Photometry

History

More than three decades have passed since the appearance of the first PC 100 photometer system.

Since that time, Tintometer has become a world-famous name as the manufacturer of photometer systems sold under the brand name of AQUALYTIC®.

Our range of photometer systems extends from the **AL100** as hand-held model, the multi parameter photometer **AL200** as desktop model to the **AL800** spectrophotometer for laboratories.

The new **XD 7000** (VIS) and **XD 7500** (UV/VIS) spectrophotometers include all available AQUALYTIC® methods and give the professional user a wide range of options in all areas of water analysis. These devices also cover special administrations and demanding applications in research and development, as well as everyday routine lab work.

The **AL450** offers a wide variety of pre-programmed methods and is therefore suitable for the demands of modern water and drinking water analysis.

A modern, mobile photometer for rapid, reliable water testing is the **AL400**.

The latest development involves the photometer system **AL410** with Bluetooth® data transmission. The device works wirelessly with the free app AquaLX®.

Parameter	AL100	AL200	AL400 & AL410	AL450	AL800	XD 7000	XD 7500	also compatible to Hach® devices*
Alkalinity-M	■	■	■	■	■	■	■	
Alkalinity-P			■	■	■	■	■	
Aluminium	■		■	■	■	■	■	see page 64
Ammonia	■		■	■	■	■	■	see page 64
Arsenic					■	■	■	
Boron			■	■	■	■	■	
Bromine	■	■	■	■	■	■	■	see page 64
Cadmium					■	■	■	
Calcium Hardness	■	■	■	■		■	■	
Chloride	■		■	■	■	■	■	
Chlorine	■	■	■	■	■	■	■	see page 64
Chlorine Dioxide	■	■	■	■	■	■	■	see page 64
Chromium			■		■	■	■	
COD	■	■	■	■	■	■	■	see page 64
Copper	■	■	■	■	■	■	■	see page 64
Cyanide			■	■	■	■	■	
Cyanuric acid	■	■	■	■	■	■	■	
DEHA	■		■	■	■	■	■	see page 64
Fluoride	■		■	■	■	■	■	
Formaldehyde					■	■	■	
Hazen (Pt-Co-Units ; APHA)	■		■	■	■	■	■	
Hydrazine	■		■	■	■	■	■	see page 66
Hydrogen Peroxide			■	■	■	■	■	
Iodine			■	■	■	■	■	
Iron (Fe^{2+}, Fe^{3+}), soluble	■	■	■	■	■	■	■	see page 66
Langelier Water Balance System			■	■				
Lead					■	■	■	
Manganese	■		■	■	■	■	■	see page 66
Molybdate / Molybdenum	■		■	■	■	■	■	see page 66
Nickel			■	■	■	■	■	

AL100

AL200

AL400

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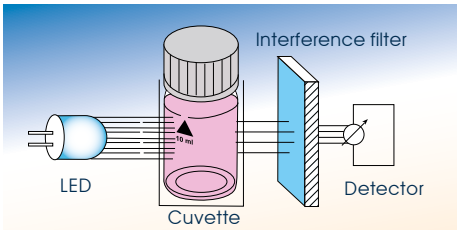
Parameter	AL100	AL200	AL400 & AL410	AL450	AL800	XD 7000	XD 7500	also compatible to Hach® devices*	
Nitrate			■	■	■	■	■		see page 66
Nitrite			■	■	■	■	■		see page 66
Oxygen, active			■	■		■	■		
Oxygen, dissolved	■		■	■		■	■		
Ozone	■		■	■	■	■	■		
pH-value	■	■	■	■	■	■	■		
Phenols					■	■	■		
PHMB (Biguanide)			■	■		■	■		
Phosphate	■		■	■	■	■	■		see page 68
Phosphonate			■	■	■	■	■		see page 68
Polyacrylates	■		■			■	■		
Potassium			■	■	■	■	■		
Silica	■		■	■	■	■	■		see page 68
Sodiumhypochlorite			■	■		■	■		
Spectral Absorption-Coefficient					■		■		
Sulphate	■		■	■	■	■	■		see page 68
Sulphide			■	■	■	■	■		
Sulphite			■	■	■	■	■		
Surfactants (anionic)					■	■	■		
Suspended Solids	■		■	■	■	■	■		
TOC					■	■	■		
Total Hardness	■		■	■	■	■	■		
Total Nitrogen			■	■	■	■	■		see page 66
Triazoles	■		■			■	■		
Turbidity (nephelometric)						■	■		
Turbidity (attenuated radiation method)			■	■	■	■	■		
Urea	■	■	■	■	■	■	■		
Zinc	■		■	■	■	■	■		

The principle of photometry

When specific reagents are added, the water sample takes on a degree of coloration that is proportional to the concentration of the parameter being measured. The photometer measures this coloration.

When a light beam passes through the coloured sample, energy with a specific wavelength is absorbed by the test substance. The photometer determines the coloration of the sample by measuring the transmission or absorption of light of this wavelength (in other words, monochromatic light). High-quality interference filters precisely limit the wavelength and are a prerequisite for obtaining high-precision measurement results. The use of such interference filters is usual standard in AQUALYTIC® filter photometers. The photometer then uses a microprocessor to calculate the required concentration and displays the result.



Mode of operation of the photometer

AL450

XD 7000/ XD 7500

AL450T-IR

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