CDS – Simultaneous-Test-Set I

Order No. 81 03 140

Application Range

Qualitative measurement of volatile substances that may be present at warfare-related materials toxic waste sites.

Substance	Sensitivity
Thioether (Sulfur Mustard)	1 mg/m³
Phosgene	0.2 ppm (approx. 7 mm pale green)
Hydrocyanic Acid (HCN)	1 ppm
Org. Arsenic Compounds and Arsine	0.1 ppm Arsine, (3 mg/m³ org. arsenic compounds)
Organic Basic Nitrogen Comp.	1 mg/m³
Number of Strokes n:	50
Time for Measurement:	approx. 3 min

Ambient Operating Conditions

Temperature:	5 to 30 °C
Humidity:	5 to 15 mg H_2O / L

Measurement outside the given temperature and humidity ranges may affect sensitivities. Water-aerosols can produce minus errors.

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Reading Evaluation: Attention! Follow Instructions in Detail!

1. Thioether (Sulfur Mustard)

Color band: yellow → orange

Cross sensitivity: Various thioethers can be indicated, differentiation among thioethers is not possible.

2. Phosgene

Color band: yellow → blue-green

Cross sensitivity: Hydrochloric acid does not affect the indication up to 100 ppm.

3. Hydrocyanic Acid

Color band: yellow-orange → red

Cross sensitivity: 100 ppm hydrogen sulfide, 300 ppm ammonia, 200 ppm sulfur dioxide, 50 ppm nitrogen dioxide, 1000 ppm acrylonitrile as well as 1000 ppm hydrochloric acid does not affect the indication. Hydrogen sulfide colors the indicator dark brown, but has no influence on the hydrogen cyanide indicator.

4. Organic Arsenic Compounds and Arsine

Color band: pale yellow → grey

Cross sensitivity: Phosphorous hydride can appear before the ampoule is opened, however it reacts with mixed sensitivity.

5. Organic Basic Nitrogen Compounds

Color band: yellow → orange-red

Cross sensitivity: Various organic basic nitrogen compounds will be indicated, differentiation is not possible.