

AQUA[®]
LYTIC



MiniCatalogue

Integrated Solutions
for all routine tests
in water analysis





Always working for you

We employ approximately 360 employees at our locations in Germany, UK, USA, Switzerland, Spain, Brazil, India, China and Malaysia. Whether logistics specialists, design engineers or technicians: Everyone of our employees is a professional in their field of work. Fast decision-making channels allow us to respond quickly and flexibly to our clients' wishes.

Teamwork, personal commitment and a strong sense of responsibility characterise the working environment in our company.

Leading the field in technology for decades

Originally incepted as the sales division of Hoelzle & Chelius GmbH in 1974, the products quickly established themselves on international markets and have been successful ever since. In 1985, AQUALYTIC® was successfully launched as an independent brand. Since 1996, AQUALYTIC® has been a part of the globally active Tintometer Group and specialises in the development of innovative equipment and reagents for water analysis. Today, the lasting success of our flexible family-operated business is primarily attributed to the commitment and creativity of our employees. Our technically advanced products are sold today in over 140 countries and above all guarantee reliable and precise analysis results.

For over 20 years, we have been certified in compliance with the quality management standard DIN ISO 9001. The high standards of quality associated with this certificate have been manifested in all parts of our company.

Experience is what makes the difference!

This applies to the field of water analysis just as it does to „real“ life!

Yours Maja Voss and Cay-Peter Voss



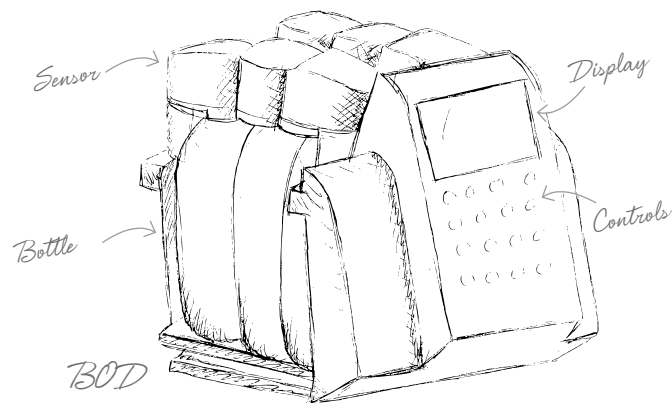
One step ahead

We never lose sight of the latest market requirements and trends. To stay competitive, you always have to be one step ahead of the competition.

From the initial idea right through to market maturity, we develop products in constant dialogue with our clients.

Decades of expertise and know-how in development and production allow us to combine chemistry with electronic measuring equipment to create the perfect products.

Our promise: We have the highest standards of development and production from one single source!



A clean business

Our original water analysis products are real all-rounders: they ensure the clear treatment and high quality of drinking water and waste water, surface, ground and untreated water as well as coolants and boiler water. And have been doing so for more than 130 years! We also achieve accurate measurement results even under difficult conditions thanks to our proven test equipment and reagents for modern water analysis.

Whether you are looking for MINIKITs for visual quick tests, highly sensitive electronic measuring equipment or industrial or waste water kits:

Our multi-functional equipment and reagents offer reliable solutions from one single source and for any task!

It is our aim to make analytical methods as environmentally compatible and safe as possible. In so doing, we want to achieve a favourably green profile. That is why we avoid using harmful chemicals such as boric acid in our formulations – although this additive is still rampant in the industry.

Rapid Tests

Titrimetric rapid tests

- Easy operation
- Exact reagent dosing
- High accuracy

Regular testing to observe the water quality

- Economical
- Accurate
- Reliable

The system for colorimetric water analysis

- More than 400 different test discs available
- Compensation for coloured and turbid samples
- Guaranteed constancy of the coloured glass standards

MINIKIT



CHECKIT® Comparator



Comparator 2000+



Colour Discs



These AQUALYTIC® test kits are specially developed for testing boiler, cooling and industrial process water. They make use of both colorimetric and titrimetric techniques. Each test kit contains all the necessary chemicals and reagents in liquid or powder form to conduct the tests.

Test Kits

- Fast quantitative determination
- For testing boiler, cooling and industrial process water
- Suitable for field and laboratory testing
- Cost-effective use due to keenly priced refill packs



Precise water analysis in high-quality design with interference filter technology



AL100 & AL110

It's small but has a huge impact in the industry. It is a handheld design. The single and multi-parameter photometers of the AL100 and AL110 series are best suited for mobile on-site analysis. Both instrument series can be used in almost all fields of water analytics. The difference: the AL110 instrument is equipped with low-energy **Bluetooth®**.

AL200

The Benchtop Classic from AQUALYTIC®. For years, this instrument has been providing excellent performance with the highest accuracy and quality. The series includes several 2in1, 3in1, 4in1, 5in1 and even 6in1 variants as well as application-specialists for boiler and cooling systems and is applicable in all fields of water analysis. This makes for a truly versatile portfolio.

Bluetooth® is a wireless technology subject to regional approval. The use of the AL110 with Bluetooth® is currently only permitted within Europe, the USA, and in Canada. The use of the AL110 will also be possible in other regions in the future. For current regions and further information, visit: www.lovibond.com/bluetooth
Regions in which the AL110 with Bluetooth® can currently be used (status: 01/2015): within Europe (according R&TTE Directive: 1999/5/EC), USA (according to FCC part 15, comprised in FCC ID QOQB113), Canada (comprised in IC 5123A-BGTBLE113)

AL100, AL110 & AL200 Photometers

This strong trio enables you to deal with any challenge in almost all fields of water analytics. Results are precise every time and can be reproduced in a relatively short period of time. These instruments are equipped with high-precision optics, long-term stable LEDs, high quality interference filters, resistance to shocks – not to mention they are maintenance-free and waterproof (as defined in IP 68, 1 hour at 0,1 m).

Data transfer via Bluetooth®



Precise results using high-quality interference filters



Photometer AL450

The AL450 is a modern microprocessor-controlled photometer with reference beam optics, an ergonomic keypad and a large graphic display. The dual-beam technology prevents drift and fosters extraordinary long-term stability.

Enjoy wear-free optics due to a lack of moving parts. The MultiDirect operates with 6 interference filters of different wavelengths and holds a large number of pre-programmed methods based on the proven range of Aqualytic® tablet reagents, liquid reagents, vial tests, or VARIO powder packs. In addition, performed tests and measuring methods can be saved for future use.



Update via internet
Data transfer via RS 232 interface



AL400 & AL410 Photometer

With more than 120 pre-programmed methods and up to 1,000 storable data sets, these are just a few benchmarks the AL 400 & AL 410 photometer series utilises. All important parameters from A(luminium) to Z(inc) are covered by these instruments. Equipped with **Bluetooth®**, the AL 410 is an extended variation of the AL 400. All instruments use powder reagents, tablet reagents, liquid reagents or tube tests (according to the method). Six long-term stable LEDs in conjunction with interference filters ensure the highest accuracy – making for a fast and reliable analysis of a sample at any time.

Reference and Verification Standard Kits

The reference and verification standard kits are designed to assure the user of the accuracy and the reliability of the results.

Bluetooth® is a wireless technology subject to regional approval. The use of the AL410 with Bluetooth® is currently only permitted within Europe, the USA, and in Canada. The use of the AL410 will also be possible in other regions in the future. For current regions and further information, visit: www.lovibond.com/bluetooth
Regions in which the AL410 with Bluetooth® can currently be used (Status: 01/2015): within Europe (according to R&TTE Directive 1999/5/EC), USA (according to FCC part 15, comprised in FCC ID Q008T113); Canada (comprised in IC 5123A-BG1B1E113)

VIS / UV-VIS Spectrophotometer XD 7000 / 7500

The outstanding price/performance ratio of the XD 7000 and XD 7500 is maintained with the diverse range of Lovibond® reagents. So the user can be sure when purchasing the device to also have a low-priced solution for consumables in future.

The barcoded cuvette tests allow the user an immediate access to the respective method: The insertion of the 16mm cuvettes into the cell compartment is sufficient. Likewise for any other of the more than 150 parameters, external barcode reader provides direct method selection. By adopting these barcodes into customer documents, such as work instructions, the correct operation is significantly streamlined.

- Economic system solution consisting of premium spectrophotometer and barcoded reagents
- Direct method selection via barcode recognition
- High Speed UV/VIS Spectral Scan
- Versatile application via 150 pre-programmed, ready to use methods
- 8-language methodology handbook, 24-language device software, 27-language user manual
- Comprehensive support of analytical quality assurance

ValidCheck Standardsolutions

Quality management of analytical methods is a fundamental prerequisite for reliable water analysis.

With the new ValidCheck standards ready-to-use solutions are available.

The precisely adjusted concentrations are adapted to each particular application case. The dilution is omitted.

Waste Water Set-Up

The Aqualytic® waste water testing setups are complete packages composed of a thermal reactor, a photometer, required reagents and a vial stand. The reagents supplied are for determining the most relevant waste water parameters such as COD, Ammonium, Nitrate, Nitrite, Total Nitrogen, Phosphate and Total Phosphorus.



For several decades, AQUALYTIC® in Dortmund has been manufacturing reagents for water testing and marketing these reagents around the world. Different forms of reagents are required for different fields of application. AQUALYTIC® is the only reagent producer in the world that offers a complete range of reagent forms.

Tablet Reagents

- Secured storage in individually-packed aluminium strips
- Rapid dosage, even under in-field conditions
- High accuracy and simple handling
- Guaranteed shelf life of 5-10 years

Powder Reagents

- Fast and easy use
- Extended shelf life
- High stability
- Their chemical properties make them compatible to Hach® instruments.*

Tube Tests

- barcode test vial
- 16 mm diameter tubes
- Precisely predosed reagent
- Time-saving methods
- Enhanced work safety
- Can be used with other standard photometers (COD)

Liquid Reagents

- Rapid solubility
- Easy dosage
- 1 year guaranteed shelf life

Tablet Reagents



Powder Reagents



Tube Tests



Liquid Reagents

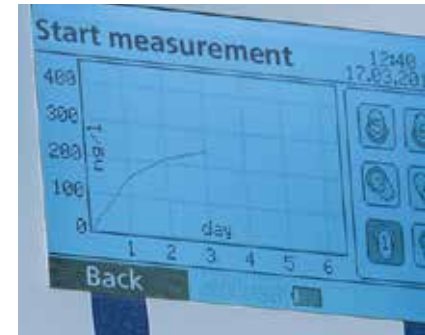


* HACH® is a registered trademark of Hach Company, Loveland, Colorado. The use of the HACH® trademark does not imply any affiliation with or approval by Hach Company regarding the formulation, testing or compatibility of these products for use in HACH® brand spectrophotometers or other devices or systems.

BOD Measurement

The sensor system BD 600 is a 6 sample system that allows precise measurements of BOD based on the manometric principle. Manometric respirometers relate oxygen uptake to the change in pressure caused by oxygen consumption while maintaining a constant volume. Thanks to the modern integral pressure sensors, it is no longer necessary to use mercury for pressure measurements. Due to the modern integral pressure sensors, it is not necessary to use mercury for the measurements.

- User friendly
- Large brilliant graphic display
- Graphical representation of measured values
- Data transfer via USB and SD card
- Mercury-free, environmentally-friendly
- Remote control
- User-selectable time span from 1 to 28 days
- Free individual programming of each of the six samples
- Inductive stirring system, 100 - 240 V / 50 - 60 Hz



COD Setups COD VARIO

The AQUALYTIC® COD VARIO setups allow highly sensitive and precise water testing with minimum effort. They measure the ST-COD concentration by photometric detection.

The COD setups comprise the photometer, 25 tube tests for each of the two lower measuring ranges, a reactor for sample digestion and a vial stand.

Thermoreactor AL125

For tube test digestion.

Chemical digestion of samples is required for the photometric determination of COD, TOC, total chromium, total nitrogen and total phosphate.

COD Setup AL100



COD Setup AL200



Waste Water Setup



Thermoreactor



Thermostatically controlled incubators

The TC series of thermostatically controlled cabinets is used for continuous temperature control over a range of 2 °C to 40 °C. This makes them ideal for the determination of BOD at 20 °C.

Highly efficient components provide maximum energy efficiency.

There are 4 models available with standard doors from 135 to 445 litres net capacity, and 2 models with glass doors with 140 and 255 litres net capacity.

- Temperature range 2 °C to 40 °C, adjustable in steps of 0.1 °C
- Low power consumption
- Illuminated LED display
- Power sockets inside the incubator
- 6 models in 4 sizes
- Standard door or glass door

Spark-free cabinets

The German guidelines „Working Safely in Laboratories BG-I 850-0“ stipulates that interior spaces must be explosion-protected where hazardous, explosive atmospheres can develop (for example, due to the presence of flammable liquids).

The AQUALYTIC® cabinets in the EX range meet the requirements of these guidelines and are fully equipped for daily laboratory use.

- Spark-free according to BG-I 850-0
- Dynamic cooling system
- 1 °C to 15 °C, continuously adjustable
- Digital temperature display
- High energy efficiency
- Robust materials
- Lockable



Floc Tester

Floc testers are designed for a range of applications – such as testing the efficiency of flocculation or precipitation agents.

State-of-the-art technology ensures maximum operating convenience and makes the unit maintenance-free. The main features of the laboratory floc testers are the continuously variable stirring speed, the digital display of stirring rpm, the timer function, the illuminated back panel, and the height adjustment option for the stirring blades during operation.



- Continuously variable stirring speed
- Digital display
- Height adjustment of the stirring blades during operation
- Timer feature
- For laboratory and field use



- Measurement with infrared light at an angle of 90°
- Measurement of coloured liquids
- Automatic overall range adjustment with Standard-Set T-Cal
- Autoranging and high accuracy
- Laboratory and mobile use
- Storage for up to 1000 data-sets
- Real-time clock
- Waterproof sample chamber and housing
- Meets EN ISO 7027

AL450T-IR with infrared light source

The automatic measurement range detection facility (Autorange) enables direct turbidity measurement from 0.01 to 1100 NTU with an accuracy of $\pm 2\%$ up to 500 NTU and $\pm 5\%$ thereafter.



AL255T-IR with USB-Interface & AL250T-IR both with infrared light source

The compact AQUALYTIC® infrared turbidity measuring instruments AL255T-IR & AL250T-IR for fast and accurate on-site analysis. It is measured as provided in EN ISO 7027, the scattered light at an angle of 90°. Turbidity measurement range from 0.01 to 1100 NTU with an accuracy of $\pm 2,5\%$ of reading up to 500 NTU and $\pm 5\%$ thereafter.

A direct transfer of the measurement results to a PC is through the USB interface AL255T-IR easy to set up.

- AL255T-IR: USB-Interface
- Measurement with infrared light at an angle of 90°
- Measurement of coloured liquids
- Easy handling
- 600 tests without battery change



AL400T-WL with white light source

The AL 400T-WL allows easy turbidity measurement in either the field or laboratory. Using a "white light" source and 90° detection, the AL 400T-WL meets the specifications for EPA turbidity measurement (EPA Standard 180.1).

Integrated diagnostics confirm correct operation and accuracy. The measurement ranges from 0,01 - 1100 NTU with an accuracy of $\pm 2\%$ up to 500 NTU and $\pm 3\%$ thereafter.

- Measurement with white light at an angle of 90°
- Simple operation
- Easy calibration
- Auto-Ranging
- Meets USEPA 180.1

The new SD 400 Oxi L measures the dissolved oxygen content by the optical principle. Benefits are the luminescent technology, less maintenance and calibration as well as the fast response time.

- Dissolved Oxygen (O₂)
- O₂ Concentration in mg/l
- O₂ Saturation in %
- Temperature (°C/°F)

The SD 300 pH, SD 310 Oxi and SD 320 Con are high quality rugged and waterproof hand-held meters for on-site analysis with PC interface for data transmission. Beside the automatic temperature compensation the meters have data logger-, alarm- and GLP- features (good laboratory practice).

- pH
- Redox
- Temperature (°C/°F)

- Dissolved Oxygen (O₂)
- O₂ Concentration in mg/l
- O₂ Saturation in %
- Temperature (°C/°F)

- Conductivity
- TDS
- Salinity
- Temperature (°C/°F)

SD 400 Oxi L



SD 300 pH



SD 310 Oxi



SD 320 Con



The AL15 combines the features of several hand-held meters. It is designed for multi purpose operation.

- pH value
- Redox
- Oxygen (dissolved)
- Conductivity
- TDS
- Temperature (°C/°F)

The AL10 series consists of multiple battery operated hand-held devices. They are designed for use under difficult conditions. High measuring accuracy, light weight housing protective casing and a built-in electrode holder make this series very popular.

- pH
- Conductivity
- Salinity

The Aqualytic® SD series comprises a range of compact, easy-to-use, hand-held instruments for the accurate measurement of pH, ORP, Con, TDS or Salt. With robust housing and fully waterproof (IP67) casing, these testers are the ideal solution for in-situ testing in environmental, industrial or pool & spa applications. The instruments are equipped with replaceable electrodes to ensure long-life functionality in the field.

- pH
- ORP/Redox
- Conductivity
- TDS
- Salt

AL15



AL10 series



SD 50 pH • SD 60 ORP • SD 70 Con • SD 80 TDS • SD 90 Salt



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| Parameter | Rapid Tests | | | | Photometer Systems | | | | | | |
|--------------------------------------------------------|-------------|--------------------|------------------|-----------|--------------------|-------|-------|---------------|-------|-------|-------------------|
| | MINIKIT | CHECKIT®Comparator | Comparator 2000+ | Test Kits | AL100 | AL110 | AL200 | AL400 & AL410 | AL450 | AL800 | XD 7000 & XD 7500 |
| Acid Capacity K _{54.3} | | | | | | | ■ | ■ | ■ | ■ | ■ |
| Acid Concentration | ■ | | | | | | | | | | |
| Alkalinity-M | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Alkalinity-P | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| Aluminium | | ■ | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ |
| Amine | | | ■ | | | | | | | | |
| Ammonia | | ■ | ■ | | ■ | | | ■ | ■ | ■ | ■ |
| Ammonia, free** | | | ■ | | | ■ | | ■ | ■ | ■ | ■ |
| Arsenic | *) | | | | | | | | ■ | ■ | |
| Boron | | | ■ | | | | | ■ | ■ | ■ | ■ |
| Bromine | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Cadmium | | | ■ | | | | | | | ■ | ■ |
| Calcium Hardness | ■ | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Carbonat Hardness | | | | ■ | | | | | | | |
| Carbonic Acid | | | | ■ | | | | | | | |
| Chloride | ■ | | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Chlorine | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Chlorine Dioxide | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Chromium | | | ■ | | | | | ■ | | ■ | ■ |
| COD | | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Copper | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Cyanide | | | ■ | | | | | ■ | ■ | ■ | ■ |
| Cyanuric acid | ■ | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| DEHA | | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Fluoride | | ■ | ■ | | ■ | | | ■ | ■ | ■ | ■ |
| Formaldehyde | | | | | | | | | | ■ | ■ |
| Hazen <i>(Pt-Co-Units; APHA)</i> | | | ■ | | ■ | | | ■ | ■ | ■ | ■ |
| Hydrazine | | | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ |
| Hydrogen Peroxide | | | ■ | | | ■ | | ■ | ■ | ■ | ■ |
| Hydroxide Concentration | ■ | | | | | | | | | | |
| Iodine | | | ■ | | | | | ■ | ■ | ■ | ■ |
| Iron (Fe ²⁺ , Fe ³⁺), dissolved | | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Langelier Water Balance System | | | | | | | | ■ | ■ | ■ | |
| Lead | | | ■ | | | | | | | ■ | ■ |
| Manganese | | ■ | ■ | | ■ | | | ■ | ■ | ■ | ■ |
| Molybdate / Molybdenum | | ■ | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ |
| Nickel | | | ■ | | | | | ■ | ■ | ■ | ■ |
| Nitrate | | ■ | ■ | | | | | ■ | ■ | ■ | ■ |
| Nitrite | ■ | ■ | ■ | | | | | ■ | ■ | ■ | ■ |

** not available in all countries

| Parameter | Rapid Tests | | | | Photometer Systems | | | | | | | |
|----------------------------------------------|-------------|--------------------|------------------|-----------|--------------------|-------|-------|---------------|-------|-------|-------------------|----------------|
| | MINIKIT | CHECKIT®Comparator | Comparator 2000+ | Test Kits | AL100 | AL110 | AL200 | AL400 & AL410 | AL450 | AL800 | XD 7000 & XD 7500 | |
| Nitrogen, total | | | | | | | | | ■ | ■ | ■ | ■ |
| Oxygen, activ | | | | | | | | | ■ | ■ | ■ | ■ |
| Oxygen, dissolved | | | ■ | | ■ | ■ | | | ■ | ■ | | ■ |
| Ozone | | ■ | ■ | | ■ | ■ | | | ■ | ■ | ■ | ■ |
| Permanganate | | | ■ | | | | | | | | | |
| pH value | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Phenols | | | ■ | | | | | | | ■ | ■ | |
| PHMB (Biguanides) | | | | | | | | | ■ | ■ | | ■ |
| Phosphate | ■ | ■ | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ |
| Phosphonate | | | | | | | | | ■ | ■ | ■ | ■ |
| Polyacrylates | | | | | ■ | ■ | | | ■ | | | ■ |
| Potassium | | | | | | | | | ■ | ■ | ■ | ■ |
| QAC | ■ | | ■ | | | | | | | | | |
| Residual Hardness | | | | ■ | | | | | | | | |
| Silica | | ■ | ■ | | ■ | ■ | | | ■ | ■ | ■ | ■ |
| Sodium Hypochlorite | ■ | ■ | | | | | | | ■ | ■ | | ■ |
| Spectral Absorption Coefficient (SAC) 254 nm | | | | | | | | | | | | ■ only XD 7500 |
| Spectral Absorption Coefficient (SAC) 436 nm | | | | | | | | | | | ■ | ■ |
| Spectral Absorption Coefficient (SAC) 525 nm | | | | | | | | | | | ■ | ■ |
| Spectral Absorption Coefficient (SAC) 620 nm | | | | | | | | | | | ■ | ■ |
| Stabilizer (Cyanuric acid) | ■ | | | | ■ | | | ■ | ■ | ■ | ■ | ■ |
| Sugar | | | ■ | | | | | | | | | |
| Sulphate | ■ | | | | ■ | ■ | | | ■ | ■ | ■ | ■ |
| Sulphide (Hydrogen Sulfide) | | | ■ | | | | | | ■ | ■ | ■ | ■ |
| Sulphite | ■ | ■ | ■ | ■ | | | | | ■ | ■ | ■ | ■ |
| Surfactants (anionic) | | | ■ | | | | | | ■ | ■ | ■ | ■ |
| Surfactants (cationic) | | | | | | | | | ■ | ■ | ■ | ■ |
| Surfactants (non-ionic) | | | | | | | | | ■ | ■ | ■ | ■ |
| Suspended Solids | | | | | ■ | | | | ■ | ■ | ■ | ■ |
| Tannin | ■ | | ■ | | | | | | | | | |
| Thiocyanate | | | ■ | | | | | | | | | |
| Tin | | | ■ | | | | | | | | | |
| TOC | | | | | | | | | ■ | ■ | ■ | ■ |
| Total Hardness | ■ | | ■ | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| Triazoles | | | | | ■ | ■ | | | ■ | | | ■ |
| Turbidity | | | | | | | | | ■ | ■ | ■ | ■ |
| Urea | | | | | ■ | | ■ | | ■ | ■ | ■ | ■ |
| Vanadium | | | ■ | | | | | | | | | |
| Zinc | | ■ | ■ | | ■ | ■ | | | ■ | ■ | ■ | ■ |

*) for more information and further tests see: www.aqualytic.de