

The Thermo Scientific Orion AQ3700 AQUAfast colorimeter offers a broad range of preprogrammed methods for all of your testing needs. The software prompts you through the test steps, ensuring conformity and consistency in gathering your important test results.

## Thermo Scientific Orion AQ3700 AQUAfast Colorimeter



### Markets

- Wastewater
- Drinking water
- Nutrient monitoring
- Environmental testing
- Food and Beverage
- Industrial Applications

### Thermo Scientific Orion AQ3700 Colorimeter

The new Orion AQ3700's benefits can be seen in treating and monitoring effluent. The benefit of efficient operation is important to all production facilities, no matter what they make. By optimizing the process in wastewater treatment, the dirty water can move to the next stage of the process at the perfect time – not prior to the being fully treated and not overtreated. Overtreatment wastes chemicals and slows down the processing which requires more energy to maintain the process. Undertreatment can cause problems if the discharge exceeds the permitted levels. Typically, total nitrogen and total phosphate testing required very long reflux digestion processes with expensive glassware. Now the results can be ready in an hour or so using persulfate digestion tube methods.

This greatly improves the turnaround time for the results. These in-process checks of the nutrient removal status can ensure you are on track for the final levels you need to attain plus give you timely information to correct the process if needed. In many locations, these tests are now required. With the Orion AQ3700 and its many options testing for various nitrogen and phosphate forms, you can help reduce the harmful effects of algae blooms and ecosystem disruption in your world.

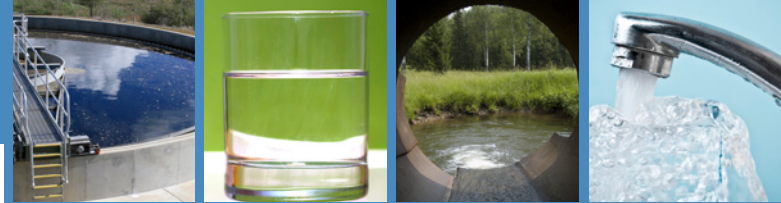
With the AQ3700 meter, Total Nitrogen and Total Phosphate Tube Digestion tests are now available from Thermo Scientific. If you are already testing COD levels, you can quickly add these important tests and start reaping the benefits!

## Test Reagents for the Orion AQ3700

The Orion AQ3700 colorimeter offers many new parameters and test ranges. Select the parameter you need to measure, then the measurement range. Our EPA approved methods for Drinking Water and Wastewater are noted. Additionally there are other

Orion methods that use EPA-approved test methodology and are acceptable for EPA reporting. These are noted as EPA Equivalent for the sample type. The preprogrammed tests make it easy to get quick, accurate results.

| Parameter          | Reagent Form      | Catalog Number | Description   | Range                            | Number of Tests | EPA Approved Methods           |
|--------------------|-------------------|----------------|---|----------------------------------|-----------------|--------------------------------|
| Alkalinity         | Tablet            | AC2002         | AQUAfast II Alkalinity-m , Total                                  | 5.0 - 200 mg/L CaCO <sub>3</sub> | 100             |                                |
|                    | Tablet            | AC2002         | AQUAfast Acid Demand at pH 4.3                                    | 0.1-4 mmol/L                     | 100             |                                |
|                    | Tablet <b>NEW</b> | AC3002P        | AQUAfast Alkalinity-p   | 5-500 mg/L CaCO <sub>3</sub>     | 100             |                                |
| Aluminum           | Tablet            | AC2027         | AQUAfast II Aluminum  | 0.05 - 0.30 mg/L                 | 50              | WW Equivalent                  |
|                    | Powder <b>NEW</b> | AC4P27         | AQUAfast Aluminum Powder Pack                                     | 0.01-0.25 mg/L                   | 100             | WW Equivalent                  |
| Ammonia (Nitrogen) | Tablet            | AC2012         | AQUAfast II Ammonia, as Nitrogen                                  | 0.05 - 1.0; 0.5 - 10.0 mg/L      | 50              |                                |
|                    | Powder <b>NEW</b> | AC4P12         | AQUAfast Ammonia-Nitrogen, Powder                                 | 0.1 - 0.50 mg/L                  | 100             |                                |
|                    | Liquid <b>NEW</b> | ACD012         | AQUAfast Ammonia Thermal Digestion Test                           | 0.02-2.5 mg/L                    | 50              |                                |
|                    | Liquid <b>NEW</b> | ACD011         | AQUAfast Ammonia Thermal Digestion Test                           | 1-50 mg/L                        | 50              |                                |
| Boron              | Tablet <b>NEW</b> | AC3089         | AQUAfast Boron  | 0.1-2 mg/L                       | 100             |                                |
| Bromine            | Ampoule           | AC4035NL       | AQUAfast IV Bromine   | 0.75 - 9.0 mg/L                  | 30              |                                |
|                    | Tablet            | AC2035         | AQUAfast II Bromine   | 0.1 - 13.5 mg/L                  | 100             |                                |
| Chloride           | Tablet            | AC2017         | AQUAfast II Chloride  | 0.5 - 25 mg/L                    | 50              |                                |
| Chlorine           | Powder            | AC4P71         | AQUAfast Chlorine,Free, DPD, Powder Packets, EPA-approved Method  | 0.03 - 2.00 mg/L                 | 100             | DW                             |
|                    | Tablet            | AC2071         | AQUAfast II Chlorine, DPD, Free Only                              | 0.05 - 6.0 mg/L                  | 100             | DW                             |
|                    | Tablet            | AC2070         | AQUAfast II Chlorine, Free and Total, EPA-approved Method         | 0.05 - 6.0 mg/L                  | 50 ea           | DW - Free & Total<br>WW -Total |
|                    | Liquid <b>NEW</b> | AC2070LQ       | AQUAfast Chlorine Liquid Kit                                      | 0.2 - 4 mg/L                     | 30              | DW                             |
|                    | Powder            | AC4P72         | AQUAfast Chlorine,Total, DPD, Powder Packets, EPA-approved Method | 0.03 - 2.00 mg/L                 | 100             | DW & WW                        |
|                    | Tablet            | AC2072         | AQUAfast II Chlorine, Total, EPA-approved Method                  | 0.05 - 6.0 mg/L                  | 50              | DW & WW                        |
|                    | Tablet <b>NEW</b> | AC3072         | AQUAfast Total Chlorine HR Tablet                                 | 5 -200 mg/L                      | 100             | DW & WW Equivalent             |
| Chlorine Dioxide   | Tablet            | AC2099         | AQUAfast II Chlorine Dioxide                                      | 0.04 - 2.8 mg/L                  | 100             |                                |
| COD                | Liquid            | CODL00         | AQUAfast COD, Low Range, EPA-approved Method                      | 0-150 mg/L                       | 25              | WW                             |
|                    | Liquid            | CODH00         | AQUAfast COD, High Range, EPA-approved Method                     | 0-1500 mg/L                      | 25              | WW                             |
|                    | Liquid            | CODHP0         | AQUAfast COD, Very High Range                                     | 0-15000 mg/L                     | 25              | WW Equivalent                  |
| Copper             | Powder            | AC4P29         | AQUAfast Copper, Bicinchoninate, Powder                           | 0.05 - 5.00 mg/L                 | 100             | WW Equivalent                  |
|                    | Tablet            | AC2065         | AQUAfast II Zinc/Copper   | 0.02 - 1.0 mg/L                  | 50              |                                |
|                    | Tablet            | AC2029         | AQUAfast II Copper  | 0.05 - 5.0 mg/L                  | 50              |                                |
| Cyanide            | Liquid            | AC4P06         | AQUAfast Cyanide Powder and Liquid                                | 0.01 - 0.5 mg/L                  | 200             | DW & WW Equivalent             |
| Cyanuric Acid      | Tablet            | AC2098         | AQUAfast II Cyanuric Acid   | 5 - 90 mg/L                      | 100             |                                |
| DEHA               | Liquid <b>NEW</b> | AC3088         | AQUAfast DEHA Tablet and Liquid                                   | 0.02 -0.5 mg/L                   | 100             |                                |
|                    | Liquid <b>NEW</b> | AC4P88         | AQUAfast DEHA Powder and Liquid                                   | 20 - 500 mg/L                    | 100             |                                |
| Fluoride           | Liquid            | AC2009         | AQUAfast II Fluoride SPADNS Kit, EPA-approved Method              | 0.05 - 20 mg/L                   | 50              | DW & WW                        |
| Hardness           | Tablet <b>NEW</b> | AC3032C        | AQUAfast Hardness Calcium Tablet                                  | 50 - 900mg/L                     | 100             |                                |
|                    | Tablet <b>NEW</b> | AC3032T        | AQUAfast Hardness Total Tablet                                    | 2 - 50 mg/L                      | 100             |                                |
|                    | Tablet <b>NEW</b> | AC3032HR       | AQUAfast Hardness Total HR Tablet                                 | 20 - 500 mg/L                    | 100             |                                |
| Hydrazine          | Liquid <b>NEW</b> | AC3030LQ       | AQUAfast Hydrazine Liquid   | 0.01 - 0.6 mg/L                  | 50              |                                |
|                    | Powder <b>NEW</b> | AC4P30         | AQUAfast Hydrazine Powder   | 0.05 - 0.5 mg/L                  | 100             |                                |
| Hypochlorite       | Tablet <b>NEW</b> | AC3073         | AQUAfast Sodium Hypochlorite Tablet                               | 0.2- 16 mg/L                     | 100             |                                |
| Iodine             | Tablet <b>NEW</b> | AC3053         | AQUAfast Iodine, Tablets  | 0.05 - 3.6 mg/L                  | 100             |                                |



| Parameter           | Reagent Form       | Catalog Number | Description  | Range                      | Number of Tests | EPA Approved Methods |
|---------------------|--------------------|----------------|--|----------------------------|-----------------|----------------------|
| Iron                | Powder             | AC4P79         | AQUAfast Iron Total TPTZ, Powder                                   | 0 - 1.80 mg/L              | 100             |                      |
|                     | Powder             | AC4P78         | AQUAfast Iron Total Ferro, Powder                                  | 0 - 3.00 mg/L              | 100             |                      |
|                     | Tablet             | AC2078         | AQUAfast II Iron (II, III) Soluble, Tablet                         | 0.02 - 1.0 ; 0.2 - 10 mg/L | 100             |                      |
| Manganese           | Powder             | AC4P55         | AQUAfast Manganese HR, Powder                                      | 0.2 - 20.0 mg/L            | 100             |                      |
|                     | Tablet             | AC2055         | AQUAfast II Manganese  | 0.05 - 4 mg/L              | 50              |                      |
|                     | Liquid <b>NEW</b>  | AC4P54         | AQUAfast Manganese LR, Powder and Liquid                           | 0.01 - 0.7 mg/L            | 50              |                      |
| Molybdate           | Powder             | AC4P42         | AQUAfast Molybdenum/Molybdate, HR, Powder                          | 0 - 40.0 mg/L              | 100             |                      |
|                     | Tablet <b>NEW</b>  | AC3042         | AQUAfast Molybdate Tablet  | 1.0 - 50.0 mg/L            | 100             |                      |
| Monochloramine      | Liquid <b>NEW</b>  | AC4P26         | AQUAfast Monochloramine, Powder and Liquid                         | 0.04 - 4.50 mg/L           | 50              |                      |
| Nitrate             | Tablet             | AC2007         | AQUAfast II Nitrate  | 1 - 40 mg/L                | 50              |                      |
|                     | Liquid <b>NEW</b>  | ACR007         | AQUAfast Nitrate Powder and Reaction Tube                          | 1.0 - 30.0 mg/L            | 50              |                      |
| Nitrite             | Tablet             | AC2046         | AQUAfast II Nitrite, EPA-approved Method                           | 0.05 - 0.50 mg/L           | 100             | DW & WW              |
|                     | Powder <b>NEW</b>  | AC4P46         | AQUAfast Nitrite LR, Powder  | 0 - 0.350 mg/L             | 100             |                      |
|                     | Ampoule <b>NEW</b> | AC4046NL       | AQUAfast IV Nitrite  | 0.080 - 0.80 mg/L          | 30              | DW & WW Equivalent   |
| Nitrogen            | Liquid <b>NEW</b>  | ACD004         | AQUAfast Total Nitrogen LR Thermal Digestion Test                  | 0.5 - 25 mg/L              | 25              |                      |
|                     | Liquid <b>NEW</b>  | ACD007         | AQUAfast Total Nitrogen HR Thermal Digestion Test                  | 5 - 150 mg/L               | 25              |                      |
| Oxygen              | Ampoule <b>NEW</b> | AC4008LR       | AQUAfast Oxygen, Low Range   | 0.01 - 0.8 mg/L            | 30              |                      |
| Ozone               | Tablet             | AC2048         | AQUAfast II Ozone  | 0.05 - 0.5 mg/L            | 100             |                      |
| Peroxide            | Tablet <b>NEW</b>  | AC3069         | AQUAfast Hydrogen Peroxide Tablet                                  | 0.03 - 3 mg/L              | 100             |                      |
| pH                  | Liquid             | AC3001         | AQUAfast pH, Phenol Red, Dropper Bottle                            | 5.9 - 8.2                  | 30              |                      |
|                     | Tablet             | AC2001         | AQUAfast II pH Tablet Phenol Red                                   | 6.5 - 8.4                  | 100             |                      |
|                     | Tablet <b>NEW</b>  | AC3001BP       | AQUAfast pH Tablet Bromocresol Purple                              | 5.2 - 6.8                  | 100             |                      |
|                     | Tablet <b>NEW</b>  | AC3001TB       | AQUAfast pH Tablet Thymol Blue                                     | 8.0 - 9.6                  | 100             |                      |
| PHMB (Guanidine)    | Tablet <b>NEW</b>  | AC3093         | AQUAfast PHMB (Biguanide) Tablet                                   | 2.0 - 60.0 mg/L            | 100             |                      |
| Phosphate           | Powder             | AC4P95         | AQUAfast Phosphorus 3, Powder                                      | 0.07 - 2.5 mg/L            | 100             | DW & WW Equivalent   |
|                     | Tablet             | AC2096         | AQUAfast II Phosphorus HR  | 10 - 100 mg/L              | 50              |                      |
|                     | Tablet             | AC2095         | AQUAfast II Phosphorus LR  | 0.05 - 4.0 mg/L            | 50              | DW & WW              |
|                     | Liquid <b>NEW</b>  | ACR095         | AQUAfast Ortho Phosphate Powder and Reaction Tube                  | 0.06 - 5 mg/L              | 50              | DW & WW Equivalent   |
|                     | Liquid <b>NEW</b>  | ACD095AH       | AQUAfast Acid Hydrolyzable Phosphate Powder/Thermal Digestion Test | 0.02 - 1.6 mg/L            | 50              | DW & WW Equivalent   |
|                     | Liquid <b>NEW</b>  | ACD095         | AQUAfast Total Phosphate Powder/Thermal Digestion Test             | 0.02 - 1.1 mg/L            | 50              | WW Equivalent        |
| Potassium           | Tablet <b>NEW</b>  | AC3019         | AQUAfast Potassium Tablet  | 0 - 12 mg/L                | 100             |                      |
| Silica              | Powder             | AC4P60         | AQUAfast Silica HR, Powder Packets                                 | 1.0 - 75.0 mg/L            | 100             | DW & WW              |
|                     | Tablet             | AC2061         | AQUAfast II Silica Phosphate Removal                               | NA                         | 100             |                      |
|                     | Tablet             | AC2060         | AQUAfast II Silica   | 0.05 - 4.0 mg/L            | 50              | DW & WW              |
|                     | Liquid <b>NEW</b>  | AC4P60LR       | AQUAfast Silica LR Powder and Liquid                               | 0.1 - 1.6 mg/L             | 50              |                      |
| Sodium Hypochlorite | Tablet <b>NEW</b>  | AC3073         | AQUAfast Sodium Hypochlorite Tablet                                | 0.2 - 16 mg/L              | 100             |                      |
| Sulfate             | Powder             | AC4P82         | AQUAfast Sulfate 4, Powder Packets                                 | 2 - 100 mg/L               | 100             | DW & WW Equivalent   |
|                     | Tablet             | AC2082         | AQUAfast II Sulfate  | 5 - 200 mg/L               | 100             | DW & WW Equivalent   |
| Sulfide             | Tablet             | AC2016         | AQUAfast II Sulfide  | 0.05 - 0.50 mg/L           | 50              |                      |
| Zinc                | Tablet             | AC2065         | AQUAfast II Zinc/Copper  | 0.02 - 1.0 mg/L            | 50              | WW Equivalent        |

The Orion AQ3700 AQUAfast meter offers many tests critical for the water and wastewater industries. New nutrient testing capabilities will protect our ecosystems.

|  |  |
|--|--|
| <b>AQ3700 Meter Specifications</b>   | <b>Incident Light Source:</b> 6 Light Emitting Diodes (LEDs)                   |
|  | <b>LED Wavelengths:</b> 430, 530, 560, 580, 610, 660 nm                        |
|  | <b>Photometric Accuracy:</b> 2% full scale as measured with standard solutions |
|  | <b>Photometric Resolution:</b> +/- 0.005 Abs                                   |
|  | <b>New Method Upload Capability:</b><br>Yes, via internal RJ45 port            |
|  | <b>Output:</b> IRDA (order IRIM adapter AQ37IRIM separately)                   |
|  | <b>User Interface</b>  |
|  | <b>Display:</b> Graphic display  |
|  | <b>Backlit:</b> Yes  |
|  | <b>Inputs:</b> 15 button keypad  |
| <b>Key Functions:</b> Numeric keys, On/Off, Up, Down, Enter, Timer, Zero, Test, Cal, Mode, Store, Shift, plus 3 Function keys  |  |
| <b>Test methods:</b> Preprogrammed with user prompts and feedback, user's favorite's list, 10 user defined method locations  |  |
| <b>Automatic Range Selection:</b> Yes  |  |
| <b>Blank Capacity:</b> Per method  |  |
| <b>Datalog Points:</b> Up to 1000, time and date stamp   |  |
| <b>Test Reagent Formats:</b> Powder, tablet, liquid, reagent tubes, digestion tubes. Color, Turbidity and Suspended Solids tests do not require reagents.                                    |  |
| <b>Sample Required:</b> 10mL   |  |
| <b>Sample Cells:</b> 24mm and 13mm diameter vials and 16mm tubes   |  |
| <b>Software Languages:</b> English, French, German, Spanish, Italian   |  |
| <b>Auto shut down:</b> 20 min after last key-press, wakes to last location   |  |
| <b>Field Case:</b> 17 in W x 13 in L x 6 in H black case, molded and foam to secure meter, sample cells, adapters, stir rod, brush and enclosed upper section for user guide & reagent packs |  |
| <b>Power:</b> 4 AA batteries (>3000 tests)   |  |
| <b>Regulatory and Safety (CE)</b>  |  |
| <b>Environmental Operating Conditions:</b><br>± 1999.9 mV  |  |
| <b>Ambient Operating Temperature:</b> 5 to 40 °C   |  |
| <b>Relative Humidity:</b> 30 to 90%, Non-Condensing at 30 °C   |  |
| <b>Certifications:</b> CE  |  |
| <b>Waterproof Rating:</b> IP67   |  |
| <b>Warranty:</b> 2 year  |  |

### Accessories for AQ3700 Meter

| Cat. No.        | Description  |
|-----------------|--|
| <b>AQ3700</b>   | AQ3700 meter with samples cells, adapters, stir rod, brush in 17 in W x 13 in L x 6 in H (inches) field case with enclosed upper section for user guide with test methods and powder and tablet reagent storage. Order reagents separately |
| <b>AC2V16</b>   | Replacement 16mm vials, pkg of 10  |
| <b>AC2V24</b>   | Replacement 24mm vials, pkg of 12  |
| <b>AC3SR24</b>  | Sealing ring for 24mm vial pkg of 12   |
| <b>AC37A16</b>  | Replacement 16mm adapter for AQ3700  |
| <b>AC37A13</b>  | Replacement 13mm adapter for AQ3700  |
| <b>AC3ROD</b>   | Tamping Stir rod, pkg of 10  |
| <b>AC3CBR</b>   | Cleaning Brush, pkg of 10  |
| <b>AC3VSK</b>   | Meter Verification Check Standards Kit   |
| <b>AQ37IRIM</b> | IR Data Transfer Interface Module, with USB cable, user guide, software and batteries  |

For more information, contact your local Thermo Scientific products dealer or call our customer and technical service experts at 1-800-225-1480 (for the US and Canada) or visit [www.thermo.com/water](http://www.thermo.com/water).

©2010 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. ROSS and the COIL traddress are trademarks of Thermo Fisher Scientific Inc. US Patent 6,793,787.



S-AQ3700-E-0110 RevA

#### Water Analysis Instruments

**North America**  
166 Cummings Center  
Beverly, MA 01915 USA  
Toll Free: 1-800-225-1480  
Tel: 1-978-232-6000  
info.water@thermo.com

**Netherlands**  
Tel: (31) 033-2463887  
info.water.uk@thermo.com

**China**  
Tel: (86) 21-68654588  
wai.asia@thermofisher.com

**India**  
Tel: (91) 22-4175-8800  
wai.asia@thermofisher.com

**Singapore**  
Tel: (65) 6778-6876  
wai.asia@thermofisher.com

**Japan**  
Tel: (81) 045-453-9175  
wai.asia@thermofisher.com

[www.thermo.com/water](http://www.thermo.com/water)

**Thermo**  
SCIENTIFIC