

Comparator 2000+

Colorimeter for regular testing in public pools & spas with colour-stable glass standards



Comparator 2000+

With its accessories, the Lovibond® Comparator system 2000 is an extremely versatile, modular system for testing water. It is simple to use yet is uncompromising in terms of precision and reproducibility of results. It is compact and portable. The integrated prism brings the glass standards of the test discs and the coloured sample into the same field of view.

Discs

The required accuracy of results is only ensured if stable, fade-free colour standards are used.

Glass colour standards are fade-free, resistant to chemicals and scratchproof. Lovibond® standards are made from coloured glass filters. They comply with international standards, e.g. ISO 7393/2.

For a selection of the most popular test discs see the table on page 26 onwards.

Cells

We manufacture precision plastic and optical glass cells in line with the highest quality standards. The cells ensure high precision and reproducibility of results.

Lighting unit

We recommend the use of the battery-operated Lovibond® lighting unit in variable lighting conditions. This guarantees uniform lighting conditions, and ensures greater test accuracy.

 **Please see pages 28 onwards for tests, ranges and reagents**

Highlights

- Accurate and reproducible results
- Colour-stable, fade-free glass standards
- In accordance with ISO 7393/2 "Determination of free chlorine and total chlorine"
- Integrated prism



Lighting unit, battery operated



Comparator 2000+



Disc

Test Kits 2000+



Photo: Riviera Pool, www.rivierapool.com

Type*	Test Kits	Code
AF 112 A	Chlorine 0.1 – 1.0 mg/l, Type 3/40 A**	41 11 20
AF 112 B	Chlorine 0.2 – 4.0 mg/l, Type 3/40 B**	41 11 30
AF 112 J/J	Chlorine 0.1 – 2.0 mg/l, Type 3/40 J** pH value 6.8 – 8.4, Type 2/1 J	41 72 46
AF 116 A	Chlorine 0.1 – 1.0 mg/l, Type 3/40 A** pH value 6.8 – 8.4, Type 2/1 J	41 11 40
AF 116 B	Chlorine 0.2 – 4.0 mg/l, Type 3/40 B** pH value 6.8 – 8.4, Type 2/1 J	41 11 60
AF 118 S	Chlorine 0.1 – 1.0 mg/l, Type 3/40 A**	41 11 81

Type*	Test Kits	Code
	Chlorine 1.0 – 4.0 mg/l, Type 3/40 S** pH value 5.2 – 6.8, Type 2/1 G pH value 6.8 – 8.4, Type 2/1 J	
AF 129	Water Balance Chlorine 0.2 – 4.0 mg/l, Type 3/40 B** pH value 6.8 – 8.4, Type 2/1 J Total Alkalinity-M*** 0 – 500 mg/l CaCO ₃ Tablet Count Method Calcium Hardness*** 0 – 1000 mg/l CaCO ₃ Tablet Count Method	41 12 90
AF 405 M	Municipal Kit Chlorine	41 40 51

Type*	Test Kits	Code
	0.2 – 4.0 mg/l, Type 3/40 B** pH value 6.8 – 8.4, Type 2/1 J Cyanuric Acid*** 20 – 200 mg/l Cyanuric Acid Turbidity Method Total Alkalinity-M*** 20 – 800 mg/l CaCO ₃ Speed-Test Calcium Hardness*** 20 – 800 mg/l CaCO ₃ Speed-Test	

* Disc readings see following pages

** All test kits for chlorine are for "free, combined and total chlorine"

*** Reagents for tablet count method, turbidity method and speed-test see Minikit, page 13

Comparator 2000+ and Accessories

Type	Item	Code	
TK 100	Comparator 2000+	14 20 00	
TK 102	Portable lighting unit, battery operated	14 20 50	
	Daylight Unit, mains operated	17 10 10	
AF 631	Water sampler with two 500 ml bottles and one lid (p. 29)	17 05 00	
	Measuring beaker, 100 ml	38 48 01	
	Vial stand for 10 vials (\varnothing 16 mm or \square 13,5 mm), acrylic glass	41 89 57	
	Glass stirring rod, 12 cm length	36 41 10	
	Plastic stirring rod, 13 cm length	36 41 00	
	Brush,		
	11 cm length	38 02 30	

Glass Cells

Type	Item	Code
DB424/S	5 glass cells with lid, volume 10 ml, calibrated 2 - 12 ml, path length 13,5 mm	35 42 43
W680/40	Glass cell 40 mm path length, calibrated at 20 ml	60 68 90

Plastic Cells

	5 plastic cells, frosted on two sides, 13.5 mm path length, volume 10 ml, with lid	14 55 05
	10 plastic cells, as 14 55 05	14 55 00
	100 plastic cells, as 14 55 05	14 55 10

Delivery content

- Comparat+or 2000+
in a sturdy plastic case
- Disc(s)
- Cells & accessories
- Tablet reagents for 100 tests
- Warranty information
- Instruction manual



Daylight unit, mains operated



Comparartor 2000+



Test Kit



Plastic cells

Comparator 2000+

Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Aluminium	3/127 A	0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.4; 0.5 mg/l	0 - 0.5 mg/l	23 02 05
Ammonia ★	3/112	0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4 mg/l	0 - 0.4 mg/l NH ₄	23 00 60
Ammonia	3/113	0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1 mg/l	0 - 1.0 mg/l N	23 00 70
Bromine ★	3/53A	0.2; 0.4; 0.6; 0.8; 1; 1.2; 1.4; 1.6; 2 mg/l	0.2 - 2.0 mg/l	23 53 10
Bromine ★	3/53B	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l	23 53 20
Bromine ★	3/53C	0.5; 1; 1.5; 2; 2.5; 3; 4; 5; 6 mg/l	0.5 - 6 mg/l	23 53 30
Chlorine ★ free, combined, total	3/40A	0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 1 mg/l	0.1 - 1.0 mg/l	23 40 10
Chlorine ★ free, combined, total	3/40J	0.1; 0.2; 0.3; 0.4; 0.6; 0.8; 1; 1.5; 2 mg/l	0.1 - 2.0 mg/l	23 41 40
Chlorine ★ free, combined, total	3/40B	0.2; 0.4; 0.6; 1; 1.5; 2; 2.5; 3; 4 mg/l	0.2 - 4.0 mg/l	23 40 20

★ also suitable for seawater, # including stirring rod

* alternative reagent, used instead of DPD No.1 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity

Reagents	Quantity	Code	Accessories	Code
ALUMINIUM No.1	100	51 54 60 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 54 61 BT		
ALUMINIUM No.2	100	51 54 70 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 54 71 BT		
Combi pack#	each 100	51 76 01 BT		
ALUMINIUM No.1 / No.2	each 250	51 76 02 BT		
AMMONIA No.1	100	51 25 80 BT	40 mm cell W680/40	60 68 90
	250	51 25 81 BT		
AMMONIA No.2	100	51 25 90 BT	40 mm cell W680/40	60 68 90
	250	51 25 91 BT		
Combi pack#	each 100	51 76 11 BT		
AMMONIA No.1 / No.2	each 250	51 76 12 BT		
AMMONIA No.1/2			13.5 mm cell, 10 ml	35 42 43
DPD No.1	100	51 10 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 51 BT		
	500	51 10 52 BT		
DPD No.1			13.5 mm cell, 10 ml	35 42 43
DPD No.1			13.5 mm cell, 10 ml	35 42 43
DPD No.1	100	51 10 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 51 BT		
	500	51 10 52 BT		
DPD No.1 HIGH CALCIUM*	100	51 57 40 BT	13.5 mm cell, 10 ml	35 42 43
DPD No.2	100	51 15 30 BT		
	250	51 15 31 BT		
DPD No.3	100	51 10 80 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 81 BT		
	500	51 10 82 BT		
DPD No.3 HIGH CALCIUM*	100	51 57 30 BT	13.5 mm cell, 10 ml	35 42 43
Combi pack#	each 100	51 77 11 BT		
DPD No.1 / No.3	each 250	51 77 12 BT		
Combi pack#	each 100	51 77 81 BT		
DPD No.1 / No.3	each 250	51 77 82 BT		
HIGH CALCIUM*				
DPD No.4	100	51 12 20 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 12 21 BT		
	500	51 12 22 BT		
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43



MSDS (Material Safety Data Sheets): www.lovibond.com

Comparator 2000+

Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Chlorine ★ free, combined, total	3/40K	0.5; 1; 1.5; 2; 2.5; 3; 4; 5; 6 mg/l	0.5 - 6.0 mg/l	23 39 30
Chlorine ★ free, combined, total	3/40S	1; 1.2; 1.4; 1.6; 1.8; 2; 2.5; 3; 4 mg/l	1.0 - 4.0 mg/l	23 40 90
Chlorine ★ free, combined, total	3/40P	2; 2.3; 2.5; 2.7; 3; 3.2; 3.6; 4; 5 mg/l	2.0 - 5.0 mg/l	23 39 20
Chlorine ★ free, combined, total	3/40HN	2; 3; 4; 5; 6; 7; 8; 9; 10 mg/l	2.0 - 10 mg/l	23 40 81
Copper	3/106	0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1 mg/l	0 - 1.0 mg/l	23 00 50
Copper	3/110	0; 0.5; 1; 1.5; 2; 2.5; 3; 3.5; 4 mg/l	0 - 4.0 mg/l	23 00 40
Hydrogen Peroxide	3/114	2; 4; 6; 8; 10; 12; 14; 16; 20 mg/l	2 - 20 mg/l	23 00 80
Hydrogen Peroxide	3/115	10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	10 - 100 mg/l	23 00 90
Iron , ★ total	3/116	0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 1 mg/l	0.1 - 1.0 mg/l	23 01 00
Iron , total	3/117	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l	23 01 10
Manganese	3/169	0; 0.5; 1; 1.5; 2; 2.5; 3; 3.5; 4 mg/l	0 - 4.0 mg/l	23 06 90

★ also suitable for seawater, # including stirring rod

* alternative reagent, used instead of DPD No.1 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity

Reagents	Quantity	Code	Accessories	Code
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43
DPD No.1/2/3/4			5 mm cell W680/5	60 67 90
COPPER/ZINC LR	100 250	51 26 20 BT 51 26 21 BT	13.5 mm cell, 10 ml	35 42 43
COPPER/ZINC HR	100 250	51 23 40 BT 51 23 41 BT	13.5 mm cell, 10 ml	35 42 43
HYDR. PEROXIDE HR	100 250	51 35 30 51 35 31	13.5 mm cell, 10 ml	35 42 43
ACIDIFYING PT	100 250	51 35 40 51 35 41		
HYDR. PEROXIDE HR	100 250	51 35 30 51 35 31	13.5 mm cell, 10 ml	35 42 43
ACIDIFYING PT	100 250	51 35 40 51 35 41		
IRON LR (Fe ²⁺ and Fe ³⁺)	100 250	51 53 70 BT 51 53 71 BT	13.5 mm cell, 10 ml	35 42 43
IRON (II) LR (Fe ²⁺)	100	51 54 20 BT		
IRON HR	100 250	51 53 80 BT 51 53 81 BT	13.5 mm cell, 10 ml	35 42 43
MANGANESE LR 1	100 250	51 60 80 BT 51 60 81 BT	13.5 mm cell, 10 ml	35 42 43
MANGANESE LR 2	100 250	51 60 90 BT 51 60 91 BT		
Combi pack#	each 100	51 76 21 BT		
MANGANESE LR 1/ MANGANESE LR 2	each 250	51 76 22 BT		



Water sampler AF 631, volume 500 ml,
total length 85 cm,
Order code: 17 05 00

Ensures water is sampled at the optimum depth.

Comparator 2000+

Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Nitrate	3/142	10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	10 -100 mg/l NO ₃	23 03 60
Ozone (DPD)	3/67	0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 1 mg/l	0.1 - 1.0 mg/l	23 67 00
Ozone (DPD)	3/67A	0.01; 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.1 mg/l	0.01 - 0.1 mg/l	23 67 10
Ozone (Indigo)	3/148	0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.4; 0.5 mg/l	0 - 0.5 mg/l	23 04 40
pH	2/1G	5.2; 5.4; 5.6; 5.8; 6; 6.2; 6.4; 6.6; 6.8	5.2 - 6.8 pH	22 11 00
pH	2/1J	6.8; 7; 7.2; 7.4; 7.6; 7.8; 8; 8.2; 8.4	6.8 - 8.4 pH	22 11 30
pH	2/1P	4; 5; 6; 7; 8; 9; 9.4; 10; 11	4.0 - 11 pH	22 12 20
Phosphate	3/136	0; 5; 10; 15; 20; 25; 30; 35; 40 mg/l	0 - 40 mg/l PO ₄	23 03 10
Phosphate	3/70	0; 10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	0 - 100 mg/l PO ₄	23 70 00
QAC (Quaternary Ammonia Compounds)	3/118	0; 2; 4; 6; 8; 10; 12; 15; 20 mg/l	0 - 20 mg/l	23 01 20
QAC (Quaternary Ammonia Compounds)	3/119	0; 20; 40; 60; 80; 100; 120; 150; 200 mg/l	0 - 200 mg/l	23 01 30
Sodiumhypochlorite	3/2 Hypo	2; 4; 6; 8; 10; 12; 14; 16 %	2 - 16 %	23 21 10

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* alternative reagent, used instead of DPD No.1 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity

Reagents	Quantity	Code	Accessories	Code
NITRATE No.1	100	51 31 10	13.5 mm cell, 10 ml	35 42 43
NITRATE No.2	100	51 31 20		
	250	51 31 21		
Combi pack#	each 100	51 76 41		
Nitrate No.1 / No.2	each 250	51 76 42		
DPD No.4	100	51 12 20 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 12 21 BT		
DPD No.4	100	51 12 20 BT	40 mm cell W680/40	60 68 90
	250	51 12 21 BT		
OZONE-INDIGO	100	51 31 70 BT	40 mm cell W680/40	60 68 90
	250	51 31 71 BT		
BROMOCRESOL PURPLE	100	51 17 30	13.5 mm cell, 10 ml	35 42 43
	250	51 17 31		
PHENOL RED	100	51 17 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 17 51 BT		
UNIVERSAL PH Indicator	25 ml	45 17 70	13.5 mm cell, 10 ml	35 42 43
	100 ml	45 17 71		
	250 ml	45 17 72		
	500 ml	45 17 73		
PHOSPHATE HR	100	51 19 80 BT	13.5 mm cell, 10 ml	35 42 43
PHOSPHATE HR	100	51 19 80 BT	13.5 mm cell, 10 ml	35 42 43
QAC LR	100	51 53 90 BT	40 mm cell W680/40	60 68 90
	250	51 53 91 BT		
ACIDIFYING GP	100	51 54 80 BT		
	250	51 54 81 BT		
QAC HR	100	51 54 00	13.5 mm cell, 10 ml	35 42 43
	250	51 54 01		
ACIDIFYING GP	100	51 54 80 BT		
	250	51 54 81 BT		
CHLORINE HR (KI)	100	51 30 00 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 30 01 BT		
ACIDIFYING GP	100	51 54 80 BT		
	250	51 54 81 BT		
Combi pack#	each 100	51 77 21 BT		
CHLORINE HR (KI)/	each 250	51 77 22 BT		
ACIDIFYING GP				
Dilution set for sample preparation	1	41 44 70		

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