

1,1,1-Trichloroethane 0.5 to 5 mg/L

Order No. CH 21 101

Application Range

Determination of 1,1,1-trichloroethane in water/waste water

Dräger-Tube:	Trichloroethane 50/d
Measuring range:	0.5 to 5 mg/L
Number of Strokes (n):	5 + 3 desorption strokes at clean air
Typical Stroke Time:	40 to 70 s + 20 to 40 s
Measurement Time:	approx. 550 s + 90 s
Sample Volume:	200 mL
Color Change:	grey → brown red
Temperature Range:	5 to 35 °C
pH-Measurement:	not necessary

System Parameters

Measurement Range [mg/L]	Standard Deviation [%]	Temperature [°C]	Parameters	
			B	C
0.5 to 5	25	5 to 12	0.0059	-50
	25	13 to 25	0.0059	-100
	30	26 to 33	0.0054	-200

Evaluation of Measurement

Calculate 1,1,1-trichloroethane concentration:

$$Y_{[\text{mg/L}]} = A \cdot B \cdot (X_{[\text{ppm}]} + C)$$

Cross Sensitivity

Perchloroethylene, carbon tetrachloride, dichloromethane and trichloroethylene are indicated with lower sensitivity. Petroleum hydrocarbons are not indicated.



Chlorinated Hydrocarbons qualitative in oil

Order No. CH 21 101

Application Range

Determination of volatile chlorinated hydrocarbons
in oil sludges/oil emulsions

Dräger-Tube:	Trichloroethane 50/a
Measuring range:	qualitative
Number of Strokes (n):	6 + 3 desorption strokes in clean air
Typical Stroke Time:	40 to 70 s + 30 s
Measurement Time:	approx. 660 s + 90 s
Sample Volume:	approx. 0.5 g
Color Change:	grey → brown red
Temperature Range:	10 to 25 °C
pH-Measurement:	not necessary

Information of Measurement

- Approx. 0.5 g oil sample has to be shaken intensively with 1 L de-ionized water for 2 minutes in a laboratory bottle.
- The solution must be filtered through an analysis funnel with a round filter (black ribbon) directly into the gas wash bottle up to the 200 mL mark.

Evaluation of Measurement

The measurement evaluation is qualitative (yes or no)

Cross Sensitivity

Dichloromethane, Perchloroethylene, Carbon tetrachloride, 1,1,1-Trichloroethane and Trichloroethylene are indicated. Petroleum hydrocarbons are not indicated.



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Chlorinated Hydrocarbons qualitative in multiple phase

Order No. CH 21 101

Application Range

Determination of volatile chlorinated hydrocarbons in multiple phase

Dräger-Tube:	Trichloroethane 50/a
Measuring range:	qualitative
Number of Strokes (n):	6 + 3 desorption strokes in clean air
Typical Stroke Time:	40 to 70 s + 30 s
Measurement Time:	approx. 660 s + 90 s
Sample Volume:	200 mL
Color Change:	grey → brown red
Temperature Range:	10 to 25 °C
pH-Measurement:	not necessary

Information of Measurement

- Mix a multiple phase sample which consists of e.g. 250 g water, 10 g fixed phase and 10 g oil part (about 300 mL) is mixed with approx. 5 g activated coal. It must rest for 3 minutes and then be shaken for 1 min.
- 0.2 g hydrophobated peat is added and the it must be shaken for 1 minute.
- The liquid is filled into the gas wash bottle up to the 200 mL mark.

Evaluation of Measurement

The measurement evaluation is qualitative (yes or no)

Cross Sensitivity

Dichloromethane, perchloroethylene, carbon tetrachloride, 1,1,1-trichloroethane and trichloroethylene are indicated. Petroleum hydrocarbons are not indicated.

