PERMEA-TEC™
(patent no. 5,976,881)
Sensor for **Hydrazine**

Permeation Detection of Hydrazines

Permeation of hydrazines through gloves and protective clothing may be enhanced by work conditions or with solvent usage. Intermittent exposure to hydrazine may not be well represented by the ASTM permeation test protocol which measures glove breakthrough times based on continuous exposure to the solution tested.

The **PERMEA-TEC™ Hydrazine** sensor detection system was developed to provide a method for field validation of chemical protective gloves. The colorimetric sensors are worn underneath the glove to detect breakthrough under actual work conditions.

Field validation of gloves, rather than a non-representative laboratory validation, allows for optimal consideration of productivity, safety, and cost when choosing a glove or other personal protective clothing.

Instructions for Use

To determine a user-safe time period for the particular glove, double gloving is necessary.

1. Affix **PERMEA-TEC™ Hydrazine** sensors to the thumb, middle finger and palm on the outside of the glove currently being worn. Don the glove to be evaluated over the first glove.
2. After one hour, remove the outside glove and the underlying **PERMEA-TEC™ Hydrazine** sensors.
3. A positive indication of breakthrough results in a color change from yellow to blue. A small amount (10 – 20 ug) of the chemical under study should be applied to a fresh sensor pad to provide a positive control and color reference.
4. If no break-through is indicated, apply fresh **PERMEA-TEC™ Hydrazine** sensors and continue to wear the outside glove for another hour. Follow Step 2 to determine if breakthrough has occurred.
5. By repeating Steps 3 and 4, you can determine a user-safe time period for gloves.

Compounds Detected: Hydrazine, MMH, UDMH