

# Information Data Sheet

**Detector Tube HF-1**

**Part No. (US): 804142**

**Part No. D5086830**

## 1. Application

Detection of hydrogen fluoride (hydrofluoric acid gas, HF) in air or technical gases.

## 2. Detector Tube Sampling Pump

KWIK DRAW(formerly MSA AUER) Gas-Tester<sup>®</sup> I/H, Gas-Tester<sup>®</sup> I / ThumbPump<sup>™</sup>-Sampler, Toximeter<sup>®</sup> II, Uniphos Kwik-Draw<sup>™</sup>-Pump or other suitable detector tubes pumps. Observe respective instructions for use.

## 3. Measuring Range

5 ppm ... 50 ppm hydrogen fluoride at 2 pump strokes (n=2).  
1 ppm ... 12 ppm hydrogen fluoride at 8 pump strokes (n=8).

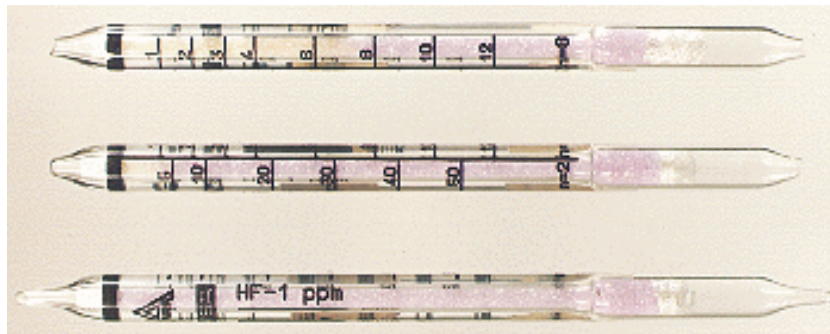
Any number of strokes from n=2 to 8 can be chosen. For calculation use n=8 scale, relate as follows:

$$\text{ppm HF} = \frac{8 \times \text{indication on n=8 scale}}{\text{no. of strokes chosen}}$$

## 4. Chemical Reaction and Color Change

Change of pH-value causes color change of an acid-base-indicator.

Color change: Light blue → Yellow.



## 5. Ambient Conditions During Sampling

Detector tubes can be used without compensation of the reading between 5 °C and 35 °C (41 °F and 95 °F) and between 20 % RH (1.4 g/m<sup>3</sup> at 5 °C [41 °F]) and 80 % RH (32 g/m<sup>3</sup> at 35 °C [95 °F]).

## 6. Interferences and Cross Sensitivities

a) No interference from:

- hydrogen, methane, ethane, propane, butanes, carbon monoxide, carbon dioxide.
- higher saturated hydrocarbons (e. g. hexanes, octanes), olefinic hydrocarbons (e. g. ethylene), aromatic hydrocarbons (e. g. benzene) up to 5000 ppm (n=8).
- hydrogen sulfide up to 300 ppm (n=8).
- sulfur dioxide up to 5 ppm (n=8).

b) Nitrogen dioxide will be indicated. To distinguish between hydrogen fluoride and nitrogen dioxide use detector tube NO<sub>2</sub>-0,5 (part no.: 487341) which detects only nitrogen dioxide.

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- c) Hydrogen chloride will be indicated. To distinguish between hydrogen fluoride and hydrogen chloride use detector tube HCl-1 (part no.: 803948) which detects - within the concentration range up to 30 ppm (n=5) - only hydrogen chloride.

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