BioMicroLab VC100

automated non-contact liquid level detection

The VC100 uses ultrasonic technology to measure the height of the sample meniscus without coming into contact with the sample. The volume of each well of a 96 well plate is returned in 1 minute. This easy to use system provides a robust alternative to manual or visual well plate inspection.

applications

- Low or high sample volume detection in uncapped consumables
- Sample library inventory management
- Assay plate quality control
- QC/QA for assay development and DNA processing
- Detect sample volume for incoming plate samples
- Volume verification for plates before and after liquid handling operations

features

- Scans a 96 well plate in one minute
- Collects and outputs sample volume data for each well position
- Works with common lab solutions such as water, alcohol, DMSO and more
- Outputs data in easy-to-use LIMS formats

software

- Graphically displays the well plate volumes in columns and rows
- User interface designed for quality control applications
- Project-based software for multiple types of applications and labware
- Select or deselect rows and/or columns to scan for efficient throughput
- Includes plate data calibration table utility
- Easy-to-use Windows based software
- ActiveX toolkit available for integration projects
- Prints plate data reports

labware compatibility

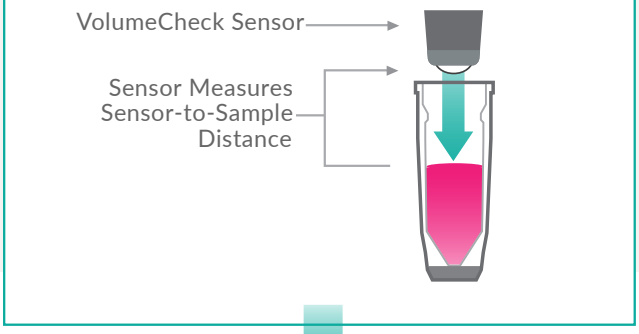
- Compatible with a wide variety of consumables such as 24, 48, 96 well ANSI/SLAS standard racks, PCR plates, deep well blocks and assay plates
- Vials or tubes up to 92 mm in height
- No consumables – works with your sample racks and plates

sptlabtech

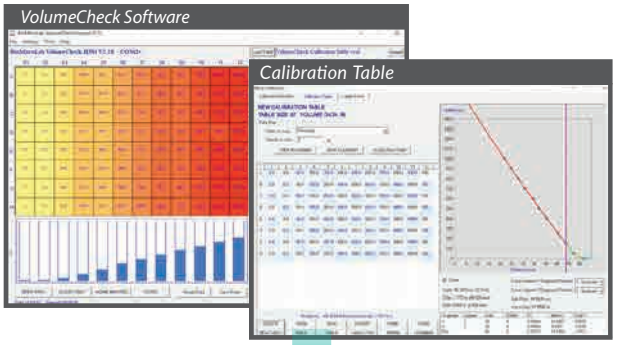
how it works

VolumeCheck measures sensor-to-sample distance of known sample volumes to create a calibration table. The sensor-to-sample distance decreases as larger amounts of sample are added to the well. Using a reference curve specific to each well plate or tube rack, the VolumeCheck instrument returns the volume of sample or compound in each well position.

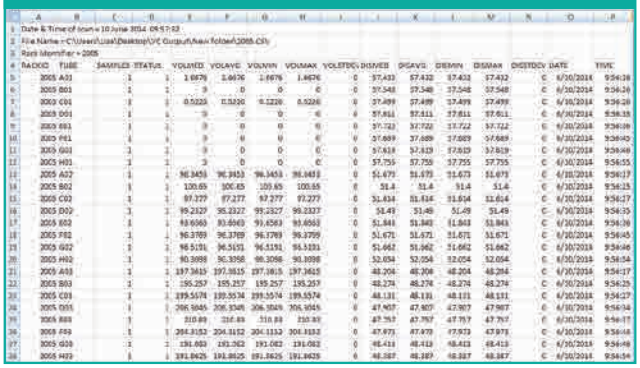
Ultrasonic Sensor Detects Meniscus



VolumeCheck Processes Plates Based On Calibration Table



Output Data File Created (.csv)



VC100™ calibration table

A sensor distance-to-volume calibration plot is generated by scanning known sample volumes in specific well plates or tube racks. The VolumeCheck software provides a utility to efficiently generate the data to establish the distance-to-volume reference tables. The volumes of unknown samples are scanned and extrapolated from a reference table.

system resolution and accuracy

The VolumeCheck system is a general purpose volume detection system for a wide variety of labware. The VolumeCheck liquid level sensor is capable of sensing changes in sample volume in the sub 10 µL range. Resolution is dependent on labware and lab processes when using the system.

VC100™ system resolution can be maximized by:

- Centrifuging sample plates to provide a consistent sample level
- Ensuring the reference table is optimized to the consumables and type of sample
- Reducing dimensional variation in labware

specifications

models	throughput speed	labware supported	48 and 24 well	96 well	384 well
BioMicroLab VC100	one minute per plate	up to 92mm High	yes	yes	no
BioMicroLab VC384	30 sec-3 min per plate	up to 92mm High	yes	yes	yes

- Dimensions: 28cm x 68cm x 28cm (11"W x 24.5"D x 11.5"H)
- Weight: 15 kg (33.25 lbs.)
- Electrical: 110-220 VAC 50/60Hz
- System Requirements: Windows 10, 8, 7 • 512MB RAM • One USB port
- IQ/OQ: Installation Qualification / Operational Qualification Available