

# TNTplus<sup>®</sup> Vial Chemistries

## Applications

- Wastewater
- Industrial Water
- Drinking Water



## Expert water analysis made simple.

### Reduce errors

A unique barcode label on each Hach<sup>®</sup> TNTplus Vial Chemistry is automatically read by the spectrophotometer when used with Hach's DR6000<sup>™</sup> UV-VIS Spectrophotometer or DR3900<sup>™</sup> Benchtop Spectrophotometer to identify the appropriate method and take the measurement. This significantly reduces errors as well as scratched, flawed or dirty glassware becomes non-issue as the instrument averages 10 readings and rejects outliers.

### Lot after Lot - Be Right

Truecal<sup>™</sup> with each vial includes the calibration data for each individual lot, reducing variation in results. This allows you to meet reporting standards and to perform proficiency testing with higher confidence.

### Documented shelf life and COA

The barcode details batch number and expiry date of reagents, which are documented along with the measurement result. An automatic warning is issued if expiry date has passed. Certificate of Analysis (COA) is available on RFID\* tag on the box, which can be read out with the DR6000 or DR3900 spectrophotometer.

### No reagent blank necessary

The high quality of TNTplus vials, tight reagent production controls, instrument calibration verification, and high instrument stability all combine to eliminate the need to run reagent blanks — saving you time and money!

### Safe and easy handling

TNTplus vials use innovative Dosicaps that are easier to use than powder pillows or liquid reagents. There's no risk of spillage, no safety risk, or risk of contamination with Dosicaps because the reagents are completely contained within the vial cap. The glassware used assures the best precision and the vials have a flat bottom so they can stand on their own.

Packages of TNTplus vials are color-coded for fast and easy parameter and range recognition for the exact test you need. Step-by-step illustrated test methods are printed on the box for quick reference.

## TNTplus Vial Tests\*

Prod. No.	Parameter	Range	Method Name	Method	Truecal	EPA
TNT870	Alkalinity, Total	25 - 400 mg/L CaCO <sub>3</sub>	Colorimetric	10239		
TNT848	Aluminium	0.02 - 0.50 mg/L Al	Chromazurol S	10215		
TNT830	Ammonia, Nitrogen	0.015 - 2.00 mg/L NH <sub>3</sub> -N	Salicylate	10205	Yes	Yes
TNT831		1 - 12 mg/L NH <sub>3</sub> -N	Salicylate	10205		Yes
TNT832		2 - 47 mg/L NH <sub>3</sub> -N	Salicylate	10205	Yes	Yes
TNT833		47 - 130 mg/L NH <sub>3</sub> -N	Salicylate	10205		Yes
TNT834		100 - 1800 mg/L NH <sub>3</sub> -N	Salicylate	10301		
TNT882KTO	Anammox activity	0 - 1000 mAbs	Heme	10304		
TNT817	International Bitter Units	≥2 International Bitter Units	Analogous MEBAK and ASBC	10288		
TNT877	Boron	0.05 - 2.50 mg/L B	Azomethine-H	10274		
TNT852	Cadmium	0.02 - 0.30 mg/L Cd	Cadion	10217		
TNT879	Chloride	1 - 70 mg/L Cl 70 - 1000 mg/L Cl	Iron(III)-thiocyanate	10291		
TNT866	Chlorine, Free	0.05 - 2.00 mg/L Cl <sub>2</sub>	DPD	10231		Yes
TNT867	Chlorine, Total	0.05 - 2.00 mg/L Cl <sub>2</sub>	DPD	10231, 10232		Yes
TNT854	Chromium, Hexavalent Chromium, Total	0.03 - 1.00 mg/L Cr	1,5-Diphenylcarbohydrazide	10218 (Cr <sup>6+</sup> )		Yes
TNT820	COD (Chemical Oxygen Demand)	1 - 60 mg/L COD	Reactor Digestion	10211	Yes	
TNT821		3 - 150 mg/L COD	Reactor Digestion	8000	Yes	Yes
TNT822		20 - 1500 mg/L COD	Reactor Digestion	8000	Yes	Yes
TNT823		250 - 15000 mg/L COD	Reactor Digestion	10212		
TNT824		5,000 - 60,000 mg/L	Reactor Digestion	10212		
TNT815	COD (for samples up to 20000 mg/L Chloride)	7 - 70 mg/L COD	Reactor Digestion	10299		
TNT816		70 - 700 mg/L COD	Reactor Digestion	10299		
TNT825	Chemical Oxygen Demand (COD), Mercury-Free	25 - 1000 mg/L COD	Reactor Digestion	8000		
TNT860	Copper	0.1 - 8.0 mg/L Cu	Bathocuproin	10238		
TNT862	Cyanide	0.01 - 0.6 mg/L CN	Pyridine barbituric acid	10265		Yes
TNT878	Fluoride	0.1 - 2.5 mg/L F	SPADNS 2	10225		Yes
TNT871	Formaldehyde	0.5 - 10 mg/L H <sub>2</sub> CO	Acetylacetone	10295		
TNT858	Iron, Ferrous Iron, Total	0.2 - 6.0 mg/L Fe	1, 10 Phenanthroline	10229		Yes
TNT850	Lead	0.1 - 2.0 mg/L Pb	PAR	10216		
TNT849	Magnesium	0.5 - 50 mg/L Mg	Metalphthalein	10292		
TNT856	Nickel	0.1 - 6.0 mg/L Ni	Dimethylglyoxime	10220		
TNT835	Nitrate, Nitrogen	0.23 - 13.50 mg/L NO <sub>3</sub> -N	Dimethylphenol	10206	Yes	Yes
TNT836		5 - 35 mg/L NO <sub>3</sub> -N	Dimethylphenol	10206	Yes	Yes
TNT839	Nitrite, Nitrogen	0.015 - 0.600 mg/L NO <sub>2</sub> -N	Diazotization	10207	Yes	Yes
TNT840		0.6 - 6.0 mg/L NO <sub>2</sub> -N	Diazotization	10237	Yes	Yes
TNT841		2 - 90 mg/L NO <sub>2</sub> -N	Diazotization	10296		
TNT880	Nitrogen, Simplified Total Kjeldahl	0 - 16 mg/L N	Simplified TKN (s-TKN™)	10242	Yes	Yes
TNT826	Nitrogen, Total Inorganic	1 - 16 mg/L N	Persulfate Digestion	10208	Yes	
TNT827		5 - 40 mg/L N	Persulfate Digestion	10208		
TNT828		20 - 100 mg/L N	Persulfate Digestion	10208		
TNT868	Phenols	5 - 150 mg/L	4-Aminoantipyrine	10266		Yes
TNT846	Phosphorus, Reactive (Ortho)	1.6 - 30 mg/L PO <sub>4</sub> -P (5 - 90 mg/L PO <sub>4</sub> )	Molybdovanadate	10214		

## TNTplus Vial Tests\*

Prod. No.	Parameter	Range	Method Name	Method	Truecal	EPA
TNT843	Phosphorus, Acid Hydrolyzable	0.05 - 1.5 mg/L PO <sub>4</sub> -P (0.15 - 4.5 mg/L PO <sub>4</sub> )	Ascorbic Acid	10209	Yes	Yes
TNT844	Phosphorus, Reactive (Ortho)	0.5 - 5.0 mg/L PO <sub>4</sub> -P (1.5 - 15.0 mg/L PO <sub>4</sub> )	Ascorbic Acid	10209		Yes
TNT845	Phosphorus, Total	2 - 20 mg/L PO <sub>4</sub> -P (6 - 60 mg/L PO <sub>4</sub> )	Ascorbic Acid	10209	Yes	Yes
TNT864	Sulfate	40 - 150 mg/L SO <sub>4</sub>	Turbidimetric	10227		
TNT865	Sulfate	150 - 900 mg/L SO <sub>4</sub>	Turbidimetric	10227		
TNT861	Sulfide	0.1 - 2.0 mg/L S <sup>2-</sup>	Dimethyl-p-phenylenediamine	10294		Yes
TNT874	Surfactants, Anionic	0.1 - 4.0 mg/L	Methylene Blue (MBA)	10278		
TNT885	Surfactants, Cationic	0.2 - 2 mg/L as CTAB	Bromophenol Blue	10305		
TNT875	Surfactants, Nonionic	0.2 - 6.0 mg/L as Triton x 100	TBPE	10275		
TNT876	Surfactants, Nonionic	6 - 200 mg/L as Triton X-100	TBPE	10275		
TNT810	TOC (Total Organic Carbon)	1.5 - 30.0 mg/L C	Direct Method	10267		Yes
TNT811		30 - 300 mg/L C	Direct Method	10267		Yes
TNT819	Vicinal diketones (VDK)	0.015 - 0.5 mg/kg Diacetyl	Analogous MEBAK and ASBC	10276		
TNT872	Volatile Acids	50 - 2,500 mg/L Acetic Acid	Esterification	10240		Yes
TNT869	Water Hardness	20 - 350 mg/L as CaCO <sub>3</sub> 5 - 100 mg/L Ca 3 - 50 mg/L Mg	Metalphthalein	10293		

\*Subject to change without notice.  
Part numbers may vary by country.

## Order Information

### Accessories

- TNT890** Metals Prep Set (used for Cu, Fe, Pb, Cd, & Ni digestion), 50 digestions
- TNT892** Calcium Separation Set (for Cadmium TNTplus Test TNT852), 24 separations
- TNT919** Sample Blank Vials for TNTplus, 5/pk
- BBP078** Pipet, Variable Volume, 0.2-1.0 mL
- BBP065** Pipet, Variable Volume, 1.0-5.0 mL
- BBP079** Pipet Tips for 0.2-1.0 mL Pipet (BBP078), 100/pk
- BBP068** Pipet Tips for 1.0-5.0 mL Pipet (BBP065), 75/pk
- LZP320** Pipet Set BBP065 & BBP078, with tips

### DRB200 Reactors

- DRB200-01** 9 vials x 13 mm + 2 vials x 20 mm (single block), 115 VAC
- DRB200-02** 21 vials x 13 mm + 4 vials x 20 mm (dual block), 115 VAC
- DRB200-03** 15 vials x 13 mm + 4 vials x 13 mm (dual block), 115 VAC
- DRB200-04** 12 vials x 13 mm + 8 vials x 20 mm (dual block), 115 VAC
- DRB200-05** 9 vials x 13 mm + 2 vials x 20 mm (single block), 230 VAC
- DRB200-06** 21 vials x 13 mm + 4 vials x 20 mm (dual block), 230 VAC
- DRB200-07** 15 vials x 13 mm + 15 vials x 13 mm (dual block), 230 VAC
- DRB200-08** 12 vials x 13 mm + 8 vials x 20 mm (dual block), 230 VAC

### DRB200 Reactor Adapters

- 2895805** Reactor Adapter, 16 mm to 13 mm, for TNTplus vials, 5/pk
- HHA155** Reducing Adapter for DRB200, 20 mm to 16 mm (for 20 mm vial wells of existing reactors to adapt to 16 mm vials)

## To complete your chemical analysis, choose from the following Spectrophotometers...\*

### DR6000 UV-VIS Benchtop Spectrophotometer

With high speed wavelength scanning across the UV and Visible Spectrum, and over 250 pre-programmed testing methods, the DR6000™ is the industry's most advanced lab spectrophotometer. Add in guided step-by-step procedures and integrated quality assurance software, and it makes sure you are ready to handle your comprehensive water testing needs. Available RFID\* technology to read out certificates of analysis (COA) of each TNTplus method. Sample bottles with smart tags can be tracked easily with the optional Hach RFID sample-ID system.

### DR3900 Benchtop Spectrophotometer

Built with the future of water analysis in mind, the DR3900 Spectrophotometer gives consistently accurate results in a simpler testing format. Using the latest technology, the instrument requires less training and increases confidence in your test results. With 1 Ethernet and 3 USB ports, the DR3900 easily connects to a computer and is programmed to interface with any LIMS system. Available RFID\* technology to read out certificates of analysis (COA) of each TNTplus method. Sample bottles with smart tags can be tracked easily with the optional Hach RFID sample-ID system.

### DR1900 Portable Spectrophotometer

The DR1900 excels in the field because it is the lightest and most compact portable spectrophotometer. It is built for rugged conditions, and it's flexible, accepting the widest range of vial sizes. Built with field use in mind, the DR1900 has a large, clear screen and a simple user interface that makes testing easier than ever in even the most demanding conditions. Underneath the rugged exterior, the DR1900 has the largest number, - over 220- of the most commonly tested preprogrammed methods already built in. You can also use the easy-to-use interface to create your own methods. Tests are performed with a wavelength range of 340 to 800 nm which make this a field instrument you can use to find results typically only seen in laboratory instruments.

*TNTplus vial test evaluation possible, but without barcode identification.*

*\*RFID technology currently available in US, Canada, Puerto Rico, Australia, New Zealand, and Colombia only.*



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