

# Formaldehyde Trace

## Principle

Formaldehyde reacts in aqueous solution with ammonium ions and acetylacetone to give a yellow dye.

## Range of Application

Chipboard after previous perforation (DIN 120), fabrics, air, cosmetics, waste water, process control

## Storage Information

The test reagents are stable at +15 to +25°C up to the expiry date given on the package.

## Interferences

The high selectivity of the method almost completely excludes interferences from other aldehydes. Strong oxidizing agents interfere.

The measurement results must be subjected to plausibility checks (dilute and/or spike the water sample).

## pH/Temperature/Time

The pH of the sample must be between pH 3 and pH 10.

The temperature of the sample and reagents must be between +15 and 25°C.

***The time in the thermostat must be strictly observed (40°C for 10 min).***

**Applies to all types of photometer**

**Formaldehyde** Trace

**Edition 07/1994**

Pipette into the cuvette test

|   | Sample cuvette | Blank-value cuvette |
|---|----------------|---------------------|
| Sample                                  | 2 ml           | —                   |
| Distilled water                         | —              | 2 ml                |
| Ammonium acetate solution A (LCK 325 A) | 1 ml           | 1 ml                |

Close cuvettes and invert a few times. Heat in thermostat at **40°C** for **10 min** and then allow to stand at room temperature for **60 min**.  
Transfer the contents to 50 mm semi-micro cuvettes; thoroughly clean the outside of the cuvettes and evaluate. **Take care that there are no air bubbles!**

**Formaldehyde** Trace

**Edition 07/1994**

**Evaluation**

1. Insert filter **412 nm**.
2. Enter factor (see below) and store  $\uparrow$ .
3. Insert blank-value cuvette (see procedure) and press "Null" (zero) key.
4. Insert sample cuvette and press "Ergebnis mit Faktor" (result with factor) key.

| Parameter          | Factor | Meas. range     |
|--------------------|--------|-----------------|
| Formaldehyde Trace | 1.66   | 0.01 – 1.0 mg/l |

**LP2W** **07/1994**

Formaldehyde Trace •  $F_1 = 0$  •  $F_2 = 1.66$  •  $K = 0$

**CADAS 30/30S/50/50S** **07/1994**

Formaldehyde Trace •  $\lambda$ : 413 nm • Pro.: 1 •  $F_1 = 0$  •  $F_2 = 1.56$  •  $K = 0$

**ISIS 6000/9000** **07/1994**

Formaldehyde Trace •  $\lambda$ : 405 nm • Pro.: 1 •  $F_1 = 0$  •  $F_2 = 1.658$  •  $K = 0$

**CADAS 100 / LPG 185** **07/1994**

Formaldehyde Trace •  $\lambda$ : 412 nm •  $F = 1.62$

**CADAS 100 /  $\geq$  LPG 210** **07/1994**

Formaldehyde Trace •  $\lambda$ : 412 nm •  $F_1 = 1.62$

**Formaldehyde** Trace

**Edition 07/1994**

**Evaluation**

1. Insert program filter **412 nm**.
2. Press "Tests" key until display (see below) appears.
3. Control number must be **4**.
4. Insert blank-value cuvette (see procedure) and press "Null" (zero) key.
5. Insert sample cuvette and press "Ergebnis" (result) key.

| Parameter          | Display         | Meas. range     |
|--------------------|-----------------|-----------------|
| Formaldehyde Trace | Form.-T LCK 325 | 0.01 – 1.0 mg/l |

**Formaldehyde** Trace

Edition 07/1994

**Evaluation**

1. Check program control number:  
 \_\_ : **38 (CADAS 200)**  
 \_\_ : **32 (ISIS 6000/9000)** ⇒ Select »TEST« mode.  
**CADAS 30/50** ⇒ Select »TEST« mode.  
**LASA 100, XION 500** ⇒ Select »Dr. Lange« mode.
2. Select test number (see below).
3. Control number must be:  
**2 (CADAS 30/50, ISIS 6000/9000)**  
**3 (CADAS 200, LASA 100, XION 500)**
4. Insert blank-value cuvette (see procedure) and press blue key.
5. Insert sample cuvette and press green key.

| Parameter          | Test-No. | Meas. range     |
|--------------------|----------|-----------------|
| Formaldehyde Trace | 325      | 0.01 – 1.0 mg/l |

**Formaldehyde** Trace

Edition 07/1994

**Evaluation**

1. Select »TEST« mode.
2. Select test number (see below).
3. Control number must be **2**.
4. Insert blank-value cuvette (see procedure) and press key below »ZERO«.
5. Insert sample cuvette and press key below »MEAS.«.

| Parameter          | Test-No. | Meas. range     |
|--------------------|----------|-----------------|
| Formaldehyde Trace | 325      | 0.01 – 1.0 mg/l |

**Formaldehyde** Trace

Edition 07/1994

**Evaluation**

1. Select »TEST« mode.
2. Select symbol (see below).
3. Check factors and measuring wavelength in memory »Mem« (**LPG 185**) or control number must be **7 (LPG 210)**.
4. Insert blank-value cuvette (see procedure) and press »NULL“ (zero) key.
5. Insert sample cuvette and press »MESS“ (measure) key.

| Parameter          | Symbol | Meas. range     |
|--------------------|--------|-----------------|
| Formaldehyde Trace | 325 T  | 0.01 – 1.0 mg/l |

**Formaldehyde** Trace

Edition 07/1994

**Evaluation**

1. Insert filter **440 nm**.
2. Select »Dr. Lange« mode.
3. Select test number (see below).
4. Control number must be **3**.
5. Insert blank-value cuvette (see procedure) and press blue key.
6. Insert sample cuvette and press green key.

| Parameter          | Test-No. | Meas. range     |
|--------------------|----------|-----------------|
| Formaldehyde Trace | 325      | 0.01 – 1.0 mg/l |

**Formaldehyde** Trace**Edition 05/2006****Evaluation**

1. Select menu "Stored Programs".
2. Select test number (see below) and touch "Start".
3. Insert blank-value cuvette (see procedure) and touch "Zero".
4. Insert sample cuvette and touch "Read".

| <b>Parameter</b>   | <b>Test-No.</b> | <b>Meas. range</b> |
|--------------------|-----------------|--------------------|
| Formaldehyde Trace | 325             | 0.01 – 1.0 mg/l    |