

**Phosphate HR C****327****5 - 40 mg/l P^c)****Vanadomolybdate****Instrument specific information**

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	λ	Measuring Range
MD 600, MD 610, MD 640, MultiDirect, XD 7000, XD 7500	ø 13 mm	430 nm	5 - 40 mg/l P ^c)

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Vacu-vial Phosphate Test Kit	1 Set	380460

Application List

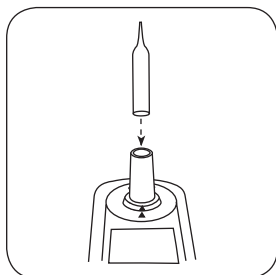
- Waste Water Treatment
- Boiler Water
- Drinking Water Treatment
- Raw Water Treatment

Notes

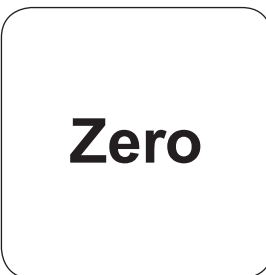
1. This method is adapted from a product by CHEMetrics. The measuring range and wavelength used for this photometer may differ from the data specified by CHEMetrics.
2. Before performing the test, you must read through the original instructions and safety data sheet that is delivered with the test kit (MSDS are also available on the homepage of www.chemetrics.com).
3. Vacu-vials® is a registered trademark of the company CHEMetrics, Inc. / Calverton, U.S.A.
4. Only ortho-phosphate ions react.

Implementation of the provision Phosphate HR, ortho with Vacu Vials® K-8503

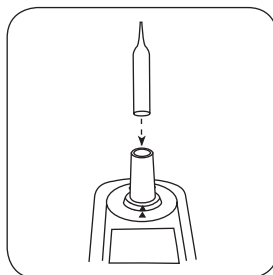
Select the method on the device



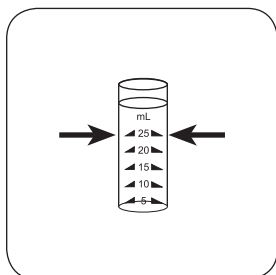
Place **Zero ampoule** in the sample chamber.



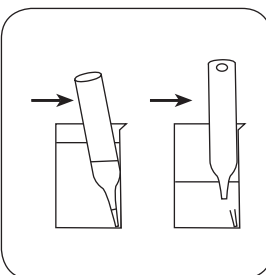
Press the **ZERO** button.



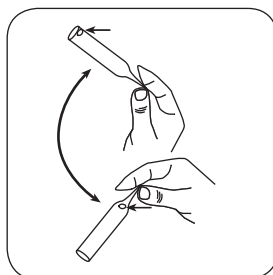
Remove zero ampoule from the sample chamber.



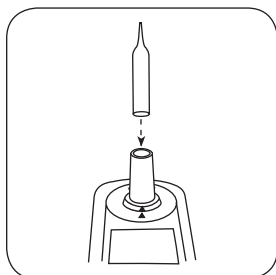
Fill the sample glass to the 25 ml mark with the sample.



Place a Vacu-vial® ampoule in the sampling vessel. Break off the ampoule tip by applying light pressure against the vessel wall. Wait for the ampoule to fill completely.



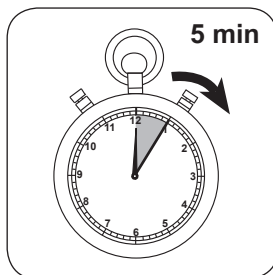
Invert the ampoule several times, allowing the bubble to move from one end to the other. Dry the outside.



Place the ampoule in the sample chamber.



Press the **TEST (XD: START)** button.



Wait for **5 minute(s) reaction time**.

Once the reaction period is finished, the measurement takes place automatically.

The result in mg/l ortho-Phosphate appears on the display.

Analyses

The following table identifies the output values can be converted into other citation forms.

Unit	Cite form	Scale Factor
mg/l	P	1
mg/l	PO_4^{3-}	3.066
mg/l	P_2O_5	2.3

Chemical Method

Vanadomolybdate

Appendix

Interferences

Persistent Interferences

- Sulphide, thiosulphate, and Thiocyanide produce lower test results.

Interference	from / [mg/l]
Al	200
AsO_4^{3-}	in all quantities
Cr	100
Cu	10
Fe	100
Ni	300
SiO_2	50
Si(OH)_4	10
S^{2-}	in all quantities
Zn	80

According to

Standard Method 4500-P E

^{a)} determination of free, combined and total | ^{b)} Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | ^{c)} MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | ^{d)} Spectroquant® is a Merck KGaA Trademark | ^{e)} alternative reagent, used instead of DPD No.1/No.3 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity | ^{f)} additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | ^{g)} Reagent recovers most insoluble iron oxides without digestion | ^{h)} additionally required for samples with hardness values above 300 mg/l CaCO_3 | ⁱ⁾ high range by dilution | ^{j)} including stirring rod, 10 cm

