

The evaluation of many bioassays requires accurate recognition of complex optical patterns in test wells. While the expert's eye is remarkable in judging morphologies, visual evaluation is tedious, does not leave transparent audit trails, and is error prone. CTL has created a reader platform, BioSpot®, that evaluates these assays with the accuracy of an expert's eye, minus the shortcomings.

Accuracy and Objectivity

Unlike visual analysis by different investigators or repeat analysis by the same one, the results produced by the BioSpot® Platform will be identical and user-independent each time a plate is analyzed. Reading with the BioSpot® Platform will eliminate the largest variable in these assays: subjective evaluation.

QC & Documentation

Regulatory agencies require stringent and transparent documentation of test results. The BioSpot® Platform automatically retains complete audit trails for regulated work, including the tamper-proof archiving of the original digital images together with counting results and possible revisions made in the quality control step.

Productivity and Streamlined Work Flow

Visual evaluation is typically the rate-limiting step that prevents the utilization of these assays to their fullest potential. The BioSpot® Platform acquires, images, counts, and documents in a fully-automated fashion at a rate of approximately one well per second.

SOME OF THE MOST FREQUENTLY USED BIOASSAYS ARE PRESENTLY STILL READ BY EYE

- Viral Plaque Assays (PRNT, FRNT, PFU)
- Bacterial Colony Counting (SBA, SBT, OPK, OPA)
- Clonogenic Assays, Cancer, Stem Cell CFU
- Genotoxic Assays, Ames Test, MLA
- Microbial Colony Counting, MPN, TVC, MIC

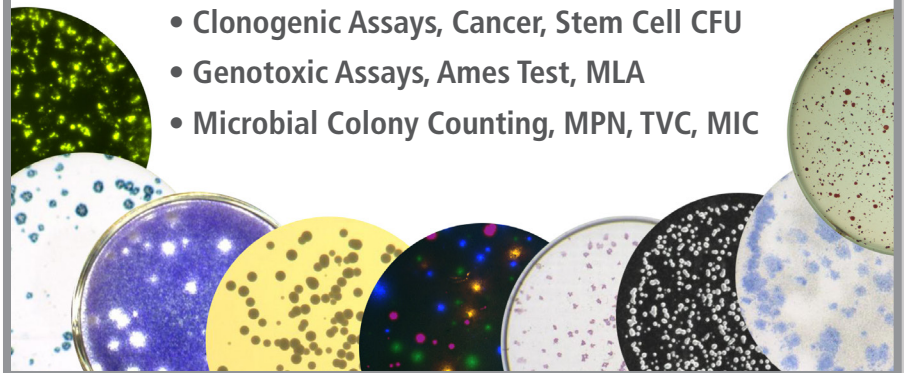


Plate loader integration, barcoding, and automated data evaluation further increase the high-throughput capability of the system.

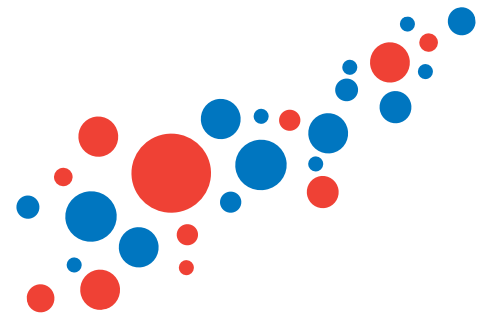
Validation

Regulatory compliance requires validation of the assay itself, and of instruments used for evaluating such assay results. CTL offers an optional GLP package that enables 21 CFR Part 11 compliant work and we even provide IQ/OQ/PQ at installation.

Versatility

Morphometric assays are performed in a range of well formats (384-well plates to 100mm Petri dishes), using either visible or fluorescent light for multicolor analysis. The requirements for optical resolution are unique to each assay. CTL offers a range of BioSpot® instruments to accommodate these requirements. The CTL Technical Support Team will gladly assist you in tailoring a platform to suit your specific needs.





CTL S6 Analyzers

Cellular Technology Limited is the world leader in ELISPOT expertise and technology. As the pioneer in its field, CTL is the only entity that specializes in developing ELISPOT instrumentation and assays, as well as their implementation in GLP-compliant contract research.

Unmatched Expertise, Quality Products, Comprehensive Solutions

The Series 6 (S6) line of ImmunoSpot® Analyzers has evolved out of CTL's world-class expertise and years of scientific experience. ImmunoSpot® Analyzers combine accuracy, flexibility, and scientific methodology, making them invaluable research tools.

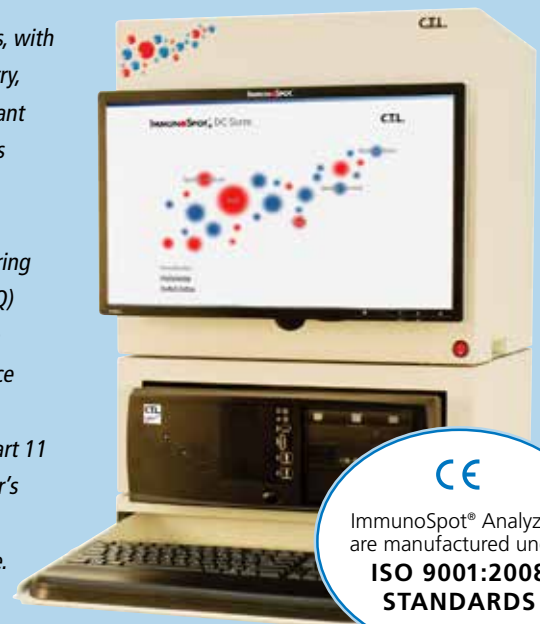
The S6 Analyzers come in a variety of models that accommodate a wide range of budgets and scientific needs. Every model incorporates the highest quality components and CTL's advanced analysis tools, thereby ensuring that accuracy and precision are not compromised.

S6 Analyzers are not just for ELISPOT assays. Thanks to their quality engineering and versatile designs, they can also be used for analyzing other microtiter plate-based bioassays. These include bacterial, yeast, stem cell, and tumor colonies, as well as viral plaque assays and more.

Each S6 model employs CTL's proprietary SmartLux™ or SmartLux™ 3D illumination techniques, thereby optimizing them for a wide range of assay types.

CTL will gladly assist you in selecting the instrument that best meets

All ImmunoSpot® Analyzers, with the exception of the S6 Entry, can be used in GLP-compliant environments. CTL supports customers in establishing a validated status for their devices. In addition to offering installation qualification (IQ) for the instrument, CTL can also assist with performance qualification (PQ) and with configuration for 21 CFR Part 11 compliance in the customer's environment. Plate stacker upgrades are also available. Ask for more details.



your specific needs and budget. No matter what you require — versatility, resolution, or affordability — CTL has a solution for you.

CTL S6 Core

The S6 Core Analyzer is our professional, baseline model. Even still, it outperforms the competition on every performance benchmark. It is ideally suited for working with single-plate formats. The S6 Core is configured for use with 24- to 384-well plates. Its high-performance backlight makes it an ideal choice for scanning ELISPOT

plates, viral plaque assays, yeast or bacterial colonies, and more.

CTL S6 Macro

When you need versatility, the S6 Macro Analyzer is the instrument of choice. This model is ideally suited for counting objects under 100µm in diameter and it is designed to handle 100mm Petri dishes, 384-well plates, and all other formats in between (6-, 12-, and 24-well). It is the best choice for customers who work with different assay types and want the ultimate in plate scanning versatility.



IMMUNOSPOT[®] CTL S6 Analyzers

FEATURES AND SPECIFICATIONS	ENTRY	VERSA	CORE	MACRO	MICRO	FLUOROCORE	UNIVERSAL	ULTIMATE
ELISPOT (2 Analytes)	✓	✓	✓	✓	✓	✓	✓	✓
FluoroSpot (# of Analytes)	x	x	x	x	x / 3	2 / 3	3 / 6 / 8	8
Number of Fluorescent Excitation Sources	x	x	x	x	Upgradeable Polychromatic Fluorescence	1 / 2	2 / 3 / 4	4
Lens Type	Fixed	Manual Zoom	Fixed	Motorized Zoom	Motorized Zoom	Fixed	Manual Zoom / Motorized	Fully Motorized
Max Image Resolution (MegaPixels)	5	10	10	25	25	10	18 / 25	25
Supported plate formats								
384-well	✓	x	✓	✓ 55 seconds	✓	✓	✓	✓
96-well	✓	✓	✓	✓ 50 seconds	✓	✓	✓	✓
48-well	x	✓	✓	✓ 15 seconds	✓	✓	✓	✓
24-well	x	✓	✓	✓	✓	✓	x / ✓	✓
12-well	x	✓	x	✓	✓	x	x / ✓	✓
6-well	x	✓	x	✓	✓	x	x / ✓	✓
60mm Petri dishes	x	✓	x	✓	x	x	x	x
100mm Petri dishes	x	✓	x	✓	x	x	x	x
Single cell Imaging/Counting	x	x	x	x	✓	✓	✓	✓
Live/Dead	x	x	x	x	x / ✓	x / ✓	x / ✓	✓
Histological Slides (Visible)	x	x	x	x	✓	x	✓	✓
Histo Slides, Fluorescent (Colors)	x	x	x	x	x / ✓	x	3 / 6 / 8	8
GLP capability	x / ✓	✓	✓	✓	✓	✓	✓	✓

CTL S6 Micro

By miniaturizing classic bioassays, one can dramatically increase throughput, cut analysis time, and reduce costs. Such miniaturized assays depend upon microscopic image analysis, and thereby require the use of specialized hardware.

The S6 Micro's motorized optics permit seamless switching between the 6-, 12-, 24-, 48-, 96-, and 384-well plate formats. They also allow the user to zoom in for even higher magnification, counting objects less than 2µm wide... including individual cells!

The S6 Micro can be upgraded

with the BioLux™ lighting system for even better illumination. In addition, CTL provides GLP support packages for enhanced repeatability.

Want to get the best possible performance out of this machine? A few simple upgrades are all that's required!

CTL S6 FluoroSpot Line

The S6 FluoroSpot Analyzers are CTL's most advanced model series. In addition to providing high-resolution visible light analysis, they also incorporate multiple fluorescent light sources for fluorescent applications — FluoroSpot, cell cycle

analysis, cell viability tests, apoptosis tests, and much more.

The automated filter changer allows up to 8 wavelengths of fluorescent analysis. Its high-magnification lens allows the user to view a wide range of plate types, zooming in for further detail as needed. It also provides exceptional speed for rare event, single-cell analysis applications — generating results up to 120 times faster than flow cytometry. Finally, there's the motorized lens option, which provides increased convenience and repeatability.

WHAT ARE SMARTLUX™, SMARTLUX™ 3D, AND BIOLUX™?

SmartLux™ is CTL's intelligent lighting system. SmartLux™ incorporates proprietary upper and lower lighting sources to provide even illumination and enhanced image quality. BioLux™ integrates an additional light source for darkfield imaging of small objects, whereas SmartLux™ 3D integrates upper, lower, and coaxial light sources for versatile analysis of both fluorescent and visible light assays.

Seeing IS Believing.

Schedule a demonstration so we may present the sophisticated solutions we offer for the new era of assay analysis.



Cellular Technology Limited

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BioSpot® High-throughput Analysis of Morphometric Bioassays™

Adaptability

Each morphometric assay has unique requirements regarding optics, resolution, and pattern recognition for analysis. Also, high-throughput and GLP requirements are unique. CTL can help you customize a solution that meets your specific needs.

Reliability

With 20 years of experience, Cellular Technology Limited leads the field of biomedical image analysis. More than 1600 customers worldwide have trusted CTL Readers and Software Solutions to meet their requirements, including the "who's who" of the biopharmaceutical industry.

SEEING IS BELIEVING

Schedule a demonstration today so we may present the sophisticated solutions the BioSpot® platform offers.

CE

BioSpot® Analyzers
are manufactured under
ISO 9001:2008
STANDARDS



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