

## Phosphate LR C

M328

0.02 - 1.6 mg/L P<sup>o</sup>)

Stannous Chloride

### 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	$\lambda$	Measuring Range
MD 600, MD 610, MD 640, MultiDirect	ø 13 mm	660 nm	0.02 - 1.6 mg/L P <sup>o</sup> )
XD 7000, XD 7500	ø 13 mm	660 nm	0.016 - 1.6 mg/L P <sup>o</sup> )

### Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Vacu-vial Phosphate Test Kit	1 Set	380480
ValidCheck Phosphate 0.3 mg/l PO <sub>4</sub> - 4	1 pc.	48241225
ValidCheck Phosphate 1 mg/l PO <sub>4</sub> - 4	1 pc.	48241425
ValidCheck DW Anions Multistandard Cl/F/NO <sub>3</sub> / PO <sub>4</sub> /SO <sub>4</sub>	1 pc.	48399312

The following accessories are required.

Accessories	Packaging Unit	Part Number
Adapter for round cuvettes 13 mm Ø	1 pc.	19802192
Adapter (13 mm) MultiDirect for Vacu-vial	1 pc.	192075

### Application List

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



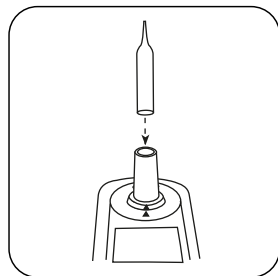
## Notes

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](http://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.

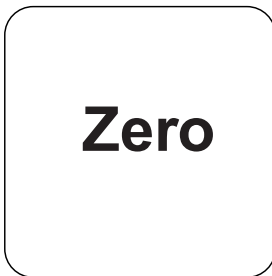


## Determination of Phosphate LR, ortho with Vacu Vials® K-8513

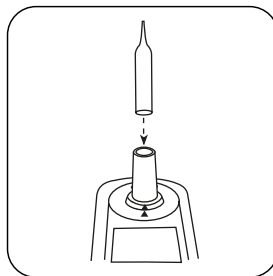
Select the method on the device.



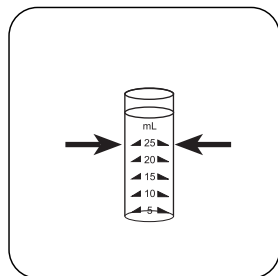
Place **Zero ampoule** in the sample chamber.



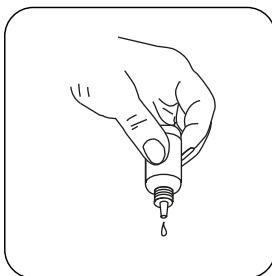
Press the **ZERO** button.



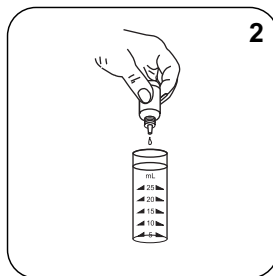
Remove zero ampoule from the sample chamber.



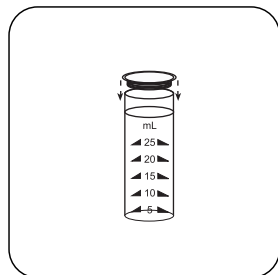
Fill the sample glass to the 25 mL mark with the sample.



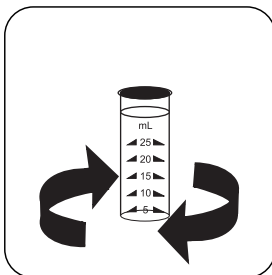
Hold cuvettes vertically and add equal drops by pressing slowly.



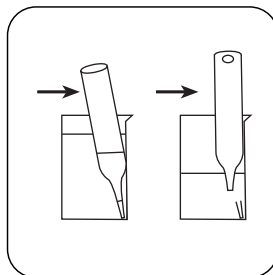
Add **2 drops A-8500-Activator Solution**.



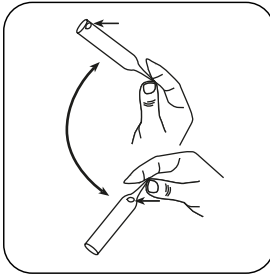
Close the sample glass with the lid.



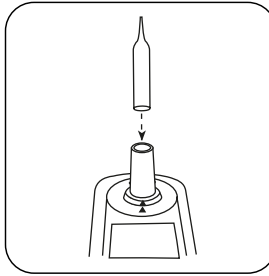
Invert several times to mix the contents.



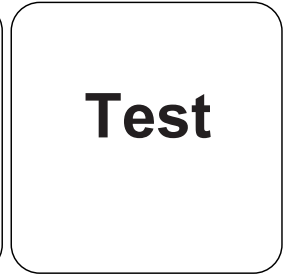
Place a Vacu-vial® ampoule in the sampling vessel. Break off the ampoule tip by applying light pressure against the vessel wall. Wait for the ampoule to fill completely.



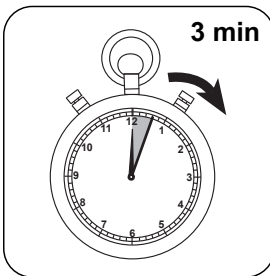
Invert the ampoule several times, allowing the bubble to move from one end to the other. Dry the outside.



Place the ampoule in the sample chamber.

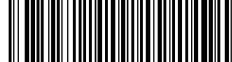


Press the **TEST** (XD: **START**) button.



Wait for **3 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 <sub>4</sub> <sup>3-</sup>	3.066
mg/l	P <sub>2</sub> O <sub>5</sub>	2.3

## Chemical Method

Stannous Chloride

## Appendix

### Calibration function for 3rd-party photometers


Conc. = a + b•Abs + c•Abs<sup>2</sup> + d•Abs<sup>3</sup> + e•Abs<sup>4</sup> + f•Abs<sup>5</sup>

	ø 13 mm
a	-2.51412 • 10 <sup>-2</sup>
b	1.93277 • 10 <sup>-0</sup>
c	
d	
e	
f	

## Interferences

### Persistent Interferences

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



<b>Interference</b>	<b>from / [mg/L]</b>
Al	200
AsO <sub>4</sub> <sup>3-</sup>	in all quantities
Cr	100
Cu	10
Fe	100
Ni	300
SiO <sub>2</sub>	50
Si(OH) <sub>4</sub>	10
S <sup>2-</sup>	in all quantities
Zn	80

**According to**

Standard Method 4500-P D

<sup>o</sup> MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75)