
<td>&lt;2.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.00</td>
<td>&lt;3.00</td>
</tr>
</tbody>
</table>

Results have not been method blank or field blank corrected unless otherwise indicated. All quality control acceptance criteria were met, unless otherwise noted.

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**Warning**
Do Not Use For:
- Ammonia, Carbon Monoxide; Ethylene Oxide*; Formaldehyde*; Hydrogen Sulfide; Isocyanates: Methane; Ethane; Propane; Methyl Alcohol (Methanol); Methyl Chloride; Methyl, Dimethyl, Trimethyl Amines; Organic Solids; Sulfur Dioxide
- Reactive or polar compounds such as amines, phenols, aldehydes, and low molecular weight alcohols
- Extremely low concentrations within a sampling period of less than 8 hours

*Ethylene Oxide can be monitored using 3M™ Ethylene Oxide Monitor 3550/3551.

*Formaldehyde can be monitored using 3M™ Formaldehyde Monitor 3720/3721.

For product use instructions and limitations, see User Instructions Guide.