Use of Leather Cases with Non-Aspirated Gas Detection Instruments

Through ongoing research and development efforts, Industrial Scientific Corporation has identified an issue with the accuracy of gas measurements made with diffusion (non-aspirated/non-pumped) portable instruments that are used in leather cases to measure certain gases. Due to a reaction with compounds used in the leather tanning process, the measured concentrations of many gases taken with diffusion instruments used in leather cases were found to be significantly lower than measurements taken with the same instruments removed from the case.

Based on these results, Industrial Scientific recommends that leather carrying cases only be used as carrying cases and not used for continuous monitoring of the following gases with non-aspirated instruments:

- Ammonia (NH₃)
- Chlorine (Cl₂)
- Chlorine Dioxide (ClO₂)
- Hydrogen Chloride (HCl)
- Hydrogen Cyanide (HCN)
- Nitric Oxide (NO)
- Nitrogen Dioxide (NO₂)
- Phosphine (PH₃)
- Sulfur Dioxide (SO₂)
- Photo Ionization Detectors (PID) used to detect volatile organic compounds (VOCs)

**Aspirated (Pumped) Units Are Not Affected:** Aspirated (pumped) instruments used with sample tubing or a sampling probe attached did not display the same level of discrepancy in readings between those tested with a leather case and those tested without a leather case.

**Most Common Gases Are Not Affected:** The effect was found to be minimal in instruments measuring the following common gases: LEL, O₂, CO, CO₂, H₂S.

**Effective immediately, ISC recommends that leather cases should only be used as carrying cases for diffusion (non-aspirated) gas detection instruments with sensors measuring gases other than O₂, CO, CO₂, H₂S, and combustible gases (LEL).** Diffusion instruments should not be used in leather cases when continuously monitoring gases other than O₂, CO, CO₂, H₂S, and combustible gases (LEL).

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