



# Technical Datasheet

## 3M™ Organic Vapour Monitor 3500 and 3520

### Description

3M™ Organic Vapour Monitors are simple and effective devices that collect certain gases and vapours using the scientific principle of diffusion.

Diffusion is a natural process by which it is known that gases and vapours will flow from a higher concentration (in the workplace air) to a lower concentration (in the base of the monitor). A sorbent pad in the base collects and holds the organic gases and vapours until desorbed for analysis in a laboratory.

The airborne concentrations measured can be used as part of a risk management process to institute suitable controls, including assisting in determination of the type and service life of respiratory equipment appropriate to the contaminants (according to AS/NZS1715).

### Main Features

- Simple and convenient. There are no batteries, pumps or equipment to calibrate.
- Easy to use - just clip the monitor to shirt lapel, collar or pocket.
- Versatile - can be used for area or source monitoring if sufficient airflow exists.
- Comfortable - monitors are small, lightweight and will not interfere with work activities.
- Can simultaneously capture a wide range of airborne organic vapours, enabling laboratory identification of type and level of worker exposures.

### Standards

Requirements for sampling with diffusion monitors are covered in AS 2986.2:2003. 3M Organic Vapour monitors meet US OSHA specified performance levels for accuracy and repeatability.

### Applications

#### **3M™ Organic Vapour Monitor 3500:**

A single layer charcoal sorbent pad that will capture a wide range of organic vapours. See the 3M OVM Sampling & Analysis Guide for more information.

Weight: ~9 gm

#### **3M™ Organic Vapour Monitor 3520:**

A “double layer” charcoal sorbent pad gives a higher capacity for demanding applications. Typically used if it is possible that the capacity of the 3500 may be exceeded due to high concentrations, for high humidity and for complex mixtures. See the 3M OVM Sampling & Analysis Guide for more information.

Weight: ~15 gm

### User Instructions

1. Remove the diffusion monitor from the can.
2. Before monitoring, record the following information in your data log:
  - monitor serial number
  - ambient temperature and relative humidity
  - sampling date
  - compounds to be analyzed
  - employee or area I. D.
3. Record the date, employee or area ID and sampling start time on the monitor label supplied and the relevant information on the base of the OVM itself.
4. The OVM can be used as an area or personal sampler. For personal sampling attach the monitor near employee breathing zone. When used as an area monitor, hang it somewhere away from walls, corners, tabletops, or other regions where the air movement in the room maybe limited.
5. After the sampling period is ended, remove the outer plastic ring and white film from the monitor using a coin or other lever

6. **3M™ Organic Vapour Monitor 3500:**  
Snap the elution cap (with plugs) onto main monitor body. Be sure the two port plugs are pushed closed securely. Record the final sampling time on the back of monitor. The OVM is now ready for shipment.
7. **3M™ Organic Vapour Monitor 3520:**  
Snap an elution cap (with plugs) on to the top of the primary body.
8. Separate the primary (top) body and secondary (bottom) body sections by pulling or leveraging them apart. Snap the bottom cup (this has no plugs) into the bottom of the primary section. Snap the remaining elution cap onto the top of the secondary body. Record the final sampling time on the back of monitor and it is now ready for shipment.
9. NOTE: The primary and secondary sections should have the same identification numbers on the two halves. Do not mix different monitor sections or the analytical results will be compromised.
10. Return the sealed monitor section(s) and the short plastic straw to the can and close with white plastic lid provided. Send to the selected analytical laboratory for analysis.

- Product should be stored in clean, dry conditions within the temperature range: 0°C to +25°C.

## **Materials**

The following materials are used in the production of these products:

- Can – Aluminium
- Monitor Body – Nylon
- Monitor Cap – Nylon
- Diffusion Pad – Activated Carbon
- Clothing Clip—Zinc plated Steel
- Elution Cap—Nylon

## **Warnings and Use Limitations**

They are not effective for all substances. These monitors are NOT suitable for:

- Isocyanates
- Ammonia, Sulfur Dioxide
- Carbon Monoxide, Formaldehyde
- Methane, ethane, propane
- Methanol, Methyl Chloride
- Methyl, di- & tri- methylamines
- Reactive or polar compounds such as amines, phenols, aldehydes.
- Particulates

## **Storage and Shelf Life**

- 3M Organic Vapour Monitors have a shelf life of 18 months – the expiry date is marked on a label on the base of the can.
- Keep away from heat, high temperature and direct sunlight
- Keep package sealed; use immediately after opening.

**Contact 3M to obtain a copy of the 3M OVM Sampling and Analysis Guide, advice on exposure sampling or recommended analytical laboratories for the analysis of 3M Organic Vapour Monitors.**



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