

Pool Analytics



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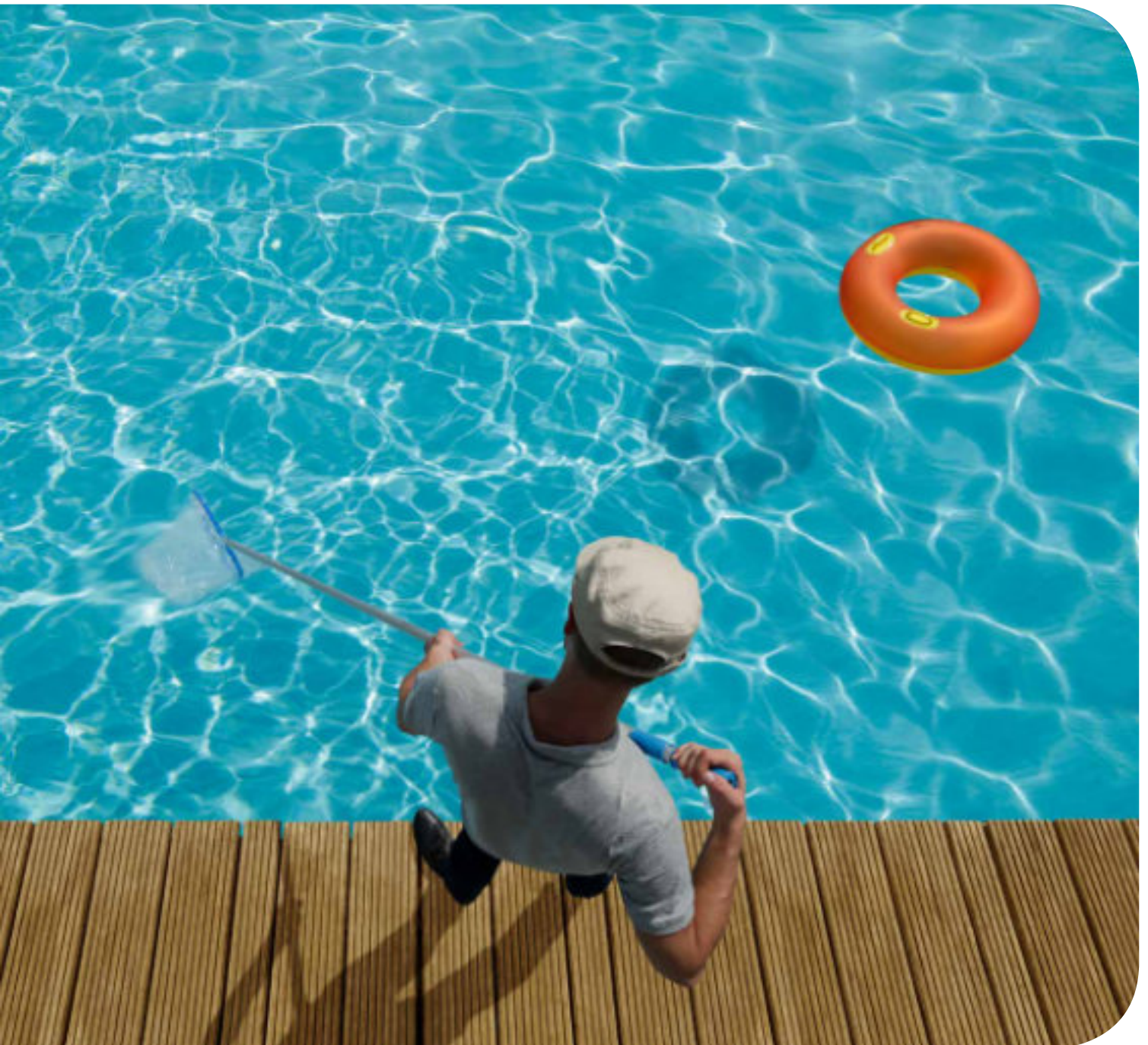
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Pooltester





Water Treatment

pH value

The pH value of pool & spa water should generally be between the slightly acidic value of 6.5 and the slightly basic value of 7.6. Due to the use of various water treatment chemicals as well as ambient environmental effects, pool owners have to determine the pH of the water and correct the value as necessary.

Disinfection

Nowadays, pool owners can choose from a range of modern water treatment agents that are often used in combination.

These water treatment chemicals are only effective within a limited pH range. Therefore in addition to checking the concentration of the water treatment chemicals, the owner / operator should also monitor the pH value of pool water and adjust it if necessary.



Rapid Tests

Three-Chamber Tester

The Three-Chamber Tester is a competitively priced unit for the determination of disinfectants and the pH value. Interferences from the colour of the pool water are eliminated by the third, middle chamber.

Pooltester

The Pooltester is designed for the simultaneous determination of the most popular water treatment agents and the pH value.

Multipooltester

Additionally the Multipooltester allows the determination of cyanuric acid, total alkalinity and calcium hardness.



Compact Pool Test Kits

Item	Code
Chlorine-Bromine-pH LR, in mini case¹⁾ Bromine 0.2-6.8 mg/l Chlorine 0.1-3.0 mg/l / pH value 6.8 – 8.2	15 77 00
Chlorine-Bromine-pH LR, in blister²⁾ Bromine 0.2-6.8 mg/l Chlorine 0.1-3.0 mg/l / pH value 6.8-8.2	15 75 20
Chlorine-pH HR, in blister²⁾ Chlorine 0.5-6.0 mg/l / pH value 6.8-8.2	15 80 10
Active Oxygen-pH, in blister²⁾ Active Oxygen 0 -10 mg/l / pH value 6.8-8.2	15 76 10
Biguanide (PHMB)-pH, in blister²⁾ Biguanide (PHMB) 10-100 mg/l pH-Wert 6.8-8.2	15 61 50
4 in 1, in plastic case Chlorine LR 0.1-3.0 mg/l / pH value 6.8-8.2 Cyanuric acid 20-200 mg/l Alkalinity-m 50-300 mg/l	15 17 00
Phosphate Test Kit³⁾ 0-1000 ppb (0-1mg/l PO ₄)	15 78 00

¹⁾ Packagingunit 10 pcs.

²⁾ Packagingunit 6 pcs.

³⁾ Packagingunit 24 pcs.



Pooltester

Item	Code
Chlorine-pH LR⁴⁾ Chlorine 0.1-3.0 mg/l / pH value 6.8-8.2	15 16 00
Chlorine-pH HR⁴⁾ Chlorine 0.5-6.0 mg/l / pH value 6.8-8.2	15 16 01
Bromine-pH⁴⁾ Bromine 1.0-8.0 mg/l / pH value 6.8-8.2	15 16 04
Active Oxygen-pH⁴⁾ O ₂ 0-10 mg/l / pH value 6.8-8.2	15 16 05
Copper LR/HR-pH⁴⁾ Copper LR 0.1-1.0 mg/l & HR 0.5-5.0 mg/l pH value 6.8-8.2	15 51 90
Active Oxygen-Copper-pH⁴⁾ O ₂ 0-10 mg/l / Copper 0.1-1.0 mg/l pH value 6.8-8.2	15 52 35
Biguanide (PHMB)-Hydrogen Peroxide (H₂O₂)-pH⁴⁾ PHMB 10-100 mg/l / H ₂ O ₂ 5-50 mg/l pH value 6.8-8.2	15 61 00

⁴⁾ Packagingunit 6 pc



Multi Pooltester

Item	Code
5 in 1 Multi-Pooltester⁵⁾ Chlorine 0.1 – 3.0 mg/l / pH value 6.8 – 8.2 Cyanuric acid 20 - 200 mg/l Alkalinity-m 20 - 800 mg/l Calcium hardness 20 – 800 mg/l	15 19 00

⁵⁾ Packagingunit 5 pcs.

Green Chemistry

Delivery content

- Three-Chamber-Tester in a bubble pack or mini case
- Tablet reagents
- Instruction manual

Delivery content

















- Pooltester in a sturdy plastic box
- Tablet reagents for 20 tests
- Instruction manual

Delivery content

- 5 in 1 Multi Pooltester
- Pooltester Chlorine - pH LR in a robust plastic case
- Cyanuric acid tube
- Dilution / shakertube, 100 ml
- Dilution / shakertube, 30 ml
- Cleaning brush
- Stirring rod
- 20 tablet reagent each DPD No. 1 Rapid, DPD No. 3 Rapid, Phenol Red Rapid
- 10 tablet reagent each CyA-Test, Alk-Test, CAL-Test
- Instruction manual
- Statements (phrases-Hand P)

Ref II Packs

Reagents

Item	Code	Item	Quantity	Code	Item	Quantity	Code
Chlorine/ Bromine/ pH* 	51 58 84	Acidifying PT	100 pc.	51 54 90	DPDNo.3/RAPID  	100 pc.	51 12 90BT
30 DPDNo.1 / RAPID-tablets and 30 PHENOLRED/ RAPID-tablets			250 pc.	51 54 91		250 pc.	51 12 91BT
						500 pc.	51 12 92BT
Active Oxygen - pH* 	51 59 34	ALK LR	100 pc.	51 60 40BT	DPDNo.4/RAPID  	100 pc.	51 15 70BT
30 DPDNo.4 / RAPID-tablets and 30 PHENOLRED/ RAPID-tablets		ALK TEST	100 pc.	51 55 70BT		250 pc.	51 15 71BT
						500 pc.	51 15 72BT
Active Oxygen - Copper- pH*	51 58 65	Bromthymolblue RAPID	100 St.	51 16 30BT	Hydrogenperoxide HR	100 pc.	51 59 40BT
20 DPDNo.4 / RAPID-tablets			250 St.	51 16 31BT		250 pc.	51 59 41BT
20 COPPERNo.1-tablets and 20 PHENOLRED/ RAPID-tablets		CAL TEST	100 pc.	51 55 80BT	PHENOLRED/RAPID(pH) 	100 pc.	51 17 90BT
PHMB/H₂O₂ - pH	51 58 70	Copper No.1  	100 pc.	51 35 50BT		250 pc.	51 17 91BT
20 PHMB-, 20 H ₂ O ₂ -, 20 ACIDIFYING PT-and 20 PHENOLRED/ RAPID-tablets			250 pc.	51 35 51BT		500 pc.	51 17 92BT
PHMB- pH*	51 61 55	Cyanuric Acid CyA-TEST 	100 pc.	51 13 70BT	PHMB(Biguanide)	100 pc.	51 58 90BT
30 PHMB-tablets and 30 PHENOLRED/ RAPID-tablets			250 pc.	51 13 71BT		250 pc.	51 58 91BT
Copper - pH* 	51 57 78	DPDNo.1/RAPID  	100 pc.	51 13 10BT	 also suitable for seawater  Green Chemistry		
30 COPPERNo.1-tablets and 30 PHENOLRED/ RAPID-tablets			250 pc.	51 13 11BT			
			500 pc.	51 13 12BT			
Combi pack for Three-Chamber-Tester 4 in 1	51 59 35						
20 DPDNo.1/ RAPID-, 20 PHENOLRED/ RAPID-, 20 CyA-TEST- 20 ALK LR-Tabletten							
Combi pack for Multipooltester 5 in 1	51 59 80						
20 DPDNo.1/ RAPID-, 20 DPDNo.3/ RAPID-, 20 PHENOLRED/ RAPID-, 20 CyA-TEST- 10 ALK TEST- 10 CAL-TEST-tablets							

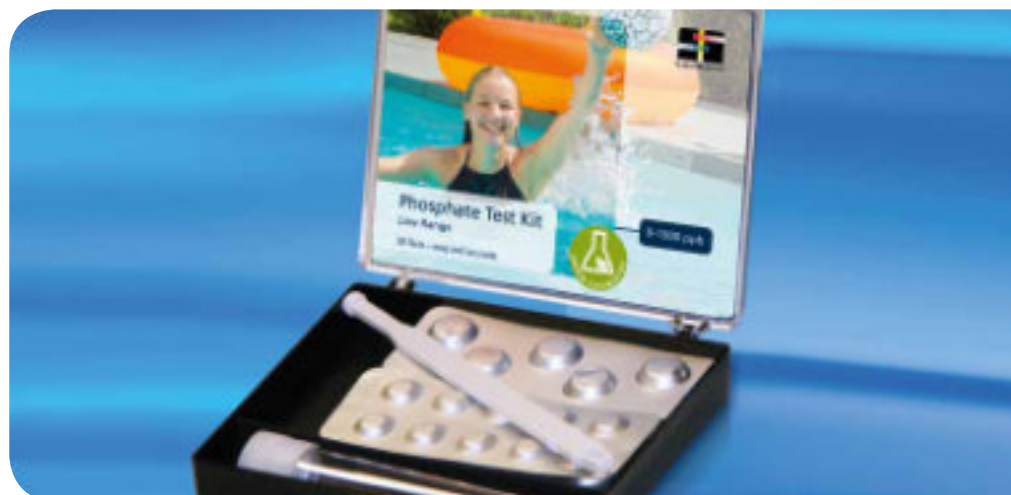
* Each pack contains 12 units



Pool Analysis

Lovibond®-RAPID tablets DPD and PHENOLRED will dissolve quickly, have a guaranteed 10 year shelf-life and are provided in green-printed foil packaging.

Material Safety Data Sheets:
www.lovibond.com





Scuba II

Electronic Pooltester



Modern,
ergonomic
design

Watertight housing*

Large display

User-friendly
Handling

* as defined in IP 68,
1 hour at 0.1 meter

Scuba II

Every pool owner should check the most important parameters in the pool at regular intervals. This is the only way to ensure that water quality is maintained at the right level and to arrange dosing in an optimum manner.

The Scuba II enables the operator to check the pool water quickly and accurately. The integrated sample chamber is filled by immersing it in the water. A tablet reagent is added and generates a characteristic colour which can be measured using the photometric principle. The result is then displayed on the screen.

Six parameters, **free chlorine**, **total chlorine**, **pH**, **alkalinity**, **cyanuric acid** and **bromine** are measured within a few minutes. Water analysis becomes a pleasure rather than a chore and more time is left for enjoying the pleasure of the pool.

If the Scuba II falls into the water it will simply float and, of course, it is watertight.

Why not try this compact test equipment – after all, the knowledge that you are safe in a thoroughly hygienic pool is worth it.

Technical Data

Optics	temperature-compensated LED (λ = 530 nm) and photo-sensor
Power supply	2 batteries (AAA), capacity approx. 90 tests
Auto-Of	automatic switch-off approx. 5 minutes after last key press
Display	LCD-display
Dimensions (L x W x H)	145 x 70 x 45 mm
Weight	approx. 165 g (incl. batteries)
Operating conditions	temperature: 5 – 40 °C relative humidity: 30 – 90 %, non-condensing
Approval	CE

Refill pack

Article	Code
Ref II pack for Scuba II	52 56 00
20 DPD No.1 Photometer tablets	
10 DPD No.3 Photometer tablets	
10 PHENOLRED Photometer tablets	
10 CyA-Test tablets	
10 Alka-M-Photometer tablets	
Packaging unit = 12 packs	

 Green Chemistry

Determination

Range

Resolution

Accuracy

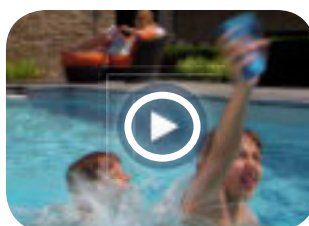
Chlorine, free	0.1 - 6 mg/l Cl ₂	0.1 mg/l	0 - 1 mg/l ± 0.1 mg/l ; 1 - 2 mg/l ± 0.2 mg/l 2 - 3 mg/l ± 0.4 mg/l ; 3 - 6 mg/l ± 0.5 mg/l
Chlorine, total	0.1 - 6 mg/l Cl ₂	0.1 mg/l	0 - 1 mg/l ± 0.1 mg/l ; 1 - 2 mg/l ± 0.2 mg/l 2 - 3 mg/l ± 0.4 mg/l ; 3 - 6 mg/l ± 0.5 mg/l
pH-value	6.5 - 8.4 pH	0.1 pH	± 0.2 pH
Cyanuric acid	1 - 160 mg/l	1.0 mg/l	1 - 50 mg/l ± 10 mg/l ; 50 - 160 mg/l ± 20 mg/l
Alkalinity (total)	0 - 300 mg/l CaCO ₃	1.0 mg/l	± 50 mg/l
Bromine	0.2 - 13.5 mg/l Br ₂	0.1 mg/l	0 - 2 mg/l ± 0.2 mg/l 2 - 4 mg/l ± 0.4 mg/l 4 - 7 mg/l ± 0.8 mg/l 7 - 13.5 mg/l ± 1.1 mg/l

Delivery content

- Scuba II in a robust plastic box
- Tablet reagents
20 DPD No.1 Phenol Red Photometer
10 DPD No.3
10 CyA-Test
10 Alka-M-Photometer
- 2 batteries (AAA)
- Stirring rod
- Instruction manual

Order code: 21 61 00-17 

Get
the
clip!



<http://scuba-II.lovibond.com>



PM Photometer

All pool parameters in one instrument



- Interface
(PM 630)

Back-lit display

Stores up to
1000 results

Intuitive operation

User guide in
German,
English,
French,
Spanish,
Italian,
Portuguese,
Polish
& Indonesian

The **Bluetooth**® word mark is a registered trademark owned by Bluetooth SIG, Inc. and any use by Lovibond® Tintometer GmbH is under license. IOS® is a registered trademark of Cisco, Inc. and licensed to Apple, Inc. Android™ is a trademark of Google, Inc.

The Lovibond® PM 600 series of photometers has simplified the pool water analysis decisively. The PM 600 and PM 620 Photometers meet all requirements of demanding pool operators for a modern water analysis. The series is extended by the PM 630 with **Bluetooth®** data transmission.

The **PM 600** focuses on the main pool parameters required for balanced water including: Alkalinity, Bromine, Chlorine, Cyanuric Acid, Iron, Calcium Hardness, Copper, Sodium Hypochlorite, Ozone and pH-value.

The **PM 620** also has the following detection methods: Aluminium, Ammonia, Biguanides (PHMB), Chlorine dioxide, Total Hardness, Urea, Iodine, Phosphate, Acid capacity $KS_{4.3}$, Oxygen (active), Sulphate und Hydrogen peroxide.

The **PM 630** corresponds to the PM 620. It is additionally equipped with a **Bluetooth®** interface. This allows data to be transferred quickly and easily to a smartphone or tablet.

All instruments have a back-lit display. Operator guidance displays information about the measurement range and reagent type, as well as automatic countdown timers for accurate response times. The internal memory is capable of storing up to 1000 results with date, time and sample ID. These results can be retrieved and transmitted at any time.

Data transfer

PM 600 and **PM 620** can transfer data via an optional infrared module (IRIM) to the PC.

Code: 21 40 50

For the **PM 630**, a set of software and **Bluetooth®** dongle is available for data transfer to the PC.

Code: 24 44 480

Aqua LX® App

The system is further enhanced by the free Lovibond® App, **AquaLX®**, enabling the immediate review, process and evaluation of measured results directly on-site. Data trends can be monitored with easy-to-view graphical displays with set minimum and maximum values.

Display	Graphic-display
Interfaces	Infrared ¹ (PM 600 / PM 620), Bluetooth® 4.0 (PM 630), RJ45 socket for Internet updates ¹
Optics	LEDs, interference filters and photo sensor
Wavelength Accuracy	± 1 nm
Photometric Accuracy*	2 % FS (T= 20 °C – 25 °C)
Photometric Resolution	0.005 A
Operation	Acid and solvent resistant, touch-sensitive keypad with audible feedback via integrated beeper
Power Supply	4 batteries (Mignon AA/LR6)
Auto-Off	approx. 20 minutes after last keypress with audible signal
Dimensions	approx. 210 x 95 x 45 mm (unit) approx. 395 x 295 x 106 mm (case)
Weight (unit)	approx. 450 g
Ambient Conditions	5–40 °C at max. 30–90 % rel. humidity (non condensing)
Language Selection	German, English, French, Spanish, Italian, Portuguese, Polish, Indonesian
Memory Capacity	approx. 500 data sets (PM 630) approx. 1000 data sets (PM 600, PM 620)
Approval	CE

¹ optional available: connection cable with integrated electronics (RS232 / RJ-45 plug)

* tested with standard solutions

Furthermore, additional personalized information, like sample takers or place of sampling can be added. Records can be transferred at the touch of a button by email either as a graphic or database record, simplifying the transfer, management and sharing of results.

PoolM8 App

AquaLX® complements the Langelier Index App, **PoolM8**, which negates the need for complex calculations for Balanced Water. By simply entering the results of the parameters (pH; Total Alkalinity; Calcium Hardness; Total Dissolved Solid; Temperature.), the App automatically determines and displays the results which can then be saved to create a history and, again, shared via email.

The reference standards are used to check the photometric accuracy and reproducibility of the photometer's chlorine method.

An adjustment of the overall system from photometric meter and reagents is not possible with the reference standard kits. Consider using our ValidCheck Chlorine (see page 83).

The shelf life is two years from the date of manufacture when used and stored properly.

Reference Standard Kit Chlorine 21 56 30
0.2* and 1.0* mg/l
for tablet and VARIO methods¹⁾

Reference Standard Kit Chlorine 21 56 35
0.5* and 2.0* mg/l
for tablet methods only

Reference Standard Kit Chlorine 21 56 36
1.0* and 4.0* mg/l
for tablet methods only

Reference Standard Kit pH 21 56 65
7.45* pH

* Approximate figure, actual figure specified in certificate of analysis enclosed




¹⁾ The standard values mentioned in kit 215630 for the VARIO method are for photometer PM 620 only, because this method is not available on the PM 600

Verification Standard Kit

The verification standards for the photometer PM 600/620/630 are used to check the photometric accuracy and reproducibility of all wavelengths in the instruments. The shelf life of the standards is two years from the date of manufacture when used and stored properly. The measurements are in units of mAbs.

Verification Standard Kit 21 56 80

Delivery Content

- Instrument in carrying case
 - 4 batteries (AA)
 - 3 round vials 24 mm ø
 - Syringe, brush, stirring rod
 - 1 plastic beaker 100 ml
 - Reagents for Chlorine (free, combined, total) pH value Calcium Hardness Acid capacity $KS_{4.3}$ (Alkalinity-m)
 - Instruction Manual
 - Certificate of Compliance and Warranty information
- PM 600** (13 Parameters, Infrared)
Order code: 21 40 60 
- PM 620** (34 Parameters, Infrared)
Order code: 21 40 65 
- PM 630** (34 Parameters, Bluetooth®)
Order code: 21 40 70 

 Green Chemistry

Bluetooth® is a wireless technology subject to regional approval. The use of the PM 630 with **Bluetooth®** is currently only permitted within Europe, the USA, Japan and in Canada. The use of the PM 630 will also be possible in other regions in the future. For current regions and further information, visit: bluetooth.lovibond.com

Regions in which the PM 630 with **Bluetooth®** can currently be used (status: 01/2019): within Europe (according to R&TTE Directive 1999/5/EC); USA (according to FCC part 15, comprised in FCC ID QOQBLE113); Canada (comprised in IC 5123A-BGTBLE113), Japan (includes CABID 007-ABO 103)