

Lovibond® Water Testing Tintometer® Group



XD 7500 (UV-VIS)

Simplify your Work - Save Time and Money!



- Over 150 pre-programmed testing methods
- Prevention of measurement errors with automatic method recognition and cuvette type detection features
- Integrated GLP techniques assure user security and data protection
- UV-VIS testing wavelengths

Part Number: 71307500

Optimized for Water Quality Analysis

Pre-programmed with over 150 analytical methods that cover a wide variety of applications and industries. All methods are compatible with Lovibond® reagents.

Intuitive Interface that Prevents Measurement Errors

Save time and eliminate errors with the automatic test recognition feature. Each Lovibond® method is recognized by the instrument with a barcode, which ensures the instrument is in the correct measurement mode before taking a reading. The automatic cuvette type detection feature confirms that the proper vial is being used with the test, which is a critical component to achieving accurate results.

Analytical Quality Assurance

Standard procedures for analytical quality assurance support the verification of the photometer, the overall system (including the chemical methodology) and the verification of matrix effects. Support of analytical quality assurance procedures include the ability to set tolerances and reminders for calibration protocols.

User Security for Data Protection

Create up to 3 different user levels with password protection. Each user account can be assigned a level of access to the instrument, ensuring users only have access to what they need.

Custom Measurement Methods

Users can create their own methods based on up to ten wavelengths with various mathematical operations.

Industry

Chemical Industry | Food and Beverage Industry | Industries Others | Marine Industry | Municipalities | NGO | Oil and Gas | Pharmaceutical Industry | Power and Energy

Application

Boiler Water | Cooling Water | Disinfection Control | Drinking Water Treatment | Galvanization | Pool Water Control | Pool Water Treatment | Raw Water Treatment | Waste Water Treatment

XD 7500 (UV-VIS)

The XD 7500 is a UV-VIS Spectrophotometer. It combines a state-of-the-art optical system with ease of use and flexibility for a wide range of water testing applications. By providing users with the full range of functions that is required from a spectrophotometer, including the ability to measure transmission and absorbance; the scanning of spectral data; recording of kinetic measurements; and the ability to create custom measurement methods, the XD 7500 is the ideal spectrophotometers for water quality testing in the laboratory.

Measuring Range

Test Name	Measuring Range	Chemical Method
Alkalinity-m HR T	5 - 500 mg/l CaCO ₃	Acid / Indicator
Alkalinity-m T	5 - 200 mg/l CaCO ₃	Acid / Indicator
Alkalinity-p T	5 - 500 mg/l CaCO ₃	Acid / Indicator
Aluminium PP	0.01 - 0.25 mg/l Al	Eriochrom Cyanine R
Aluminium T	0.01 - 0.3 mg/l Al	Eriochrom Cyanine R
Ammonia HR TT	1.0 - 50 mg/l N	Salicylate
Ammonia LR TT	0.02 - 2.5 mg/l N	Salicylate
Ammonia PP	0.01 - 0.8 mg/l N	Salicylate
Ammonia T	0.02 - 1 mg/l N	Indophenole Blue
Arsenic	0.02 - 0.6 mg/l As	Silver Diethyldithiocarbamate
Boron T	0.1 - 2 mg/l B	Azomethine
Bromine 10 T	0.1 - 3 mg/l Br ₂	DPD
Bromine 50 T	0.05 - 1 mg/l Br ₂	DPD
Bromine PP	0.05 - 4.5 mg/l Br ₂	DPD
Bromine T	0.05 - 13 mg/l Br ₂	DPD
Cadmium M. TT	0.025 - 0.75 mg/l Cd	Cadion
Chloride L (A)	0.5 - 20 mg/l Cl ⁻	Mercury Thiocyanate / Iron Nitrate
Chloride L (B)	5.00 - 60 mg/l Cl ⁻	Iron(III)-thiocyanate
Chloride T	0.5 - 25 mg/l Cl ⁻	Silver Nitrate / Turbidity
Chlorine 10 T	0.1 - 6 mg/l Cl ₂	DPD
Chlorine 50 T	0.02 - 0.5 mg/l Cl ₂ ^{a)}	DPD
Chlorine dioxide 50 T	0.05 - 1 mg/l ClO ₂	DPD / Glycine
Chlorine dioxide PP	0.04 - 3.8 mg/l ClO ₂	DPD
Chlorine dioxide T	0.02 - 11 mg/l ClO ₂	DPD / Glycine
Chlorine HR 10 T	0.1 - 10 mg/l Cl ₂ ^{a)}	DPD
Chlorine HR (KI) T (105)	5 - 200 mg/l Cl ₂	KI / Acid
Chlorine L	0.02 - 4.0 mg/l Cl ₂ ^{a)}	DPD
Chlorine MR PP	0.02 - 3.5 mg/l Cl ₂ ^{a)}	DPD
Chlorine PP	0.02 - 2 mg/l Cl ₂ ^{a)}	DPD
Chlorine T	0.01 - 6.0 mg/l Cl ₂ ^{a)}	DPD
Chromium 50 PP	0.005 - 0.5 mg/l Cr ^{b)}	Diphenylcarbazide
Chromium PP	0.02 - 2 mg/l Cr ^{b)}	Diphenylcarbazide
COD HR TT	200 - 15000 mg/l COD ^{b)}	Dichromate / H ₂ SO ₄
COD LMR TT	15 - 300 mg/l COD ^{b)}	Dichromate / H ₂ SO ₄
COD LR TT	3 - 150 mg/l COD ^{b)}	Dichromate / H ₂ SO ₄
COD MR TT	20 - 1500 mg/l COD ^{b)}	Dichromate / H ₂ SO ₄

Test Name	Measuring Range	Chemical Method
Copper 50 T	0.05 - 1 mg/l Cu ^{a)}	Biquinoline
Copper L	0.05 - 4 mg/l Cu ^{a)}	Bicinchoninate
Copper PP	0.05 - 5 mg/l Cu	Bicinchoninate
Copper T	0.05 - 5 mg/l Cu ^{a)}	Biquinoline
CyA T	10 - 160 mg/l CyA	Melamine
DEHA PP	0.02 - 0.5 mg/l DEHA	PPST
DEHA T (L)	0.02 - 0.5 mg/l DEHA	PPST
Fluoride L	0.05 - 2 mg/l F ⁻	SPADNS
Formaldehyde 10 M. L	1.00 - 5.00 mg/l HCHO	H ₂ SO ₄ / Chromotropic acid
Formaldehyde 50 M. L	0.02 - 1.00 mg/l HCHO	H ₂ SO ₄ / Chromotropic acid
Formaldehyde M. TT	0.1 - 5 mg/l HCHO	H ₂ SO ₄ / Chromotropic acid
H ₂ O ₂ 50 T	0.01 - 0.5 mg/l H ₂ O ₂	DPD / Catalyst
H ₂ O ₂ HR L	40 - 500 mg/l H ₂ O ₂	Titanium Tetrachloride / Acid
H ₂ O ₂ LR L	1 - 50 mg/l H ₂ O ₂	Titanium Tetrachloride / Acid
H ₂ O ₂ T	0.03 - 3 mg/l H ₂ O ₂	DPD / Catalyst
Hardness Calcium (B) T	20 - 500 mg/l CaCO ₃	Murexide
Hardness Calcium (B) T	50 - 900 mg/l CaCO ₃	Murexide
Hardness total HR T	20 - 500 mg/l CaCO ₃ ⁱ⁾	Metallphthaleine
Hardness total T	2 - 50 mg/l CaCO ₃	Metallphthaleine
Hazen 24	10 - 500 mg/l Pt	(APHA) Platinum Cobalt Standard Method
Hazen 50	10 - 500 mg/l Pt	(APHA) Platinum Cobalt Standard Method
Hydrazine C	0.01 - 0.7 mg/l N ₂ H ₄ ^{c)}	PDMAB
Hydrazine L	5 - 600 µg/l N ₂ H ₄	Dimethylaminobenzaldehyde
Hydrazine P	0.05 - 0.5 mg/l N ₂ H ₄	Dimethylaminobenzaldehyde
Hypochlorite T	0.2 - 17 % NaOCl	Potassium Iodide
Iron 10 T	0.05 - 1 mg/l Fe	Ferrozine / Thioglycolate
Iron 50 PP	0.01 - 1.5 mg/l Fe ^{g)}	1,10-Phenanthroline
Iron 50 T	0.01 - 0.5 mg/l Fe	Ferrozine / Thioglycolate
Iron (TPTZ) PP	0.02 - 1.8 mg/l Fe	TPTZ
Iron HR L	0.1 - 10 mg/l Fe	Thioglycolate
Iron in Mo PP (224)	0.01 - 1.8 mg/l Fe	TPTZ
Iron LR L (A)	0.03 - 2 mg/l Fe	Ferrozine / Thioglycolate
Iron LR L (B)	0.03 - 2 mg/l Fe	Ferrozine / Thioglycolate
Iron PP	0.02 - 3 mg/l Fe ^{g)}	1,10-Phenanthroline
Iron T	0.02 - 1 mg/l Fe	Ferrozine / Thioglycolate
K _{S4.3} T	0.1 - 4 mmol/l K _{S4.3}	Acid / Indicator
Lead 10	0.1 - 5 mg/l Pb	4-(2-Pyridylazo)-resorcin
Lead (A) TT	0.1 - 5 mg/l Pb	4-(2-Pyridylazo)-resorcin
Lead (B) TT	0.1 - 5 mg/l Pb	4-(2-Pyridylazo)-resorcin
Iodine T	0.05 - 3.6 mg/l I	DPD
Manganese HR PP	0.1 - 18 mg/l Mn	Periodate Oxidation
Manganese L	0.05 - 5 mg/l Mn	Formaloxime
Manganese LR PP	0.01 - 0.7 mg/l Mn	PAN
Manganese T	0.2 - 4 mg/l Mn	Formaloxime
Molybdate HR L	1 - 100 mg/l MoO ₄	Thioglycolate
Molybdate HR PP	0.3 - 40 mg/l Mo	Mercaptoacetic Acid
Molybdate LR PP	0.03 - 3 mg/l Mo	Ternary Complex
Molybdate T	1 - 50 mg/l MoO ₄	Thioglycolate
Nickel 50 L	0.02 - 1 mg/l Ni	Dimethylglyoxime
Nickel L	0.2 - 7 mg/l Ni	Dimethylglyoxime
Nitrate HR	1.2 - 35 mg/l N	2,6-Dimethylphenole
Nitrate LR TT	0.5 - 14 mg/l N	2,6-Dimethylphenole

Test Name	Measuring Range	Chemical Method
Nitrate T	0.08 - 1 mg/l N	Zinc Reduction / NED
Nitrate TT	1 - 30 mg/l N	Chromotropic Acid
Nitrite HR TT	0.3 - 3 mg/l N	Sulfanilic / Naphthylamine
Nitrite LR TT	0.03 - 0.6 mg/l N	Sulfanilic / Naphthylamine
Nitrite PP	0.01 - 0.3 mg/l N	Diazotation
Nitrite T	0.01 - 0.5 mg/l N	N-(1-Naphthyl)-ethylendiamine
Oxygen active T	0.1 - 10 mg/l O ₂	DPD
Oxygen dissolved C	10 - 1100 µg/l O ₂ ^{c)}	Rhodazine D TM
Ozone 50 T	0.02 - 0.5 mg/l O ₃	DPD / Glycine
Ozone PP	0.015 - 2 mg/l O ₃	DPD / Glycine
Ozone T	0.02 - 2 mg/l O ₃	DPD / Glycine
Phenol T	0.1 - 5 mg/l C ₆ H ₅ OH	4-Aminoantipyrine
PHMB T	2 - 60 mg/l PHMB	Buffer / Indicator
Phosphate h. TT	0.02 - 1.6 mg/l P ^{b)}	Phosphomolybdenum Blue
Phosphate HR C	1.6 - 13 mg/l P ^{c)}	Vanadomolybdate
Phosphate HR L	5 - 80 mg/l PO ₄	Vanadomolybdate
Phosphate HR T	0.33 - 26.09 mg/l P	Vanadomolybdate
Phosphate HR TT	0.98 - 19.57 mg/l P	Vanadomolybdate
Phosphate LR C	0.016 - 1.6 mg/l P ^{c)}	Stannous Chloride
Phosphate LR L	0.1 - 10 mg/l PO ₄	Phosphomolybic Acid / Ascorbic Acid
Phosphate LR T	0.016 - 1.305 mg/l P	Phosphomolybdenum Blue
Phosphate PP	0.02 - 0.815 mg/l P	Phosphomolybdenum Blue
Phosphate t. TT	0.02 - 1.1 mg/l P ^{b)}	Phosphomolybdenum Blue
Phosphate total HR TT	1.5 - 20 mg/l P ^{b)}	Phosphomolybdenum Blue
Phosphate total LR TT	0.07 - 3 mg/l P ^{b)}	Phosphomolybdenum Blue
Phosphate TT	0.02 - 1.63 mg/l P	Phosphomolybdenum Blue
Phosphonate PP	0.2 - 125 mg/l PO ₄	Persulfate UV Oxidation Method
pH-value HR T	8.0 - 9.6 pH	Thymol Blue
pH value L	6.5 - 8.4 pH	Phenol Red
pH-value LR T	5.2 - 6.8 pH	Bromocresolpurple
pH-value T	6.5 - 8.4 pH	Phenol Red
Potassium T	0.7 - 16 mg/l K	Tetraphenylborat Turbidity
SAC 254 nm (344)	0.5 - 50 m ⁻¹	Direct Reading EN ISO 7887:1994
SAC 436 nm	0.5 - 50 m ⁻¹	Direct Reading EN ISO 7887:1994
SAC 525 nm	0.5 - 50 m ⁻¹	Direct Reading EN ISO 7887:1994
SAC 620 nm	0.5 - 50 m ⁻¹	Direct Reading EN ISO 7887:1994
Selenium	0.05 - 2 mg/l Se	3,3'-Diaminobenzidine in Toluene
Silcate T	0.05 - 4 mg/l SiO ₂	Silicomolybdenum Blue
Silcate HR PP	1 - 100 mg/l SiO ₂	Silicomolybdate
Silcate L	0.1 - 8 mg/l SiO ₂	Heteropolyblue
Silcate LR PP	0.05 - 1.6 mg/l SiO ₂	Heteropolyblue
Silica VLR PP	0.005 - 0.5 mg/l SiO ₂	Heteropolyblue
Sulphate HR PP	50 - 1000	Bariumsulphate Turbidity
Sulphate PP	5 - 100 mg/l SO ₄ ²⁻	Bariumsulphate Turbidity
Sulphate T	5 - 100 mg/l SO ₄ ²⁻	Bariumsulphate Turbidity

Test Name	Measuring Range	Chemical Method
Sulphide T	0.04 - 0.5 mg/l S ²⁻	DPD / Catalyst
Sulphite 10 T	0.1 - 10 mg/l SO ₃	DTNB
Sulphite T	0.1 - 5 mg/l SO ₃	DTNB
Surfactants M. (anion.) TT	0.05 - 2 mg/l SDSA	Methylene Blue
Surfactants M. (cation.) TT	0.05 - 1.5 mg/l CTAB	Disulphine Blue
Surfactants M. (not ionic) TT	0.1 - 7.5 mg/l Triton X-100	TBPE
Suspended solids 24	10 - 750 mg/l TSS	Turbidity / Attenuated Radiation Method
Suspended solids 50	10 - 750 mg/l TSS	Turbidity / Attenuated Radiation Method
TN HR 2 TT	5 - 140 mg/l N ^{b) i)}	2,6-Dimethylphenole
TN HR TT	5 - 150 mg/l N ^{b)}	Persulphate Digestion
TN LR 2 TT	0.5 - 14 mg/l N ^{b)}	2,6-Dimethylphenole
TN LR TT	0.5 - 25 mg/l N ^{b)}	Persulphate Digestion
TOC HR M. TT	50 - 800 mg/l TOC ^{b)}	H ₂ SO ₄ / Persulphate / Indicator
TOC LR M. TT	5 - 80 mg/l TOC ^{b)}	H ₂ SO ₄ / Persulphate / Indicator
Triazole PP	1 - 16 mg/l Benzotriazole or Tolyltriazole	Catalyzed UV Digestion
Turbidity 50	5 - 500 FAU	Attenuated Radiation Method
Turbidity 24	10 - 1000 FAU	Attenuated Radiation Method
Urea T	0.1 - 2.5 mg/l Urea	Indophenol / Urease
Zinc L	0.1 - 2.5 mg/l Zn	Zincon / EDTA
Zinc T	0.02 - 1 mg/l Zn	Zincon

Technical Data

Optics	Grid monochromator with reference beam and beam splitter after exit slit
Measurement	Concentration, single and multi-wavelength measurement of absorbance and % transmission, kinetics, spectra
Wavelength Range	190 - 1100 nm (nm)
Wavelength Resolution	1 nm
Wavelength Accuracy	± 1 nm on all Holmium peaks
Spectral Scope	4 nm
Photometric Range	-3.3 - +3.3 Abs
Photometric Resolution	Absorption: 0.001 ; Transmission: 0.1 %
Photometric Reproducibility	0.003 Abs below 0.6 Abs ; 0.5 % from 0.6 to 2.0 Abs
Photometric Linearity	< 1 % up to 2.0 Abs between 340 to 900 nm
Scan Speed	700 - 2000 nm/min.
Stray Light	< 0.05 % Transmission at 340 and 408 nm
Drift	< 0.005 Abs per hour after 15 minutes heat up time
Operation	Membrane Keyboard
Display	7" high contrast colour graphic-display
Suitable Vials	Rectangular Cuvettes 10 mm Rectangular Cuvettes 20 mm Rectangular Cuvettes 50 mm Round Cuvettes 13 mm Round Cuvettes 16 mm Round Cuvettes 24 mm
Automatic Cuvette Recognition	Round cuvettes: 13, 16 and 24 mm ; Rectangular cuvettes: 10, 20 and 50mm
Test Recognition	via internal barcode reader
Interfaces	Ethernet USB B USB A for External Memory Keypad Barcode-Scanner

	PCL Compatible Printer
Auto-Check	Self-test at each switch-on: test of memory, processor, internal interface, filter lamp and additional calibration of each wavelength
LIMS Compatibility	ASCII, .csv-files
Internal Storage	approx. 5000 data sets (method, user ID, date, result), autostorage function / manual storage function
Security	Password protection possible: 3 different user levels (guest, user, admin)
Power Drain	100 - 240 V, 50/60 Hz
Power Supply	Buffer batteries (4 x AA), power supply unit with cable
Auto – OFF	Yes
Portability	Benchtop
Compliance	CE
Protection Class	IP 30
IP Protection Class	EN 60529
Interference Emission	Class B
Interference Immunity	IEC 61000-4-3
Tolerance Extension	0.008 E
Meter Safety	EC Directive 2014/35/EC EN 61010-1:2010
Languages User Interface	German, English, French, Spanish, Italian, Portuguese, Polish, Indonesian, Russian, Chinese, Japanese, Dutch, Swedish, Norwegian, Czech, Romanian, Macedonian, Slovenian, Hungarian, Turkish, Korean, Vietnamese, Thai, Serbian, Malaysian, Danish, Bulgarian
Languages Quick Start Guide	German, English, French, Spanish, Italian, Portuguese, Polish, Indonesian, Russian, Chinese, Japanese, Dutch, Swedish, Norwegian, Czech, Romanian, Macedonian, Slovenian, Hungarian, Turkish, Korean, Vietnamese, Thai, Serbian, Malaysian, Danish, Bulgarian
Languages Full User Manual	German, English, Spanish, French, Italian, Portuguese, Chinese, Japanese
Dimensions	16.61 x 7.68 x 12.72"
Weight	4.5 kg

Title	Part Number
Thermoreactor RD 125	2418940
USB cable 3 m	2444482
Measuring spoon, 1 g	384930
UV Pen Lamp, 254 nm	400740
Cuvette stand for 6 round cuvettes Ø 24 mm	418951
Cuvette stand for 10 round cuvettes Ø 16 mm	418957
Pipette tips*, 1-5 ml (white) 100 pc.	419066
Pipette tips**, 0,1-1 ml (white), 1000 pc.	419073
Automatic pipette*, 1-5 ml	419076
Automatic pipette**, 0,1-1 ml	419077
Screw caps TOC	420757
Measuring spoon no. 8, black	424513
Universal Container - Cap	424648
Plastic funnel with handle (white)	471007
ValidCheck Chlorine 1,5 mg/l	48105510
Stirring rod and spoon	56A006601
W100/OG/10MM Rectangular cell, optical glass	601040
W100/OG/20MM Rectangular cell, optical glass for determination of arsenic	601050
W100/OG/50MM Rectangular cell, optical glass	601070
W110/UV/10MM Rectangular cell, Quartz UV	661130
W110/UV/20MM Rectangular cell, Quartz UV	661140
W110/UV/50MM Rectangular cell, Quartz UV	661160
Energy station XD series/SpectroDirect	711051
Secondary standard set VIS with DAKKS calibration certificate	711160
12 V-plug connector for XD 7000/7500	71310020
Barcode Hand-held Scanner	71310030
Semimicro cell, 50 mm with lid	71310045

Delivery Scope

- 4 batteries (AA)
- 1 power supply cable
- 4 round cuvettes with lid and 1 zero cuvette XD 7x00 (ø 24 mm)
- 1 zero cuvette (ø 16 mm)
- Quickstart guide in 24 languages
- Full user manual in 8 languages

Accessories

Title	Part Number
Adapter (13 mm) MultiDirect for Vacu-vial	192075
Batteries (AA), set of 4	1950025
Round cuvette 24 mm, set of 12	197620
Round cuvette 24 mm, set of 5	197629
Cleaning cloth	197635
Round cuvette 16 mm, set of 10	197665
Adapter for round cuvettes 13 mm	19802192
Mixing cylinder, 25 ml	19802650
Zero cuvette ø 16 mm for XD 7000/7500	215661
Zero cuvette ø 24 mm for XD 7000/7500	215662

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Technical changes without notice
Printed in Germany

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