LCK049 Orthophosphate

DOC312.53.94032

Method

5–90 mg/L PO_4, 1.6–30.0 mg/L PO_4-P or 3.7–70.0 mg/L P_2O_5 **LCK049**

Scope and application: For water, soil analysis, fertilizers, animal feed and process analysis.

Test preparation

Test storage

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

pH/Temperature

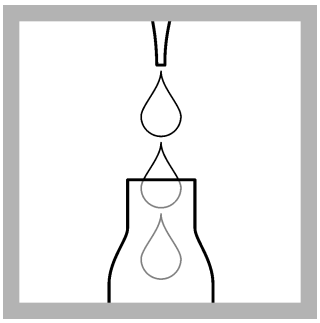
The pH of the water sample must be between pH 3–10.

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

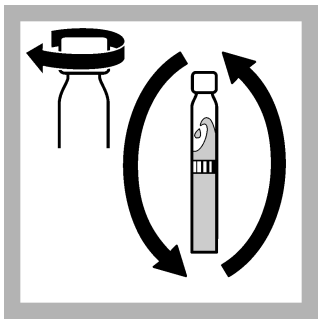
Before starting

Determination of orthophosphate: filtrate the sample before analysis.
Cuvette Tests LCK348, LCK349 or LCK350 must be used for the determination of total phosphorus.
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.

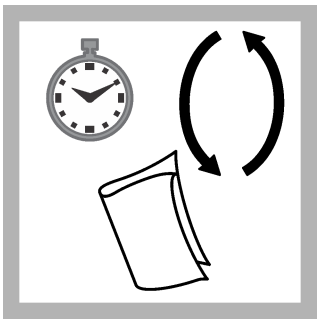
Procedure



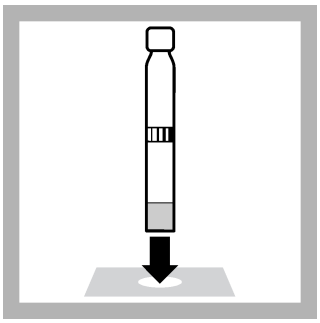
1. Carefully pipet **5.0 mL sample**.



2. Close the cuvette and invert a few times.



3. After **10 minutes**, invert a few more times, thoroughly clean the outside of the cuvette and evaluate.



4. 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
1000 mg/L	SO_4^{2-}, Cl^-
500 mg/L	K^+, Na^+, Ca^{2+}
50 mg/L	CO_3^{2-}, NO_3^-, Fe^{2+}, Fe^{3+}, Zn^{2+}, Cu^{2+}, Ni^{2+}, Cr^{3+}
5 mg/L	Pb^{2+}

Summary of method

Phosphate ions react with vanadate-molybdate reagent to form a yellow dye.

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