ASTORIA•PACIFIC

Automated Wet-Chemistry Analyzers and Diagnostic Reagents

rAPID-T

rAPID-T System

ASTORIA-PACIFIC PROUDLY OFFERS OUR rAPID-T SYSTEM:

- Durable. Accurate. Precise. Economical.
- Easy to run with preprogrammed methods for various industries:
  - Tests for NO_2, NO_3, NH_4, OP, TKN, TP, CN, Phenol, Cr^{+6}, etc.
  - Wine Tests for Acetic Acid, Ammonia, Glucose+Fructose, etc.
- Up to 200 tests per hour with 10mm path-length cuvettes
- Automated Dilution and Standards Prep capability
- Wavelengths: 340, 405, 420, 480, 505, 540, 570, and 660
- Small footprint and weight: 21” W x 15.5” H x 20” D and 37 pounds!
- Compatible with Windows XP, Vista or 7/8/10 (computer not supplied)

ASTORIA•PACIFIC

METHOD AVAILABILITY

rAPID-T is developed and supported by Astoria-Pacific. The system has been developed to be durable, versatile and precise. Operators simply run rAPID-T's easy-to-use methods and configurations. rAPID-T offers a variety of pre-programmed methods for various industries.*

*NOTE: Dilution or sample prep may be necessary for some sample types and/or analyte concentrations.

Examples of pre-programmed applications in Astoria-Pacific's popular industries:

ENVIRONMENTAL

METHOD	EPA #	Std Mthd	Application Range (mg/L)
Alkalinity	310.2	N/A	20 - 200
Ammonia	350.1	4500-NH3 F, G	0.02 - 4.0
Chloride	325.1 (2)	4500-Cl C, E	1.0 - 50
Chlorine	330.5	4500-Cl G	0.05 - 5
Cyanide, Post-Dist.	335.3 (4)	4500-CN A, B, E	0.002 - 0.5
Hexavalent Chromium	7196A	3500-Cr B	0.002 - 0.1
Nitrate by Enzymatic reduction	NECi ATP	N/A	0.01 - 1.0
Nitrate by Vanadium reduction	N/A	N/A	0.002 - 0.2
Nitrite	353.2 (3)	4500-NO_2 F	0.0025 - 0.5
Orthophosphate	365.2	4500-P E	0.01 - 1.0
Phenol, Post-Dist.	420.2 (4)	5530-B, D	0.05 - 2.0
Silica	370.1	4500-SiO_2	0.05 - 5.0
Sulfate	375.4	4500-SO_4 A, E	1.0 - 40
Total Kjeldhal Nitrogen	351.2	4500-N_{org}	0.2 - 5.0
Total Phosphorus (persulfate)	365.1 (3)	4500-P B	0.02 - 1.0

WINE

METHOD	Application Range
Acetic Acid	0.1 - 1.0 g/L
Ammonia	10 - 100 mg/L
Glucose+Fructose	0.1 - 6.0 g/L
L-Malic Acid	0.05 - 3.0 g/L
Nitrogen by OPA (NOPA)	5 - 140 mg/L
Total Sulfite	5 - 200 mg/L

rAPID-T SOFTWARE

rAPID-T offers an exceptional user interface. We have designed the software for easy navigation and operation.

Import/Export functions allows the operator to import/export sample tables, run files and database files.

User-defined reporting features, allows the operator to select what information is presented in the run table and result files. Other features include auto-dilution and auto-calibration/standards preparation.

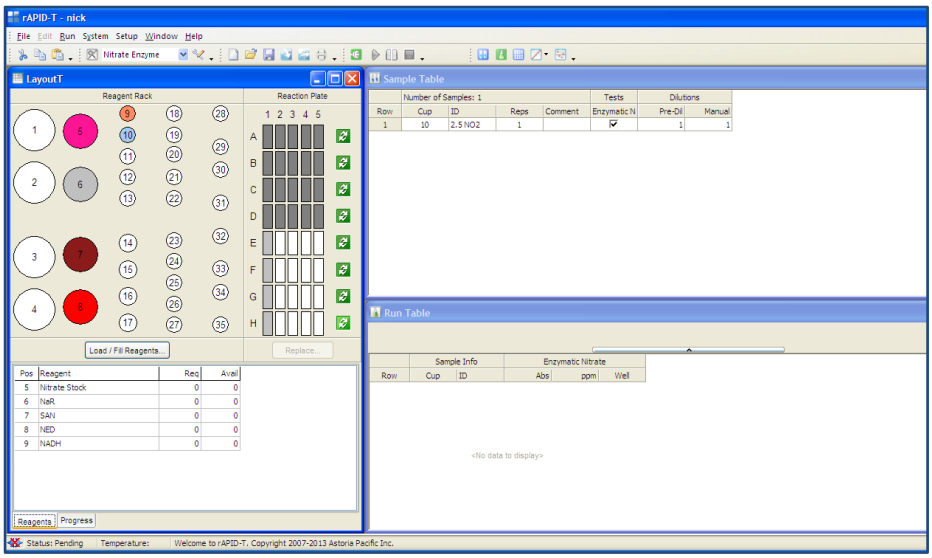


Figure 1. rAPID-T Layout

rAPID-T's graphical interface provides real-time information, allowing the operator to view:

- Sample Table
- Results in Run Table
- Reagent and Sample positions on the analyzer
- Available reagent per test
- Reaction Plate
- Toolbar for access to calibration, configurations, and system diagnostic tools

Figure 2. Calibration Curve

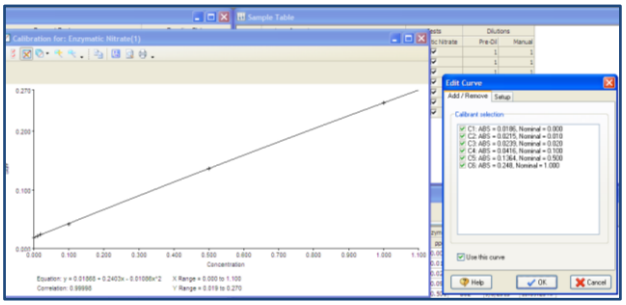
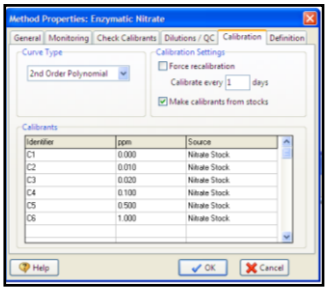


Figure 2 - 3. Calibration

The operator can have the system prepare Calibrants from a single stock standard or run Calibrants prepared in the lab.

1st Order or Polynomial curves can be selected for fit. Bad points can be dropped if necessary for research purposes

Figure 3. Calibration Setup



EASY-TO-USE SOFTWARE

Figures 4 - 9. Test Selection, Method Parameters and Method Setup Windows

Test configurations are easily selected with a dropdown menu.

Configurations can be copied and renamed if a slight variation of the test—i.e. adjusting the stock calibrant concentration—needs to be made for a special application

Method Parameters, including Method Definitions (e.g. test parameters defining sample/reagent volumes and incubation times), Dilution and QC properties, and general default info, are accessible with selection tabs via the Primary Edit Method Window.

Figure 4. Test Selection menu

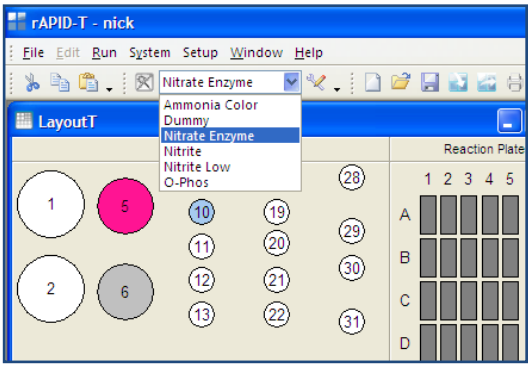


Figure 5. General Method Parameters

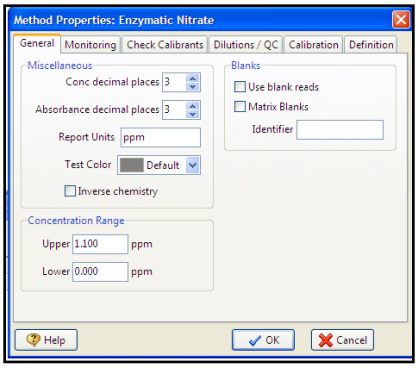


Figure 6. Dilution/QC Properties

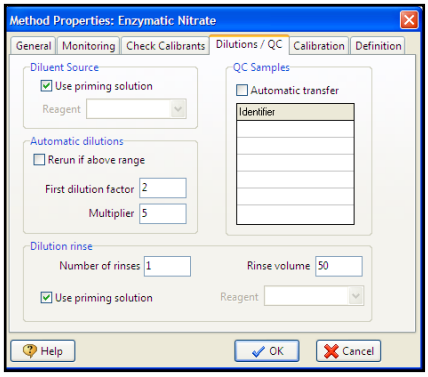


Figure 7. System Default Info

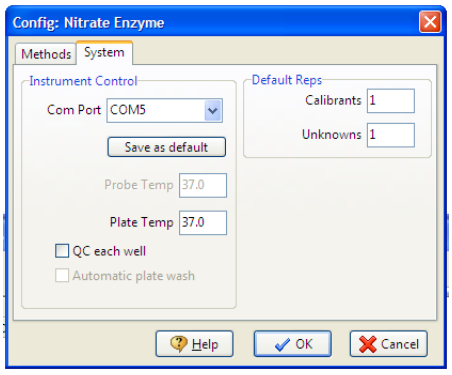


Figure 8. Test/Method Edit

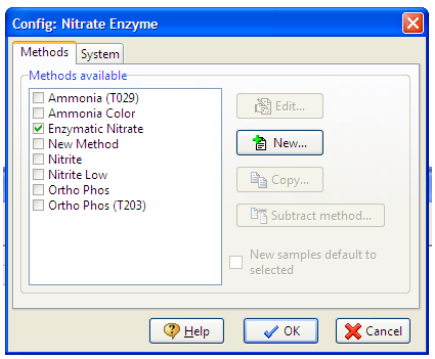
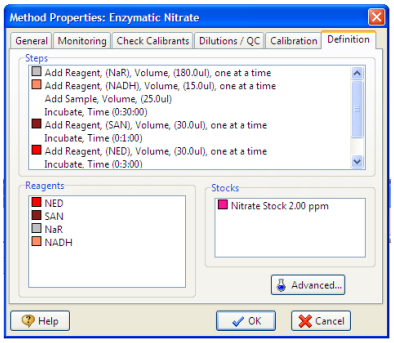


Figure 9. Method Definition Edit



SUPREME ADAPTABILITY

The rAPID-T system is designed to accommodate various sample types and workloads. Run a single module for small to medium facilities. Or run a rAPID-Tx2 system to meet large-scale needs, reduce chances of sample/reagent contamination between tests or simply have a backup unit if one module goes out for repair.

rAPID-T system – 100+ tests per hour

rAPID-T x 2 system – 200+ tests per hour

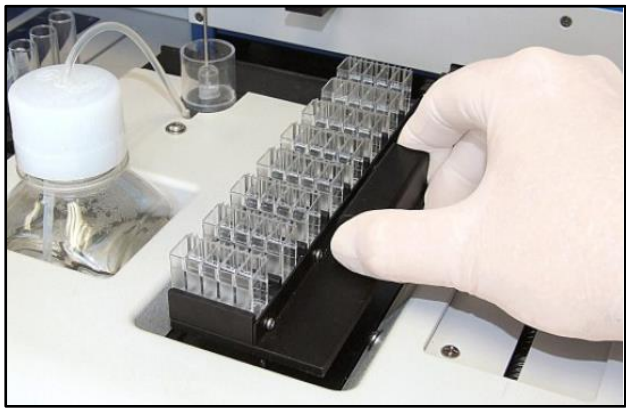
Various types of industries use the rAPID-T system. Environmental labs monitor water quality. Wine and Beer labs use the system to ensure consistent and safe products.

UNPRECEDENTED FLEXIBILITY

The rAPID-T's hardware module is built tough and easy to maintain via simple cleaning and lubrication.

1 cm cuvettes optimize performance for common US EPA and Standard Methods.

The standard module from Astoria-Pacific includes the following wavelength filters: 340, 405, 420, 480, 505, 540, 570 and 660.



Cuvettes with working volume up to 600 µL

- **5-well strips with 10mm path length**
- **Easy to load and unload**
- **Reaction temperature: From ambient to 40°C**
- **Starter quantity for 6500 tests included in system order**
- **Widely used throughout the industry**

Designed for fast throughput

- **Cuvettes automatically glide through optical system for endpoint reactions**
- **Up to 200 tests per hour in x2 mode**
- **8 strips of 5 cuvettes each allows 40 reactions without intervention – PAUSE feature allows operator to add more cuvettes during the run**

Multi-Function Probe delivers 2 µL to 360 µL

- **Typical precision of 2% CV or better**
- **Oscillates to mix**
- **Detects liquid surface**
- **Measures remaining volume**
- **Retracts safely if probe contacts an obstacle**
- **Washes automatically**

ONE YEAR WARRANTY

rAPID-T SYSTEM – TECHNICAL SPECIFICATIONS

	General, Single rAPID-T module
Typical throughput	up to 100 tests per hour
Typical reaction volume	250 µL
Path length of cuvette	10mm
Reaction vessel	5-well cuvettes, disposable
Maximum reaction volume	500 µL
Dimensions	21” (53cm) W x 15.5” (40cm) H x 20” (50 cm) D
Weight	37 lbs (15 kg)
	Reagent and Sample Handling
Syringe	500 µL, range 2 µL – 450 µL w/increments of 0.5 µL
Probe	316 stainless steel w/liquid level sensing
Mixing	Probe oscillation, time and speed adjustable
Precision for volumes < 5 µL	< 3% CV
Precision for volumes > 5 µL	< 2% CV
No. of reaction cuvette places	40 w/PAUSE feature to allow operator to add more during a run
No. of reagent places	10 Total: 15 mL and 30 mL
No. of sample places	40 places for 4 mL sampler cups w/PAUSE feature to add additional samples during a run
	Incubating, timing and temperature control
Reaction temperature	40^{o}C
	Reading
Optical design	User-selected monochromatic or bichromatic results 8-position filter wheel Wavelengths: 340, 405, 420, 480, 505, 540, 570, and 660
Interference filters	Long life, hard coat, ion assisted deposition, ~10nm half bypass
Linear range	0.0 to 3.0 A
Photometer accuracy	$\pm$ (1% reading + 0.005A) from 0 to 1.0 A $\pm$ (2% reading + 0.005A) from 1.0 A to 3.0 A
	Software (Computer not supplied)
Format	USB with internet upgrades
QC Functions	Store Control Data, QC Data Charting Screen
Operating system	Windows® 7/8/10
System Diagnostic Tools	Probe/Rack Alignment, Control Scripts, Self-Test, QC Well
Self-monitoring modes	Lamp, filters, reagent levels, Cuvette
	Certifications
	NRTL listed, CE marked Awareness Technologies is certified under ISO 13485:2003

OFFERED BY:

ASTORIA•PACIFIC

www.astoria-pacific.com
sales@astoria-pacific.com
1-800-536-3111 / 1-503-657-3010
Clackamas, OR 97015-0830
U.S.A.

REPRESENTED BY: