

Technical Data Sheet: TDS 3A

DIF 900 RTU - ACID GASES

This tube is designed for passively monitoring airborne acid gases such as Hydrogen fluoride, Hydrogen chloride, Nitric acid, Hydrogen bromide, Phosphoric acid and Sulfuric acid (HF, HCl, HNO₃, HBr, HPO₄ and H₂SO₄).



Description: Acrylic tube fitted with green and white thermoplastic rubber caps. The colored cap contains the absorbent. A one-micron porosity filter is fitted to prevent particulate ingress.

The concentrations of fluoride, chloride, nitrate, bromide, phosphate and sulfate ions are quantitatively determined by Ion Chromatography with reference to a calibration curve derived from the analysis of standard solutions (ISO Accredited Methods).

Suitable for carrying out spatial or localized assessments of Acid Gases in ambient air or workplace monitoring.

Tube Dimensions: 71.0mm length x 11.0mm internal diameter.

Recommended Exposure Periods: 2 –4 weeks.

Air Velocity: Influence of wind speed <10% between 1.0 and 4.5 msec⁻¹ (based on original data). No influence when filter is fitted.

Storage: Store in a dark, cool environment preferably between 5-10°C.

Shelf Life: 12 weeks from preparation date.

Desorption Efficiency: d = 0.98 (determined using N.I.S.T. Standard Analytes).

Limit of detection:

- HCl – less than 3.5 $\mu\text{g m}^{-3}$ over a 4-week exposure period.
- HF – less than 0.5 $\mu\text{g m}^{-3}$ over a 4-week exposure period.
- HBr – less than 2.0 $\mu\text{g m}^{-3}$ over a 4-week exposure period.
- H₃PO₄ – less than 2.5 $\mu\text{g m}^{-3}$ over a 4-week exposure period.
- NO₃ – less than 2.0 $\mu\text{g m}^{-3}$ over a 4-week exposure period.
- H₂SO₄ – less than 2.0 $\mu\text{g m}^{-3}$ over a 4-week exposure period.

Specific values available upon request.

Analytical Expanded Measurement Uncertainty: Available upon request.

Working range: 4 – 200 $\mu\text{g m}^{-3}$.

Relevant Standards: BS EN 13528 Parts 1-3 : 2002/3.

Special Factors: Potential interference from acidic aerosol particles.