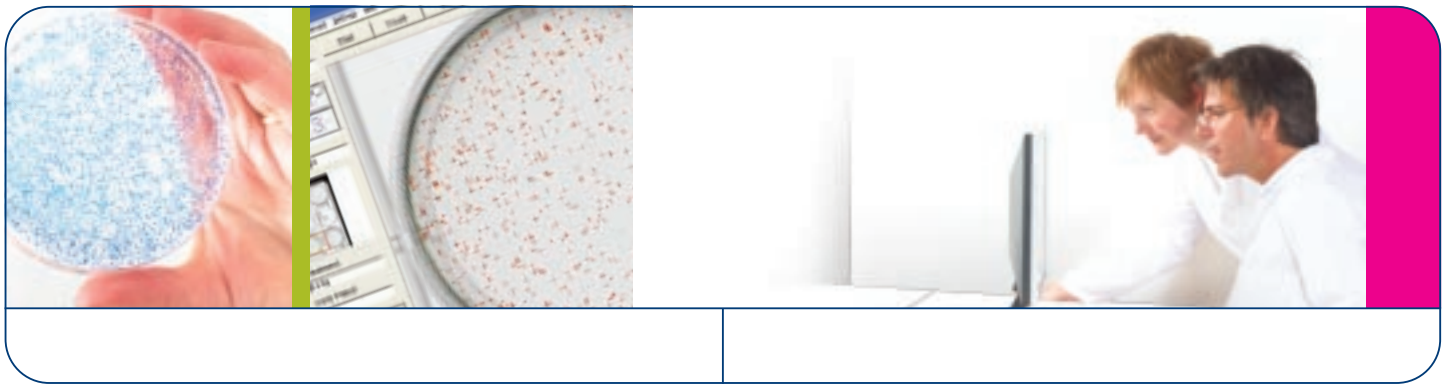


GELCOUNT™

OXFORD OPTRONIX

Automated Mammalian Cell Colony Counter for

Adherent or Non-Adherent Mammalian Cell Colony Forming Assays

Proven results in:

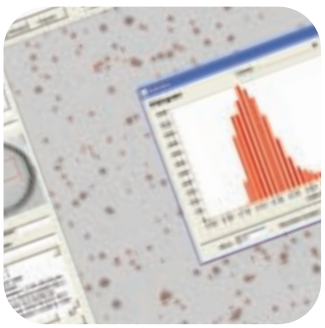
- Radiation biology
- Chemotherapy
- Drug discovery
- Toxicology

GELCOUNT™

Automated Mammalian Cell Colony Counting

Adherent or Soft-Agar Colony Assays

GelCount™ is an innovative, bench top system for counting both stained, adherent colonies and unstained, non-adherent colonies in 3-D media.



Introduction

The Colony Forming Assay is universally recognized as the **gold standard** for measuring the effects of radiation, chemotherapeutic drugs and other agents on cell viability. However, manually counting the resulting cell colonies is a thankless and laborious task in which consistent objectivity is difficult to achieve.

Saves time, eliminates doubt

GelCount is a cost effective and reliable solution to the problem of counting colonies manually. It not only dramatically reduces overall colony counting time but its inherent objectivity and consistency eliminates the factor of human error which often arises from subjective interpretation, bias and fatigue – a particular problem when manually counting under microscopes. Lab personnel may come and go, but GelCount will always provide consistent results.

Applications

Gelcount's inherent versatility enables automated colony counting in a wide range of assays including clonogenic, cell survival, tumour cloning and colony forming assays.

Powerful, 'intelligent' image processing

Using our proprietary, multi-thread aware CHARM™ algorithm, GelCount is able to distinguish overlapping colonies, and to differentiate real colonies from cell debris. By combining high resolution imaging with innovative digital image processing, it can detect and count individual colonies as small as 30µm in diameter.

"GelCount's detection and sorting algorithms are very powerful and flexible, and the resolution at the high end is really quite remarkable – which is great for tracking the growth progress of non-stained colonies"

Dr Ryan Williams MD Anderson Cancer Center, Houston, United States

Flexible and versatile

GelCount can detect both stained and unstained colonies growing in most types of 3-D media such as soft agar and methylcellulose, as well as traditional, stained adherent colonies. With its easy-loading, motorized drawer system, it can process up to four multi-well culture plates and up to 24 Petri dishes in a single tray.

Unlocking powerful new data

As well as colony counts, GelCount's wide range of Excel® compatible outputs include the means and SDs of colony diameter, area, volume, density and 'distance-to-nearest neighbour'. These, as well as actual raw data, are available for each detected colony, providing unparalleled data extraction from every plate.

At the touch of a button, GelCount's unique histogram tool provides these data in the form of histograms; providing the user with hitherto unavailable information relating to colony size distribution, colony formation and more.

Try GelCount for yourself

For details of pricing, and to discuss your specific application needs, please contact our sales team.

We can also arrange a **free, no-obligation demonstration** in your laboratory and send you citations from organisations currently using GelCount.

Call +44 1235 821 803
Email sales@oxford-optronix.com

GELCOUNT™

Automated Mammalian Cell Colony Counting

Adherent or Soft-Agar Colony Assays

About Oxford Optronix

Oxford Optronix is a global pioneer in the research, development and manufacture of fibre-optic-based biosensors and intelligent imaging technology, for both scientific and medical research applications.

For more details about all our products, including our range of tissue monitoring systems, please visit

www.oxford-optronix.com

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Technical Specifications for GelCount

GENERAL

Imaging method: Ultra-high depth of field high resolution CCD-based scanning engine

Scanning resolution: User selectable 300, 600, 1200, 2400 dpi

Grey-scale resolution: User selectable 8 or 16 bit

Min. resolvable colony diameter: 30µm average diameter (@ 2400 dpi)

Max. depth of optical field: 4mm from bottom of cultureware

Counting method: CHARM™ (Compact Hough and Radial Map) proprietary to Oxford Optronix Ltd

Counting variability: < 5% for repeated analysis of the same plate

Typical acquisition time (for 4 x 24-well plates): 12 min (@ 1200 dpi & 16 bit)

Culture plate loading method: User removable plate-tray latching into a motorised drawer. Additional plate-trays and Petri dish adapters are available on request.

Cultureware supported: Most manufacturers of 6, 12, 24, 48, 96 multi-well plates with/without lids[2] Petri dishes with/without lids ; limited T25 flask support

Plate-tray capacity: 1-4 multi-well plates, 1-24 Petri dishes, 1-8 T25 flasks

Colony detection: Unstained and Stained (e.g. Tetrazolium- based stains such as MTT)

DATA OUTPUTS

Counting Statistics (per well): Excel® compatible CSV data files of

- Absolute Count
- Mean Diameter + SD
- Mean Area + SD
- Mean Volume +SD
- Mean Optical Density +SD
- Mean Distance-to-Nearest-Neighbour +SD

Raw Data for each detected colony (per well): Excel® compatible CSV data files of

- Colony Diameter
- Colony Area
- Colony Volume
- Colony Optical Density
- Colony Distance-to-Nearest-Neighbour

Colony Histograms (per well):

- Colony Diameter
- Colony Area
- Colony Volume
- Colony Optical Density
- Colony Distance-to-Nearest-Neighbour

PHYSICAL

Dimensions (H x W x D): 155mm x 560mm x 450mm

Weight: 20 kg

Power: 110-120V, 220-240 V ~1.5A; 50-60 Hz

Fuses: 2 x T1.6A

Storage temperature: 10-40°C • **Operating temperature:** 15-30°C

Operating humidity: 0-70% (non condensing humidity)

MINIMUM PC REQUIREMENTS

Processor type/speed: 1.6 GHz dual-core type processor

HDD: 80 GB

System memory: 2 GB

Video memory: Non-shared 128 MB minimum

Monitor/display resolution: 1280 x 1024 pixels

Interface: 2 x USB 2.0

Other: CD ROM

Operating System: Windows XP® or Windows 7®

Notes:
1. Dependent on exact specification of PC/Laptop.
2. Please contact Oxford Optronix for cultureware compatibility.