# LCK345 Phenols

DOC312.53.94050

## 0.05–5.00 mg/L Phenols LCK345

**Scope and application:** For water, wastewater, soils and waste.

## Test preparation

### Test storage

Storage temperature: 15–25 °C (59–77 °F)

### pH/Temperature

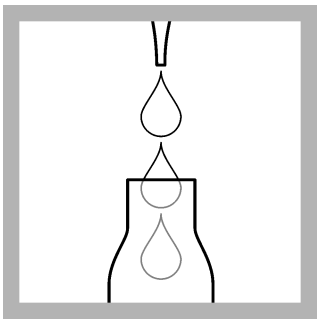
The pH of the water sample must be between pH 2–10.

The temperature of the water sample and reagents must be between 15–25 °C (59–77 °F).

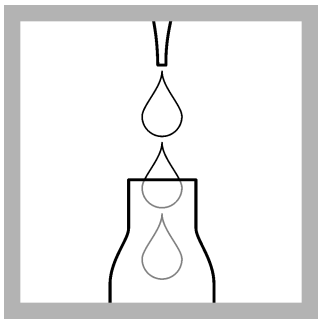
### Before starting

| |
|---|
| Strong acidic or strong basic samples must be brought to the correct pH **before testing**. |
| Different substances which contain phenol groups form different color shades in the color reaction. In special cases, in which individual specific phenols are to be determined, calibration curves have to be made using the phenol in question. |
| Turbidities are eliminated by filtration through a membrane filter (LCW904). |
| If the **reaction time (2 minutes)** after addition of the solution A (LCK345A) **is exceeded** then **low-bias results** will be obtained. |
| Review safety information and expiration date on the package. |
| Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment. |
| Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information. |

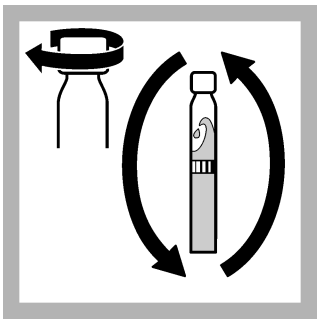
### Procedure



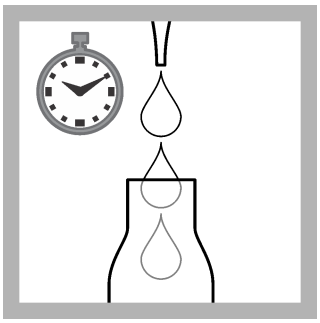
**1.** Carefully pipet **2.0 mL** of **sample**.



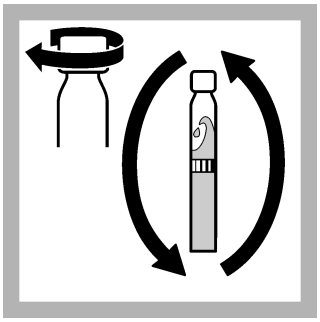
**2.** Carefully pipet **0.2 mL** of **solution A**.



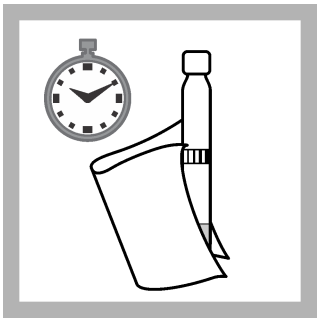
**3.** Close the cuvette and invert a few times.



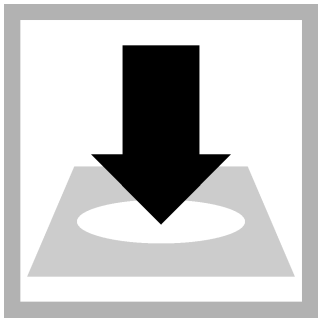
**4.** After **2 minutes** (stopwatch) pipet **0.2 mL solution B** into the **same** cuvette.



**5.** Close the cuvette and invert a few times.



**6.** After **2 minutes**, thoroughly clean the outside of the cuvette and evaluate.



**7.** Insert the cuvette into the cell holder.
DR1900: Go to LCK/TNTplus methods.
Select the test, push **READ**.

## Interferences

The ions listed in the table have been individually checked against the given concentrations and do not cause interference. The cumulative effects and the influence of other ions have not been determined.

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

| Interference level | Interfering substance |
|---|---|
| 2000 mg/L | $Na^+$, $K^+$, $SO_4^{2-}$ |
| 1000 mg/L | $Cl^-$ |
| 500 mg/L | $Mg^{2+}$ |
| 250 mg/L | $NO_3^-$ |
| 125 mg/L | $Ca^{2+}$ |
| 50 mg/L | $Cu^{2+}$, $Zn^{2+}$, $Co^{2+}$, $Cd^{2+}$, $NO_2^-$ |
| 25 mg/L | $Al^{3+}$, $Mn^{2+}$, $Cr^{6+}$, $Cr^{3+}$, $Pb^{2+}$ |
| 10 mg/L | $Sn^{2+}$, $NH_4^+$ |
| 5 mg/L | $Fe^{3+}$, $Ag^+$, $CN^-$ |
| 2.5 mg/L | $Fe^{2+}$ |
| 2 mg/L | $Cl_2$ |

## Summary of method

Phenols react with 4-nitroaniline to form a yellow color complex, which is then measured in a photometer.

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