



# Water Testing

## ValidCheck Standards

**New!**



Put your entire water analysis process to the test:

With Lovibond® ValidCheck standards you can check the specified functionality of your photometer, the performance of the measurement method and your sample handling.

### The advantages of the ValidCheck primary standards:

- ready-to-use solution
- certified concentration
- adapted to the application
- for typical water & wastewater parameters
- as single & multiparameter standards



Your choice for:

- Calibration & verification
- Quality assurance
- Reliable measurement results

QUALITY made in  
GERMANY



# Our solutions for you

## ValidChecks

### Multi-talents with quality

The ValidChecks are used as a reference and calibration basis wherever water and wastewater samples are analysed with colorimetric or photometric methods. They are produced in a defined matrix under controlled conditions. Due to these precisely controlled manufacturing conditions, the standards have tightly defined tolerances. The exact concentrations and tolerances are specified for each batch in the certificate of analysis.

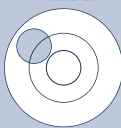
The basis of the precisely controlled production is a quality system in accordance with EN ISO 9001, whereby all the testing equipment used is checked by accredited laboratories.

Lovibond® uses only analytes that are traceable to NIST (National Institute of Standards and Technology, USA).

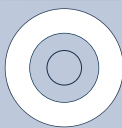
The ValidCheck standards can also be used in combination with photometers and reagents from other manufacturers.



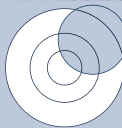
high precision  
high accuracy  
high accuracy  
low bias



high precision  
low accuracy  
low accuracy  
high bias



low precision  
high accuracy  
low accuracy  
low bias



low precision  
low accuracy  
low accuracy  
high bias

## Why ValidChecks?

**In every measurement** random influences affect the result of a measurement. These random deviations result in fluctuating results around a mean value.

These fluctuations can be described by the standard deviation.

Ideally the mean value is equal to the true value of a measurement.

However, there are also systematic deviations that lead to a shift of the mean value from the true value. Causes can be e.g. handling or a faulty calibration of the measuring device.

The ValidChecks give you the opportunity to check the quality of your measurements, to identify the causes of deviations and to bring about improvements.

Thus, the ValidCheck Standard offers you the possibility to verify the accuracy of your measurement and to increase the confidence in the results.

## ValidCheck Chlorine

Free and combined chlorine are of central importance for drinking and swimming pool water:

It is the most monitored hygiene parameter par excellence.

Due to its sensitivity, ValidCheck Chlorine is offered in a special ampoule format. The ampoule is broken open and the hypochlorite solution is added to the chlorine-free deionised water it contains. The standard solution with a certified concentration of 1.50 mg/L chlorine ( $\text{Cl}_2$ ) is then ready for use.



ValidCheck Chlorine  
1.5 mg/L  $\text{Cl}_2$  (98.5 +1.5 mL)

Code: 48105510

## Single parameter standards

Ready to use without dilution – with precisely adjusted concentrations, matched to the respective application:

Product name	Analyt	Analyt concentration	Packaging sizes	Order code
ValidCheck Chlorine	Cl <sub>2</sub>	1.5 mg/L Cl <sub>2</sub>	98.5 +1.5 mL	48105510
ValidCheck Fluoride	F <sup>-</sup>	0.3 mg/L	250 mL	48321225
ValidCheck Fluoride	F <sup>-</sup>	1 mg/L	250 mL	48321325
ValidCheck Sulphate	SO <sub>4</sub> <sup>2-</sup>	75 mg/L	250 mL	48311325
ValidCheck Sulphate	SO <sub>4</sub> <sup>2-</sup>	500 mg/L	250 mL	48311825
ValidCheck Copper	Cu	0.5 mg/L	250 mL	48141325
ValidCheck Copper	Cu	2 mg/L	250 mL	48141525
ValidCheck Manganese	Mn	0.3 mg/L	250 mL	48161425
ValidCheck Potassium	K	10 mg/L	250 mL	48191325
ValidCheck Nitrate	NO <sub>3</sub> <sup>-</sup>	10 mg/L NO <sub>3</sub> <sup>-</sup>	250 mL	48211325
ValidCheck Nitrate	NO <sub>3</sub> <sup>-</sup>	50 mg/L NO <sub>3</sub> <sup>-</sup>	250 mL	48211625
ValidCheck Nitrite	NO <sub>2</sub> <sup>-</sup> -N	0.1 mg/L	250 mL	48221225
ValidCheck Nitrite	NO <sub>2</sub> <sup>-</sup> -N	0.4 mg/L	250 mL	48221425
ValidCheck Nitrogen, total	N	50 mg/L	250 mL	48231725
ValidCheck Phosphate	PO <sub>4</sub> <sup>3-</sup> - P	0.3 mg/L	250 mL	48241225
ValidCheck Phosphate	PO <sub>4</sub> <sup>3-</sup> - P	1 mg/L	250 mL	48241425
ValidCheck COD	COD/TOC	40 mg/L COD	250 mL	48371225
ValidCheck COD	COD/TOC	120 mg/L COD	250 mL	48371425
ValidCheck COD	COD/TOC	500 mg/L COD	250 mL	48371625
ValidCheck COD	COD/TOC	5000 mg/L COD	250 mL	48371825

## Multi-parameter standards

For checking all important parameters of an application with one standard. With the spiking solution, a matrix effect can additionally be examined with real samples.

This allows the influence of sample components to be checked and identified.

Product name	Analyt	Analyt concentration of standards	Analyt concentration of stocking solution	Packaging sizes	Order code
ValidCheck DW Anione	Cl <sup>-</sup>	250 mg/L	1500 mg/L	100 mL Standard solution + 30 mL Standard solution	48399312
	NO <sub>3</sub> <sup>-</sup>	50 mg/L	250 mg/L		
	PO <sub>4</sub> <sup>3-</sup>	2 mg/L	10 mg/L		
	SO <sub>4</sub> <sup>2-</sup>	500 mg/L	3000 mg/L		
ValidCheck WW Influent	CSB	500 mg/L	2500 mg/L	100 mL Standard solution + 30 mL Standard solution	48399712
	NO <sub>3</sub> <sup>-</sup> -N	2 mg/L	10 mg/L		
	PO <sub>4</sub> <sup>3-</sup> -P	10 mg/L	50 mg/L		
	NH <sub>4</sub> -N	10 mg/L	150 mg/L		
ValidCheck WW Effluent	CSB	40 mg/L	200 mg/L	100 mL Standard solution + 30 mL Standard solution	48399612
	NO <sub>3</sub> <sup>-</sup> -N	10 mg/L	50 mg/L		
	P (total)	1 mg/L	5 mg/L		
	NH <sub>4</sub> -N	5 mg/L	40 mg/L		

# All from one source

## Photometer

### MD100/110/200

Portable all-round photometer with high-quality interference filters and long-term stable LEDs in the transparent measuring shaft as well as internal ring memory.



### MD600/610

With 6 long-term stable LEDs combined with interference filters, the mobile photometer offers laboratory features.

With infrared interface (MD600) or Bluetooth® (MD610).

### MultiDirect

Microprocessor-controlled photometer with pre-programmed methods, 6 precision interference filters and two-beam technology.

### XD7000/7500

VIS/UV-VIS spectrophotometer for the highest demands in water analysis with high-quality reference beam optics, automatic tester recognition via barcode system and automatic cuvette recognition.



## Proven Lovibond® products for analytical quality assurance

### Reference Standard Kits

To check the proper functioning of the photometer within its specifications.

- Long-term stable, coloured liquid standard in sealed glass containers
- Colourings simulate a defined concentration in the chlorine mode of the photometer (e.g. 0.2 mg/L and 10 mg/L chlorine)

Order code: 275650 (for MD100/110/200)



### Verification Standard Kit

To check the photometric accuracy and reproducibility of the results at the different wavelengths.

- Long-term stable liquid verification standards sealed in glass containers
- Measurement in milli-extinction units (mAbs)

Order code: 215670 (MD100/110/200)  
215640 (MD600/610/640)  
215680 (PM600/620/630)



## ValidCheck website



A landing page created especially for you, where you get the most important information with one click.

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