

TECHNICAL SPECIFICATION

Instrument Type	Pre-programmed colorimeter for direct-reading of molybdate concentration
Optics	Palintest B6 optical system with pulsed blue LED, wavelength filter and photo-detector
Operating Ranges	Molybdate 0 – 20 MoO ₄ mg/l 0 – 100 MoO ₄ mg/l
Operating Temp	0 – 40°C/32 – 104 °F
Display	10 mm character LCD
Test Cells/Reagents	For use with Palintest Molybdate LR and Molybdate HR test reagents
Operation	Two-button operation
Blank/Zero Setting	Optionally held in memory or reset for each reading
Internal Calibration	Factory set. Recalibration through internal software
Instrument Case	Splash-proof case with membrane keypad
Power Supply	2 x 1.5v batteries. Power management system with auto-switch off
Size	Instrument only 173 x 75/44 x 41 mm

For more information about Palintest products, visit our web site at www.palintest.com

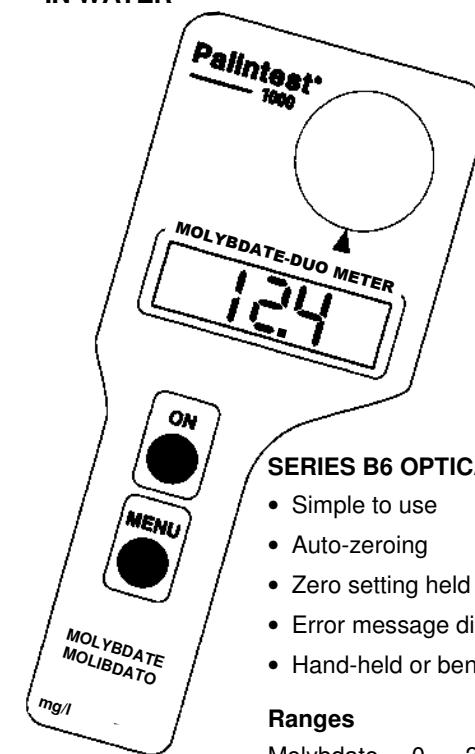
V2-01/09

Palintest®
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INST.28

MOLYBDATE-DUO METER

PRECISION DUAL RANGE PHOTOMETER FOR MEASURING MOLYBDATE CONCENTRATION IN WATER



SERIES B6 OPTICAL SYSTEM

- Simple to use
- Auto-zeroing
- Zero setting held in memory
- Error message display
- Hand-held or bench use

Ranges

Molybdate 0 – 20 mg/l MoO₄
0 – 100 mg/l MoO₄

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ERROR MESSAGES

The Palintest 1000 Molybdate-Duo Meter displays error messages to assist the operator in the event of any problems with the sample or instrument.

Display	Cause	Action
E1	Coloured, dirty or scratched BLANK tube used.	Re-zero instrument on a correct BLANK in a clean, dry tube.
E2 or E3	a) Incorrect BLANK used to zero instrument. b) Electrical fault in instrument.	a) Re-zero instrument on a correct BLANK. b) Return instrument for repair.
E4	Battery voltage too low for correct reading.	Change batteries.
E5	Stray light has affected the reading.	a) Remove instrument from vicinity of spotlights or other bright light sources. b) Check instrument case for damage.

CALIBRATION CHECK

Instrument calibration should not change in use. Certified colour standards are available for checking instrument optical system. Use only Series B6 Standards. Standards may differ in colour to actual test colours.

CARE AND MAINTENANCE

Here are five hints on keeping the photometer clean, free from contamination and in good working order :-

- 1 Prepare your workplace before use. Make sure you have sufficient space to work in and all the necessary reagent systems.
- 2 Wipe test tubes on a clean tissue to remove drips or condensation before placing in the photometer. Remember to cap the tube before reading in the instrument.
- 3 Immediately wipe up any drips or spillages onto the instrument or into the test chamber with a clean tissue.
- 4 Keep the instrument in a clean, dry place when it is not in use. Keep it on a clean, dry bench away from chemicals, place it in a storage cupboard or keep it in a carrying case.
- 5 Keep the carrying case in a clean, dry condition. Make sure any solutions that have spilled or drained into the carrying case are dry before the case is closed up and the instrument is put away.

Replace the battery when the 'B' symbol remains on the display. To remove the battery compartment cover press gently on the sides of the cover and pull downwards. Use 2 x 1.5v alkaline 'AA' batteries, MN 1500, LR6, E9f, AM3 or equivalent. Remove batteries from instrument if it is to be stored or left unused for a long period of time.

The Palintest 1000 Molybdate-Duo Meter is guaranteed for a period of two years from the date of purchase excluding accidental damage or damage caused by unauthorised repair or misuse. Should repair be necessary, contact our Technical Services Department quoting the instrument serial number. This guarantee does not affect statutory rights.

An instrument failure, due to test cell contamination, is not covered by the Palintest instrument warranty.

OPERATING PROCEDURE

Blank and Sample Tubes

The Palintest 1000 Molybdate-Duo meter uses a BLANK tube to set the instrument to zero and a SAMPLE tube to take the test measurement.

A BLANK tube is a test tube filled with untreated water sample. A SAMPLE tube is a test tube containing the sample to which reagents have been added in accordance with the test procedure described below.

The zero setting is held in memory. It is not necessary to reset the zero each time a reading is taken or between different test ranges provided the conditions of use are the same. The zero setting can be confirmed if necessary by taking a reading on the blank tube.

To Select Test Ranges

- 1 Press the MENU key. The currently selected test range will appear on the display: Molybdate 0 – 20 mg/l Lr or Molybdate 0 – 100 mg/l Hr.
- 2 To change the range, press the MENU key again.

To Set Zero

- 1 Insert the BLANK tube into the test chamber.
- 2 Press and hold down the ON key until the '---' symbol appears on the display (2 seconds).
- 3 Release the ON key when the display shows '0.0'. This zero setting will be held in memory.

To Take Test Reading

- 1 Insert the SAMPLE tube into the test chamber.
- 2 Press the ON key until the test range indication appears on the display (1 second). Release the key and the test result will be displayed. (Do not hold the key down or the instrument will attempt to blank on the sample and cause errors in the readings).
- 3 The display will show '—Hi' if the reading exceeds the maximum limit of the test range. In this case, move to the higher test range or repeat the test on a diluted sample.

TEST PROCEDURE

MOLYBDATE LR TEST

0 – 20 mg/l MoO₄

Reagents and Equipment

Palintest Molybdate No 1 LR Tablets
Palintest Molybdate No 2 LR Tablets
Palintest Photometer Round Test Tubes, 10 ml glass (PT 515)

Test Procedure

- 1 Fill test tube with sample to the 10 ml mark.
- 2 Add one Molybdate No 1 LR tablet, crush and mix to dissolve.
- 3 Add one Molybdate No 2 LR tablet, crush and mix to dissolve.
- 4 Stand for two minutes to allow full colour development. Take Molybdate-Duo meter reading. The reading represents the molybdate concentration as parts per million (milligrams per litre).

MOLYBATE HR TEST

0 – 100 mg/l MoO₄

Reagents and Equipment

Palintest Molybdate No 1 HR Tablets
Palintest Molybdate No 2 HR Tablets
Palintest Photometer Round Test Tubes, 10 ml glass (PT 515)

Test Procedure

- 1 Fill test tube with sample to the 10 ml mark.
- 2 Add one Molybdate No 1 HR tablet, crush and mix to dissolve.
- 3 Add one Molybdate No 2 HR tablet, crush and mix to dissolve.
- 4 Take Molybdate-Duo meter reading. The reading represents the molybdate concentration as parts per million (milligrams per litre).