

## BATTERY REPLACEMENT

Battery replacement must only take place in a non-hazardous environment.

Simply rotate the battery cover on the back of the meter.

Detach the battery from the terminals and attach a fresh 9V battery while paying attention to the correct polarity. Insert the battery and replace the cover.



## ACCESSORIES

MI0004	Tissue for wiping cuvetts (4 pcs)
MI0005	9V battery (1 pc)
MI0011	10 mL glass cuvette (2 pcs.)
MI0012	Cap for 10 mL glass cuvet (2 pcs.)
MI0013	Stopper for 10 mL glass cuvet (2 pcs.)
MI515-100	Calibration standards: 0, 10, 500 FNU (3 x 30 mL dropper bottles)

## CERTIFICATION

Milwaukee Instruments conform to the CE European Directives.

**Disposal of Electrical & Electronic Equipment.** Do not treat this product as household waste. Hand it over to the appropriate collection point for the recycling of electrical and electronic equipment.

**Disposal of waste batteries.** This product contains batteries. Do not dispose of them with other household waste. Hand them over to the appropriate collection point for recycling.

Please note: proper product and battery disposal prevents potential negative consequences for human health and the environment. For detailed information, contact your local household waste disposal service or go to [www.milwaukeeinstruments.com](http://www.milwaukeeinstruments.com) (USA & CAN) or [www.milwaukeeinst.com](http://www.milwaukeeinst.com).



RoHS  
compliant



## RECOMMENDATION

Before using this product, make sure it is entirely suitable for your specific application and for the environment in which it is used. Any modification introduced by the user to the supplied equipment may compromise the meter's performance. For your and the meter's safety do not use or store the meter in hazardous environment. To avoid damage or burn, do not perform any measurement in microwave ovens.

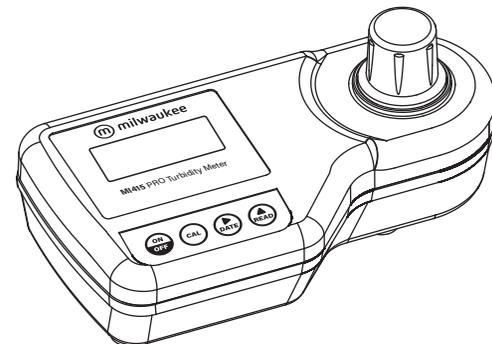
## WARRANTY

These instruments are warranted against defects in materials and manufacturing for a period of 2 years from the date of purchase. This warranty is limited to repair or free of charge replacement if the instrument cannot be repaired. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered by warranty. If service is required, contact your local Milwaukee Instruments Technical Service. If the repair is not covered by the warranty, you will be notified of the charges incurred. When shipping any meter, make sure it is properly packaged for complete protection.

# USER MANUAL

## MI415

## PRO Turbidity Meter



[milwaukeeinstruments.com](http://milwaukeeinstruments.com) (USA & CAN)  
[milwaukeeinst.com](http://milwaukeeinst.com)



Dear Customer,  
Thank you for choosing a Milwaukee Instruments product. This manual will provide you with the necessary information for the correct use of the instrument. Please read it carefully before using the meter.

## SPECIFICATIONS

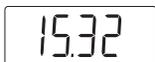
Range	0.00 to 50.00 FNU 50 to 1000 FNU
Resolution	0.01 FNU and 1 FNU
Precision	±0.5FNU or ±5% of reading, whichever is greater
Light Source	High emission infrared LED
Light Detector	Silicon Photocell
Method	Detection of scattered light, according to ISO 7027
Environment	0 to 50 °C (32 to 122 °F) 100% RH max
Battery Type	1 x 9 volt
Auto-Shut off	After 5' of non-use
Dimensions	192 x 104 x 52 mm (7.5 x 4.1 x 2")
Weight	380 g

## MEASUREMENT PROCEDURE

- Turn the meter on by pressing ON/OFF.
- When the LCD displays "- - -", the meter is ready.
- Fill a clean, dry cuvet with sample up to the mark.
- Replace the cap.
- Clean the cuvet with a lintfree cloth to remove any fingerprints, dirt or waterspots.
- Place the cuvet into the holder and ensure that the notch on the cap is positioned securely into the groove.
- Press READ/▲ and "SIP" will blink during measurement.



- The instrument directly displays turbidity in FNU units.



## CALIBRATION PROCEDURE

- Turn the meter on by pressing ON/OFF. When the LCD displays "- - -", the meter is ready.
- Press CAL key and "CAL" will blink on the display.



- Press CAL key again. The date of calibration in MM.DD format appears on the LCD.



- To toggle between month and day press DATE/▶ key.



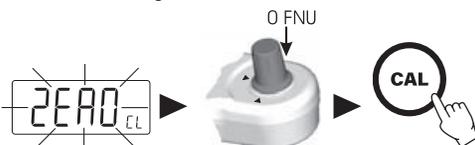
- To change the date press READ/▲ key.



- To confirm the date values press CAL key.



A blinking ZERO message will appear on the LCD. Insert the 0 FNU standard and press CAL key. "SIP" will blink during measurement.



- At the end the blinking "10.00" message will appear on the LCD.

Insert the 10 FNU standard and press CAL key. "SIP" will blink during measurement.



- The blinking "500" message will appear on the LCD.

**Note:** At this moment you can exit calibration by pressing READ/ key and the meter will memorize only the two-point calibration.

Insert the 500 FNU standard and press CAL key. "SIP" will blink during measurement



- At the end of the reading the instrument goes directly to measurement mode. Now the instrument is calibrated and ready to use.



**Note:** A monthly calibration is recommended.

The instrument can be checked with the supplied standard solutions each day.

To check the date of the last calibration simply press DATE/▶ key.

## GUIDE TO DISPLAY CODES

This prompt appears for 1 second each time the instrument is turned on.



The dashes "- - -" indicates that the meter is in a ready state and measurement can be performed.



Sampling In Progress. Flashing "SIP" prompt appears each time the meter is performing a measurement.



The presence of battery icon on the display indicates that the battery voltage is getting low and the battery needs to be replaced.



"BA-", the battery is dead and must be replaced. Once this indication is displayed, the meter will lock up. Change the battery and restart the meter.



"CAL", the meter is in calibration mode. If the CAL key is not pressed within 6 seconds, the meter will automatically switch to idle mode.



"CL" appears on the lower part of the display when the meter is in calibration mode.

