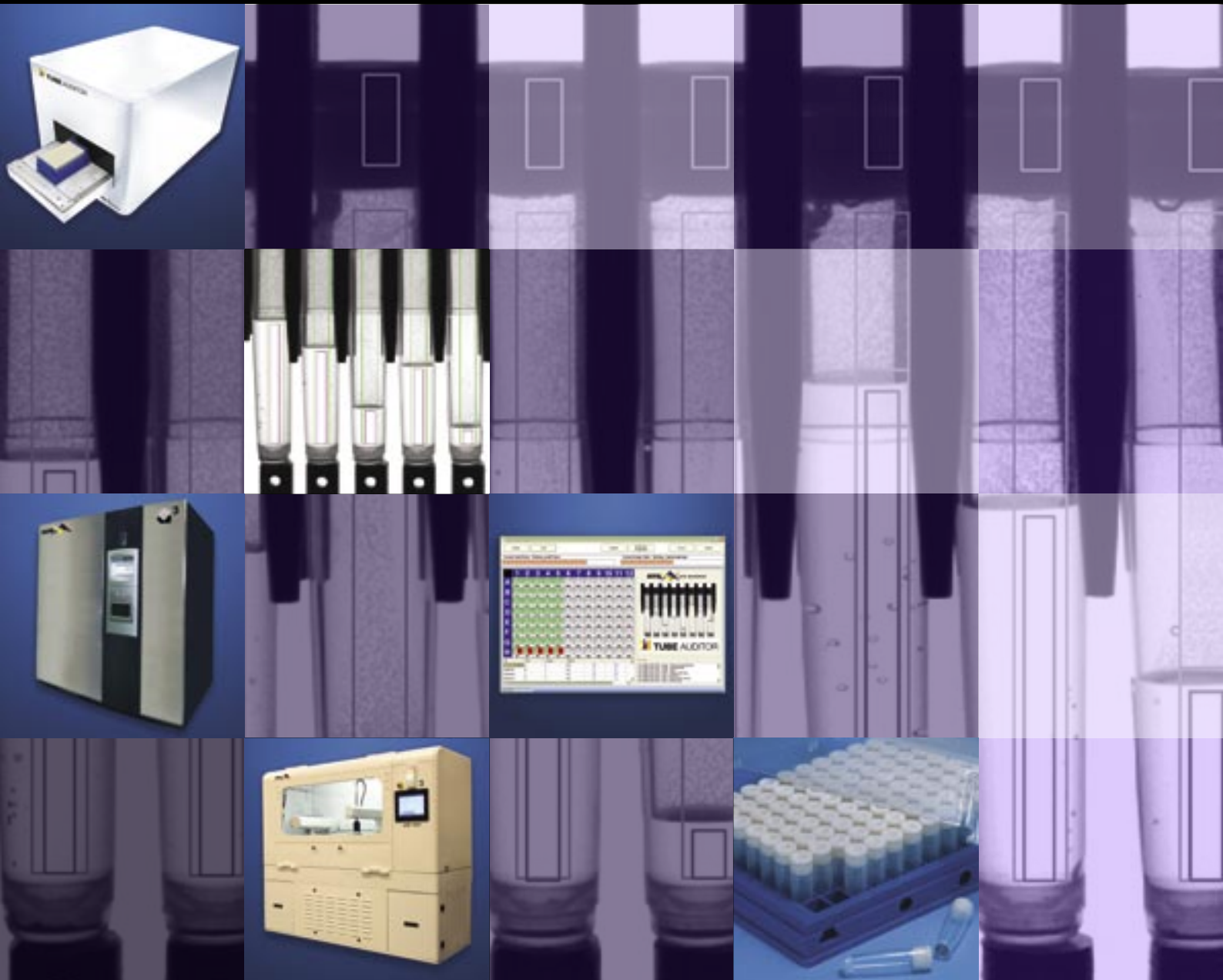


RTS Tube Auditor™

High-Speed Volume Measurement and Precipitate Detection for Drug Discovery and Biobanking Applications



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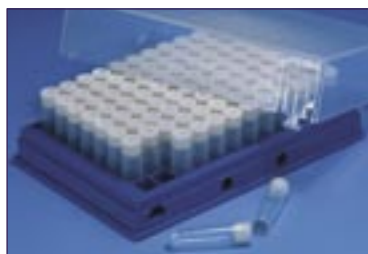
High-speed, non-contact volume measurement and precipitate detection for SBS format microtubes.

Knowing the volume of sample in a source tube, and whether there is any precipitate, prior to plating, is key to avoiding screening empty wells, or samples at the wrong concentration. The RTS Tube Auditor™ and Tube Auditor Pro™ instruments measure sample volume and detect precipitate using high-speed vision technology.

Tube Auditor gives confidence in the quality of your samples (at both collection and output) and helps reduce downstream costs and waste, which can arise from empty wells and false results.



Feature	Tube Auditor	Tube Auditor Pro
Volume Measurement	✓	✓
Cap Detection	✓	✓
Manual and Remote Operation	✓	✓
User Interface Software	✓	✓
Precipitate Detection		✓
Image Capture and Recall		✓



Performance

- High-speed – takes less than 2 minutes to audit a full 96-way tube rack
- Accurate – volume measurement to better than +/-10µl

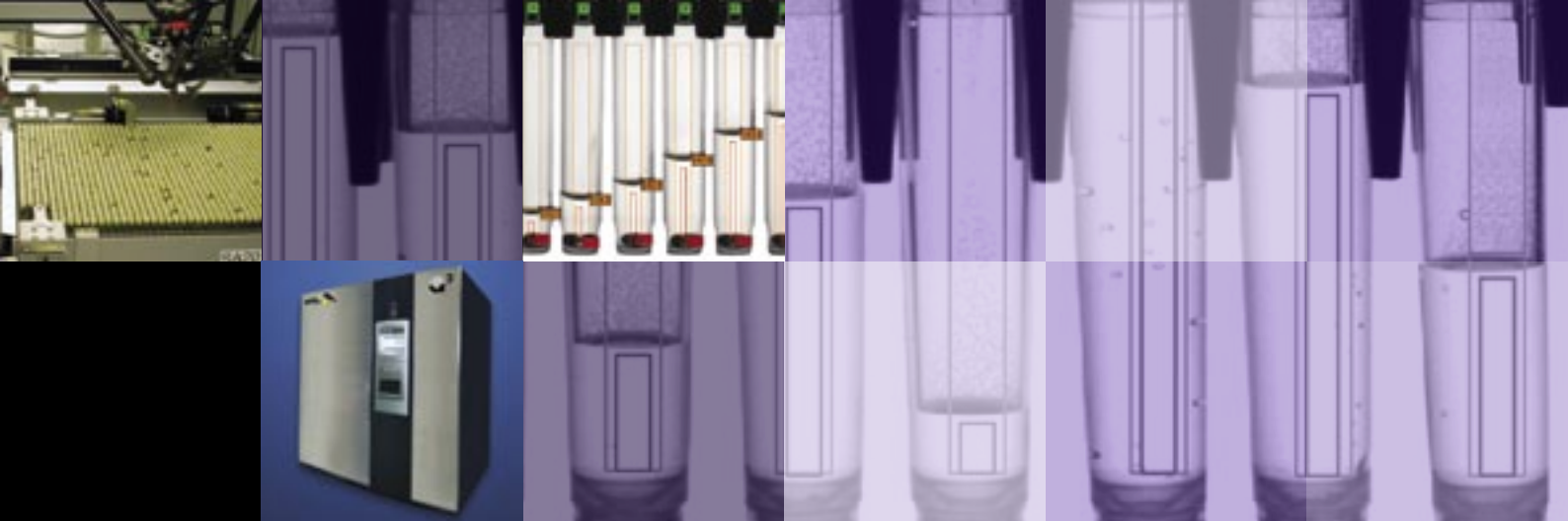
Applications

- Compound Management, High Throughput Screening and Biobanking
- Sample quality control and empty tube detection
- Sample dissolution / solubility quality checks
- Cap detection

Operates With

- SBS format microtube racks* – Thermo Matrix & ABgene, Micronic, fluidX etc.
- DMSO / Water / DNA (TE buffer) / Plasma / Blood / Urine
- Capped tubes – Split-septa, Sepraseal™ & Duraseal™ and screw caps

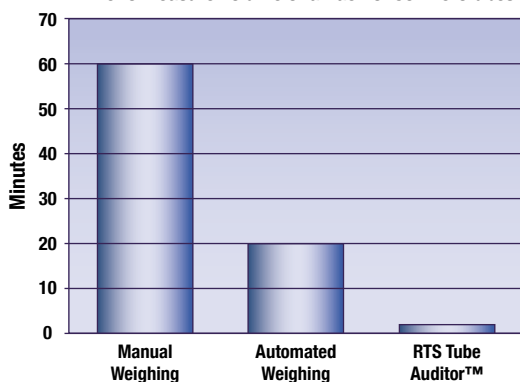
*As standard the RTS Tube Auditor™ is designed to operate with microtubes in SBS format 96-way racks; please enquire for other labware formats and custom applications.



Auditing using vision technology is significantly faster than alternative methods (such as weighing). The ability to work with capped tubes means that the RTS Tube Auditor™ is the only solution for some tube / cap combinations, and additionally ensures that sample quality isn't compromised by water uptake or cross-contamination.

To correlate the meniscus position to a liquid volume, the Tube Auditor requires a calibration data set; calibration involves auditing a known set of tubes for which the actual volume in each tube is supplied in a data file. The instrument software automatically generates a calibration line, specific to the tube and liquid type, allowing sample volume to then be determined from the measured liquid height.

Time to Measure Volume of a Rack of 96 Microtubes



Benefits

- Rapid, non-contact volume measurement and precipitate detection in a single audit pass
- Minimises downstream costs from the processing of empty plate wells
- Increases confidence in the concentration of delivered output samples
- Helps avoid damage to liquid handling tips caused by failed de-cap operations

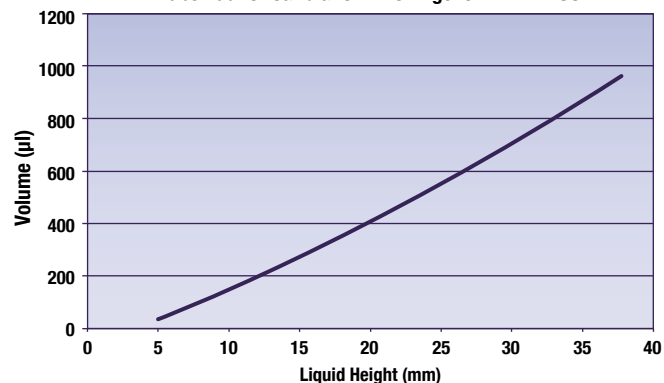
Software

- User-friendly and feature-packed Windows software
- Graphical display of volume, precipitate and cap presence in rows and columns
- Multiple output data formats
- Supports manual or remote operation

How it Works

The RTS Tube Auditor™ uses a high-resolution vision system to detect the liquid meniscus within the sample tube. Once the position of the meniscus has been determined, the volume of liquid is calculated. Additional algorithms are used to detect the presence of a cap on the tube and also any precipitate in the base of the tube.

Tube Auditor Calibration Line ABGene 1.2ml DMSO



The Tube Auditor vision system is capable of detecting sample volume changes to +/-5µl; however, overall system accuracy can be affected by a number of factors e.g. dimensional variations in labware, sample droplets on tube walls etc. Centrifugation of samples prior to auditing has been shown to result in optimum levels of system accuracy.

Specifications and Requirements

Dimensions (L x W x H)	864mm x 424mm x 414mm (34" x 16.7" x 16.3")
Weight	32kg (70lbs)
Electrical	110-240 VAC 50/60Hz
PC	MS Windows XP

RTS is at the forefront of automated sample storage and retrieval, having provided solutions to pharma, biotech, biobanking and academic institutions for over 15 years.



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