Detector Tube
H_2O-HP (mg/m^3)
Part No.: D7086872

KWIK DRAW
UNIPHOS

Instructions for Use

1 Application

Determination of moisture (H_2O) in compressed air / gases.

2 Sampling Device

The tube may only be used with moisture monitoring set for compressed air e.g. KWIKDRAW Airtester HP. Observe enclosed instructions for use.

3 Measuring Range

5 to 200 mg/m^3 water vapour for a 50 Liter sample.

4 Chemical Reaction and Color Change

Precipitation of selenium from selenium/sulfuric acid by water.

Color change: Yellow → Reddish brown.

5 Sampling Procedure

- Connect sampling device to compressor or compressed air cylinder.
- Carefully flush sampling device with the air to be tested. Residues of humidity in the sampling device must be completely removed. The required duration of the flushing process should be determined by preliminary tests.
- Adjust flow of the air to be tested exactly to 2.0 L/ min (red mark).
- Break off both tube tips. The tip at which arrow on tube points (air outlet) has to be opened at first.
  In a second step open the other tip (air inlet) directly in the flow of the air to be tested. The humidity of the ambient air must not penetrate into opened detector tube.
- Insert detector tube tightly into tube holder of the sampling device. Arrow on tube must point away from the sampling device.
- Then start the watch immediately.
  Note: After inserting the detector tube the float of the flowmeter shows a lower position than before.
  During the measurement allow the float to remain in this lower position.
- Allow the air to be tested to flow through the detector tube for 25 minutes (50 L sample) or as per the requirement. After that remove detector tube from the sampling device.
- Immediately after removing of tube read concentration at end of color zone. Indication may alter by penetration of ambient humidity into detector tube.

6 General Information and Cautions

- The measurement result applies only to the sampled portion i. e. for the expanded portion of air. In order to validate the water content of the total air in compressed air system, variations in place and time resulting from surface adsorption and desorption processes must be taken into account. Such processes are strongly dependent on temperature.
- The white mist appearing at the air outlet of detector tube during measurement is caused by an emission of small droplets of sulfuric acid with the air flow. The amount is very slight. Any irritations will not happen.
- Used detector tubes without any color change cannot be used repeatedly.

7 Interferences and Cross Sensitivities

No interference from:hydrogen, methane, ethane, propane, carbon monoxide, carbon dioxide, mineralic oil (vapor and mist).

8 Ambient conditions during sampling

Detector tubes can be used between 0 °C and 35 °C (32 °F and 95 °F).

9 Overall Uncertainty

Up to ±15 % to 20 % for 50 L sampling volume. (expressed as relative standard deviation)

10 Storage and Transport

Up to 25°C (77°F) and protected from light. Expiration date: see back of package.

11 Safety Advice / Disposal

For tubes contents the following indications of danger apply: R: 20/21/22-35-37.

Safety advice S: 2–23-24/25-26-28 (water).

Tubes must be kept away from unauthorized persons. For disposal of tubes as waste observe the legal regulations applicable in the individual country of use.