



MANUAL & AUTOMATED ENVIRONMENTAL ANALYSIS SOLUTIONS

AUTOMAX 400 SERIES

MANTECH's Next Generation Autosamplers



Sounds Like an EV

So quiet that if you're not looking at it, you don't know it's running.



RUNS LIKE AN F1

Fast analysis time reduces run times and improves efficiency.



STOPS ON A LINE

Accuracy of probe placement within a millimeter.



ONE SIZE DOES NOT FIT ALL!

MANTECH's new AM400 autosamplers are designed to meet your laboratory's needs with capacities ranging from 18 - 720 positions.

STANDARD RACK CAPACITIES

15mL Tubes 144 positions x 15mL **50mL Tubes** 112 positions x 50mL **125mL Tubes** 32 positions x 125mL **300mL Bottles** 18 positions x 300mL



TITRATION ANALYSIS SYSTEM FEATURES

MODEL	MT3	MT5	MT10	MT30	MT100	
Automated Capacity	Manual Probe Dip	Manual Probe Dip	32 - 560	32 - 560	32 - 720	
MANTECH Pro™ Software	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
DualProbe			\checkmark	✓	\checkmark	
IntelliRinse™			\checkmark	\checkmark	\checkmark	
			Static and Dip Multiple Stations	Dynamic	Dynamic	
SampleProtect™			\checkmark	✓	\checkmark	
Temperature Compensation	Automated with Manual Temperature Entry (Thermistor Optional)	Automated with Manual Temperature Entry (Thermistor Optional)	Automated with Manual Temperature Entry (Thermistor Optional)	Automated with Thermistor	Automated with Thermistor	
PeCOD® Analyzer Add-on (10min BOD/COD and 5min 'Optimized TOC')	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
BOD 5 Day DUO Add-on	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
a	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
2 or more titration methods	In different sample cups	In different sample cups	In different sample cups	In different sample cups	From a single sample cup	
Sample cup size	125mL	125mL	50mL & 125mL	50mL & 125mL	15mL, 50mL & 125mL	
Customer-Supplied Vessels	\checkmark	\checkmark	\checkmark	✓	\checkmark	
RapidDuo™ e.g. alkalinity & hardness in 2 different vessels					\checkmark	
TitraSip™ Gen2					\checkmark	
IntelliVOL [™] *	\checkmark	\checkmark	\checkmark	\checkmark		
Automated Pipetting					\checkmark	
Buret**		\checkmark	\checkmark	✓	\checkmark	
Parameters	Ammonia, chloride, color, conductivity, fluoride, nitrate, oxidation- reduction potential (ORP), oxygen, pH, salinity, temperature, turbidity	Acidity, alkalinity, ammonia, chloride, color, conductivity, fluoride, nitrate, oxidation-reduction potential (ORP), oxygen, pH, salinity, temperature, total hardness, turbidity	Acidity, alkalinity, ammonia, chloride, color, conductivity, fluoride, nitrate, oxidation-reduction potential (ORP), oxygen, pH, salinity, temperature, total hardness, turbidity	Acidity, alkalinity, ammonia, chloride, color, conductivity, fluoride, nitrate, oxidation-reduction potential (ORP), oxygen, pH, salinity, temperature, total hardness, turbidity	Acidity, alkalinity, ammonia, chloride, color, conductivity, fluoride, nitrate, oxidation-reduction potential (ORP), oxygen, pH, salinity, temperature, total hardness, turbidity	
MANTECH		*Aspiration of sample to a known volume via extraction pump. Accurate sample volume allows for titration directly in 125 mL cup or 50 mL tube. **For every model, up to 20 burets , 30 IntelliPeri™ pumps, 30 IntelliDose™ pumps can connect to the same analyzer. Optional enclosure with a protective cover for the sides and front doors ensuring easy access to samples (view photo).				



MANTECH PRO[™] SOFTWARE

Our user-friendly and customizable centralized software package provides reliable results with automated quality control checks, linear and multi-line calibrations.



FEATURES

- 1. Shortcut buttons for simplified operations
- 2. Real time analysis results display on screen
- 3. Manage and prioritize samples during analysis
- Easily reference historical data and transfer results to LIMS



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Automates 18 - 520 samples in a single batch



Customizable user interface for simplified operation

SYSTEM BENEFITS



Non-destructive sample preparation allows for up to 5 parameters on a single sample



Eliminates potential for human error with automated pipetting using MANTECH's Titrasip™



IntelliRinse[™] prevents cross contamination between samples

PARAMETER	METHODOLOGY	CONFORMS TO:	RANGE OF MEASUREMENT [.]	CALCULATED METHOD DETECTION LIMIT (MDL)"	RSD SPECIFICATIONS
Acidity	Potentiometric Titration	EPA 305.1, 305.2; SM 2310 B; ASTM D 1067	1 - 2500ppm	0.42	0.97% @ 100ppm
Alkalinity (P&M, bicarbonate, carbonate, hydroxide)	Potentiometric Titration	EPA 310.1; SM 2320 B; ASTM D 1067; ISO 9963-2	0.3 - 2500ppm	0.18	0.48% @ 200ppm
Ammonia	Ion Selective Electrode	EPA 350.3; SM 4500-NH3 D; ASTM D 1426 (B)	0.1 - 17,000ppm	0.05	2.41% @ 1ppm
	lon Selective Electrode (Standard Addition)	SM 4500-NH3 E	0.5 - 200ppm	0.1	4.24% @ 2ppm
Chloride	Potentiometric Titration	SM 5400-Cl- D; Variation of ASTM D 512 (B); ISO 9297	1 - 1000ppm	0.28	0.24% @ 100ppm
	Ion Selective Electrode	Variation of ASTM D 512 (C)	0.05 - 35,500ppm	0.01	1.55% @ 100ppm
Color	Colorimetric	EPA 110.2; SM 2120 B	2 - 500CU	0.19	1.7% @ 5CU
Conductivity	Conductivity cell	EPA 120.1; SM 2510 B; ASTM D1125; ISO 7888	<1 - 199,999uS	0.65	0.18% @ 1413uS
Fluoride	lon Selective Electrode	EPA 340.2; SM 4500-F- C; ASTM D 1179 (B); ISO 10359-1	0.02 - Saturated	0.005	1.57% @ 1ppm
Nitrate	Ion Selective Electrode	SM 4500-NO3- D	0.14 - 62,000ppm	0.05	0.87% @ 100ppm
Oxidation-Reduction Potential (ORP)	Redox Electrode Measurement	SM 2580; ASTM D 1498	-2000 - 2000mV	N/A	0.10% @ 220mV
Oxygen	Dissolved Oxygen Probe Measurement	EPA 360.1; SM 4500-O G; ASTM D 888 (B); ISO 5814	0 - 19.99ppm	N/A	N/A
рН	pH Electrode Measurement	EPA 150.1, 150.2; SM 4500-H+ B; ASTM D 1293; ISO 10523	1 - 14	N/A	+/- 0.05
Salinity	By Calculation	SM 2520 B	0.1 - 42	0.002	0.15% @ 10
Temperature	Thermometric	EPA 170.1; SM 2550 B	N/A	N/A	N/A
Total Hardness	Potentiometric EDTA Titration	Adapted from EPA 130.2, SM 2340 C, ASTM D 1126	1.09 - 1500ppm	0.43	1.63% @ 94ppm
Turbidity	Nephelometric	EPA 180.1; SM 2130 B; ASTM D 1889; ISO 7027	0.1 - 2000NTU	0.05	2.95% @ 1NTU

Please note that in order to obtain the above MDLs, proper analytical techniques and MANTECH recommended procedures including sample volume and reagent concentrations are to be used. Varying sample matrices may generate different results.

*Data for these measuring ranges were obtained using laboratory prepared standards. Some measuring ranges may be increased by using larger capacity analysis vessels, auto-dilution and/or sample spikes. The Reporting Limits (RL) were determined based on data obtaining a coefficient of variance better than 30%. Results may differ depending on laboratory practices and sample matrices **MDLs differ from RLs in that they refer to the minimum concentration of a substance that can be measured with 99% confidence that the analyte concentration is greater then zero. The MDL calculation procedure was obtained from US EPA 40 CFR Appendix B to part 136 - Definition and Procedure for the Determination of the Method Detection Limit. MDL = Standard Deviation x T-Value. T-values obtained from reference tables, 99% confidence, n-1 degrees of freedom.

***The RSDs listed are stated for a particular measurement range. As the MDL is approached, the value will increase as described above.



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