



# RapidDuo™

The High-Speed Version of PC-Titrate TitraSip™ Systems

Analyze pH, conductivity, alkalinity and fluoride in 3 minutes or less!



# RapidDuo™

Man-Tech is pleased to announce the release of the RapidDuo™. The RapidDuo enables rapid multi-parameter analysis from a single sample. The RapidDuo is the HIGH SPEED version of Man-Tech's PC-TitrateTitraSip™ System. Analyze pH, conductivity, alkalinity and fluoride, in 3 minutes or less, total cycle time!

#### Benefits of the RapidDuo System:

- Analyzes multiple parameters FAST
- Quick Return on Investment
- Rock solid technology
- Follows US EPA approved methods





Load. Start. Done.

Man-Tech first delivered Multi-Parameter Solutions to the Environmental Industry 10 years ago, meeting the requirements of unattended analysis. In today's ever changing market, Environmental Laboratories are challenged to deliver results faster and Man-Tech has the solution, once again, with the RapidDuo.

### Key Features and Benefits

- Utilizes US EPA ETV verified TitraSip SA technology
- Backward Compatible. Current PC-TitrateTitraSip end-users may upgrade and cut their analysis times by more than half.
- Rapidly generated results are accurate and precise
- Available configurations include stand alone, near-line or with the AutoMax sampler
- Galvanic electrode separation allows for simultaneous and separate analyses from the same sample
- IntelliRinse<sup>™</sup> system ensures that the system and probes are clean before moving to the next sample
- Generates results for your clients sooner
- Durable, reliable and rugged
- Delivers results that stand the test of time

#### Applications include:



- рН
- color
- conductivity
- hardness
- alkalinityfluoride
- ammonia
- fluoride
- chlorine
- turbidity
- and more!

Analyze up to 197 samples, unattended, in a single batch!
Still the largest capacity system on the market,
and now even FASTER.



# How Does the RapidDuo Work?

The key to the success and development of the RapidDuo is Man-Tech's innovative TitraSip System and the PC-Titrate™ software. The PC-Titrate software allows the control of 2 or more TitraSip modules in a single system. Most functions and analyses occur simultaneously, which is the heart of the FAST RapidDuo system.

# Schedule of operation and analyses

Listed below, is the schedule of operation and analyses in the case of a RapidDuo for conductivity, pH, alkalinity and fluoride:

- 1. Rinse the probes, analysis vessels and all pipetting lines.
- 2. Move to the sample and triple dip for the conductivity measurement (conductivity is automatically separated from the pH and fluoride electrodes).
- While measuring conductivity, simultaneously pipet sample aliquots into the alkalinity analysis vessel and fluoride analysis vessel. TISAB is also simultaneously added to the fluoride analysis vessel.
- 4. While measuring the pH and titrating for alkalinity, simultaneously stabilize and measure the fluoride concentration.
- 5. Move the sampler arm to the rinse station.
- 6. Simultaneously drain both analysis vessels and rinse the entire system using Man-Tech's dynamic IntelliRinse™.
- 7. For the next sample, repeat steps 2 7.
- 8. Total cycle time for alkalinities < 500ppm is 3 minutes or less!





# Upgrade Options



#### SmartCal™

For scheduled, unattended, calibrations and QC standards analysis:

- Enables running real, revenue-generating samples sooner
- Increases the capacity of the AutoMax sampler for real, revenue-generating samples
- Increases profitability

# Turbidity/Color analysis and many more\*

• Analyze turbidity and/or color from the same sample!

\*For a complete list of approved methods capabilities, please request the Approved Methods List

#### PC-BOD/Titrate Duo™

- Add the PC-BOD™
- BOD by Day, Titrate by Night



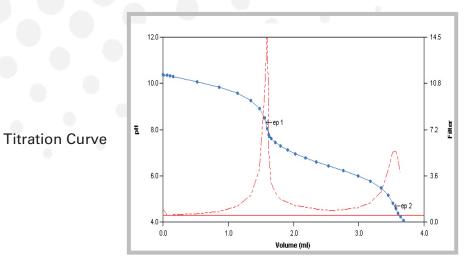




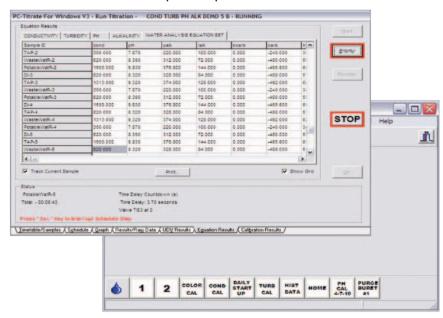
#### PC-Titrate™ Software

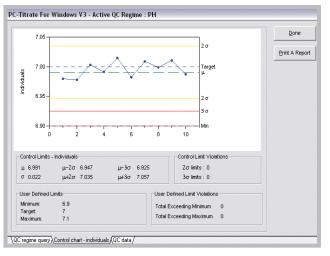
The PC-Titrate software controls all facets of the TitraSip Multi-parameter system.

- Controls all facets of analysis from a single sample
- Innovative Man-Tech Autorun buttons simplify operation
- Pick only the parameters required for each sample
- Auto calibration for pH, turbidity, ISE, color, etc.
- Up to 16 calibration points for each parameter
- Complete audit trail
- Import/export from/to LIMS
- Decision making capabilities, e.g.: IF/ELSE/WHILE
- Built-in quality control system for electrodes, standards, duplicates, spikes etc.



#### TitraSip Multiparameter





QC Chart



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