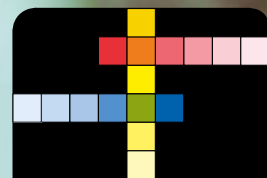


# Comparators



Lovibond®

since 1885



Distributed By:

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**CHECKIT®Comparator**  
Page 18



**Comparator 2000+**  
Page 32



**Comparator ECPt-Co**  
Page 50



# CHECKIT<sup>®</sup>Comparator





CHECKIT® Comparator Test Kits are accurate, easy to use test kits for water analysis. Simply add the reagent to the sample cell, rotate the disc until the colour matches the prepared water sample and read the concentration value.

### CHECKIT® Comparator

The Lovibond® CHECKIT® Comparator is a compact and handy colorimetric unit which is suitable for both mobile and static analysis work. Supplied with a generous number of different colour scales, it provides the basis for a comprehensive, easy-to-use colorimetric analysis system.

### CHECKIT® Disc

Each CHECKIT® Disc contains a continuous colour scale which makes it possible to achieve an exact colour match between the colour standard and the sample. These CHECKIT® Discs are specially manufactured in selected materials to retain colour stability over a long period and guarantee reliable, reproducible measurement results.

### Applications

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

➤ Please see pages 22 onwards for tests, ranges and reagents



Front view of the CHECKIT® Comparator with cells



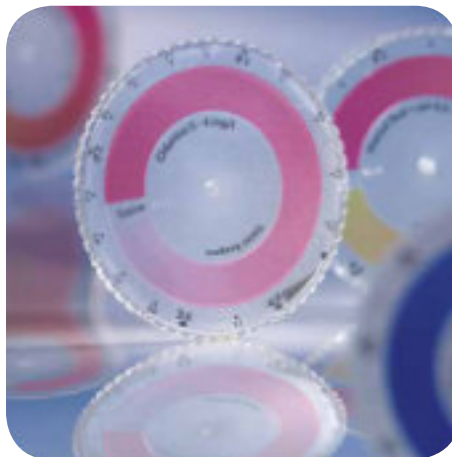
Rear view of the CHECKIT® Comparator with dif user plate, cells and disc



Complete TestKit with reagent in carrying case, ready to use



Plastic cells, frosted on two sides, volume 10 ml, path length 13.5 mm, with lids



CHECKIT® Discs with continuous and stable scales



Tablet reagents in blister packaging



Plastic cells in pack, available:

- 5 cells - 14 55 05
- 10 cells - 14 55 00
- 100 cells - 14 55 10



## Delivery content

- CHECKIT® Comparator
- CHECKIT® Disc(s)
- Reagents for an average of 30 tests
- Cuvettes
- Accessories
- Instruction manual
- Warranty information
- in portable case





## Single Parameter Test Kits

Test	Range* (± 5 % F.S.)	Best-Nr.
Acid Capacity K <sub>S4.3</sub>	0.5 - 5 mmol/l	14 74 60
Aluminium	0 - 0.3 mg/l Al	14 72 00
Ammonia	0 - 1 mg/l N	14 72 10
Ammonium, Powder Pack	0 - 0.5 mg/l N	14 72 11
Bromine	0 - 5 mg/l Br	14 72 80
Chlorine (DPD)** free, combined, total	0.02 - 0.3 mg/l Cl <sub>2</sub>	14 70 00
Chlorine (DPD) free, combined, total	0 - 1 mg/l Cl <sub>2</sub>	14 70 10
Chlorine (DPD) free, combined, total	0 - 2 mg/l Cl <sub>2</sub>	14 70 40
Chlorine, free (DPD), Powder Pack	0 - 3.5 mg/l Cl <sub>2</sub>	14 70 50
Chlorine, total (DPD), Powder Pack	0 - 3.5 mg/l Cl <sub>2</sub>	14 70 51
Chlorine free + total (DPD), Powder Packs	0 - 3.5 mg/l Cl <sub>2</sub>	14 70 52
Chlorine (DPD) free, combined, total	0 - 4 mg/l Cl <sub>2</sub>	14 70 20
Chlorine KI	10 - 300 mg/l Cl <sub>2</sub> (total)	14 70 30
Chlorine dioxide**	0.01 - 0.2 mg/l ClO <sub>2</sub>	14 73 30
Copper, free (Cu <sup>2+</sup> )	0 - 1 mg/l Cu	14 72 30
Copper HR, free + total	0 - 5 mg/l Cu	14 74 30
Copper HR, free, Powder Pack	0 - 5 mg/l Cu	14 74 31
Copper LR**, free + total	0 - 1 mg/l Cu	14 74 40
Copper LR**, free, Powder Pack	0 - 1 mg/l Cu	14 74 41
DEHA	0 - 0.5 mg/l DEHA	14 73 70
Fluoride, Testpak available only	0.2 - 2 mg/l F <sup>-</sup>	
Iron HR	0 - 10 mg/l Fe	14 73 20
Iron LR	0.05 - 1 mg/l Fe	14 72 20
Iron (TPTZ), Powder Pack	0 - 1.8 mg/l Fe	14 74 70
Manganese LR, Testpak available only	0.1 - 0.7 mg/l Mn	
Manganese VLR**, Testpak available only	0.02 - 0.2 mg/l Mn	
Molybdate LR**	0 - 10 mg/l MoO <sub>4</sub>	14 72 91
Molybdate HR	0 - 100 mg/l MoO <sub>4</sub>	14 72 90
Molybdate HR	50 - 500 mg/l MoO <sub>4</sub>	14 72 95
Nitrate LR, Testpak available only	0 - 1 mg/l NO <sub>3</sub>	
Nitrite LR	0 - 0.5 mg/l N	14 73 00
Nitrite, Powder Pack	0 - 0.3 mg/l N	14 73 01
Ozon (DPD), in the presence of chlorine	0 - 1.0 mg/l O <sub>3</sub>	14 72 70
Ozon (DPD)	0 - 1.0 mg/l O <sub>3</sub>	14 72 75
pH value (Phenol red)	6.5 - 8.4 pH	14 71 00
pH value (Bromocresolpurple)	5.2 - 6.8 pH	14 71 10
pH value (Bromocresolpurple)	6.0 - 7.6 pH	14 71 20
pH value (Universal)	4 - 10 pH	14 71 30
Phosphate, Powder Pack	0 - 2.5 mg/l PO <sub>4</sub>	14 74 80
Phosphate HR	0 - 80 mg/l PO <sub>4</sub>	14 72 50
Phosphate LR	0 - 4 mg/l PO <sub>4</sub>	14 72 40
Silica LR	0.25 - 4 mg/l SiO <sub>2</sub>	14 73 50
Silica HR, Powder Pack	0 - 100 mg/l SiO <sub>2</sub>	14 73 51
Silica VLR**	0 - 1 mg/l SiO <sub>2</sub>	14 73 60
Sodium hypochlorite	2 - 18 %	14 74 90
Sulfate LR	0.5 - 10 mg/l SO <sub>3</sub>	14 73 80
Total Alkalinity	20 - 240 mg/l CaCO <sub>3</sub>	14 74 50
Zinc LR	0 - 1 mg/l Zn	14 73 40

\* Discardings see following pages  
 \*\* Only with CHECKIT® Comparator D55  
 with mirror optics (path length 55 mm)

 Green Chemistry  
 also suitable for seawater

## Test Kits 2in1

Test Kit	Code
Chlorine 0 – 1.0 mg/l Cl <sub>2</sub> * 	14 70 15
pH value 6.5 – 8.4 pH	
Pool version	14 70 16
Chlorine 0.1 – 2.0 mg/l Cl <sub>2</sub> * 	14 70 45
pH value 6.5 – 8.4 pH	
Pool version	14 70 46
Chlorine 0 – 4.0 mg/l Cl <sub>2</sub> * 	14 70 25
pH value 6.5 – 8.4 pH	
Pool version	14 70 26
Bromine 0 – 5.0 mg/l Br 	14 72 85
pH value 6.5 – 8.4 pH	
Copper 0 – 1.0 mg/l Cu	14 72 35
pH value 6.5 – 8.4 pH	

Water Balance	Code
Chlorine 0 – 4.0 mg/l Cl <sub>2</sub> *	14 70 28
pH value 6.5 – 8.4 pH	
Cyanuric acid (Turbidity method)**	
20 – 200 mg/l Cys	
Calcium hardness (Speed-Test)**	
20 – 800 mg/l CaCO <sub>3</sub>	
Total Alkalinity (M) (Speed-Test)**	
20 – 800 mg/l CaCO <sub>3</sub>	

Discardings see following pages.  
 \*All test kits for chlorine are for "free, combined and total chlorine".  
 \*\*Reagents for turbidity method and speed test (Test-Kit 5 in 1) see MINIKIT.

## Testpak

The Testpak concept makes it easy to add new parameters to the CHECKIT® Comparator.

The only requirement is the CHECKIT® Comparator as the basic unit, Code: 14 50 00.

For test paks, see the following pages.
















# CHECKIT<sup>®</sup>Comparator

## Tests, Test Kits, Testpaks, Discs, Reagents

Test	Range	Readings (Accuracy $\pm$ 5 % Full Scale)	Test Kit	Testpak
<b>Aluminium</b>	0 - 0.3 mg/l Al	0 / 0.01 / 0.02 / 0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3	14 72 00	14 77 00
<b>Ammonia</b>	0 - 1 mg/l N	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.9 / 0.95 / 1.0	14 72 10	14 77 10
<b>Ammonia VARIO</b>	0 - 0.5 mg/l N	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5	14 72 11	14 77 11
<b>Bromine</b>	0 - 5 mg/l Br	0 / 0.2 / 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.4 / 1.6 / 1.8 / 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5	14 72 80	14 77 80
<b>Chlorine</b> free, combined**, total	0 - 1 mg/l Cl <sub>2</sub>	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.85 / 0.9 / 0.95 / 1.0	14 70 10	14 75 10
<b>Chlorine</b> free, combined**, total	0 - 2 mg/l Cl <sub>2</sub>	0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0 / 1.1 / 1.2 / 1.3 / 1.4 / 1.6 / 1.8 / 2.0	14 70 40	14 75 40
<b>Chlorine</b> free, combined**, total	0 - 4 mg/l Cl <sub>2</sub>	0 / 0.2 / 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.4 / 1.6 / 1.8 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0	14 70 20	14 75 20
<b>Chlorine</b> free, combined**, total	0 - 3.5 mg/l Cl <sub>2</sub>	0 / 0.2 / 0.4 / 0.6 / 0.8 / 1 / 1.2 / 1.4 / 1.6 / 1.8 / 2 / 2.2 / 2.4 / 2.6 / 2.8 / 3 / 3.2 / 3.4 / 3.5	14 70 52	14 75 50, free 14 75 51, total
<b>Chlorine</b> free, combined**, total	0.02 - 0.3 mg/l Cl <sub>2</sub>	0.02 / 0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.1 / 0.11 / 0.12 / 0.13 / 0.14 / 0.15 / 0.16 / 0.17 / 0.18 / 0.19 / 0.2 / 0.22 / 0.24 / 0.26 / 0.28 / 0.3	14 70 00	14 75 00
**may be calculated by deducting free from = total chlorine		only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm) Code: 14 50 10		

\* RAPID: fast dissolving tablet  
# including stirring rod


Disc	Reagent	Quantity	Code	
14 62 00	ALUMINIUM No.1	100	51 54 60 BT	
		250	51 54 61 BT	
	ALUMINIUM No.2	100	51 54 70 BT	
		250	51 54 71 BT	
	Combi pack <sup>#</sup> ALUMINIUM No.1 / No.2	each 100 each 250	51 76 01 BT 51 76 02 BT	
14 62 10	AMMONIA No.1	100	51 25 80 BT	
		250	51 25 81 BT	
	AMMONIA No.2	100	51 25 90 BT	
		250	51 25 91 BT	
	Combi pack <sup>#</sup> AMMONIA No.1 / No.2	each 100 each 250	51 76 11 BT 51 76 12 BT	
14 62 11	VARIO Ammonia Salicylate F10 VARIO Ammonia Cyanurate F10	Powder Pack/ 200 Powder Pack/ 200 Set	53 55 00	
14 62 80	DPD No.1-RAPID* 	100	51 13 10 BT	
		250	51 13 11 BT	
		500	51 13 12 BT	
14 60 10	DPD No.1-RAPID* 	100	51 13 10 BT	
		250	51 13 11 BT	
		500	51 13 12 BT	
	DPD No.3-RAPID* 	100	51 12 90 BT	
		250	51 12 91 BT	
	DPD No.4-RAPID* 	500	51 12 92 BT	
		100	51 15 70 BT	
	250	51 15 71 BT		
	500	51 15 72 BT		
14 60 40	DPD No.1/3/4-RAPID* 			
14 60 20	DPD No.1/3/4-RAPID* 			
14 60 50	VARIO Chlorine Free DPDF5 	100	53 00 90	
	VARIO Chlorine Total DPDF5 	100	53 00 80	
14 60 00	DPD No.1 	100	51 10 50 BT	
		250	51 10 51 BT	
		500	51 10 52 BT	
	DPD No.3 	100	51 10 80 BT	
		250	51 10 81 BT	
		500	51 10 82 BT	
	Combi pack <sup>#</sup> 	each 100	51 77 11 BT	
		each 250	51 77 12 BT	
		DPD No.1 / No.3		



CHECKIT® Discs

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

f) additionally required for determination of chlorine dioxide / ozone in the presence of chlorine

 Green Chemistry







# CHECKIT<sup>®</sup>Comparator

## Tests, Test Kits, Testpaks, Discs, Reagents

Test	Range	Readings (Accuracy ± 5 % Full Scale)	Test Kit	Testpak
<b>Chlorine KI</b> total only	10 - 300 mg/l Cl <sub>2</sub>	10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 110 / 120 / 130 / 140 / 150 / 160 / 170 / 180 / 190 / 200 / 250 / 300	14 70 30	14 75 30
<b>Chlorine dioxide</b>	0.01 - 0.2 mg/l ClO <sub>2</sub>	0.01 / 0.02 / 0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.1 / 0.11 / 0.12 / 0.13 / 0.14 / 0.15 / 0.16 / 0.17 / 0.18 / 0.19 / 0.2 only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm) Code: 14 50 10	14 73 30	14 78 30
<b>DEHA</b>	0 - 0.5 mg/l DEHA	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5	14 73 70	14 78 70
<b>Iron LR</b>	0 - 1 mg/l Fe	0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.9 / 1.0	14 72 20	14 77 20
<b>Iron HR</b>	1 - 10 mg/l Fe	1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7 / 7.5 / 8 / 8.5 / 9 / 10	14 73 20	14 78 20
<b>Iron (TPTZ)</b>	0 - 1.8 mg/l Fe	0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1 / 1.1 / 1.2 / 1.3 / 1.4 / 1.5 / 1.6 / 1.7 / 1.8	14 74 70	14 79 70
<b>Fluoride</b> Testpak available only	0.2 - 2 mg/l F	0.2 / 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.4 / 1.6 / 1.8 / 2.0	-	14 78 90
<b>Copper, free (Cu<sup>2+</sup>)</b>	0 - 1 mg/l Cu	0 / 0.1 / .2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0	14 72 30	14 77 30
<b>Copper LR</b> free and total	0 - 1 mg/l Cu	0 / 0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0 only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm)	14 74 40	14 79 40
<b>Copper LR,</b> only free	0 - 1 mg/l Cu	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0 only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm)	14 74 41	14 79 41

\* RAPID: fast dissolving tablet  
# including stirring rod




Disc	Reagent	Quantity	Code
14 60 30	CHLORINE HR (KI)	100	51 30 00 BT
		250	51 30 01 BT
	ACIDIFYING GP	100	51 54 80 BT
		250	51 54 81 BT
	Combi pack <sup>#</sup> CHLORINEHR (KI)/ACIDIFYING GP	each 100 each 250	51 77 21 BT 51 77 22 BT
14 63 30	DPD No. 1 	100	51 10 50 BT
		250	51 10 51 BT
	DPD Glycine <sup>f)</sup>	100	51 21 70 BT
		250	51 21 71 BT
	Combi pack <sup>#</sup> DPD No.1 / GLYCINE	each 100 each 250	51 77 31 BT 51 77 32 BT
14 63 70	DEHA	100	51 32 20 BT
		250	51 32 21 BT
	DEHA Solution	15 ml	46 11 85
	DEHA Solution	100 ml	46 11 81
14 62 20	IRON LR (Fe <sup>2+</sup> und Fe <sup>3+</sup> )	100	51 53 70 BT
		250	51 53 71 BT
	IRON (II) LR (Fe <sup>2+</sup> )	100	51 54 20 BT
14 63 20	IRON HR	100	51 53 80 BT
		250	51 53 81 BT
14 64 70	Vario Iron TPTZF10	100	53 05 50
14 63 90	SPADNS reagent solution	250 ml	46 74 81
		500 ml	46 74 82
	Help for pipette	1	36 50 55
	Pipette 2 ml	1	36 50 50
14 62 30	COPPER/ZINC LR	100	51 26 20 BT
		250	51 26 21 BT
14 64 40	COPPER No. 1 	100	51 35 50 BT
		250	51 35 51 BT
	COPPER No. 2	100	51 35 60 BT
		250	51 35 61 BT
	Combi pack <sup>#</sup> COPPER No.1 / No.2	each 100 each 250	51 76 91 BT 51 76 92 BT
14 64 41	Vario Cu1 F10	100	53 03 00



TestKit complete in case

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

f) additionally required for determination of chlorine dioxide / ozone in the presence of chlorine

 Green Chemistry




# CHECKIT<sup>®</sup>Comparator

## Tests, Test Kits, Testpaks, Discs, Reagents

Test	Range	Readings (Accuracy ± 5 % Full Scale)	Test Kit	Testpak
<b>Copper HR</b> free and total	0 - 5 mg/l Cu	0 / 0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0 / 4.5 / 5.0	14 74 30	14 79 30
<b>Copper HR, free only</b>	0 - 5 mg/l Cu	0 / 0.5 / 1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 5	14 74 31	14 79 31
<b>Manganese LR</b> Testpak available only	0.1 - 0.7 mg/l Mn	0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7	-	14 79 10
<b>Manganese VLR</b> Testpak available only	0.02 - 0.2 mg/l Mn	0.02 / 0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.1 / 0.11 / 0.12 / 0.13 / 0.14 / 0.15 / 0.16 / 0.18 / 0.2 only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm)	-	14 79 20
<b>Molybdate HR</b>	0 - 100 mg/l MoO <sub>4</sub>	0 / 5 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 / 55 / 60 / 65 / 70 / 75 / 80 / 85 / 90 / 95 / 100	14 72 90	14 77 90
<b>Molybdate HR</b>	50 - 500 mg/l MoO <sub>4</sub>	50 / 100 / 150 / 200 / 250 / 300 / 500	14 72 95	14 77 95
<b>Molybdate LR</b>	0 - 10 mg/l MoO <sub>4</sub>	0 / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 only with CHECKIT <sup>®</sup> ComparatorD55 with mirror optics (path length 55 mm)	14 72 91	14 77 91

\* RAPID:fast dissolving tablet  
# including stirring rod




Disc	Reagent	Quantity	Code
14 64 30	COPPER No. 1 	100	51 35 50 BT
		250	51 35 51 BT
	COPPER No. 2	100	51 35 60 BT
		250	51 35 61 BT
	Combi pack <sup>#</sup> COPPER No.1 / No.2	each 100 each 250	51 76 91 BT 51 76 92 BT
14 64 31	Vario Cu1 F10	100	53 03 00
14 64 10	VARIO Manganese Reagent, LRF10 consists of:	<b>1 Set</b>	53 50 90
	VARIO Alkaline-Cyanide Solution	60 ml	
	Vario Ascorbic Acid	100	
	Vario PAN Indicator Solution	60 ml	
	Accessories: VARIO Rochelle Salt Solution needed for samples with hardness values above 300 mg/l CaCO <sub>3</sub>	30 ml	
14 64 20	VARIO Manganese Reagent, LRF10 consists of:	<b>1 Set</b>	53 50 90
	VARIO Alkaline-Cyanide Solution	60 ml	
	Vario Ascorbic Acid	100	
	Vario PAN Indicator Solution	60 ml	
	Accessories: VARIO Rochelle Salt Solution needed for samples with hardness values above 300 mg/l CaCO <sub>3</sub>	30 ml	
14 62 90	MOLYBDATENo. 1 HR	100	51 30 60 BT
		250	51 30 61 BT
	MOLYBDATENo. 2 HR	100	51 30 70 BT
		250	51 30 71 BT
	Combi pack <sup>#</sup> MOLYBDATENo.1 HR/ No.2 HR	each 100 each 250	51 76 31 BT 51 76 32 BT
14 62 95	MOLYBDATENo. 1 HR	100	51 30 60 BT
		250	51 30 61 BT
	MOLYBDATENo. 2 HR	100	51 30 70 BT
		250	51 30 71 BT
	Combi pack <sup>#</sup> MOLYBDATENo.1 HR/ No.2 HR	each 100 each 250	51 76 31 BT 51 76 32 BT
14 62 91	MOLYBDATENo. 1 HR	100	51 30 60 BT
		250	51 30 61 BT
	MOLYBDATENo. 2 HR	100	51 30 70 BT
		250	51 30 71 BT
	Combi pack <sup>#</sup> MOLYBDATENo.1 HR/ No.2 HR	each 100 each 250	51 76 31 BT 51 76 32 BT



Plastic cells, volume 10 ml

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

f) additionally required for determination of chlorine dioxide / ozone in the presence of chlorine

 Green Chemistry






# CHECKIT<sup>®</sup>Comparator

## Tests, Test Kits, Testpaks, Discs, Reagents

Test	Range	Readings (Accuracy ± 5 % Full Scale)	Test Kit	Testpak
<b>Sodiumhypochlorite</b>	2 - 18 %	2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 / 16 / 18	14 74 90	14 79 90
<b>Nitrate LR</b> to order as a testpak only	0 - 1 mg/l N	0 / 0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0	-	14 78 10
<b>Nitrite LR</b>	0 - 0.5 mg/l N	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5	14 73 00	14 78 00
<b>Nitrite VARIO</b>	0 - 0.3 mg/l N	0 / 0.01 / 0.02 / 0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.10 0.11 / 0.12 / 0.13 / 0.14 / 0.15 / 0.16 / 0.17 / 0.18 / 0.19 / 0.20 0.21 / 0.22 / 0.23 / 0.24 / 0.25 / 0.26 / 0.27 / 0.28 / 0.29 / 0.30	14 73 01	14 78 01
<b>Ozone (DPD)</b> in the presence of chlorine	0 - 1.0 mg/l O <sub>3</sub>	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.9 / 1.0	14 72 70	14 77 70
<b>Ozone (DPD)</b>	0 - 1.0 mg/l O <sub>3</sub>	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.9 / 1.0	14 72 75	14 77 75
<b>pH</b>	5.2 - 6.8 pH	5.2 / 5.3 / 5.4 / 5.5 / 5.6 / 5.7 / 5.8 / 5.9 / 6.0 / 6.1 / 6.2 / 6.3 / 6.4 / 6.5 / 6.6 / 6.7 / 6.8	14 71 10	14 76 10
	6.0 - 7.6 pH	6.0 / 6.1 / 6.2 / 6.3 / 6.4 / 6.5 / 6.6 / 6.7 / 6.8 / 6.9 / 7.0 / 7.1 / 7.2 / 7.3 / 7.4 / 7.5 / 7.6	14 71 20	14 76 20
	6.5 - 8.4 pH	6.5 / 6.6 / 6.7 / 6.8 / 6.9 / 7.0 / 7.1 / 7.2 / 7.3 / 7.4 / 7.5 / 7.6 / 7.7 / 7.8 / 7.9 / 8.0 / 8.1 / 8.2 / 8.3 / 8.4	14 71 00	14 76 00
<b>pH-Universal</b>	4 - 10 pH	4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7 / 7.5 / 8 / 8.5 / 9 / 9.5 / 10	14 71 30	14 76 30
<b>Phosphate LR</b>	0 - 4 mg/l PO <sub>4</sub>	0 / 0.25 / 0.5 / 0.75 / 1.0 / 1.25 / 1.5 / 1.75 / 2.0 / 2.25 / 2.5 / 2.75 / 3.0 / 3.25 / 3.5 / 3.75 / 4.0	14 72 40	14 77 40

\* RAPID: fast dissolving tablet  
# including stirring rod


Disc	Reagent	Quantity	Code
14 64 90	CHLORINE HR (KI)	100	51 30 00 BT
		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
14 63 10	CHLORINE HR (KI)/ACIDIFYING GP	each 250	51 77 22 BT
	Dilution set for sample preparation	1	41 44 70
14 63 00	NITRITE LR	100	51 23 10BT
		250	51 23 11BT
	NITRATE-Testtablets	100 (bottle)	50 28 10
	NITRATE Test powder	15 g	46 52 30
14 63 01	NITRATE Test tubes	1	36 62 20
14 63 00	NITRITE LR	100	51 23 10BT
		250	51 23 11BT
14 63 01	VARIONitri 3 F10	Powder Pack/ 100	53 09 80
14 62 70	DPD No. 4 	100	51 12 20 BT
		250	51 12 21 BT
	DPD Glycine <sup>f)</sup>	100	51 21 70 BT
		250	51 21 71 BT
14 62 75	DPD No. 4 	100	51 12 20 BT
		250	51 12 21 BT
14 61 10	BROMOCRESOL PURPLE	100	51 17 30
		250	51 17 31
14 61 20	BROMOTHYMOL BLUE	100	51 16 40 BT
		250	51 16 41 BT
14 61 00	PHENOL RED-RAPID* 	100	51 17 90 BT
		250	51 17 91 BT
14 61 30	UNIVERSAL PH	100	51 54 40
		250	51 54 41
14 62 40	PHOSPHATE No. 1 LR	100	51 30 40 BT
	PHOSPHATE No. 2 LR	100	51 30 50 BT
	Combi pack <sup>#</sup>	each 100	51 76 51 BT
	PHOSPHATE No.1 LR/ No.2 LR		



CHECKIT® Comparator with powder reagent / tablets

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

f) additionally required for determination of chlorine dioxide / ozone in the presence of chlorine

 Green Chemistry



# CHECKIT<sup>®</sup>Comparator

Tests, Test Kits, Testpaks, Discs, Reagents

Test	Range	Readings (Accuracy ± 5 % Full Scale)	Test Kit	Testpak
<b>Phosphate HR</b>	0 - 80 mg/l PO <sub>4</sub>	0 / 5 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 / 55 / 60 / 65 / 70 / 75 / 80	14 72 50	14 77 50
<b>Phosphate</b>	0 - 2.5 mg/l PO <sub>4</sub>	0 / 0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1 / 1.1 / 1.2 / 1.3 / 1.4 / 1.5 / 1.6 / 1.7 / 1.8 / 1.9 / 2 / 2.1 / 2.2 / 2.3 / 2.4 / 2.5	14 74 80	14 79 80
<b>Acid capacity K<sub>S4.3</sub></b>	0.5 - 5 mmol/l	0.5 / 1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 5	14 74 60	14 79 60
<b>Silica LR</b>	0.25 - 4 mg/l SiO <sub>2</sub>	0.25 / 0.5 / 0.75 / 1.0 / 1.25 / 1.5 / 1.75 / 2.0 / 2.5 / 3.0 / 3.5 / 4	14 73 50	14 78 50
<b>Silica HR VARIO</b>	0 - 100 mg/l SiO <sub>2</sub>	0 / 10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100	14 73 51	14 78 51
<b>Silica VLR</b>	0 - 1 mg/l SiO <sub>2</sub>	0 / 0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0	14 73 60	14 78 60
<b>Sulfate LR</b>	0.5 - 10 mg/l SO <sub>3</sub> <sup>2-</sup>	0.5 / 1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 6 / 7 / 8 / 9 / 10	14 73 80	14 78 80
<b>Total Alkalinity</b>	20 - 240 mg/l CaCO <sub>3</sub>	20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 110 / 120 / 130 / 140 / 150 / 160 / 170 / 180 / 190 / 200 / 220 / 240	14 74 50	14 79 50
<b>Zinc LR</b>	0 - 1 mg/l Zn	0 / 0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1.0	14 73 40	14 78 40

\* RAPID: fast dissolving tablet  
# including stirring rod


Disc	Reagent	Quantity	Code
14 62 50	PHOSPHATE HR	100	51 19 80 BT
14 64 80	Vario PHOS3 F10	100	53 15 50
14 64 60	ALKACHECK	100 250	51 32 00 BT 51 32 01 BT
14 63 50	SILICA No. 1	100	51 31 30 BT
	SILICA No. 2	250	51 31 31 BT
	Combi pack <sup>#</sup>	100	51 31 40 BT
	SILICA No.1 / No.2	250	51 31 41 BT
	SILICA PR	each 100	51 76 71 BT
		each 200	51 76 72 BT
		100	51 31 50 BT
		250	51 31 51 BT
14 63 51	Vario Silica HRMolybdate F10	Powder Pack/ 100	53 57 00
	Vario Silica HR Acid Rgt F10	Powder Pack/ 100	
	Vario Silica HRCitric Acid F10	Powder Pack/ 100	
		<b>Set</b>	
14 63 60	SILICA No. 1	100	51 31 30 BT
		250	51 31 31 BT
	SILICA No. 2	100	51 31 40 BT
		250	51 31 41 BT
	Combi pack <sup>#</sup>	each 100	51 76 71 BT
		each 200	51 76 72 BT
	SILICA No.1 / No.2	100	51 31 50 BT
	SILICA PR	250	51 31 51 BT
14 63 80	SULFTE LR	100	51 80 20 BT
14 64 50	ALKACHECK	100 250	51 32 00 BT 51 32 01 BT
14 63 40	COPPER/ZINC LR	100	51 26 20 BT
	EDTA	250	51 26 21 BT
	DECHLOR	100	51 23 90 BT
		250	51 23 91 BT
		100	51 23 50 BT



CHECKIT® Discs

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

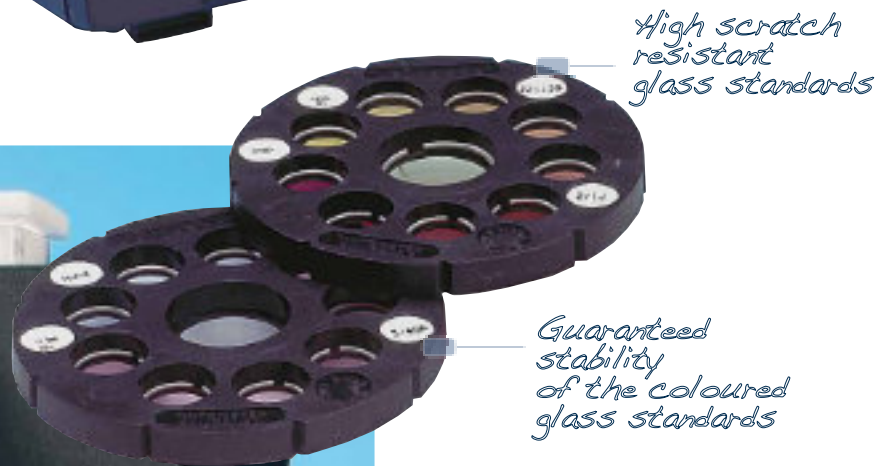
f) additionally required for determination of chlorine dioxide / ozone in the presence of chlorine

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# Comparator 2000+



## Colorimeter for regular testing 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.



Comparator 2000+



Lighting unit TK 102

### 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 36 for information on the various test discs or refer to our **disc catalogue Lovibond Comparator 2000+**.

### 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 accuracy and reproducibility of results.



Plastic cells



Test disc with colour-stable glass standards

### Applications

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

➔ Order codes see page 36



# 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. The entire product range can be found in the special catalog for Comparator 2000+.

### 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.

### 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	
AF 357	Drinking Water	Chlorine	0.1 - 1.0 mg/l Cl <sub>2</sub>	41 35 70
			1.0 - 4.0 mg/l Cl <sub>2</sub>	
		Chloride**	5 - 5000 mg/l Cl <sup>-</sup>	
		Cyanuric Acid (Cys)**	0 - 80 mg/l	
		Iron	0.1 - 1.0 mg/l Fe	
		Alkalinity-m**	20 - 800 mg/l CaCO <sub>3</sub>	
		pH-value	5.2 - 6.8 pH	
			6.8 - 8.4 pH	
		Sulphate**	40 - 4000 mg/l SO <sub>4</sub>	
		AF 358	Sewage and Domestic Effluents	
Chlorine	0.02 - 0.3 mg/l Cl <sub>2</sub>			
	0.2 - 4 mg/l Cl <sub>2</sub>			
Fluoride	0 - 1.6 mg/l F <sup>-</sup>			
Hardness Total	0 - 500 mg/l CaCO <sub>3</sub>			
AF 368	Mini Lab Heavy Metals (supplied without reagents)	Hazen	10 - 90 mg/l Pt	41 36 80
		pH-value	6 - 8.4 pH	
		Ammonia	0 - 1 mg/l N	
		Chlorine	0.1 - 1 mg/l Cl <sub>2</sub>	
			1 - 10 mg/l Cl <sub>2</sub>	
		Nitrite	0.05 - 0.5 mg/l N	
AF 368	Mini Lab Heavy Metals (supplied without reagents)	Permanganate (BOD)	0 - 60 mg/l	41 36 80
		pH-value	4 - 8 ; 8 - 9.6 pH	
		Sulphide	0 - 0.5 mg/l S	
		Chromium	0.4 - 4 mg/l Cr	
		Copper	0.05 - 1 mg/l Cu	
		Cyanide	2.5 - 50 µg Cu	
		Nickel	1 - 10 mg/l Ni	
Zinc	0 - 50 µg Zn			
Type	Designation/Combi	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	0.02 - 0.3 mg/l Cl <sub>2</sub>	41 11 26
		Chlorine	0.2 - 0.8 mg/l Cl <sub>2</sub>	
AF 112J/J	Chlorine free, comb. tot.	Chlorine	0.1 - 2.0 mg/l Cl <sub>2</sub>	41 72 46
		pH-value	6.8 - 8.4 pH	
AF 112N/T	Chlorine free, comb. tot.	Chlorine	0.1 - 1.0 mg/l Cl <sub>2</sub>	41 01 20
		Chlorine	1.1 - 2.0 mg/l Cl <sub>2</sub>	
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	0.1 - 1 mg/l Cl <sub>2</sub>	41 11 40
		pH-value	6.8 - 8.4 pH	
AF 116B	Chlorine, pH	Chlorine	0.2 - 4 mg/l Cl <sub>2</sub>	41 11 60
		pH-value	6.8 - 8.4 pH	
AF 118S	Chlorine, pH	Chlorine	0.1 - 4 mg/l Cl <sub>2</sub>	41 11 81
		pH-value	5.2 - 8.4 pH	
AF 139	Sodium hypochlorite	Sodium hypochlorite	2 - 18 % NaOCl	41 13 90
AF 129	Water Balance			41 12 90

\* Discardings see following pages

\*\* Rapid Tests

 Green Chemistry



### Comparator 2000+ and Accessories

Type	Item	Code
<b>TK 100</b>	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

Type	Item	Code
<b>Glass Cells</b>		
<b>DB424/S</b>	5 glass cells, 13.5 mm path length 13.5 mm path length, volume 10 ml, with lid	35 42 43
<b>W 680/40</b>	Glass cell 40 mm path length, calibrated at 20 ml	60 68 90
<b>Plastic Cells</b>		
	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

Glass cell with lid, volume 10 ml, calibrated 2 - 12 ml, path length 13.5 mm, Pack of 5, code: 35 42 43



### Nessleriser System and Accessories

Type	Item	Code
<b>2150</b>	Nessleriser 2150 with stand, daylight unit and AF306/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 DB420	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 AF306 and AF306/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



Nessleriser with daylight



# Comparator 2000+









## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code Colour disc
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 (50 ml probe)	0.02- 0.2 mg/l NH <sub>3</sub>	28 31 10
Ammonia	NAB	10; 12; 14; 16; 18; 20; 22; 24; 26 µg (50 ml probe)	0.2- 0.52 mg/l NH <sub>3</sub>	28 31 20
Ammonia	NAC	28; 32; 36; 40; 44; 48; 52; 56; 60 µg (50 ml probe)	0.56- 1.2 mg/l NH <sub>3</sub>	28 31 30
Ammonia	NAD	60; 65; 70; 75; 80; 85; 90; 95; 100 µg (50 ml probe)	1.2 - 2 mg/l NH <sub>3</sub>	28 31 40
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	3/40E	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

# including stirring rod



Test disc with colour stable glassstandards

Reagent	Quantity	Code	Accessories	Code
ALUMINIUM No.1	100	51 54 60 BT	13.5 mm cell, 10 ml	35 42 43
ALUMINIUM No.2	250	51 54 61 BT		
Combi pack#	100	51 54 70 BT		
ALUMINIUM No.1 / No.2	250	51 54 71 BT		
	each 100	51 76 01 BT		
	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
AMMONIA No.2	250	51 25 81 BT		
Combi pack#	100	51 25 90 BT		
AMMONIA No.1 / No.2	250	51 25 91 BT		
	each 100	51 76 11 BT		
	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
NESSLERreagent	30 ml	46 52 00	Nessler-tubes113 mm	35 30 60
SEIGNETTEsalt solution	100 ml	46 52 01	Nessleriser 2150	17 21 50
	100 ml	46 61 01		
NESSLERreagent			Nessler-tubes113 mm	35 30 60
SEIGNETTEsalt solution			Nessleriser 2150	17 21 50
NESSLERreagent			Nessler-tubes113 mm	35 30 60
SEIGNETTEsalt solution			Nessleriser 2150	17 21 50
NESSLERreagent			Nessler-tubes113 mm	35 30 60
SEIGNETTEsalt solution			Nessleriser 2150	17 21 50
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	40 mm cell W680/40	60 68 90
	250	51 10 51 BT		
	500	51 10 52 BT		
DPD No.2 	100	51 15 30 BT		
	250	51 15 31 BT		
DPD No.3 	100	51 10 80 BT		
	250	51 10 81 BT		
	500	51 10 82 BT		
Combi pack#	each 100	51 77 11 BT		
DPD No.1 / No.3 	each 250	51 77 12 BT		
DPD No.4 	100	51 12 20 BT		
	250	51 12 21 BT		
	500	51 12 22 BT		

## 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 the Tintometer® Group to conform to ISO9001. 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 the Tintometer® Group for checking and recertification.

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



# Comparator 2000+

## Tests, Discs, Reagents, Cells


Test	Disc	Disc Readings	Range	Code Colour disc
<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
<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</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

# including stirring rod

Reagent	Quantity	Code	Accessories	Code
DPDNo.1/2/3/4 			40 mm cell W680/40	60 68 90
DPDNo.1/2/3/4 			40 mm cell W680/40	60 68 90
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			25 mm cell W680/25 13.5 mm cell, 10 ml	60 68 60 35 42 43
DPDNo.1/2/3/4 			25 mm cell W680/25 13.5 mm cell, 10 ml	60 68 60 35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			13.5 mm cell, 10 ml	35 42 43
DPDNo.1/2/3/4 			5 mm cell W680/5	60 67 90
DPDNo.1/2/3/4 Phenol red tablets, see pH determination			13.5 mm cell, 10 ml 13.5 mm cell, 10 ml	35 42 43 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 <sup>#</sup>	each 100	51 77 21 BT		
CHLORINE HR (KI)/ ACIDIFYING GP	each 250	51 77 22 BT		



Lighting unit, mainsoperated

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















# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code Colour disc
<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
<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 (25 ml probe)	0.4 - 4 mg/l	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
<b>DEHA</b>	3/150	8; 16; 24; 32; 40; 48; 56; 64; 80 µg/l Discreading should be multiplied by 2 for true DEHA concentration	16 - 160 µg/l	23 04 60
<b>Fluoride</b>	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

# including stirring rod

Reagent	Quantity	Code	Accessories	Code
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
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		
DPD No.1/2/3/4 NESSLERISER 			Nessleriser 2150	17 21 50
			Nessler-tubes 113 mm	35 30 60
DPD No.1/2/3/4 NESSLERISER 			Nessleriser 2150	17 21 50
			Nessler-tubes 113 mm	35 30 60
DPD No.1/2/3/4 NESSLERISER 			Nessleriser 2150	17 21 50
			Nessler-tubes 113 mm	35 30 60
DPD No.1 	100	51 10 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 51 BT		
DPD No.1 			40 mm cell W680/40	60 68 90
DPD No.1 			40 mm cell W680/40	60 68 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		
Details on request			13.5 mm cell, 10 ml	35 42 43
COPPER/ZINC LR	100	51 26 20 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 26 21 BT		
COPPER/ZINC HR	100	51 23 40 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 23 41 BT		
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 EXCESSAL	100	51 14 10	Nessler-tubes 113 mm	35 30 60
	250	51 14 11		



Nessleriser with lighting unit





# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code Colour disc
<b>Iron, total</b>	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
<b>Iron, total</b>	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
<b>Iron, total</b>	3/117	1; 2; 3; 4; 5; 6; 7; 8; 10 mg/l	1.0 - 10 mg/l	23 01 10
<b>Iron, total</b>	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
<b>Hardness, total</b>	4/38	0; 5; 10; 15; 20; 25; 30; 40; 60 mg/l	0 - 60 mg/l CaCO <sub>3</sub>	23 10 70
<b>Hazen/APHA</b>	4/28	50; 75; 100; 150; 200; 250; 300; 400; 500 mg Pt/l	50 - 500 mg/l Pt	24 28 01
<b>Hazen/APHA</b>	NSH	10; 20; 30; 40; 50; 60; 70; 80; 90 mg Pt/l	10 - 90 mg/l Pt	28 41 70
<b>Hazen/APHA</b>	NSB	70; 85; 100; 125; 150; 175; 200; 225; 250 mg Pt/l	70 - 250 mg/l Pt	28 41 20
<b>Hazen/APHA</b>	CAA	0; 2,5; 5; 7,5; 10; 15; 20; 25; 30 mg Pt/l	0 - 30 mg/l Pt	28 41 50
<b>Hazen/APHA</b>	CAB	30; 35; 40; 45; 50; 55; 60; 65; 70 mg Pt/l	30 - 70 mg/l Pt	28 41 60
<b>Hydrazine</b>	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
<b>Hydrazine</b>	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
<b>Hydrazine</b>	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
<b>Hydrazine</b>	NOH	0; 0,5; 1; 2; 3; 4; 6; 8; 10 µg (25 ml Probe)	0 - 0.4 mg/l	28 37 00
<b>Hydrogen peroxide</b>	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
<b>Hydrogen peroxide</b>	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
<b>Hydrogen peroxide</b>	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
<b>Iodine</b>	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
<b>Iodine</b>	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
<b>Manganese</b>	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

# including stirring rod

Reagent	Quantity	Code	Accessories	Code
IRON LR (Fe <sup>2+</sup> und Fe <sup>3+</sup> )	100	51 53 70 BT	40 mm cell W680/40	60 68 90
	250	51 53 71 BT		
IRON LR (Fe <sup>2+</sup> und Fe <sup>3+</sup> )	100	51 53 70 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 53 71 BT		
IRON (II) LR (Fe <sup>2+</sup> )	100	51 54 20 BT		
IRON HR	100	51 53 80 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 53 81 BT		
IRON LR + IRON (II) LR			Nessleriser 2150	17 21 50
			Nessler-tubes 113 mm	35 30 60
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 Nessler-tubes 113 mm	17 21 50 35 30 60
Straight colour match to sample			Nessleriser 2150 Nessler-tubes 113 mm	17 21 50 35 30 60 without lid 35 30 80 with lid
Straight colour match to sample			Nessleriser 2250 Nessler-tubes 250 mm	17 22 50 35 42 00
Straight colour match to sample			Nessleriser 2250 Nessler-tubes 250 mm	17 22 50 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
HYDR. PEROXIDE LR			40 mm cell W680/40	60 68 90
DPD No.1 	100	51 10 50 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 10 51 BT		
DPD No.1 			13.5 mm cell, 10 ml	35 42 43
MANGANESE LR 1	100	51 60 80 BT	13.5 mm cell, 10 ml	35 42 43
	250	51 60 81 BT		
MANGANESE LR 2	100	51 60 90 BT		
	250	51 60 91 BT		
Combi pack <sup>#</sup>	each 100	51 76 21 BT		
MANGANESE LR 1/ MANGANESE LR 2	each 250	51 76 22 BT		



Lighting unit with comparator and discs,  
mains operated






# Comparator 2000+

## Tests, Discs, Reagents, Cells


Test	Disc	Disc Readings	Range	Code Colour disc
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
Sodiumhypochlorite	3/2 Hypo	2; 4; 6; 8; 10; 12; 14; 16 %	2 - 16 %	23 21 10
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 NO <sub>3</sub>	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 (50 ml probe)	0.001 - 0.02 mg/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

# including stirring rod

Reagent	Quantity	Code	Accessories	Code
Details on request			40 mm cell W680/40	60 68 90
MOLYBDATE No.1 HR	100	51 30 60 BT	40 mm cell W680/40	60 68 90
	250	51 30 61 BT		
MOLYBDATE No.2 HR	100	51 30 70 BT		
	250	51 30 71 BT		
Combi pack <sup>#</sup>	each 100	51 76 31 BT		
MOLYBDATE No.1 HR/ MOLYBDATE No.2 HR	each 250	51 76 32 BT		
MOLYBDATE No.1 HR MOLYBDATE No.2 HR			13.5 mm cell, 10 ml	35 42 43
CHLORINE HR (Kl)	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 (Kl)	each 250	51 77 22 BT		
ACIDIFYING GP				
Dilution set for sample preparation	1	41 44 70		
NITRATE-TEST tablets	100	50 28 10	13.5 mm cell, 10 ml	35 42 43
NITRATE Test powder (bottle)		46 52 30	Nitrate-Test-tubes	36 62 20
NITRITE LR	15 g	51 23 10BT		
	100	51 23 11BT		
	250			
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 <sup>#</sup>	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	50 23 71		
	(Flasche)			
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		



Lighting unit TK 102

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



# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code Colour disc
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
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
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

# including stirring rod

Reagent	Quantity	Code	Accessories	Code
OZONE-INDIGO	100 250	51 31 70 BT 51 31 71 BT	40 mm cell W680/40	60 68 90
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 500 ml	45 17 70 45 17 71 45 17 72 45 17 73	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 500 ml	45 16 20 45 16 21 45 16 22 45 16 23	Nessler-tubes 113 mm	35 30 60
THYMOL BLUE 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
PHOSPHATE No.1 LR PHOSPHATE No.2 LR Combi pack#	100 100 each 100	51 30 40 BT 51 30 50 BT 51 76 51 BT	13.5 mm cell, 10 ml	35 42 43
PHOSPHATE No.1 LR/ No.2 LR				



Tablet reagents in foil blister strip (BT)





# Comparator 2000+

## Tests, Discs, Reagents, Cells

Test	Disc	Disc Readings	Range	Code Colour disc
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 (50 ml probe)	0.2 - 2 mg/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
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
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

Reagent	Quantity	Code	Accessories	Code
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 215 Nessler-tubes 113 mm	17 21 50 35 30 60
Details on request			Nessler-tubes 113 mm	35 30 60
Details on request			5 mm cell W680/5	60 67 90
SULPHIDE No.1	100 (bottle)	50 29 30 50 29 40	13.5 mm cell, 10 ml	35 42 43
SULPHIDE No.2	100 (bottle)			
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		



Test disc with colour-stable glassstandards



# Colour measurement of water

## E-Comparator EC2000 Pt-Co



### The evolution of the visual (subjective) for electronic (objective) colour measurement of water

The Lovibond® EComparator Pt-Co provides an easy way to replace the subjective visual colour comparison with an objective and accurate electronic measurement, without sacrificing the visual assessment of the colour view.

The user friendly ergonomics and intuitive interface guarantee new users can be quickly trained and easily supported. Large data storage (> 20,000 readings) and USB connectivity ensures readings can be stored and shared easily and

quickly. Flexibility is further enhanced with software packages for \*\*Windows® with multiple language\* support on-screen.

Touch screen technology makes the EComparator Series easily programmable with instinctive menus on screen. Users can set language\*, date and time, view preferences and create projects with individual tolerance settings.

An on-screen warning system of:

- Green = Within Tolerance;
- Red = Outside Tolerance;
- Amber = On Border of Tolerance

provides the user with immediate information on the sample.

\* Supported Languages: English, French, German, Spanish, Italian, Chinese, Japanese, Russian

\*\*Applicable for the following operating systems: Windows XP, Windows Vista and Windows 7/10

- ✓ Colour measurement of water
- ✓ according to international standards such as:  
Platinum-Cobalt / Hazen/ APHA / ASTM D 1209/ TCU

## Platinum-Cobalt / Hazen / APHA Colour (ASTMD 1209)

Often referred to as Pt-Co, Platinum-Cobalt, Hazen or APHA Colour – all terms are interchangeable and equally valid.

Used to measure clear to dark amber liquids.

Originally defined by specified dilutions: range from 0 at the light end of the scale to 500 at the darkest.

Used extensively in the water industry but also for clear oils, chemicals and petrochemicals such as glycerine, plasticisers, solvents, carbon tetrachloride and petroleum spirits.

### Accuracy and Efficiency

The EComparator Pt-Co are supplied with a Certified and Liquid Reference Standard enabling quick and simple validation.

The instrument is equipped with an integrated light shield to protect the sample from ambient light and a flexible path length and cell choice (plastic or glass) for flexibility of application.

With robust casing and a small laboratory footprint, the EComparator Series is the ideal solution for users wishing to experience the benefits of immediate, accurate, electronic readings: the best of both worlds.

## Technical Data

<b>Light Source</b>	White LED(25 year lifetime)
<b>Sensors</b>	Tristimulus Detectors, Reference and Sample
<b>Colour</b>	Scale Pt-Co
<b>Range</b>	2 - 500
<b>Resolution</b>	1 Pt-Co Unit
<b>Repeatability</b>	+/- 3% +1 Pt-Co Units
<b>Path Length</b>	50mm
<b>Standards</b>	ASTMD1209
<b>Comparator View</b>	2 Field

<b>Display</b>	Size: 3.5 inch Resolution: 320x240 Colour: 24 Bit (TrueColour)
<b>Touchscreen</b>	Resistive
<b>Keypad</b>	3 key tactile membrane
<b>Sample Chamber</b>	W100 Spectrophotometer
<b>Cell Type Filters</b>	EC Range Holders
<b>Filter</b>	Glass standard for E-Comparator
<b>Casing</b>	Flame Retardant ABS

<b>Material Size (mm)</b>	W 106 x D 210 x H 57
<b>Power Sources Batteries</b>	USB or Battery 4 x AA
<b>Data Storage</b>	> 20,000 readings
<b>Interface</b>	USB2.0 A- Micro B plug
<b>Software</b>	Data Transmission Software for **Windows
<b>Temperature</b>	Max Sample Temperature = 80 °C

## Accessories

			Code
Liquid Standard Zero	EC2000	500 ml	133991
Liquid Reference Standard ASTM Value 1	LIQUID REFSTD		134000
Liquid Reference Standard ASTM Value 3	LIQUID REFSTD		134010
Liquid Reference Standard ASTM Value 5	LIQUID REFSTD		134020
Liquid Reference Standard Pt-Co 5	EC2000	500 ml	134140
Liquid Reference Standard Pt-Co 10	EC2000	500 ml	134150
Liquid Reference Standard Pt-Co 15	EC2000	500 ml	134160
Liquid Reference Standard Pt-Co 30	EC2000	500 ml	134170
Liquid Reference Standard Pt-Co 50	EC2000	500 ml	134180
Liquid Reference Standard Pt-Co 100	EC2000	500 ml	134190
Liquid Reference Standard ASTM 0.4 (<0.5)	LIQUID REFSTD		134290
Liquid Standard (15 ± 2.0)	EC2000	for EC2000 PT-CO- 60 ml	135049
Liquid Standard Zero	EC2000	for EC2000 PT-CO- 60 ml	135059
Glass Standard conformity filter			13 51 19
W 100 50 mm tube (plastic), tube Set 50			35 21 01
W 100. OG. 50 mm, 1 tube (optical glass)			60 10 70
USB adapter			19 06 20
USB cable, 2.0 A- Micro B plug for data transfer			19 06 30

\*\*Applicable for the following operating systems: Windows XP, Windows Vista and Windows 7/10



Due to aesthetic considerations, the colouring of drinking water should not be strong or even visible. In many countries the colouring of drinking water is therefore determined by "True Colour Units", TCU for short, which correspond in numerical value to Hazen units. For this reason, the EC2000 Comparator is also available in a version for displaying the values in TCU units.

**Code EC-TCU Kit: 162011**

**Code EC-TCU Instrument: 162007**

## Delivery Content

- EC2000-Pt-Co in carrying case
- Power Supply (UK, EU, US Plug)
- USB Cable
- Screwdriver
- 4x AA Batteries
- Liquid Reference Standard 1
- 3 x 50mm W100 (Plastic cell)
- 1 x 50mm W100 (Optical Glass cell)
- Glass Standard
- CD with Software (Windows) and Manual

**Code 16 20 10**