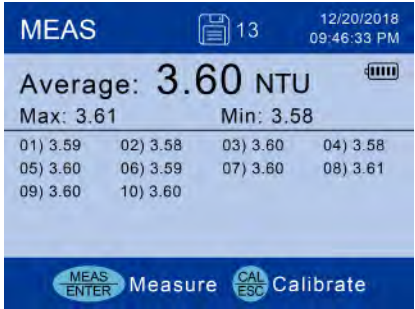


Solution for low-turbidity accuracy
(Applicable for TN500 and TN480)

Solution 1 — TruRead™ Measurement Mode

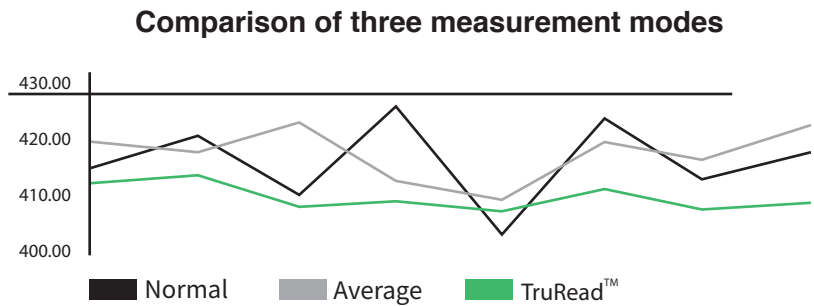
Water turbidity is a complex analytical measurement. The accuracy will be affected by many factors such as precipitation, suspension, air bubbles, stray light, instrument errors, operating techniques, cuvette contamination, and cuvette optical errors.

TruRead™ mode significantly reduces the above measurement errors.



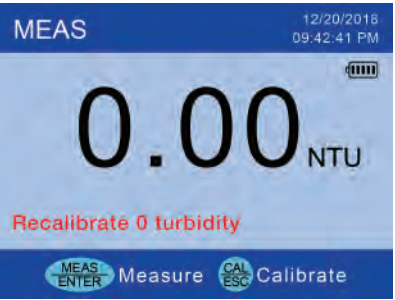
- According to different sample solutions, choose 5/10/15/20 times for continuous measurement and read the average value.
- The max and min values help you determine the reliability of measurement, whether the sample solution is sufficiently mixed, settled, or degased.
- Display or save the complete measurement interface, including MAX, MIN, average, and all measurement values.

* TruRead™ Mode (10 times)



Solution 2 — 0 NTU Error Reminder

If the zero point is calibrated with contaminated 0.0 NTU standard solution, the measurement will have a negative error. The instrument can automatically recognize the negative error at the zero point and remind users to re-calibrate, as shown in the right figure. If the reminder appears again after calibration, it means that the 0.0 NTU standard solution maybe invalid and should be replaced.



*0 NTU error reminder

Portable Turbidimeter
Compliant with EPA 180.1 Method



Place the sample vial



Replaceable light source



TN500 Premium

- Replaceable tungsten filament lamp
- Ideal for high-accuracy low-turbidity measurement
- Range: 0 – 1000 NTU, auto. ranging



GLP data management & USB data export



Rechargeable lithium battery

a

b

c

d

a. Measurement mode

b. Calibration mode

c. Calibration setup

d. Settings

MEAS

1.82 NTU

Measure Calibrate

CAL

0 20 100 400 800

Enter Move CAL Exit

CAL-20.0 NTU

23.0 NTU

Calibrating, please wait...

SETUP

P1 CAL Date and Time View
P2 Continuous measurement 05
P3 Measurement unit NTU
P4 Data save mode Manual
P5 Delete saved data No
P6 Auto-close timer OFF

First Page

Enter Move CAL Exit



TN420 Basic

Extraordinary reliability and convenience

Range: 0 – 1000 NTU

Achieve lab-grade accuracy wherever you are, suitable for tap water, drinking water, swimming pools, beverage making, environmental monitoring, etc.

Customized AMCO® Polymer Standard Calibration Solutions

Approved by U.S EPA and ASTM, AMCO® high-molecular polymer turbidity standard solutions are the best alternatives to Formazin standards in terms of shelf-life, ease of use, and safety concerns.

| | Formazin solutions | AMCO® polymer solutions |
|-------------------|------------------------------------------------------------------|-----------------------------------|
| Toxicity | Highly toxic, PPE is necessary when handling | Non-toxic |
| Operation | Requires diluting, complicated operation. | No diluting needed, use directly |
| Shelf life | <2 NTU: 1 hour; 2 – 20 NTU: 12 – 24 hours; 20 – 400 NTU: 1 month | 1 year |
| Storage condition | Avoid sunlight at low temperature | Avoid sunlight at room temp. |
| Convenience | Easy to settle, requires flipping and mixing | Very stable, can be used directly |
| Traceability | Non-traceable | NIST traceable |



*AMCO® Standard Solution Set



*Sample cuvettes
(6 units come with the kit)

Portable Turbidimeters





Compliant with ISO 7027 Method

- **Infrared LED light source, compliant with ISO7027 and DIN EN 27027 Method 2**
 - Ideal for colored sample solutions such as wine and beer
 - Range: 0 – 1000 NTU, auto. ranging
- **TruRead™ mode (TN480 only) compensates errors by particles in solutions**



*Complete Kit

| Model | Name | Description | Memo |
|----------|------------------------------|--------------------------|--------------------|
| TN500 | Portable turbidimeter kit | Refer to technical specs | EPA • Premium |
| TN420 | | | EPA • Basic |
| TN480 | | | ISO • Premium |
| TN400 | | | ISO • Basic |
| T500-2 | 0 NTU standard | 0.0NTU/100mL | applicable for all |
| T500-1 | Standards kit | 20/100/400/800NTU | TN500/TN420 |
| T200-1 | Standards kit | 20/100/400/800NTU | TN480/TN400 |
| T500-3 | Sample cuvettes | Φ25x60 mm,6 units | applicable for all |
| TN500-5 | Replacement lamp | / | TN500/TN420 |
| TN500-4 | Lithium battery | 3.7V rechargeable | TN500/TN420 |
| TN400-S3 | Silicone oil | 10mL | applicable for all |

| | | | | |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| |  |  |  |  |
| | TN500 Premium | TN420 Basic | TN480 Premium | TN400 Basic |
| Light Source | Tungsten filament lamp, 400~600 nm | | Infrared LED, 860±30 nm | |
| Regulatory | U.S EPA 180.1 Method | | ISO7027 and DIN EN 27027 Method | |
| Certification | CE, RoHS | | | |
| Range | 0 – 1000 NTU (FNU), auto. ranging | | | |
| Resolution | 0.01 NTU (0 – 19.99) / 0.1 NTU (20.0 – 99.9) / 1 NTU (100 – 1000) | | | |
| Accuracy | ± 2% of reading plus stray light | | | |
| Repeatability | ±1% of reading or 0.02 NTU, whichever is greater | | | |
| Calibration Standards | T500-1 AMCO solution kit / Formazin standard solution 0/20/100/400/800 NTU | | T200-1 AMCO solution kit / Formazin standard solution 0/20/100/400/800 NTU | |
| Detector | Silicon photovoltaic | | | |
| Measurement Mode | Normal (push to read), TruRead™ | Normal (push to read), Average | Normal (push to read), TruRead™ | Normal (push to read), Average |
| 0 NTU error reminder | Yes | N/A | Yes | N/A |
| Data storage | 200 sets | N/A | 200 sets | N/A |
| Data export | USB to PC | N/A | USB to PC | N/A |
| Calibration record | Date and time | N/A | Date and time | N/A |
| System language | English/Spanish/Chinese | English | English/Spanish/Chinese | English |
| Screen | TFT Color Screen | | | |
| Sample cuvette | Φ25×60 mm, 18 mL, high borosilicate glass with lid | | | |
| Power supply | 3.7V rechargeable lithium battery | | AA Alkaline battery *4 | |
| Working condition | Temperature: 0 – 50°C; Humidity: 0 – 90% | | | |
| Storage condition | Instrument: -40 – 60°C; Calibration solutions: 5 – 30°C | | | |
| Enclosure rating | IP67 | | | |
| Warranty | 2 years | | | |
| Dimension & Weight | Instrument: (90×203×80)mm / 385g; Kit: (310×295×110)mm / 1.5 kg | | | |
| Includes | Meter, calibration solution*5, sample cuvette*6, microfiber cloth, silicone oil, software flash-drive, USB cable, power adapter, manual, carrying case | Meter, calibration solution*5, sample cuvette*6, microfiber cloth, silicone oil, power adapter, charging cable, manual, carrying case | Meter, calibration solution*5, sample cuvette*6, microfiber cloth, silicone oil, software flash-drive, USB cable, manual, carrying case | Meter, calibration solution*5, sample cuvette*6, microfiber cloth, silicone oil, manual, carrying case |

 **APER A**
INSTRUMENTS

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Address: 6656 Busch Blvd, Columbus, Ohio 43229
Website: aperainst.com

Distributor:



Portable Turbidimeters

| | | | |
|----------------|--------------------------|--------------------------|--|
| | <i>EPA Compliant</i> | <i>ISO Compliant</i> | |
| <i>Premium</i> | TN500 | TN420 | |
| <i>Basic</i> | TN480 | TN400 | |
| | | | |

APER A
INSTRUMENTS
Fluid Precision since 1991