

## Titra-Max Titration System



### Application:

The Titra-Max titrator is used for the analysis of:

- TAN (total acid number)
- TBN (total base number)
- Mercaptan Sulphur
- Analysis of petroleum products, lubricants and transformer insulating oils.





## Titra-Max Titration System

### Features and Benefits

- User friendly auto titration system.
- User selectable End Point mode.
- Compliant to ASTM methods for TAN/TBN analysis of oil samples.
- Mercaptan sulphur titration method as standard.
- Interchangeable burette assemblies with intelligent volume recognition system.
- Vortex mixing system for vigorous and homogeneous stirring of viscous samples.
- Alphanumeric entry of all method parameters and sample data that ensures GLP compliance.
- Pre-programmed ASTM methods for easy operation.
- Two tier password protection, Administrator and User; for method editing.
- User selectable report formats - Titration analysis reports, method parameters, Data table, Titration curves, etc..
- Full reprocessing and statistical analysis of run data including first and second derivative graphical report.
- Balance interface for weight data transfer.
- Data download to PC.
- Full printout facility for titration report, analysis graph and derivative calculation.



### Burette system



Interchangeable burette assembly with intelligent volume recognition system. Simply remove the retaining screw, slide out the burette assembly and replace with different volume or titrant burette.

Easy to follow screen prompts.

### Titration vessel

Complete with vortex mixing for vigorous and homogeneous stirring of viscous samples. Chemically inert glass stirrer paddle. The vortex mixer is located next to the electrode so that the whole assembly can be swung away from the titration unit for easy rinsing and cleaning.



### Keypad

Simple, easy to use keypad with function guide display. Alphanumeric entry of Sample Name, Titrant Name, Identification Number, Date with type of electrode used for authentication, Customer Name and Instrument Serial Number on report printouts for GLP compliance.



### Electrode system

A range of specially manufactured electrodes designed for optimum performance and excellent results.



## Technical Specifications

Principle: Volume determination by equivalence point or end point

Control: Microcontroller based.

mV range: +/- 3200

Accuracy: +/- 0.1 mV

Amplifier impedance: > 10<sup>12</sup> ohms.

Burette resolution: 1/5000 for 5ml, 1/10000 for 10ml,  
1/5000 for 25ml.

Filling time: < 20 seconds

Keyboard: Alphanumeric splashproof polyester soft keys.

Display: 40 x 2 backlit LCD

Titration Head: Manual stand with swivelling arm.

Stirrer system: Microcontroller based variable speed, high torque vortex mixer.

Cut off criteria: Choice of Volume or End point.

Applications: Pre-programmed ASTM methods

Report format: Multi choice including method parameters,  
titration graph and 1/V<sup>2</sup> derivatives.

Printer connection: Parallel port.

Balance connection: Serial interface & RS232C

Power: 90-264VAC, 47-63Hz.

## Ordering Information

Part No.	Product
93000	Titra-Max Titration System, complete
Supplied accessories (also available as spare items)	
93-50500226	Vortex mixer assembly.
93-21530203	Pack 3 stirrer paddles
93-50200001	10ml burette assembly complete
93-60241201	10ml syringe
93-20240606	Syringe shell, red acrylic sleeve
93-302203	PTFE dispensing tube & diffuser tip
93-20240602	Moisture filter and tube connector
93-21580006	Reaction vessel, 150ml
93-21580006L	5 port reaction vessel lid
93-50500218	Electrode holder arm assembly
93-P11/CER	TAN/TBN combined electrode
93-01AG/BILL	Mercaptan Sulphur electrode
93-401511	Plug in power supply
93-29920129	Results Manager interface cable
93-101007	Results Manager USB/RS232 adapter

## About G.R. Scientific

Key personnel at G.R. Scientific are recognised experts in titration technology and electrochemistry. They have designed and manufactured titrators since the early 1980's and are widely regarded as some of the leading specialists in this technology.



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