Organoid Counting Software for the Corning® Cell Counter
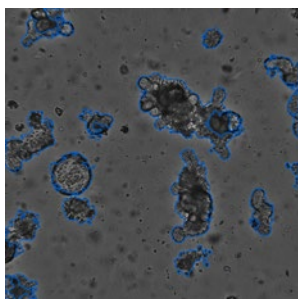
CORNING

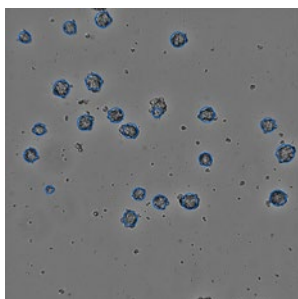Image captured using Version 1 of the organoid counting software.

Image captured using Version 2 of the organoid counting software.

Traditionally, Corning's cloud-based automated cell counter has focused on rapidly capturing the detailed-analysis of 2D cell cultures. The addition of the organoid counting application expands our cell counting capabilities into the vastly developing 3D space. The robust organoid counting software package is designed to meet the unique needs of customers as 3D populations are known to vary in morphologies dependent on numerous environmental factors or protocols. Engineered to account for complex shapes and sizes, the organoid counting software introduces two versions of the 3D counting algorithm.

Version 1 (V1) is for use with cultures of irregular morphology. The machine learning algorithm for V1 is trained to engulf the individual outer membranes within the field of view in order to calculate accurate surface area and orgs./mL data. Version 2 (V2) of the 3D algorithm is for use with spherical objects. Other than obtaining prompt surface area and orgs./mL data; V2 will be optimal for differentiating individual spherical objects within clusters. The software is shipped with a 0.2 mm gridless counting chamber, equipping the user with all the necessary devices to successfully determine their 3D counts with the Corning Cell Counter.

◗ **Accurate** – powered by machine learning artificial intelligence

◗ **Multi-informative** – organoids per milliliter of solution and surface area data

◗ **Fast** – three-second analysis* utilizing cloud-based processing

◗ **Cost-efficient and versatile** – compatible with a standard 0.1 mm counting chambers and 0.2 mm counting chambers. No consumables required.

Specifications

Organoid size range	20 µm to 100 µm 20 µm to 200 µm**
Measurement time	<3 sec.*
Compatibility	Reusable and disposable counting chambers with height: 0.1 or 0.2 mm
Sample volume	10 µL or 20 µL chamber permitting
Field of view	1.5 x 1.5 mm
Magnification	100X
Image resolution	1,536 x 1,536
Algorithm Version	Version 1 irregular morphology Version 2 spherical objects

*Measured using a 73 Mbps download speed and a 20 Mbps upload speed.
**Size limits depend on dimensions of counting chamber; user can set parameters in the application.

Ordering Information

Cat. No.	Description	Qty/Cs
6749-OC	Organoid counting software with 0.2 mm counting chamber	1
480201	0.2 mm Corning® Counting chamber	1

Related Products

Equipment

Cat. No.	Description	Qty/Cs
6749	Corning Cell Counter	1

Advanced Surfaces

Cat. No.	Description	Qty/Cs
356255	Corning Matrigel® matrix for organoid culture, phenol red-free, LDEV-free, 10 mL	1
356231	Corning Matrigel matrix, growth factor reduced (GFR), phenol red-free, 10 mL LDEV-free	1
354230	Corning Matrigel matrix, growth factor reduced (GFR), LDEV-free, 10 mL	1
354234	Corning Matrigel matrix, LDEV-free, 10 mL	1
356237	Corning Matrigel matrix, phenol red-free, LDEV-free, 10 mL	1
354235	Dispase, 100 mL	1
354253	Cell recovery solution, 100 mL	1
356256	Corning Matrigel matrix-3D plate, 384-well black/clear square bottom, phenol red-free, with lid	5
356257	Corning Matrigel matrix-3D plate, 384-well white/clear square bottom, phenol red-free, with lid	5

Ultra-Low Attachment (ULA) Surface and 3D Clearing Reagents

Cat. No.	Description	Qty/Cs
3471	Costar® 6-well clear flat bottom plate, ULA surface, individually wrapped, sterile	24
3473	Costar 24-well clear flat bottom plate, ULA surface, individually wrapped, sterile	24
7007	Corning 96-well clear round bottom microplate, ULA surface, individually wrapped, with lid, sterile	24
4515	Corning 96-well black/clear round bottom spheroid microplate, ULA surface, with lid, sterile	5
4520	Corning 96-well black/clear round bottom spheroid microplate, ULA surface, with lid, sterile, bulk packed	50
4516	Corning 384-well black/clear round bottom spheroid microplate, ULA surface, with lid, sterile	5
3830	Corning 384-well black/clear round bottom spheroid microplate, ULA surface, with lid, sterile, bulk packed	50
5730	Corning 3D Clear tissue clearing reagent starter kit Includes: Corning 3D Clear reagent (30 mL), Corning 3D Clear antibody buffer (30 mL), Corning 3D Clear blocking buffer (30 mL), Corning 3D Clear penetration buffer (30 mL), Corning 3D Clear washing buffer 10X (70 mL)	1 kit
5731	Corning 3D Clear tissue clearing reagent, 10 mL	1
5732	Corning 3D Clear tissue clearing reagent, 30 mL	1
5733	Corning 3D Clear tissue clearing reagent, 100 mL	1

Related Products (continued)

Axygen® Wide Bore Pipet Tips, Clear

Cat. No.	Volume (µL)		Packaging
T-205-WB-C-R-S	Axygen 200 µL pipet tips, wide-bore, clear, hinged racks, sterile		96 tips/rack, 10 racks/pack, 5 packs/case
TF-1005-WB-R-S	Axygen 1000 µL universal fit filter tips, wide-bore, clear, sterile, rack pack		100 tips/rack, 10 racks/pack, 5 packs/case
TF-205-WB-R-S*	Axygen 200 µL universal fit filter tips, wide-bore, clear, sterile, rack pack		96 tips/rack, 10 racks/pack, 5 packs/case

*Non-stock product. Please contact your local Corning Account Manager for more details.

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