

MD 100 Single Parameter Colorimeters



The MD 100 Series is the newest addition to the Lovibond® Tintometer® line of single parameter colorimeters. These rugged, waterproof, single parameter colorimeters are ideal for laboratory and field testing.

Available for a wide variety of parameters, these instruments feature a large, backlit display, a real time clock, automatic data logging as well as the ability to export data to a computer using the IRiM (data transfer device).

The tests are conducted using either Tablet, Powder Pack or Liquid style reagents. Choose the reagent style that works best for you!

Highlights

- Scroll-driven menu system
- Auto-off
- Automatic data storage with time and date stamp
- Easy to read, backlit display
- One time zero function
- Waterproof^{*)}

^{*)} as defined in IP 68, 1 hour at 0.1 meter

Wide Variety of Parameters

- Most instruments in the MD 100 series offer multiple ranges and methods.
- Many instruments have the flexibility to use our Powder Pack™, tablet and/or liquid reagents.

Ergonomic Design

- Angled, ergonomic design for easy bench top or hand-held use.
- Waterproof.

User Calibration Mode

- Allows user to calibrate instrument to any government or organizational standard (for example N.I.S.T or ISO)
- If the user is testing in a very specific range, resolution can be improved.
- Can be used to account for any interferences that are known to be present in the sample.

Automatic Data Storage

- 16 point internal data storage with time and date stamp.
- Ability to export data to a PC using the IRiM (infrared data transfer module) accessory.

Specifications

Interfaces	Infrared interface for test data transfer ¹
Optics	LEDs, interference filters (IF) and photo sensor in transparent sample chamber. Depending on the version, up to 3 different interference filters are used. Wavelength specifications of interference filters: 430 nm Δλ = 5 nm 530 nm Δλ = 5 nm 560 nm Δλ = 5 nm 580 nm Δλ = 5 nm 610 nm Δλ = 6 nm 660 nm Δλ = 5 nm
Wavelength Accuracy	± 1 nm
Photometric Accuracy	3% FS (T = 20°C – 25°C)
Photometric Resolution	0.01
Power Supply	4 x AAA batteries capacity approx. 17 hours or 5000 tests
Auto - OFF	After 20 minutes
Display	Backlit LCD (on keypress)
Storage	Internal ring memory for 16 data sets
Interfaces	Infrared interface for test data transfer
Additional feature	Real time clock and date
Calibration	factory calibration and user calibration. Table to factory calibration
Dimensions	155 x 75 x 35 mm (L x W x H)
Weight	basic unit approx. 260 g
Environmental conditions	temperature: 5 – 40 °C rel. humidity: 30 – 90% (non-condensing)
Conformity	CE

Ordering Information

Item	P/N
Set of 12 round vials with lid Height 48 mm, Ø 24 mm, glass	19 76 20
Set of 5 round vials with lid Height 48 mm, Ø 24 mm, glass	19 76 29
Set of 10 round vials with lid Height 90 mm, Ø 16 mm, glass	19 76 65
Adapter for round vials ø 16 mm	19 80 21 90
Set of 12 plastic vials (PC), with lid "Multi"-Type 2, Ø 10 mm	19 76 00
Vial stand for 6 round vials Ø 24 mm, acrylic glass	41 89 51
Vial stand for 10 vials (Ø 16 mm or □ 13.5 mm), acrylic glass	41 89 57
Mixing cylinder, 25 ml, with stopper required accessory for molybdenum LR test	19 80 26 50
Membrane filter set for use when preparing samples, 25 membrane filters, 0.45 µm, 2 syringes 20 ml	36 61 50
Cleaning cloth for vials	19 76 35
Set of 12 sealing rings for round vial ø 24 mm	19 76 26
Measuring beaker, volume 100 ml	38 48 01
Plastic funnel with handle	47 10 07
Tablet Crusher, 13 cm length	36 41 00
Tablet Crusher, 10 cm length	36 41 09
IRiM - Data Transfer Module	21 40 50
Secondary Reference Standard Kit Confirms the standards of Zero, 0.20, and 1.0 mg/l Cl ₂ For use with the Chlorine 1 and Chlorine 3 instruments.	27 56 60
EZ Mix Primary Chlorine Standard Kit Confirms the value of 1.5 mg/l For use with the Chlorine 1, Chlorine 2 and Chlorine 3 instruments.	36 61 60

¹available option: IRiM
^{*)}tested with standard solutions

Delivery Content

- Instrument in carrying case
- 4 AAA batteries
- 3 Round vials (glass) with lid
- 1 stirring rod & 1 brush
- Specified Reagents*
- Warranty Information
- Certificate of Conformity
- Instruction Manual

* COD and Fluoride instruments are supplied without reagents



Parameter	Range	Method	Reagents	Reagent P/N	Instrument P/N
Absorbance	See page 30 for details				
Aluminum	0.01 - 0.3 mg/l Al	Eriochrome cyanine R ²	Combi-Pack: Aluminum No. 1 / Aluminum No. 2	51 76 01 BT	27 62 00
	0.01 - 0.25 mg/l Al	Eriochrome cyanine R ²	VARIO Aluminum Reagent Set	53 50 00	27 62 05
Ammonia	0.02 - 1.0 mg/l N	Indophenol blue	Combi-Pack: Ammonia No. 1 / Ammonia No. 2	51 76 11 BT	27 60 60
	0.01 - 0.8 mg/l N	Salicylate	VARIO Ammonia Reagent Set, F10	53 55 00	27 60 65
Ammonia, Free	0.01 - 0.5 mg/l N	Indophenol	VARIO Free Ammoina Reagent Set, F10	53 58 00	27 60 70
Chlorine 1 (Free & Total)	0.02 - 2.0 mg/l Cl ₂	DPD	Free Chlorine: VARIO DPD Free Chlorine Reagent, F10	53 01 00	27 60 10
	0.1 - 8.0 mg/l Cl ₂	DPD	Total Chlorine: VARIO DPD Total Chlorine Reagent, F10	53 11 20	
In addition to the standard accessories, this instrument is also supplied with 2 x Type 2 Multi-Vials					
Chlorine 2 (Free & Total)	0.01 - 4 mg/l Cl ₂	DPD	Chlorine Reagent Set	47 10 56	27 60 05
	0.02 - 6.0 mg/l Cl ₂	DPD	Combi-Pack: DPD No. 1 / DPD No. 3	51 77 11 BT	27 60 00
	0.1 - 10 mg/l Cl ₂	DPD	Combi-Pack: DPD No. 1 HR / DPD No. 3 HR	51 77 91 BT	
Chlorine Duo (Free & Total)	0.02 - 6.0 mg/l Cl ₂	DPD	Combi-Pack: DPD No. 1 / DPD No. 3	51 77 11 BT	27 60 20
	0.02 - 2.0 mg/l Cl ₂	DPD	Free Chlorine: VARIO DPD Free Chlorine Reagent, F10	53 01 00	27 60 25
	0.1 - 8.0 mg/l Cl ₂	DPD	Total Chlorine: VARIO DPD Total Chlorine Reagent, F10	53 01 20	
	0.1 - 10 mg/l Cl ₂	DPD	Combi-Pack: DPD No. 1 HR / DPD No. 3 HR	51 77 91 BT	
Chlorine HR (Total)	5 - 200 mg/l Cl ₂	Potassium Iodide	Combi-Pack: Chlorine HR (KI) / Acidifying GP	51 77 21 BT	27 61 70
	This instrument is supplied with 3 x 16 mm sample cells and tube adapter.				
Chlorine & pH 2 in 1 Version	0.02 - 2.0 mg/l Cl ₂	DPD	Free Chlorine: VARIO DPD Free Chlorine Reagent, F10	53 01 00	27 80 30
	0.1 - 8.0 mg/l Cl ₂	DPD	Total Chlorine: VARIO DPD Total Chlorine Reagent, F10	53 01 20	
	6.5 - 8.4 pH	Phenol Red	Phenol Red Photometer Tablets	51 17 70 BT	
Chlorine Dioxide	0.02 - 3.8 mg/l ClO ₂	DPD	VARIO DPD Free Chlorine Reagent, F10	51 01 00	27 60 35
	0.02 - 11 mg/l ClO ₂	DPD	Combi-Pack: DPD No. 1 / Glycine	51 77 31 BT	27 60 30
COD	0 - 150 mg/l O ₂	Dichromate / H ₂ SO ₄	VARIO LR COD Tube Tests (25 pack)	2 42 07 20	27 61 20
			VARIO LR COD Tube Tests (150 pack)	2 42 07 25	
			VARIO LR COD Tube Tests, Hg-Free (25 pack)	2 42 07 10	
	0 - 1500 mg/l O ₂	Dichromate / H ₂ SO ₄	VARIO MR COD Tube Tests (25 pack)	2 42 07 21	
			VARIO MR COD Tube Tests (150 pack)	2 42 07 26	
			VARIO MR COD Tube Tests, Hg-Free (25 pack)	2 42 07 11	
			VARIO MR COD Tube Tests, Hg-Free (150 pack)	2 42 07 16	
	0 - 15000 mg/l O ₂	Dichromate / H ₂ SO ₄	VARIO HR COD Tube Tests (25 pack)	2 42 07 22	
			VARIO HR COD Tube Tests (150 pack)	2 42 07 27	
			VARIO HR COD Tube Tests, Hg-Free (25 pack)	2 42 07 12	
This instrument is supplied with a 16 mm tube adapter; Please order reagents separately.					
Required Accessory:			RD 125 Reactor	2 41 89 40	
Copper	0.05 - 5.0 mg/l Cu	Biquinoline	Combi-Pack: Copper No. 1 / Copper No. 2	51 76 91 BT	27 60 80
	0.05 - 5.0 mg/l Cu	Bicinchoninate	VARIO Copper Reagent, F10	53 03 00	27 60 85
Fluoride	0.05 - 2.0 mg/l F ⁻	SPADNS	SPADNS Reagent, 250 ml	46 74 81	27 60 90
			SPADNS Reagent, 500 ml	46 74 82	
	This instrument is supplied without reagents; Please order reagent and standard separately.				
Required Accessory:			Fluoride Standard, 30 ml	20 56 30	

Parameter	Range	Method	Reagents	Reagent P/N	Instrument P/N
Hardness, Total	2 - 50 mg/l CaCO ₃ 20 - 500 mg/l CaCO ₃ (by dilution)	Metallphthalein	HARDCHECK P Tablets	51 56 60 BT	27 61 90
Hazen (APHA)	0 - 500 mg/l Pt-Co	Platinum Cobalt (APHA)	No Reagents Required		27 61 60
Iron	0.02 - 1.0 mg/l Fe	PPST	Iron LR (Fe ²⁺ and Fe ³⁺) Tablet	51 53 70 BT	27 60 50
	0.02 - 1.8 mg/l Fe	TPTZ	VARIO Iron TPTZ Reagent, F10	53 05 50	27 60 55
	0.02 - 3.0 mg/l Fe	1, 10-Phenanthroline	VARIO Ferro Reagent, F10	53 05 60	27 60 56
Manganese	0.2 - 4.0 mg/l Mn	Formaldehyde	Combi-Pack: Manganese No. 1 LR / No. 2 LR	51 76 21 BT	27 61 00
	0.01 - 0.7 mg/l Mn	PAN	VARIO LR Manganese Reagent Set, F10 VARIO Rochelle Salt Solution, 30 ml (for seawater)	53 50 90 53 06 40	27 61 05
	0.1 - 18 mg/l Mn	Periodate Oxidation	VARIO HR Manganese Reagent Set, F10	53 51 00	27 61 06
Molybdate	0.03 - 3.0 mg/l Mo	Mercaptoacetic Acid	VARIO LR Molybdate Reagent Set, F20 Graduated Mixing Cylinder, Glass w/ stopper, 25 ml	53 54 50 19 80 26 50	27 61 40
	0.3 - 40 mg/l Mo	Mercaptoacetic Acid	VARIO HR Molybdate Reagent Set, F10	53 53 00	27 61 41
	0.6 - 30 mg/l Mo	Thioglycolate	Combi-Pack: Molybdate No. 1 HR / No. 2 HR	51 76 31 BT	27 61 42
	Required Accessory:				
Monochloramines	0.04 - 4.5 mg/l Cl ₂	Indophenol	VARIO Monochlor F Reagent, F10	53 18 10	27 60 70
Phosphate	0.05 - 4.0 mg/l PO ₄	Phosphomolybdic Acid	Combi-Pack: Phosphate No. 1 LR / No. 2 LR	5176 51 BT	27 60 40
	0.06 - 2.5 mg/l PO ₄	Ascorbic Acid	VARIO Phosphate 3 Reagent, F10	53 15 50	27 60 45
Silica	0.05 - 4.0 mg/l SiO ₂	Silicomolybdate	Combi-Pack: Silica No. 1 / No. 2 Silica PR Tablet (needed in the presence of phosphate)	51 76 71 51 31 50	27 61 10
	0.1 - 1.6 mg/l SiO ₂	Heteropoly Blue	VARIO LR Silica Reagent Set, F10	53 56 90	27 61 15
	1 - 90 mg/l SiO ₂	Silicomolybdate	VARIO HR Silica Reagent Set, F10	53 57 00	27 61 16
Transmission	See page 30 for details				
Suspended Solids	0 - 750 mg/l TSS	Turbidity	No Reagents Required		27 61 50
Urea	0.1 - 2.5 mg/l Urea 0.2 - 5 mg/l Urea (by dilution)		Urea Reagent Set	51 78 00 BT	27 62 10

Multi-Parameter MD 100 Instruments

Several multi-parameter variations of the MD 100 are available including:

- 2 in 1
- 3 in 1
- 4 in 1
- 5 in 1
- 6 in 1

For complete parameters, ranges and testing methods, please visit the MD 100 section of our website:

www.lovibond.us/md100

