

TitraSip™ Systems

The TitraSip™ Module



The evolution of titration automation and still true to its goal of delivering accurate, precise results that stand the test of time.

- Single stand alone module, use with autosampler, stand alone or near-line
- Integrated pipet pump, dual rinse pump, analysis vessel and drain valve in one
- The TitraSip pipet pump is a patented, valveless, ceramic, piston design that is precise and inert
- Measured over millions of pipets, the TitraSip delivers according to Class A pipet specifications

Man-Tech introduced and developed the concept of liquid handling/pipetting automation to titration systems. Early in the development stage, Man-Tech decided to develop a self contained liquid handling module that could be connected to an autosampler, connected to an continuous overflow or used as a stand alone. This offered a number of important advantages:

- Laboratories with multi-parameter analysis requirements choose the configuration that best fits their needs and workflow
- With autosampler, the entire bed is used for samples. There is no need to allocate space for the analysis vessel
- Simple to start, with a stand alone option and upgrade by adding the autosampler
- Autosampler movements are kept to minimum since the pipet probe(s) enters the sample once for multi-parameter analysis. There is no need to move from sample cup to analysis cup to transfer the sample
- Choose from 3 different analysis vessels
 - o 35ml – multi-parameter with FAST analysis times
 - o 85ml – multi-parameter with 4 electrode capability
 - o 145ml – multi-parameter, 4 electrode with large volume capability

A very important consideration when developing liquid handling devices with analysis vessels, is the elimination of carry-over from samples or from rinse water (dilution effects). The TitraSip utilizes a gravity or pump activated drain, a propeller stirrer versus a magnetic stirrer, and a high flow dual rinse action pump. This offers the following advantages:

- The drain action ensures all sample and rinse water is drained from the analysis vessel. There is nothing left! Aspiration of sample and rinse water may lead to cross contamination and/or dilution effects.
- The use of the propeller stirrer ensures there is no sample/water trapped as with magnetic stirrers that lay against the vessel.
- The dual action rinse pump rinses the analysis vessel with swirling action ensuring complete rinse of the analysis vessel and pipet probe at the same time. Effective draining eliminates any potential for dilution effects.
- Add in Man-Tech's IntelliRinse, and there is proof that the entire system is clean and ready for the next sample.

In our continued evolution, the TitraSip is now available with two analysis vessels in one, allowing for quicker analysis times when running multi-parameter analysis.

***Man-Tech TitraSip delivers the results
your laboratory counts on!***

