QUANTOM Tx™

MICROBIAL CELL COUNTER

Rapid Single Bacterial Cell Quantification

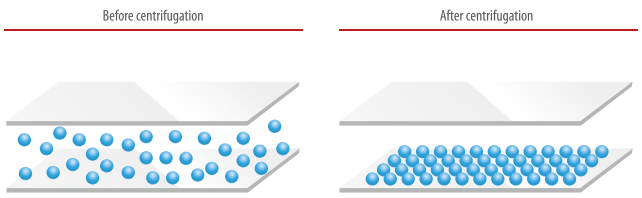
The QUANTOM Tx™ Microbial Cell Counter can automatically identify and count individual bacterial cells in minutes.

Bacteria are an incredibly diverse group of organisms that come in a variety of shapes, sizes, and arrangements, making quantification a challenging feat. The ubiquitous colony counting method is a time-consuming, unreliable estimation at best and even expensive flow and laser scanning cytometers register each particle, single or clustered, as a single event. The QUANTOM Tx™ counts fluorescence-stained microbial cells through automated fluorescence imaging and analysis to produce accurate and objective bacterial cell counts.

QUANTOM™ Innovations for Increased Counting Accuracy

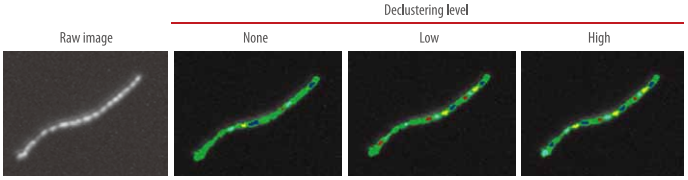
Uniform distribution and immobilization

The QUANTOM™ Cell Loading Buffer I immobilizes cells within the medium and the QUANTOM™ Centrifuge evenly distributes the cells along a single plane for accurate detection.



Bacteria-specific declustering algorithm

The QUANTOM Tx™ has a novel detection and declustering algorithm that can accurately count individual bacterial cells in the tightest clusters or the longest chains.



Counting with the QUANTOM Tx™

1. Mix cells with stain and loading buffer. Load into a counting slide.

2. Spin the slide in the QUANTOM™ Centrifuge.

3. Put the slide in the QUANTOM Tx™. Press Count.

4. Review data.

Specifications

QUANTOM Tx™ Microbial Cell Counter

Physical Characteristics	**Instrument type** Benchtop bacterial cell counter **Touchscreen** 10" capacitive touchscreen, 1280 x 800 pixels **Dimensions** 43.3 × 31.0 × 22.5 cm (17.0 x 12.2 x 8.8 in) **Weight** 10.8 kg (23.9 lb)
Technical Specifications	**Cell detection method** Automated fluorescence microscopy **Processing time** ~ 30 seconds (to capture and analyze 10 images) **Sample concentration range** 2 x 10^5 to 1 x 10^9 cells/mL (optimal: 1 x 10^6 to 5 x 10^8 cells/mL) **Cell size range** 0.3-50 µm **Sample volume** Loading volume: 5-6 µL, measuring volume: 0.09 µL (10 images)

QUANTOM Tx™ Centrifuge

Physical Characteristics	**Instrument type** Benchtop centrifuge **Dimensions** 21 x 21 x 22 cm (8.3 x 8.3 x 8.7 in) **Weight** 5.64 kg (12.4 lb)
Technical Specifications	**Maximum capacity** Up to 8 QUANTOM™ M50 Cell Counting Slides **Maximum RPM** 4,000 **Safety features** Safety lid lock, lid drop protection, automatic door release **Electrical requirements** 110 V AC, 60 Hz, 1A or 220-240 V AC, 50/60 Hz, 0.5A

QUANTOM Tx™ M50 Cell Counting Slides

Physical Characteristics	**Material** Poly(methyl methacrylate) (PMMA) **Dimensions** 25 x 75 x 1.65 mm **Chamber volume** 5-6 µL

Ordering Information

	Cat #	Product	Quantity
Instruments	Q10001	QUANTOM Tx™ Microbial Cell Counter	1
	Q10002	QUANTOM™ Centrifuge	1
Slides & Reagents	Q12001	QUANTOM™ M50 Cell Counting Slides, 50 Slides	1 box
	Q12002	QUANTOM™ M50 Cell Counting Slides, 500 Slides	10 boxes
	Q13501	QUANTOM™ Total Cell Staining Kit Q13101 QUANTOM™ Total Cell Staining Dye Q13002 QUANTOM™ Total Cell Staining Enhancer Q13001 QUANTOM™ Cell Loading Buffer I	1 kit
	Q13502	QUANTOM™ Viable Cell Staining Kit Q13201 QUANTOM™ Viable Cell Staining Dye Q13003 Dimethyl Sulfoxide Q13004 QUANTOM™ Viable Cell Dilution Buffer Q13001 QUANTOM™ Cell Loading Buffer I	1 kit
	Q13102	QUANTOM™ Calibration Beads	1 x 0.5 mL
Accessories	P10001	LUNA™ Printer	1
	P12001	LUNA™ Printer Paper - thermal, 700 prints	3 x 2 rolls

TESTIMONIALS

The QUANTOM Tx™ is extremely user-friendly with a beautiful, intuitive interface.
The entire process from start to finish is very quick, so we were able to gather a lot of data in a short amount of time. We mastered the staining protocol very quickly, and even the more inexperienced members of our research group were able to use the machine properly with ease. We were blown away by the quality of the images we received, even in mixed cultures of bacteria gathered from various biological samples!

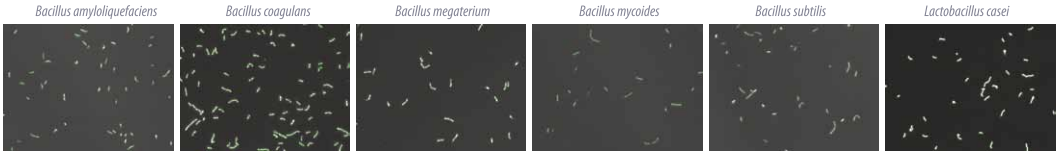
Laila Phillips
Sinai Hospital Division of Gastroenterology

Great results. I am very happy with the instrument.
The instrument is very easy to use. The sample prep is quick and the replicates are pretty tight. I used it for counting very small cells, as well as bacteria that grow in chains or clusters and the software does a great job analyzing the image. I compared the results to other methods and the results are spot on. Overall, I am very happy with the purchase.

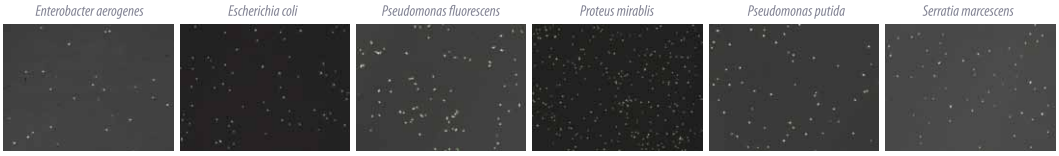
Violetta Medik
Evelo Biosciences

Bacteria Validated on the QUANTOM Tx™

Gram positive



Gram negative



This is a partial list of bacteria tested on the QUANTOM Tx™.

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