

# Lovibond® Water Testing Tintometer® Group



## Spectrophotometer 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 | Food and Beverage | Galvanization | Others | Pool Water Control | Pool Water Treatment | Raw Water Treatment | Waste Water Treatment

## Spectrophotometer 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 <sub>3</sub>                        | Acid / Indicator                            |
| Alkalinity-m T                     | 5 - 200 mg/L CaCO <sub>3</sub>                        | Acid / Indicator                            |
| Alkalinity-p T                     | 5 - 500 mg/L CaCO <sub>3</sub>                        | 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               |
| Bromine 10 T                       | 0.1 - 3 mg/L Br <sub>2</sub>                          | DPD   |
| Bromine 50 T                       | 0.05 - 1 mg/L Br <sub>2</sub>                         | DPD   |
| Bromine PP                         | 0.05 - 4.5 mg/L Br <sub>2</sub>                       | DPD   |
| Bromine T                          | 0.05 - 13 mg/L Br <sub>2</sub>                        | DPD   |
| Cadmium M. TT                      | 0.025 - 0.75 mg/L Cd                                  | Cation                                      |
| Chloramine (M) PP                  | 0.02 - 4.5 mg/L NH <sub>2</sub> Cl as Cl <sub>2</sub> | Indophenole method                          |
| Chloride L (A)                     | 5.00 - 60 mg/L Cl <sup>-</sup>                        | Iron(III)-thiocyanate                       |
| Chloride L (B)                     | 0.5 - 20 mg/L Cl <sup>-</sup>                         | Mercury Thiocyanate / Iron Nitrate          |
| Chloride T                         | 0.5 - 25 mg/L Cl <sup>-</sup>                         | Silver Nitrate / Turbidity                  |
| Chlorine 10 T                      | 0.1 - 6 mg/L Cl <sub>2</sub>                          | DPD   |
| Chlorine 50 T                      | 0.02 - 0.5 mg/L Cl <sub>2</sub> <sup>a)</sup>         | DPD   |
| Chlorine (free) and Monochloramine | 0.02 - 4.50 mg/L Cl <sub>2</sub>                      | Indophenole method                          |
| Chlorine dioxide 50 T              | 0.05 - 1 mg/L ClO <sub>2</sub>                        | DPD / Glycine                               |
| Chlorine dioxide PP                | 0.04 - 3.8 mg/L ClO <sub>2</sub>                      | DPD   |
| Chlorine dioxide T                 | 0.02 - 11 mg/L ClO <sub>2</sub>                       | DPD / Glycine                               |
| Chlorine HR 10 T                   | 0.1 - 10 mg/L Cl <sub>2</sub> <sup>a)</sup>           | DPD   |
| Chlorine HR (KI) T                 | 5 - 200 mg/L Cl <sub>2</sub>                          | KI / Acid                                   |
| Chlorine L                         | 0.02 - 4.0 mg/L Cl <sub>2</sub> <sup>a)</sup>         | DPD   |
| Chlorine MR PP                     | 0.02 - 3.5 mg/L Cl <sub>2</sub> <sup>a)</sup>         | DPD   |
| Chlorine PP                        | 0.02 - 2 mg/L Cl <sub>2</sub> <sup>a)</sup>           | DPD   |
| Chlorine T                         | 0.01 - 6.0 mg/L Cl <sub>2</sub> <sup>a)</sup>         | DPD   |
| Chromium 50 PP                     | 0.005 - 0.5 mg/L Cr <sup>b)</sup>                     | Diphenylcarbazide                           |
| Chromium PP                        | 0.02 - 2 mg/L Cr <sup>b)</sup>                        | Diphenylcarbazide                           |
| COD HR TT                          | 200 - 15000 mg/L COD <sup>b)</sup>                    | Dichromate / H <sub>2</sub> SO <sub>4</sub> |

| Test Name                          | Measuring Range   | Chemical Method                                    |
|------------------------------------|---|--|
| COD LMR TT                         | 15 - 300 mg/L COD <sup>b)</sup>                             | Dichromate / H <sub>2</sub> SO <sub>4</sub>        |
| COD LR TT                          | 3 - 150 mg/L COD <sup>b)</sup>                              | Dichromate / H <sub>2</sub> SO <sub>4</sub>        |
| COD MR TT                          | 20 - 1500 mg/L COD <sup>b)</sup>                            | Dichromate / H <sub>2</sub> SO <sub>4</sub>        |
| Copper 50 T                        | 0.05 - 1 mg/L Cu <sup>a)</sup>                              | Biquinoline  |
| Copper L                           | 0.05 - 4 mg/L Cu <sup>a)</sup>                              | Bicinchoninate                                     |
| Copper PP                          | 0.05 - 5 mg/L Cu  | Bicinchoninate                                     |
| Copper T                           | 0.05 - 5 mg/L Cu <sup>a)</sup>                              | Biquinoline  |
| Copper VLR PP                      | 2 - 210 µg/L Cu   | Porphyrine Indicator                               |
| CyA HR T                           | 10 - 200 mg/L CyA   | Melamine   |
| Cyanide 50 L                       | 0.005 - 0.2 mg/L CN <sup>-</sup>                            | Pyridine-barbituric Acid                           |
| Cyanide L                          | 0.01 - 0.5 mg/L CN <sup>-</sup>                             | Pyridine-barbituric Acid                           |
| 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 <sup>-</sup>                                | SPADNS   |
| Formaldehyde 10 M. L               | 1.00 - 5.00 mg/L HCHO                                       | H <sub>2</sub> SO <sub>4</sub> / Chromotropic acid |
| Formaldehyde 50 M. L               | 0.02 - 1.00 mg/L HCHO                                       | H <sub>2</sub> SO <sub>4</sub> / Chromotropic acid |
| Formaldehyde M. TT                 | 0.1 - 5 mg/L HCHO   | H <sub>2</sub> SO <sub>4</sub> / Chromotropic acid |
| H <sub>2</sub> O <sub>2</sub> 50 T | 0.01 - 0.5 mg/L H <sub>2</sub> O <sub>2</sub>               | DPD / Catalyst                                     |
| H <sub>2</sub> O <sub>2</sub> HR L | 40 - 500 mg/L H <sub>2</sub> O <sub>2</sub>                 | Titanium Tetrachloride / Acid                      |
| H <sub>2</sub> O <sub>2</sub> LR L | 1 - 50 mg/L H <sub>2</sub> O <sub>2</sub>                   | Titanium Tetrachloride / Acid                      |
| H <sub>2</sub> O <sub>2</sub> T    | 0.03 - 3 mg/L H <sub>2</sub> O <sub>2</sub>                 | DPD / Catalyst                                     |
| Hardness Ca and Mg L               | 0.05 - 4 mg/L CaCO <sub>3</sub>                             | Calmagite  |
| Hardness Ca and Mg MR TT           | 10 - 360 mg/L CaCO <sub>3</sub>                             | Calmagite  |
| Hardness Calcium (B) T             | 20 - 500 mg/L CaCO <sub>3</sub>                             | Murexide   |
| Hardness Calcium (B) T             | 50 - 900 mg/L CaCO <sub>3</sub>                             | Murexide   |
| Hardness total HR T                | 20 - 500 mg/L CaCO <sub>3</sub> <sup>3)</sup>               | Metallphthaleine                                   |
| Hardness total T                   | 2 - 50 mg/L CaCO <sub>3</sub>                               | 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 <sub>2</sub> H <sub>4</sub> <sup>c)</sup> | PDMAB  |
| Hydrazine L                        | 5 - 600 µg/L N <sub>2</sub> H <sub>4</sub>                  | Dimethylaminobenzaldehyde                          |
| Hydrazine P                        | 0.05 - 0.5 mg/L N <sub>2</sub> H <sub>4</sub>               | 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 <sup>d)</sup>                            | 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 <sup>d)</sup>                              | 1,10-Phenanthroline                                |
| Iron T                             | 0.02 - 1 mg/L Fe  | Ferrozine / Thioglycolate                          |
| K <sub>S4.3</sub> T                | 0.1 - 4 mmol/L K <sub>S4.3</sub>                            | 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  |

| Test Name             | Measuring Range                               | Chemical Method                     |
|-----------------------|---|-------------------------------------|
| 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 <sub>4</sub>                 | 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 <sub>4</sub>                  | 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                 |
| Nitrate T             | 0.08 - 1 mg/L N                               | Zinc Reduction / NED                |
| Nitrate TT            | 1 - 30 mg/L N                                 | Chromotropic Acid                   |
| Nitrite HR PP         | 2 - 250 mg/L NO <sub>2</sub> <sup>-</sup>     | Ferrous Sulfate Method              |
| 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       |
| Nitrite VHR L         | 25 - 2500 mg/L NO <sub>2</sub> <sup>-</sup>   | Ferrous Sulfate Method              |
| Oxygen active T       | 0.1 - 10 mg/L O <sub>2</sub>                  | DPD                                 |
| Oxygen dissolved C    | 10 - 1100 µg/L O <sub>2</sub> <sup>c)</sup>   | Rhodazine D TM                      |
| Ozone 50 T            | 0.02 - 0.5 mg/L O <sub>3</sub>                | DPD / Glycine                       |
| Ozone PP              | 0.015 - 2 mg/L O <sub>3</sub>                 | DPD / Glycine                       |
| Ozone T               | 0.02 - 2 mg/L O <sub>3</sub>                  | DPD / Glycine                       |
| Phenol T              | 0.1 - 5 mg/L C <sub>6</sub> H <sub>5</sub> OH | 4-Aminoantipyrine                   |
| PHMB T                | 2 - 60 mg/L PHMB                              | Buffer / Indicator                  |
| Phosphate h. TT       | 0.02 - 1.6 mg/L P <sup>b)</sup>               | Phosphomolybdenum Blue              |
| Phosphate HR C        | 1.6 - 13 mg/L P <sup>c)</sup>                 | Vanadomolybdate                     |
| Phosphate HR L        | 5 - 80 mg/L PO <sub>4</sub>                   | 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 <sup>c)</sup>              | Stannous Chloride                   |
| Phosphate LR L        | 0.1 - 10 mg/L PO <sub>4</sub>                 | 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 <sup>b)</sup>               | Phosphomolybdenum Blue              |
| Phosphate total HR TT | 1.5 - 20 mg/L P <sup>b)</sup>                 | Phosphomolybdenum Blue              |
| Phosphate total LR TT | 0.07 - 3 mg/L P <sup>b)</sup>                 | Phosphomolybdenum Blue              |
| Phosphate TT          | 0.02 - 1.63 mg/L P                            | Phosphomolybdenum Blue              |
| Phosphonate PP        | 0.02 - 125 mg/L PO <sub>4</sub>               | 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                          |
| Polyacrylate L        | 1 - 30 mg/L Polyacryl                         | Turbidity                           |
| Potassium T           | 0.7 - 16 mg/L K                               | Tetraphenylborat Turbidity          |
| SAC 254 nm (344)      | 0.25 - 50 m <sup>-1</sup>                     | Direct Reading EN ISO 7887:1994     |
| SAC 436 nm            | 0.5 - 50 m <sup>-1</sup>                      | Direct Reading EN ISO 7887:1994     |
| SAC 525 nm            | 0.5 - 50 m <sup>-1</sup>                      | Direct Reading EN ISO 7887:1994     |

| Test Name                     | Measuring Range                            | Chemical Method  |
|-------------------------------|--|--|
| SAC 620 nm                    | 0.5 - 50 m <sup>-1</sup>                   | Direct Reading EN ISO 7887:1994                          |
| Selenium                      | 0.05 - 2 mg/L Se                           | 3,3'-Diaminobenzidine in Toluene                         |
| Silicate HR PP                | 1 - 100 mg/L SiO <sub>2</sub>              | Silicomolybdate  |
| Silicate L                    | 0.1 - 8 mg/L SiO <sub>2</sub>              | Heteropolyblue   |
| Silicate LR PP                | 0.05 - 1.6 mg/L SiO <sub>2</sub>           | Heteropolyblue   |
| Silicate T                    | 0.05 - 4 mg/L SiO <sub>2</sub>             | Silicomolybdenum Blue                                    |
| Silica VLR PP                 | 0.005 - 0.5 mg/L SiO <sub>2</sub>          | Heteropolyblue   |
| Sulphate HR PP                | 50 - 1000                                  | Bariumsulphate Turbidity                                 |
| Sulphate PP                   | 5 - 100 mg/L SO <sub>4</sub> <sup>2-</sup> | Bariumsulphate Turbidity                                 |
| Sulphate T                    | 5 - 100 mg/L SO <sub>4</sub> <sup>2-</sup> | Bariumsulphate Turbidity                                 |
| Sulphide L                    | 8 - 1400 µg/L S <sup>2-</sup>              | Methylene Blue   |
| Sulphide T                    | 0.04 - 0.5 mg/L S <sup>2-</sup>            | DPD / Catalyst   |
| Sulphite 10 T                 | 0.1 - 12 mg/L SO <sub>3</sub>              | DTNB   |
| Sulphite T                    | 0.1 - 6 mg/L SO <sub>3</sub>               | 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                  |
| Tannin L                      | 0.5 - 20 mg/L Tannin                       |  |
| TN HR 2 TT                    | 5 - 140 mg/L N <sup>b)</sup>               | 2,6-Dimethylphenole                                      |
| TN HR TT                      | 5 - 150 mg/L N <sup>b)</sup>               | Persulphate Digestion                                    |
| TN LR 2 TT                    | 0.5 - 14 mg/L N <sup>b)</sup>              | 2,6-Dimethylphenole                                      |
| TN LR TT                      | 0.5 - 25 mg/L N <sup>b)</sup>              | Persulphate Digestion                                    |
| TOC HR M. TT                  | 50 - 800 mg/L TOC <sup>b)</sup>            | H <sub>2</sub> SO <sub>4</sub> / Persulphate / Indicator |
| TOC LR M. TT                  | 5 - 80 mg/L TOC <sup>b)</sup>              | H <sub>2</sub> SO <sub>4</sub> / Persulphate / Indicator |
| Triazole PP                   | 1 - 16 mg/L Benzotriazole or Tolytriazole  | 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

|                                    |  |
|------------------------------------|--|
| <b>Optics</b>                      | Grid monochromator with reference beam and beam splitter after exit slit                                   |
| <b>Light Source</b>                | Xenon flash lamp (500 million flashes possible)  |
| <b>Measurement</b>                 | Concentration, single and multi-wavelength measurement of absorbance and % transmission, kinetics, spectra |
| <b>Wavelength Range</b>            | 190 - 1100 nm ( nm)  |
| <b>Wavelength Resolution</b>       | 1 nm   |
| <b>Wavelength Accuracy</b>         | ± 1 nm on all Holmium peaks  |
| <b>Spectral Scope</b>              | 4 nm   |
| <b>Photometric Range</b>           | -3.3 - +3.3 Abs  |
| <b>Photometric Resolution</b>      | Absorption: 0.001 ; Transmission: 0.1 %  |
| <b>Photometric Reproducibility</b> | 0.003 Abs below 0.6 Abs ; 0.5 % from 0.6 to 2.0 Abs  |

|                                      |   |
|--------------------------------------|---|
| <b>Photometric Linearity</b>         | < 1 % up to 2.0 Abs between 340 to 900 nm   |
| <b>Scan Speed</b>                    | 700 - 2000 nm/min.  |
| <b>Drift</b>                         | < 0.005 Abs per hour after 15 minutes heat up time  |
| <b>Stray Light</b>                   | < 0.05 % Transmission at 340 and 408 nm   |
| <b>Suitable Vials</b>                | Rectangular Cuvettes 10 mm<br>Rectangular Cuvettes 20 mm<br>Rectangular Cuvettes 50 mm<br>Round Cuvettes 13 mm<br>Round Cuvettes 16 mm<br>Round Cuvettes 24 mm  |
| <b>Display</b>                       | 7" high contrast colour graphic-display   |
| <b>Interfaces</b>                    | Ethernet<br>USB B<br>USB A for External Memory<br>Keypad<br>Barcode-Scanner<br>PCL Compatible Printer   |
| <b>Operation</b>                     | Membrane Keyboard   |
| <b>Automatic Cuvette Recognition</b> | Round cuvettes: 13, 16 and 24 mm ; Rectangular cuvettes: 10, 20 and 50mm  |
| <b>Test Recognition</b>              | via internal barcode reader   |
| <b>Auto-Check</b>                    | Self-test at each switch-on: test of memory, processor, internal interface, filter lamp and additional calibration of each wavelength   |
| <b>LIMS Compatibility</b>            | ASCII, .csv-files   |
| <b>Internal Storage</b>              | approx. 5000 data sets (method, user ID, date, result), autostorage function / manual storage function  |
| <b>Security</b>                      | Password protection possible: 3 different user levels (guest, user, admin)  |
| <b>Power Drain</b>                   | 100 - 240 V, 50/60 Hz   |
| <b>Power Supply</b>                  | Buffer batteries (4 x AA), power supply unit with cable   |
| <b>Portability</b>                   | Benchtop  |
| <b>Compliance</b>                    | CE  |
| <b>IP Protection Class</b>           | EN 60529  |
| <b>Interference Emission</b>         | Class B   |
| <b>Interference Immunity</b>         | IEC 61000-4-3   |
| <b>Tolerance Extension</b>           | 0.008 E   |
| <b>Meter Safety</b>                  | EC Directive 2014/35/EC EN 61010-1:2010   |
| <b>Languages User Interface</b>      | 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 |
| <b>Languages Quick Start Guide</b>   | 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 |
| <b>Languages Full User Manual</b>    | German, English, Spanish, French, Italian, Portuguese, Chinese, Japanese  |
| <b>Dimensions</b>                    | 16.61 x 7.68 x 12.72"   |

## 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
- Warranty information

## 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      |
| Thermoreactor RD 125  | 2418940     |
| USB cable 3 m   | 2444482     |
| Pipette, 1000 µl  | 365045      |
| Measuring spoon, 1 g  | 384930      |
| UV Pen Lamp, 254 nm   | 400740      |
| UV protection glasses, orange   | 400755      |
| 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      |
| 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    |
| Factory calibration certificate ISO 9001 for XD7500                       | 999755      |

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