

# Comparator 2000+

The system for colorimetric water analysis



## Applications

- Water Treatment (e.g. Drinking Water)
- Pool-Water
- Research Centres
- Universities
- Special Applications
- Laboratory and Field Testing

## 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.

## Test 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.

Please see the table on page 30 for information on the various test discs or refer to our **L 213 test disc catalogue**.

## 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.

## 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.



Comparator 2000+



Test disc with colour-stable glass standards



Lighting unit TK 102



Nessleriser with lighting unit

➔ Order codes see page 29

## Highlights

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

# Comparator 2000+ Test Kits

## Complete kits for water analysis

### Scope of delivery for standard kits

Comparator test kits are supplied as a complete system in a sturdy plastic case. Together with the Comparator 2000+ and test discs, each kit includes all the necessary cells, accessories and Lovibond® tablet reagents (for 100 measurements) to achieve reliable results.

The table to the right shows a selection of the most popular standard test kits.

### Customised equipment

In addition to supplying standard test kits, we can construct customised kits to suit individual requirements.

Based on the desired test parameters and measuring ranges we will draw up a detailed offer to suit your application.

### Optional accessory

All test kit versions allow integration of the battery-operated portable lighting unit TK 102 and charger TK 102/ 1.

### Operating instructions

The operating instructions provide a step-by-step explanation of how to conduct the water test, ensuring that even "non-chemists" can achieve reliable and accurate measurements in the minimum of time.



Example of a comparator test kit, together with daylight unit

Type	Designation/Combi	Test	Range*	Code
AF 270	Mini Lab Pool Water	Aluminium	0 - 0.5 mg/l Al	41 27 00
		Ammonia	0 - 0.4 mg/l N	
		Chlorine	0.1 - 1.0 mg/l Cl <sub>2</sub> 1.0 - 4.0 mg/l Cl <sub>2</sub> 5 - 5000 mg/l Cl <sup>-</sup> 0 - 80 mg/l	
AF 357	Drinking Water	Chloride (salinity)	0 - 5000 mg/l Cl	41 35 70
		Chlorine	0.02 - 0.3 mg/l Cl <sub>2</sub> 0.2 - 4 mg/l Cl <sub>2</sub> 0 - 500 mg/l CaCO <sub>3</sub>	
		Hardness Total Fluoride Hazen Colour pH-value	0 - 1.6 mg/l F 10 - 90 mg/l Pt 6 - 8.4 pH	
AF 358	Sewage and Domestic Effluents	Ammonia	0 - 1 mg/l N	41 35 80
		Chlorine	0.1 - 1 mg/l Cl <sub>2</sub> 1 - 10 mg/l Cl <sub>2</sub> 0.05 - 0.5 mg/l N	
		Nitrite Permanganate (BOD) pH-value Sulphide	0 - 60 mg/l 4 - 8 ; 8 - 9.6 pH 0 - 0.5 mg/l S	
AF 368	Mini Lab Heavy Metals (supplied without reagents)	Chromium	10 - 100 µg Cr	41 36 80
		Copper	2.5 - 50 µg Cu	
		Cyanide	0.05 - 1 mg/l Cn	
		Nickel	1 - 10 mg/l Ni	
		Zinc	0 - 50 µg Zn	
Type	Designation/Single	Test	Range*	Code
AF 274	Amine	Amine	1 - 10 mg/l	41 27 40
AF 112A	Chlorine free, comb. tot.	Chlorine	0.1 - 1 mg/l Cl <sub>2</sub>	41 11 20
AF 112B	Chlorine free, comb. tot.	Chlorine	0.2 - 4 mg/l Cl <sub>2</sub>	41 11 30
AF 112E	Chlorine free, comb. tot.	Chlorine	0.02 - 0.3 mg/l Cl <sub>2</sub>	41 12 50
AF 112E/F	Chlorine free, comb. tot.	Chlorine Chlorine	0.02 - 0.3 mg/l Cl <sub>2</sub> 0.2 - 0.8 mg/l Cl <sub>2</sub>	41 11 26
AF 112J/J	Chlorine free, comb. tot.	Chlorine pH-value	0.1 - 2.0 mg/l Cl <sub>2</sub> 6.8 - 8.4 pH	41 72 46
AF 112N/T	Chlorine free, comb. tot.	Chlorine Chlorine	0.1 - 1.0 mg/l Cl <sub>2</sub> 1.1 - 2.0 mg/l Cl <sub>2</sub>	41 01 20
AF 112ED	Chlorine dioxide	Chlorine dioxide	0.04 - 0.57 mg/l ClO <sub>2</sub>	41 00 01
AF 112 EF/ED	Chlorine dioxide	Chlorine dioxide	0.04 - 1.52 mg/l ClO <sub>2</sub>	41 00 07
AF 116A	Chlorine, pH	Chlorine pH-value	0.1 - 1 mg/l Cl <sub>2</sub> 6.8 - 8.4 pH	41 11 40
AF 116B	Chlorine, pH	Chlorine pH-value	0.2 - 4 mg/l Cl <sub>2</sub> 6.8 - 8.4 pH	41 11 60
AF 118S	Chlorine, pH	Chlorine pH-value	0.1 - 4 mg/l Cl <sub>2</sub> 5.2 - 8.4 pH	41 11 81
AF 139	Sodium hypochlorite	Sodium hypochlorite	2 - 18 % NaOCl	41 13 90
AF 129	Water Balance			41 12 90

\* Disc readings see following pages

## Comparator 2000+ and Accessories

Type	Item	Code
<b>TK 100</b>	Lovibond® Comparator 2000+	14 20 00
<b>TK 102</b>	Portable lighting unit, battery operated	14 20 50
	Daylight Unit for Comparator 2000+, mains operated	17 10 10
<b>AF 631</b>	Water sampler with two 500 ml bottles and one lid	17 05 00
	Measuring beaker, 100 ml	38 48 01
	Vial stand for 10 vials (ø 16 mm or □ 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
<b>DB424/S</b>	5 glass cells, 13.5 mm path length, calibrated at 2 – 12 ml, with lids	35 42 43
<b>W680/40</b>	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

## Nessleriser System and Accessories

Type	Item	Code
<b>2150</b>	Nessleriser 2150 with stand, daylight unit and AF 306/P	17 20 30
<b>2150</b>	Nessleriser 2150 with stand	17 21 50
<b>2150</b>	Nessleriser 2150 upgrade kit	17 21 60
<b>2250</b>	Nessleriser 2250 with stand, daylight unit and DB 420	17 20 40
<b>2250</b>	Nessleriser 2250 with stand	17 22 50
<b>2250</b>	Nessleriser 2250 upgrade kit with Nessler tubes DB 420	17 21 70
	Daylight Unit for Nessleriser, mains operated	17 10 20
	Stand for Nessleriser upgrade kit	17 21 80
<b>AF 306/S</b>	Stand for 12 Nessler tubes	17 02 90
<b>AF 306</b>	Pair Nessler tubes, 113 mm	35 30 60
<b>AF 306/P</b>	Pair Nessler tubes, 113 mm with plungers	35 30 80
	Plunger for Nessler tube AF 306 and AF 306/P	35 30 70
<b>DB 420</b>	Pair Nessler tubes, 250 mm with plungers	35 42 00
	Plunger for Nessler tube DB 420	35 42 29
<b>AF 315</b>	Special Nessler tube (determination of oxygen with disc NOE)	35 31 50



Glass cell with lid, volume 10 ml,  
calibrated 2 - 12 ml, path length 13,5 mm,  
Pack of 5, code: 35 42 43

# 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
Amine	3/58	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l	23 58 00
Amine	3/64	0; 0.25; 0.5; 1; 2 mg/l	0 - 2 mg/l	23 64 00
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 <sub>4</sub>	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
Ammonia	3/125	0; 1; 2; 3; 4; 5; 6; 8; 10 mg/l	0 - 10 mg/l N	23 01 80
Ammonia	NAA	1; 2; 3; 4; 5; 6; 8; 10 µg	1 - 10 µg NH <sub>3</sub>	28 31 10
Ammonia	NAB	10; 12; 14; 16; 18; 20; 22; 24; 26 µg	10 - 26 µg NH <sub>3</sub>	28 31 20
Ammonia	NAC	28; 32; 36; 40; 44; 48; 52; 56; 60 µg	28 - 60 µg NH <sub>3</sub>	28 31 30
Ammonia	NAD	60; 65; 70; 75; 80; 85; 90; 95; 100 µg	60 - 100 µg NH <sub>3</sub>	28 31 40

# including stirring rod

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		
	250	51 54 71 BT		
Combi pack#	each 100	51 76 01 BT		
ALUMINIUM No.1 / No.2	each 250	51 76 02 BT		
AMINE	100	51 10 10	Extraction tube AF260	35 26 00
	250	51 10 11		
Details on request			13.5 mm cell, 10 ml	35 42 43
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		
	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
AMMONIA No.1/2			5 mm cell W680	60 67 90
NESSLER reagent	30 ml	46 52 00	Nessler tubes 113 mm	35 30 60
	100 ml	46 52 01		
SEIGNETTE salt solution	100 ml	46 61 01		
NESSLER reagent SEIGNETTE salt solution			Nessler tubes 113 mm	35 30 60
NESSLER reagent SEIGNETTE salt solution			Nessler tubes 113 mm	35 30 60
NESSLER reagent SEIGNETTE salt solution			Nessler tubes 113 mm	35 30 60



Lighting unit, mains operated

Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
<b>Bromine</b>	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
<b>Bromine</b>	3/53B	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l	23 53 20
<b>Bromine</b>	3/53C	0.5; 1; 1.5; 2; 2.5; 3; 4; 5; 6 mg/l	0.5 - 6 mg/l	23 53 30
<b>Chlorine</b> free, combined, total	3/40E	0.02; 0.04 ; 0.06; 0.08; 0.1; 0.15; 0.2; 0.25; 0.3 mg/l	0.02 - 0.3 mg/l	23 40 60
<b>Chlorine</b> free, combined, total		0.02; 0.04 ; 0.06; 0.08; 0.1; 0.2; 0.3; 0.4; 0.5 mg/l	0.02 - 0.5 mg/l	29 59 20
<b>Chlorine</b> free, combined, total	3/40F	0.2; 0.25 ; 0.3; 0.35; 0.4; 0.5; 0.6; 0.7; 0.8 mg/l	0.2 - 0.8 mg/l	23 40 70
<b>Chlorine</b> free, combined, total	3/40G	1.5; 1.8; 2.0; 2.3; 2.5; 2.7; 3.0; 3.2; 3.5 mg/l	1.5 - 3.5 mg/l	23 40 30
<b>Chlorine</b> 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
<b>Chlorine</b> free, combined, total	3/40T	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 41 10
<b>Chlorine</b> free, combined, total	3/40N	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 2 mg/l	1.1 - 2.0 mg/l	23 39 60
<b>Chlorine</b> 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

# including stirring rod



Reagents	Quantity	Code	Accessories	Code
DPD No.1	100 250 500	51 10 50 BT 51 10 51 BT 51 10 52 BT	13.5 mm cell, 10 ml	35 42 43
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	100 250 500	51 10 50 BT 51 10 51 BT 51 10 52 BT	40 mm cell W680/40	60 68 90
DPD No.2	100 250	51 15 30 BT 51 15 31 BT		
DPD No.3	100 250 500	51 10 80 BT 51 10 81 BT 51 10 82 BT		
Combi pack <sup>#</sup>	each 100	51 77 11 BT		
DPD No.1 / No.3	each 250	51 77 12 BT		
DPD No.4	100 250 500	51 12 20 BT 51 12 21 BT 51 12 22 BT		
DPD No.1/2/3/4			40 mm cell W680/40	60 68 90
DPD No.1/2/3/4			40 mm cell W680/40	60 68 90
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			25 mm cell W680/25 13.5 mm cell, 10 ml	60 68 60 35 42 43
DPD No.1/2/3/4			25 mm cell W680/25 13.5 mm cell, 10 ml	60 68 60 35 42 43
DPD No.1/2/3/4			13.5 mm cell, 10 ml	35 42 43



Tablet reagents in foil blister strip (BT)

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# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
<b>Chlorine</b> 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
<b>Chlorine</b> 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
<b>Chlorine</b> 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
<b>Chlorine</b> 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
<b>Chlorine</b> free, combined, total	3/40HN	2; 3; 4; 5; 6; 7; 8; 9; 10 mg/l	2.0 - 10 mg/l	23 40 81
<b>Chlorine / pH</b> free, combined, total	3/40CZ	0.5; 1; 1.5; 2; 4 mg/l Cl <sub>2</sub> 7; 7.4; 7.6; 8 pH	0.5 - 4 mg/l Cl <sub>2</sub> 7 - 8 pH	23 39 90
<b>Chlorine</b> free, combined, total	3/2A	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 20 10
<b>Chlorine</b> free, combined, total	3/2AB	0.15; 0.25; 0.5; 0.75; 1; 1.25; 1.5; 1.75; 2 mg/l	0.15 - 2.0 mg/l	23 20 20
<b>Chlorine</b> free, combined, total	3/2APC	1; 1.5; 2; 2.5; 3; 3.5; 4; 4.5; 5 mg/l	1.0 - 5.0 mg/l	23 20 50
<b>Chlorine HR</b> total chlorine only	3/2APH	2; 3; 4; 5; 6; 7; 8; 9; 10 mg/l total Cl <sub>2</sub>	2 - 10 mg/l	23 20 60
<b>Chlorine HR</b> total chlorine only	3/2ARP	5; 10; 15; 20; 25; 30; 35; 40; 50 mg/l total Cl <sub>2</sub>	5.0 - 50 mg/l	23 20 70
<b>Chlorine HR</b> total chlorine only	3/2IOD	5; 10; 25; 50; 75; 100; 150; 200; 250 mg/l total Cl <sub>2</sub>	5.0 - 250 mg/l	23 20 90

# including stirring rod

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			13.5 mm cell, 10 ml	35 42 43
DPD No.1/2/3/4			5 mm cell W680/5	60 67 90
DPD No.1/2/3/4 Phenol red tablets, see pH determination			13.5 mm cell, 10 ml	35 42 43
			13.5 mm cell, 10 ml	35 42 43
Reagents at specialized chemistry dealer			13.5 mm cell, 10 ml	35 42 43
Reagents at specialized chemistry dealer			13.5 mm cell, 10 ml	35 42 43
Reagents at specialized chemistry dealer			5 mm cell W680/5	60 67 90
CHLORINE HR (KI)	100	51 30 00 BT	40 mm cell W680/40	60 68 90
	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)/ ACIDIFYING GP	each 250	51 77 22 BT		
CHLORINE HR (KI) ACIDIFYING GP			13.5 mm cell, 10 ml	35 42 43
CHLORINE HR (KI) ACIDIFYING GP			13.5 mm cell, 10 ml	35 42 43



Test disc

 Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
<b>Chlorine</b> free, combined, total	NDPB	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	28 34 50
<b>Chlorine</b> free, combined, total	NDPC	0.02; 0.04; 0.06; 0.08; 0.1; 0.12; 0.14; 0.16; 0.2 mg/l	0.02 - 0.2 mg/l	28 34 60
<b>Chlorine</b> free, combined, total	NDP	0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.5 mg/l	0.05 - 0.5 mg/l	28 34 40
<b>Chlorine</b> free, combined, total	NDPD	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	28 34 70
<b>Chlorine dioxide</b>	3/40AD	0.19; 0.38; 0.57; 0.76; 0.95; 1.14; 1.33; 1.52; 1.9 mg/l	0.19 - 1.9 mg/l	29 22 60
<b>Chlorine dioxide</b>	3/40ED	0.04; 0.08; 0.11; 0.15; 0.19; 0.28; 0.38; 0.48; 0.57 mg/l	0.04 - 0.57 mg/l	29 79 70
<b>Chlorine dioxide</b>	3/40FD	0.38; 0.48; 0.57; 0.66; 0.76; 0.95; 1.14; 1.33; 1.52 mg/l	0.38 - 1.52 mg/l	29 87 50
<b>Chlorine dioxide</b>	3/157	0.25; 0.5; 0.75; 1; 1.25; 1.5; 2; 3; 5 mg/l	0.25 - 5.0 mg/l	23 05 70
<b>Chromium</b>	3/59	10; 20; 30; 40; 50; 60; 70; 80; 100 µg	10 - 100 µg	23 59 00
<b>Copper</b>	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
<b>Copper</b>	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

# including stirring rod

Reagents	Quantity	Code	Accessories	Code
DPD No.1 NESSLERISER	100	51 12 30 BT	Nessleriser 2150	17 21 50
	250	51 12 31 BT	Nessler tubes 113 mm	35 30 60
DPD No.2 NESSLERISER	100	51 12 40		
	250	51 12 41		
DPD No.3 NESSLERISER	100	51 12 50 BT		
	250	51 12 51 BT		
DPD No.4 NESSLERISER	100	51 12 60 BT		
	250	51 12 61 BT		
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DPD No.1/2/3/4 NESSLERISER			Nessleriser 2150	17 21 50
			Nessler tubes 113 mm	35 30 60
<hr/>				
DPD No.1/2/3/4 NESSLERISER			Nessleriser 2150	17 21 50
			Nessler tubes 113 mm	35 30 60
<hr/>				
DPD No.1/2/3/4 NESSLERISER			Nessleriser 2150	17 21 50
			Nessler tubes 113 mm	35 30 60
<hr/>				
DPD No.1	100	51 10 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 51 BT		
<hr/>				
DPD No.1			40 mm cell W680/40	60 68 90
<hr/>				
DPD No.1			40 mm cell W680/40	60 68 90
<hr/>				
CHLORINE HR (KI)	100	51 30 00 BT	40 mm cell W680/40	60 68 90
	250	51 30 01 BT		
ACIDIFYING GP	100	51 54 80 BT		
	250	51 54 81 BT		
Combi pack <sup>#</sup>	each 100	51 77 21 BT		
CHLORINE HR (KI)/	each 250	51 77 22 BT		
ACIDIFYING GP				
<hr/>				
Details on request			13.5 mm cell, 10 ml	35 42 43
<hr/>				
COPPER/ZINC LR	100	51 26 20 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 26 21 BT		
<hr/>				
COPPER/ZINC HR	100	51 23 40 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 23 41 BT		

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Lighting unit with comparator and discs, mains operated

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
DEHA	3/150	8; 16; 24; 32; 40; 48; 56; 64; 80 µg/l Disc reading should be multiplied by 2 for true DEHA concentration	16 - 160 µg/l	23 04 60
Fluoride	NOM	0; 0.2; 0.4; 0.6; 0.8; 1; 1.2; 1.4; 1.6 mg/l	0 - 1.6 mg/l	28 37 30
Hardness, total	4/38	0; 5; 10; 15; 20; 25; 30; 40; 60 mg/l	0 - 60 mg/l CaCO <sub>3</sub>	23 10 70
Hazen/APHA	4/28	50; 75; 100; 150; 200; 250; 300; 400; 500 mg Pt/l	50 - 500 mg/l Pt	24 28 01
Hazen/APHA	NSH	10; 20; 30; 40; 50; 60; 70; 80; 90 mg Pt/l	10 - 90 mg/l Pt	28 41 70
Hazen/APHA	NSB	70; 85; 100; 125; 150; 175; 200; 225; 250 mg Pt/l	70 - 250 mg/l Pt	28 41 20
Hazen/APHA	CAA	0; 2.5; 5; 7.5; 10; 15; 20; 25; 30 mg Pt/l	0 - 30 mg/l Pt	28 41 50
Hazen/APHA	CAB	30; 35; 40; 45; 50; 55; 60; 65; 70 mg Pt/l	30 - 70 mg/l Pt	28 41 60
Hydrazine	3/126	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 01 90
Hydrazine	3/135	0.02; 0.04; 0.06; 0.08; 0.1; 0.12; 0.14; 0.16; 0.2 mg/l	0.02 - 0.2 mg/l	23 02 90
Hydrazine	3/85	0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1 mg/l	0 - 1.0 mg/l	23 85 00
Hydrazine	NOH	0; 0.5; 1; 2; 3; 4; 6; 8; 10 µg	0 - 10 µg/l	28 37 00
Hydrogen peroxide	3/50 A	0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.5 mg/l	0.05 - 0.5 mg/l	23 50 00
Hydrogen peroxide	3/50 B	0.1; 0.2; 0.3; 0.4; 0.6; 1; 1.5; 2; 3 mg/l	0.1 - 3 mg/l	23 50 10

# including stirring rod

Reagents	Quantity	Code	Accessories	Code
DEHA	100	51 32 20 BT	40 mm cell W680/40	60 68 90
	250	51 32 21 BT		
DEHA solution	100 ml	46 11 81		
FLUORIDE A-Z	100	51 14 00 BT	Nessleriser 2150	17 21 50
FLUORIDE EXCESS AL	100	51 14 10	Nessler tubes 113 mm	35 30 60
	250	51 14 11		
ERIOCHROME HARDNESS powder	100 Tests	46 29 50	13.5 mm cell, 10 ml	35 42 43
Straight colour match to sample			40 mm cell W680/40	60 68 90
Straight colour match to sample			Nessleriser 2150	17 21 50
			Nessler tubes 113 mm	35 30 60
Straight colour match to sample			Nessleriser 2150	17 21 50
			Nessler tubes 113 mm	35 30 60
Straight colour match to sample			Nessleriser 2250	17 22 50
			Nessler tubes 250 mm	35 42 00
Straight colour match to sample			Nessleriser 2250	17 22 50
			Nessler tubes 250 mm	35 42 00
HYDRAZINE TEST powder	30 g	46 29 10	13.5 mm cell, 10 ml	35 42 43
HYDRAZINE TEST powder	30 g	46 29 10	40 mm cell W680/40	60 68 90
p-DMAB reagent	100 ml	46 12 61	13.5 mm cell, 10 ml	35 42 43
p-DMAB reagent	100 ml	46 12 61	Nessler tubes 113 mm	35 30 60
HYDR. PEROXIDE LR	100	51 23 80 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 23 81 BT		
HYDR. PEROXIDE LR			13.5 mm cell, 10 ml	35 42 43



Lighting unit TK 102, battery operated

Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Hydrogen peroxide	3/50 E	0.01; 0.02; 0.03; 0.04; 0.05; 0.07; 0.09; 0.12; 0.15 mg/l	0.01 - 0.15 mg/l	23 50 20
Iodine	3/77A	0.4; 0.7; 1.1; 1.4; 1.8; 2.2; 2.5; 2.9; 3.6 mg/l	0.4 - 3.6 mg/l	23 77 10
Iodine	3/77B	0.7; 1.4; 2.2; 3.6; 5.4; 7.2; 9.0; 11; 14 mg/l	0.7 - 14 mg/l	23 77 20
Iron, total	3/144	0.02; 0.04; 0.06; 0.08; 0.1; 0.15; 0.2; 0.25; 0.3 mg/l	0.02 - 0.3 mg/l	23 03 80
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
Iron, total	NOL	0.01; 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.10 mg/l	0.01 - 0.1 mg/l	28 37 20
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
Molybdate	3/162	0; 1; 2; 3; 4; 5; 6; 8; 10 mg/l	0 -10 mg/l MoO <sub>4</sub>	23 06 20
Molybdate	3/137	5; 10; 15; 20; 25; 30; 35; 40; 50 mg/l	5.0 -50 mg/l MoO <sub>4</sub>	23 03 20
Molybdate	3/138	10; 20; 30; 40; 60; 80; 100; 120; 150 mg/l	10 -150 mg/l MoO <sub>4</sub>	23 03 30

# including stirring rod



Reagents	Quantity	Code	Accessories	Code
HYDR. PEROXIDE LR			40 mm cell W680/40	60 68 90
DPD No.1	100 250	51 10 50 BT 51 10 51 BT	13.5 mm cell, 10 ml	35 42 43
DPD No.1			13.5 mm cell, 10 ml	35 42 43
IRON LR (Fe <sup>2+</sup> and Fe <sup>3+</sup> )	100 250	51 53 70 BT 51 53 71 BT	40 mm cell W680/40	60 68 90
IRON LR (Fe <sup>2+</sup> and Fe <sup>3+</sup> )	100 250	51 53 70 BT 51 53 71 BT	13.5 mm cell, 10 ml	35 42 43
IRON (II) LR (Fe <sup>2+</sup> )	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
IRON LR + IRON (II) LR			Nessleriser 2150 Nessler tubes 113 mm	17 21 50 35 30 60
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 <sup>#</sup> MANGANESE LR 1/ MANGANESE LR 2	each 100 each 250	51 76 21 BT 51 76 22 BT		
Details on request			40 mm cell W680/40	60 68 90
MOLYBDATE No.1 HR	100 250	51 30 60 BT 51 30 61 BT	40 mm cell W680/40	60 68 90
MOLYBDATE No.2 HR	100 250	51 30 70 BT 51 30 71 BT		
Combi pack <sup>#</sup> MOLYBDATE No.1 HR / MOLYBDATE No.2 HR	each 100 each 250	51 76 31 BT 51 76 32 BT		
MOLYBDATE No.1 HR MOLYBDATE No.2 HR			13.5 mm cell, 10 ml	35 42 43



Tablet reagents in blister (BT)

 Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Nitrate	3/124	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 N	23 01 70
Nitrate	3/142	10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	10 - 100 mg/l N	23 03 60
Nitrite	3/103	0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.5 mg/l	0.05 - 0.5 mg/l N	23 00 30
Nitrite	NJP	0.002; 0.004; 0.006; 0.01; 0.015; 0.02; 0.03; 0.04; 0.05 mg/l	0.002 - 0.05 mg/l N	28 39 60
Nitrite	NJ	0.05; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1 µg/l	0.05 - 1.0 µg/l N	28 35 80
Oxygen	3/165	2; 3; 4; 5; 6; 7; 8; 10; 12 mg/l	2.0 - 12 mg/l	23 06 50
Ozone	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	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	3/67S	0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.45 mg/l	0.05 - 0.45 mg/l	23 67 70
Ozone	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

# including stirring rod

Reagents	Quantity	Code	Accessories	Code
NITRATE-TEST tablets	100 (bottle)	50 28 10	13.5 mm cell, 10 ml	35 42 43
NITRATE TEST powder	15 g	46 52 30	Nitrate-Test tubes	36 62 20
NITRITE LR	100	51 23 10BT		
	250	51 23 11BT		
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		
NITRITE LR	100	51 23 10BT	13.5 mm cell, 10 ml	35 42 43
	250	51 23 11BT		
NITRITE LR	100	51 23 10BT	Nessler tubes 113 mm	35 30 60
	250	51 23 11BT		
NITRITE ACIDIFYING	250 (bottle)	50 23 71		
Details on request			Nessler tubes 113 mm	35 30 60
DO reagent No.1	100 Tests	46 11 50	13.5 mm cell, 10 ml	35 42 43
DO reagent No.2	100 Tests	46 11 60		
DO reagent No.3	90 Tests	46 11 70		
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		
DPD No.4	100	51 12 20 BT	13.5 mm cell, 10 ml	35 42 43
	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		



Tablet reagents in blister (BT)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
pH	2/1A	1.2; 1.4; 1.6; 1.8; 2.0; 2.2; 2.4; 2.6; 2.8	1.2 - 2.8 pH	22 10 10
pH	2/1B	2.8; 3; 3.2; 3.4; 3.6; 3.8; 4; 4.2; 4.4	2.8 - 4.4 pH	22 10 30
pH	2/1C	3.6; 3.8; 4; 4.2; 4.4; 4.6; 4.8; 5; 5.2	3.6 - 5.2 pH	22 10 50
pH	2/1E	4.4; 4.6; 4.8; 5; 5.2; 5.4; 5.6; 5.8; 6	4.4 - 6.0 pH	22 10 80
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	2/1H	6; 6.2; 6.4; 6.6; 6.8; 7; 7.2; 7.4; 7.6	6.0 - 7.6 pH	22 11 10
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	2/1K	7.2; 7.4; 7.6; 7.8; 8; 8.2; 8.4; 8.6; 8.8	7.2 - 8.8 pH	22 11 40
pH	2/1L	8; 8.2; 8.4; 8.6; 8.8; 9; 9.2; 9.4; 9.6	8.0 - 9.6 pH	22 11 90
pH	2/1P	4; 5; 6; 7; 8; 9; 9.4; 10; 11	4.0 - 11 pH	22 12 20
pH	2/1W	1.0; 1.2; 1.4; 1.6; 1.8; 2.0; 2.2; 2.4; 2.6	1.0 - 2.6 pH	22 12 50
pH	2/1Z	7.6; 7.8; 8; 8.2; 8.4; 8.6; 8.8; 9.0; 9.2	7.6 - 9.2 pH	22 12 70
pH	NLC	6; 6.2; 6.4; 6.6; 6.8; 7; 7.2; 7.4; 7.6	6.0 - 7.6 pH	28 10 30
pH	NLF	8; 8.2; 8.4; 8.6; 8.8; 9; 9.2; 9.4; 9.6	8.0 - 9.6 pH	28 10 60

# including stirring rod

Reagents	Quantity	Code	Accessories	Code
THYMOL BLUE	100 250	51 16 50 51 16 51	13.5 mm cell, 10 ml	35 42 43
BROMOPHENOL BLUE	100 250	51 16 20 51 16 21	13.5 mm cell, 10 ml	35 42 43
BROMOCRESOL GREEN	100 250	51 17 60 51 17 61	13.5 mm cell, 10 ml	35 42 43
METHYL RED	100 ml	45 16 31	13.5 mm cell, 10 ml	35 42 43
BROMOCRESOL PURPLE	100 250	51 17 30 51 17 31	13.5 mm cell, 10 ml	35 42 43
BROMOTHYMOL BLUE	100 250	51 16 40 BT 51 16 41 BT	13.5 mm cell, 10 ml	35 42 43
PHENOL RED	100 250	51 17 50 BT 51 17 51 BT	13.5 mm cell, 10 ml	35 42 43
CRESOL RED	100 250	51 16 00 51 16 01	13.5 mm cell, 10 ml	35 42 43
THYMOL BLUE	100 250	51 16 50 51 16 51	13.5 mm cell, 10 ml	35 42 43
UNIVERSAL PH Indicator	25 ml 100 ml 250 ml	45 17 70 45 17 71 45 17 72	13.5 mm cell, 10 ml	35 42 43
M-CRESOL PURPLE	100 250	51 17 10 BT 51 17 11 BT	13.5 mm cell, 10 ml	35 42 43
M-CRESOL PURPLE	100 250	51 17 10 BT 51 17 11 BT	13.5 mm cell, 10 ml	35 42 43
BROMOTHYMOL BLUE PH Indicator	25 ml 100 ml 250 ml	45 16 20 45 16 21 45 16 22	Nessler tubes 113 mm	35 30 60
THYMOL BLAU PH Indicator	25 ml 100 ml 250 ml 500 ml	45 16 50 45 16 51 45 16 52 45 16 53	Nessler tubes 113 mm	35 30 60



Test disc

Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)

# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Phosphate	3/133	0; 0.25; 0.5; 1; 1.5; 2; 2.5; 3; 4 mg/l	0 - 4.0 mg/l PO <sub>4</sub>	23 02 70
Phosphate	3/136	0; 5; 10; 15; 20; 25; 30; 35; 40 mg/l	0 - 40 mg/l PO <sub>4</sub>	23 03 10
Phosphate	3/12	0; 10; 20; 30; 40; 50; 60; 70; 80 mg/l	0 - 80 mg/l PO <sub>4</sub>	23 12 00
Phosphate	3/70	0; 10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	0 - 100 mg/l PO <sub>4</sub>	23 70 00
Phosphate	3/60	10; 20; 30; 40; 50; 60; 70; 80; 100 mg/l	10 - 100 mg/l PO <sub>4</sub>	23 60 00
Phosphate	NMD	10; 20; 30; 40; 50; 60; 70; 80; 100 µg/l	10 - 100 µg/l PO <sub>4</sub>	28 39 50
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
Silica	3/139	0.4; 0.6; 1; 1.5; 2; 2.5; 3; 3.5; 4 mg/l	0.4 - 4.0 mg/l SiO <sub>2</sub>	23 03 40
Silica	3/147	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l SiO <sub>2</sub>	23 04 20
Silica	3/140	0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 1.0 mg/l	0.1 - 1.0 mg/l SiO <sub>2</sub>	23 02 50
Silica	3/13	2.5; 5; 7.5; 10; 12.5; 15; 17.5; 20; 25 mg/l	2.5 - 25 mg/l SiO <sub>2</sub>	23 13 00
Silica	NN	1; 2; 4; 6; 8; 10; 12; 16; 20 mg/l	1.0 - 20 mg/l SiO <sub>2</sub>	28 36 30

# including stirring rod

Reagents	Quantity	Code	Accessories	Code
PHOSPHATE No.1 LR	100	51 30 40 BT	13.5 mm cell, 10 ml	35 42 43
PHOSPHATE No.2 LR	100	51 30 50 BT		
Combi pack#	each 100	51 76 51 BT		
PHOSPHATE No.1 LR / No.2 LR				
PHOSPHATE HR	100 250	51 19 80 BT 51 19 81 BT	13.5 mm cell, 10 ml	35 42 43
Details on request			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
Vanadomolybdat- reagent	1 litre	46 84 04	13.5 mm cell, 10 ml	35 42 43
Details on request			Nessler tubes 113 mm	35 30 60
QAC LR	100 250	51 53 90 BT 51 53 91 BT	40 mm cell W680/40	60 68 90
ACIDIFYING GP	100 250	51 54 80 BT 51 54 81 BT		
QAC HR	100 250	51 54 00 51 54 01	13.5 mm cell, 10 ml	35 42 43
ACIDIFYING GP	100 250	51 54 80 BT 51 54 81 BT		
SILICA No.1	100 250	51 31 30 BT 51 31 31 BT	13.5 mm cell, 10 ml	35 42 43
SILICA No.2	100 250	51 31 40 BT 51 31 41 BT		
Combi pack#	each 100	51 76 71 BT		
SILICA No.1 / No.2	each 200	51 76 72 BT		
SILICA No.1/No.2			13.5 mm cell, 10 ml	35 42 43
Details on request			40 mm cell W680/40	60 68 90
Ammonia molybdate	100 ml	46 02 41	40 mm cell W680/40	60 68 90
Ammonia molybdate	100 ml	46 02 41	Nessleriser 2150 Nessler tubes 113 mm	17 21 50 35 30 60



Test disc

 Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)



# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code
Silica	NV	0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9; 1.0 mg/l	0.2 - 1.0 mg/l SiO <sub>2</sub>	28 38 80
Sodiumhypochlorite	3/2 Hypo	2; 4; 6; 8; 10; 12; 14; 16 %	2 - 16 %	23 21 10
Sugar	3/29A	0; 5; 10; 15; 30; 45; 60; 75; 100 mg/l	0 - 100 mg/l	23 29 10
Sulphide	3/128	0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.4; 0.5 mg/l	0 - 0.5 mg/l S	23 02 10
Zinc	3/151	0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1 mg/l	0 - 1.0 mg/l	23 04 70
Zinc	3/102	0; 0.5; 1; 1.5; 2; 2.5; 3; 3.5; 4 mg/l	0 - 4.0 mg/l	23 00 20

# including stirring rod



### Certification for Comparator 2000+ Discs

To allow users to demonstrate that test equipment has been assessed for conformance with accepted quality standards, Lovibond® colour discs can be certified by Tintometer Group to conform to ISO 9001. If requested at the time of order, new discs are issued with a serial number and a certificate of conformance stating that the disc has satisfied the relevant inspection criteria and conforms to the requirements of the appropriate test. Depending on the requirements of the user's quality control system, used discs can be returned at regular intervals to Tintometer Group for checking and recertification.

Code	Type of certificate
999800	Certificate for a new test disc
999810	Certificate for a used test disc
999820	Calibration certificate for a new test disc
999830	Calibration certificate for a used test disc

Reagents	Quantity	Code	Accessories	Code
Details on request			Nessler tubes 113 mm	35 30 60
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 <sup>#</sup>	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		
Details on request			5 mm cell W680/5	60 67 90
SULPHIDE No.1	100 (bottle)	50 29 30	13.5 mm cell, 10 ml	35 42 43
SULPHIDE No.2	100 (bottle)	50 29 40		
COPPER/ZINC LR	100	51 26 20 BT	13.5 mm cell, 10 ml	35 42 43
COPPER/ZINC LR	250	51 26 21 BT		
COPPER/ZINC HR	100	51 23 40 BT	13.5 mm cell, 10 ml	35 42 43
COPPER/ZINC HR	250	51 23 41 BT		

Material Safety Data Sheets: [www.lovibond.com](http://www.lovibond.com)



Tablet reagents in foil blister strip (BT)