

# Information Data Sheet

**Detector Tube**      **CO-10 (vol.%)**

**Part No. (US):**      **804421**

**Part No.**              **D5085820**

## 1. Application

Detection of carbon monoxide (CO) in air or in technical gases.

## 2. Detector Tube Sampling Pump

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

## 3. Measuring Range

0.01 vol.% ... 0.3 vol.% carbon monoxide at n = 1 (1 stroke)

0.001 vol.% ... 0.03 vol.% carbon monoxide at n = 10 (10 strokes).

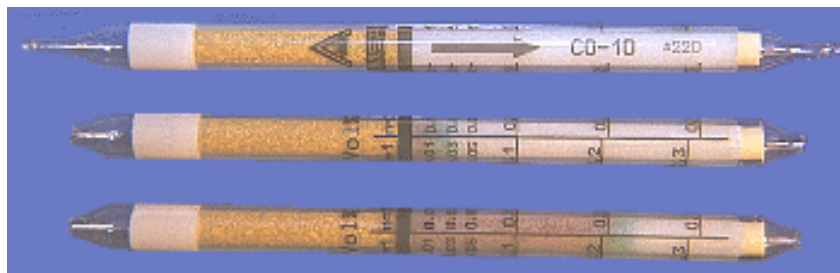
Any number of strokes from 1 to 10 can be chosen. For calculation use n=10 scale, relate as follows:

$$\text{vol. \% CO} = \frac{10 \times \text{indication on n=10 scale}}{\text{no. of strokes chosen}}$$

## 4. Chemical Reaction and Color Change

Oxidation of carbon monoxide by iodine pentoxide in fuming sulfuric acid.

Color change:    white      →    brown / green.



## 5. Ambient Conditions During Sampling

120 °F) and up to 90 % rh (75 g/m<sup>3</sup> at 50 °C [120 °F]) water vapor will not affect accuracy of indication.

Water vapor will be absorbed by the protective layer changing its color from brown to yellow. Do not use detector tube if protective layer has totally changed color.

## 6. Interferences and Cross Sensitivities

a) No interference from:

- Methane, carbon dioxide, as well in concentrations above 50 vol.%.
- Hydrogen, ethane up to 10 vol.% (n = 1) or 1 vol.% (n = 10); higher concentrations discolor the whole indicating layer, a sharp stain edge is not formed.
- sulfur dioxide, nitrogen oxide, nitrogen dioxide up to 1 vol.% (n = 1) or 0.1 vol.% (n=10).

*Manufactured By:*

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- b) Propane and higher saturated hydrocarbons, olefinic hydrocarbons, hydrogen sulfide discolor the protective layer from brown to greenish. At least 0.3 vol.% (n = 1) or 0.03 vol.% (n =10) of propane, olefinic hydrocarbons (e.g. ethylene) and hydrogen sulfide are retained. Retention is lower for butanes and higher saturated hydrocarbons (e.g. hexanes). Concentrations of hydrocarbons exceeding the protective capacity may be eliminated by adding a charcoal filter tube Ads (804403).
- c) Acetylene is indicated: 0.1 vol.% is indicated as approx. 0.04 vol.% CO (n = 1).
- d) Water vapor reduces the protective layer retention capacity, in particular for hydrocarbons.

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