MANTECH

OPTIMIZE YOUR RESULTS. PROTECT OUR ENVIRONMENT.

AUTOMATED SOIL PH CONDUCTIVITY & MULTI-PARAMETER ANALYSIS SOLUTIONS

MANTECH PRO SOFTWARE™

MANTECH's customizable MANTECH Pro software provides reliable results with automated quality control checks, linear and multi-line calibrations.

FEATURES

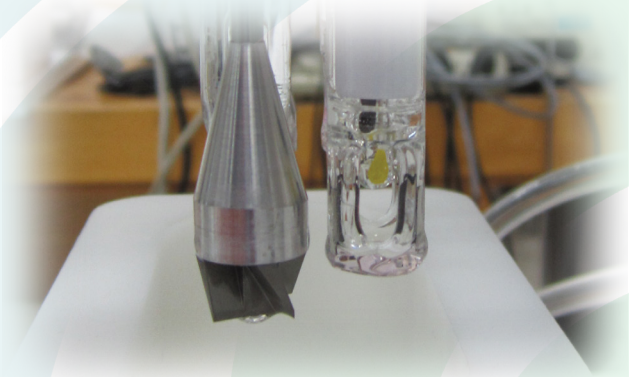
1. Shortcut buttons for simplified operations
2. Real time analysis results display on screen
3. Manage and prioritize samples during analysis
4. Easily reference historical data and transfer results to LIMS

SYSTEM BENEFITS

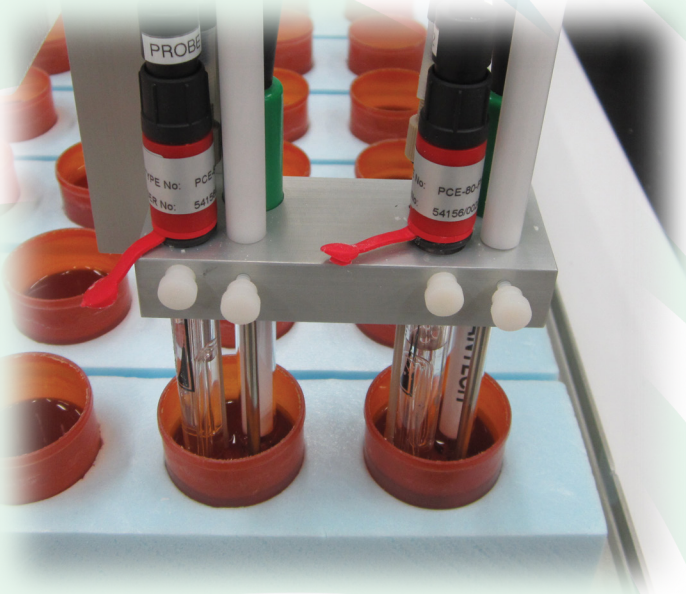
- Automates 26-400 samples in a single batch
- Customizable user interface for simplified operation
- MANTECH Automation allows for up to 5 parameters on a single sample
- Eliminates potential for human error with precisely timed analysis settings
- IntelliRinse™ and Jet Rinse prevent cross contamination between samples

SOIL ANALYSIS SYSTEM FEATURES

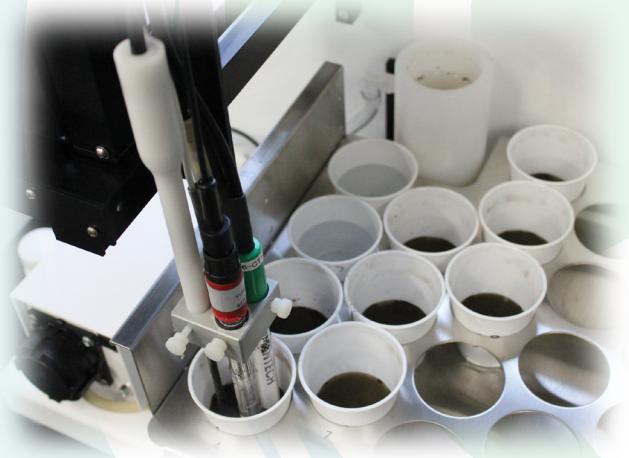
Paddle and Baffled Stirrer Options



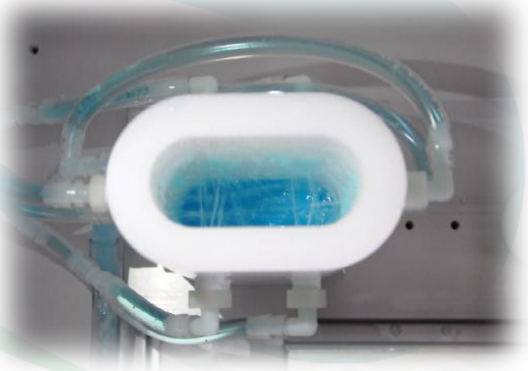
Dual and Quadra Probe Analysis



Compatible with ANY Sample Cup



Powerful Jet Rinse Probe Cleaning



SYSTEM PICTURED MEASURES PH, CONDUCTIVITY, AND ALKALINITY FROM A SINGLE SAMPLE

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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
	Ion 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
Conductivity	Conductivity cell	EPA 120.1; SM 2510 B; ASTM D1125; ISO 7888	<1 - 199,999uS	0.65	0.18% @ 1413uS
FOS/TAC	Potentiometric Titration	N/A	0.3 - 2500ppm	0.18	0.48% @ 200ppm
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
pH	pH Electrode Measurement	EPA 150.1, 150.2; SM 4500-H+ B; ASTM D 1293; ISO 10523	1 - 14	N/A	+/- 0.05
Sulfide	Ion Selective Electrode	SM 4500-*S2 G; ASTM D 4658	0.04 - 4000ppm	0.02	3.25% @ 2ppm
Temperature	Thermometric	EPA 170.1; SM 2550 B	N/A	N/A	N/A

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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