

CheckitDirect Photometer



Highlights

- Waterproof
- Automatic Switch-Off
- Real-Time-Clock and Date
- Calibration Mode
- Backlit Display
- Storage Function
- Suitable for use as a testing instrument

Applications

- Water Treatment
- Waste/Drinking Water
- Cooling/Boiler Water
- Pool-Water
- Beverage Industry
- Laboratory and Field Testing



The CheckitDirect models each offer one test method, while the CheckitDirect+ units are programmed for a number of different parameters. The units supply accurate, reproducible results very quickly. Other major advantages include ease of operation, ergonomic design, compact dimensions and safe handling.

The calibration and software-based adjustment options mean that the CheckitDirect is also suitable for use as a testing instrument.

The tests are conducted using either Lovibond® tablet reagents with long-term stability and a guaranteed minimum 5 or 10 year shelf life, VARIO powder reagents or using liquid reagents.

N.I.S.T Traceability

The instruments have a factory calibration, which is related to internal standards which are not N.I.S.T traceable. The instrument may be calibrated by the user in a "user calibration mode" with N.I.S.T traceable standards.

Calibration certificate

Beside the "Certificate of Compliance" which is supplied with each CheckitDirect, calibration certificates are available at cost on request. Calibration certificates are individually supplied per instrument and per method.

The Calibration Certificate has to be ordered together with the new instrument and cannot be delivered at a later stage.

Delivery Content

Each CheckitDirect is supplied in a case complete with 9 V battery, 3 round vials with cap, tablets and/or liquid reagents or VARIO Powder Packs, accessories, instruction manual, guarantee sheet and a certificate of compliance.

➔ Please see pages 68 onwards for tests, ranges and reagents

Accessories

Item	Code
Set of 12 round vials with cap Height 48 mm, Ø 24 mm	19 76 20
Set of 12 round vials with cap Height 90 mm, Ø 16 mm	19 76 65
Adapter for round vials Ø 16 mm	19 80 10 94
Cleaning cloth for vials	19 76 35
Lid for adapter	19 80 11 00
Cleaning set for sample chamber	12 40 60
Measurement beaker, 100 ml	38 48 01
Plastic funnel with handle	47 10 07
Plastic stirring rod, 13 cm length	36 41 00
Plastic stirring rod, 10 cm length	36 41 09
Battery lid with accessories	19 80 11 63
9 V-battery	19 50 01 2

Technical data

Optics	temperature-compensated LEDs and photosensor amplifier in water proof sample chamber
Power supply	9 V powerpack battery providing 40 hours operation
Auto - OFF	automatic switch-off
Display	backlit LCD (on keypress)
Storage	internal ring memory for 16 data sets
Additional feature	real time clock and date
Calibration	factory calibration and user calibration. Reset to factory calibration possible
Dimensions (L x W x H)	190 x 110 x 55 mm
Weight	0.4 kg (base unit)
Environmental conditions	Temperature: 0–40 °C rel. humidity: 30–90% (non condensing)
CE-conformity	DIN EN 50081-1 VDE 0839 part 81-1: 1993-03 DIN EN 50082-2 VDE 0839 part 82-2: 1996-02



CheckitDirect photometer in carrying case, ready to use

Photometry

Reference Standard Kit

The reference standards are designed to check the accuracy and the reliability of the results.

The shelf life of reference standards is two years from the date of production, provided that storage and use are in accordance with the instructions provided.

Kit Chlorine Tablet/Liquid Test 0.2* and 1.0* mg/l	20 56 00
Kit Chlorine Tablet/Liquid Test 0.5* and 2.0* mg/l	20 56 05
Kit Chlorine Powder Reagent Test (VARIO) 0.2* and 1.0* mg/l	20 56 40
Kit pH Tablet/Liquid Test	20 56 10

* Approximate figure, actual figure specified in Certificate of Analysis



CheckitDirect



Each CheckitDirect is programmed for one test method

➔ Please see pages 68 onwards for tests, ranges and reagents

Test Methods CheckitDirect

Test	λ (nm)	Formula	Range	Reagent	Code
Aluminium	528	Al ³⁺	0.05–0.3 mg/l	ALUMINIUM No.1 / No.2	20 64 00
Ammonia	660	NH ₄ ⁺	0.02–1 ; 0.2–10 mg/l*	AMMONIA No.1 / No.2	20 65 00
Chlorine DPD¹⁾ free, combined, total	528	Cl ₂	0.01–6 mg/l	DPD No.1/No.3	26 69 00
Chlorine DPD²⁾ free, combined, total	528	Cl ₂	0.01–4 mg/l	DPD Liquid Reagents	26 70 00
Chlorine PP⁴⁾ free, combined, total	528	Cl ₂	0.01–2 mg/l	VARIO DPD Powder Chlorine FREE-DPD/F10 Chlorine TOTAL-DPD/F10	26 99 50
Chlorine HR (KI)	470	Cl ₂	5–200 mg/l	ACIDIFYING GP CHLORINE HR (KI)	20 71 00
Chloride	528	Cl ⁻	0.5–25 ; 5–250 mg/l*	CHLORIDE T1 / T2	20 68 00
COD³⁾	430	O ₂	0–150 mg/l	Supplied without tube tests and reactor	26 92 50
	605	O ₂	0–1500 mg/l		
	605	O ₂	0–15000 mg/l		
COD	430	O ₂	0–150 mg/l	Supplied with tube tests (2 ranges) and reactor	26 92 40
	605	O ₂	0–1500 mg/l		
	605	O ₂	0–15000 mg/l		
Copper	528	Cu	0.05–5 mg/l	COPPER No.1 / No.2	20 72 00
Copper / Zinc	580	Cu/Zn	0.02–1 mg/l	COPPER/ZINC LR/EDTA	20 72 10
DEHA	528		0.02–0.5 mg/l	DEHA-Reagents	20 97 00
Fluoride	580	F ⁻	0.05–2.0 mg/l	SPADNS-Reagent Solution ⁶⁾	20 93 00
Hardness, total	528	CaCO ₃	50–500 mg/l*	HARDCHECK P	20 80 10
Hazen	470	Pt-Co Units	0–500 mg Pt/l	No reagents required	20 72 40
Hydrazin	470	N ₂ H ₄	0.05–0.5 mg/l	HYDRAZINE TEST POWDER ⁷⁾	20 73 00
Hydr.Peroxide	528	H ₂ O ₂	0.05–3 mg/l	HYDROGEN PEROXIDE LR	20 86 00
Iron (II, III)	528	Fe	0.02–1 ; 0.2–10 mg/l*	IRON LR	20 74 00
Manganese	430	Mn	0.05–4 mg/l	MANGANESE LR 1 / LR 2	20 94 00
Nitrite LR	528	NO ₂	0.02–0.5 mg/l	NITRITE LR	20 76 00
Ozone (Indigo)	605	O ₃	0.05–0.5 mg/l	OZONE	20 77 00
Phosphate LR	660	PO ₄	0.05–4 mg/l	PHOSPHATE LR No.1/No.2	20 79 00
Phosphate HR	470	PO ₄	10–100 mg/l	PHOSPHATE HR No.1/No.2	20 78 00
Silica	580	SiO ₂	0.05–4 mg/l	SILICA No.1/No.2/PR	20 81 00
Suspended Solids	605		5–750 mg/l	No reagents required	20 92 70
Turbidity⁵⁾	875		0.1–2000 NTU (FNU, TE/F)	No reagents required	26 60 20
Urea	660	CH ₄ N ₂ O	0.1–3 ; 0.2–6 mg/l*	UREA-Reagent 1/2 AMMONIA No.1 / No.2	20 85 00

Zinc, see Copper/Zinc

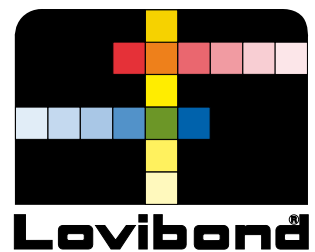
- * High range by dilution
- 1) Kit with tablet reagents
- 2) Kit with liquid reagents
- 3) CheckitDirect basic unit COD only
- 4) PP = VARIO Powder Packs
- 5) Turbidity: see pages 114 to 119
- 6) without reagents,
must be ordered separately
- 7) required accessories for filtration
are not included

CheckitDirect +



Each Multi-CheckitDirect +
is programmed for several
test methods

➔ Please see pages 68 onwards for
tests, ranges and reagents



Test	λ (nm)	Range	Reagent	Resolution
Alkalinity-m (total)	605	5 – 200 mg/l CaCO ₃	Alka M-Photometer	1 mg/l CaCO ₃
Bromine	528	0.1 – 13.5 mg/l	DPD No.1	0.01 mg/l
Calcium Hardness	528	0 – 500 mg/l	Calcio	1 mg/l CaCO ₃
Chlorine free, combined**, total	528	0.01 – 6 mg/l	DPD No.1/No.3 Tablet Reagents	0.01 mg/l
Chlorine free, combined**, total	528	0.01 – 4 mg/l	DPD Liquid Reagents	0.01 mg/l
Chlorine free, combined**, total	528	0.01 – 2 mg/l	VARIO DPD Powder Free/Total Chlorine***	0.01 mg/l
Chlor HR (KI)	470	5 – 200 mg/l	Acidifying GP/Chlorine HR	1 mg/l
Chlorine Dioxide	528	0.1 – 11 mg/l	DPD No.1	0.01 mg/l
Copper	528	0.05 – 5 mg/l	Copper No.1/No.2	0.01 mg/l
Cyanuric Acid	528	2 – 160 mg/l*	Cyanuric Acid	1 mg/l
Iron	528	0.02 – 1 mg/l	Iron LR	0.01 mg/l
pH-value	528	6.5 – 8.4 pH	Phenol Red Photometer	0.01 mg/l
Urea	660	0.1 – 6 mg/l	Urease 1/2 AMMONIA No.1/No.2	0.1 mg/l

* by 1:1 sample dilution, ** may be calculated by deducting free from total chlorine

*** VARIO DPD-Powder is also suitable for use with Hach-Photometers

CheckitDirect+

CheckitDirect	Determination	Code	CheckitDirect	Determination	Code	CheckitDirect	Determination	Code
2 in 1	Chlorine, pH-value with tablet reagents	26 89 40	4 in 1	Chlorine, pH-value, Cyanuric Acid, Alkalinity, total (M) with tablet reagents for Chlorine and pH	26 60 50	5 in 1	Chlorine, pH-value, Cyanuric Acid, Alkalinity, total (M), Calcium Hardness	26 61 20
2 in 1	Chlorine, pH-value with VARIO DPD Free/Total Chlorine (Powder)	26 99 60	4 in 1	Chlorine, pH-value, Cyanuric Acid, Alkalinity, total (M) with liquid reagents for Chlorine and pH	26 60 54	5 in 1	Chlorine, pH-value, Cyanuric Acid, Alka- linity, total (M), Iron	20 62 40
2 in 1	Copper, pH-value	20 72 30	4 in 1	Chlorine, pH-value, Cyanuric Acid, Urea	20 92 20	6 in 1	Chlorine, pH-value, Cyanuric Acid, Alkalinity, total (M), Calcium Hardness, Bromine	26 61 90
3 in 1	Chlorine, pH-value, Bromine	26 61 80	4 in 1	Chlorine, pH-value, Alkalinity, total (M), Urea	20 62 90	6 in 1	Chlorine, pH-value, Cyanuric Acid, Alkalinity, total (M), Copper, Iron	20 62 10
3 in 1	Chlorine Dioxide, Chlorine LR, HR	20 88 00						
3 in 1	Chlorine, pH-value Alkalinity, total (M)	26 89 00						
3 in 1	Chlorine, pH-value, Alkalinity, total (M) with liquid reagents for Chlorine and pH	26 89 30						
3 in 1	Chlorine, pH-value, Cyanuric Acid with tablet reagents for Chlorine and pH	26 60 10						
3 in 1	Chlorine, pH-value, Cyanuric Acid with liquid reagents for Chlorine and pH	26 82 00						