

ProtoCOL³

ACCURATE, AUTOMATED
COLONY COUNTING AND
ZONE MEASUREMENT

FOR ALL YOUR
MICROBIOLOGY
APPLICATIONS



FULL TRACEABILITY FOR REGULATORY COMPLIANCE

Synbiosis manufactures and supplies the world's most popular automated colony counters and zone measurement systems. With over 30 years' experience, Synbiosis systems are tried and trusted by microbiologists world-wide.

FLEXIBLE

Now in its third generation, **ProtoCOL 3** is a compact, automated powerhouse for all your colony counting and inhibition zone measurement applications. With a range of software options, as well as a UNISTAT statistics package, you can cost-effectively customise and upgrade a **ProtoCOL 3** to suit your laboratory's needs.

ACCURATE

ProtoCOL 3 features unique three colour lighting for unrivalled illumination of all colony and zone types. The system's high-resolution camera captures high quality, colour images, ensuring that you can generate precise, reproducible colony count and inhibition zone data.

FAST

At the press of a button you can automatically read plates of up to 150 mm diameter to count colonies as small as 43µm and measure zones with an accuracy of more than 99.9%.

TRACEABLE

ProtoCOL 3 is compatible with 1D barcode readers, results can be automatically exported into a spreadsheet (Excel/OpenOffice), PDF or transferred to your LIMS. All data is fully 21 CFR Part 11 compliant with audit trails and user access levels, making **ProtoCOL 3** suitable for any highly regulated microbiology laboratory.



“PROTOCOL 3 -
A SOLUTION
FOR EVERY
MICROBIOLOGY
APPLICATION”



FEATURES

- Reads different plate and agar types
- User access level restrictions, audit locks and login/out activity
- Free software upgrades and no annual licence fee
- Stores results in Microsoft SQL Server
- Automatically exports data to Excel, Open Office, PDF or your LIMS
- Classify by up to 20 colours automatically and unlimited colours manually
- Separates touching colonies, creates exclusion areas and classifies colonies by colour, shape and size
- Large selection of customisable batch types

BENEFITS

- Flexible, processes plates of up to 150 mm of all major agar types
- Complete audit trail, ensures your data is 21 CFR Part 11 compliant
- Future-proof your system with no hidden, extra costs
- Secure, accessible raw data
- Quick and easy generation of reports suitable for regulatory audit
- Easy to select a number of colour options on the same plate to detect and count the colonies you're looking for
- Accurate plate image and colony count results which can be saved and printed
- Simple set-up of a wide range of current microbiology techniques

PROTOCOL 3 SYSTEM FEATURES



INTEGRATED SOFTWARE

ProtoCOL 3 comes with simple, user-friendly software, which can be customised to suit your applications needs. All the data you generate is 21 CFR Part 11 compliant with a full audit trail and is easily exported into a spreadsheet (Excel/OpenOffice) or transferred to your LIMS.



UNIQUE LIGHTING

Using patented three colour LED lighting, your plate is exposed to rapid bursts of red, green and blue light. An automated self-calibration process ensures accurate colour definition with each image.



HIGH QUALITY CAMERA

ProtoCOL 3 uses a sensitive camera, allowing you to easily detect colonies as small as 43µm and measure zones to 0.5mm. **ProtoCOL 3** comes with two camera options - 1.4 megapixel or a 5 megapixel camera (**ProtoCOL 3 HD**).



VERSATILE PLATFORM

The sample platform has interchangeable backgrounds when you need to use bright-field or dark-field exposures and can be adjusted to read circular plates (from 55mm - 150mm) and square plates (up to 120mm x 120mm). For plates larger than 150mm, please contact Synbiosis for further information on the custom solutions we offer.



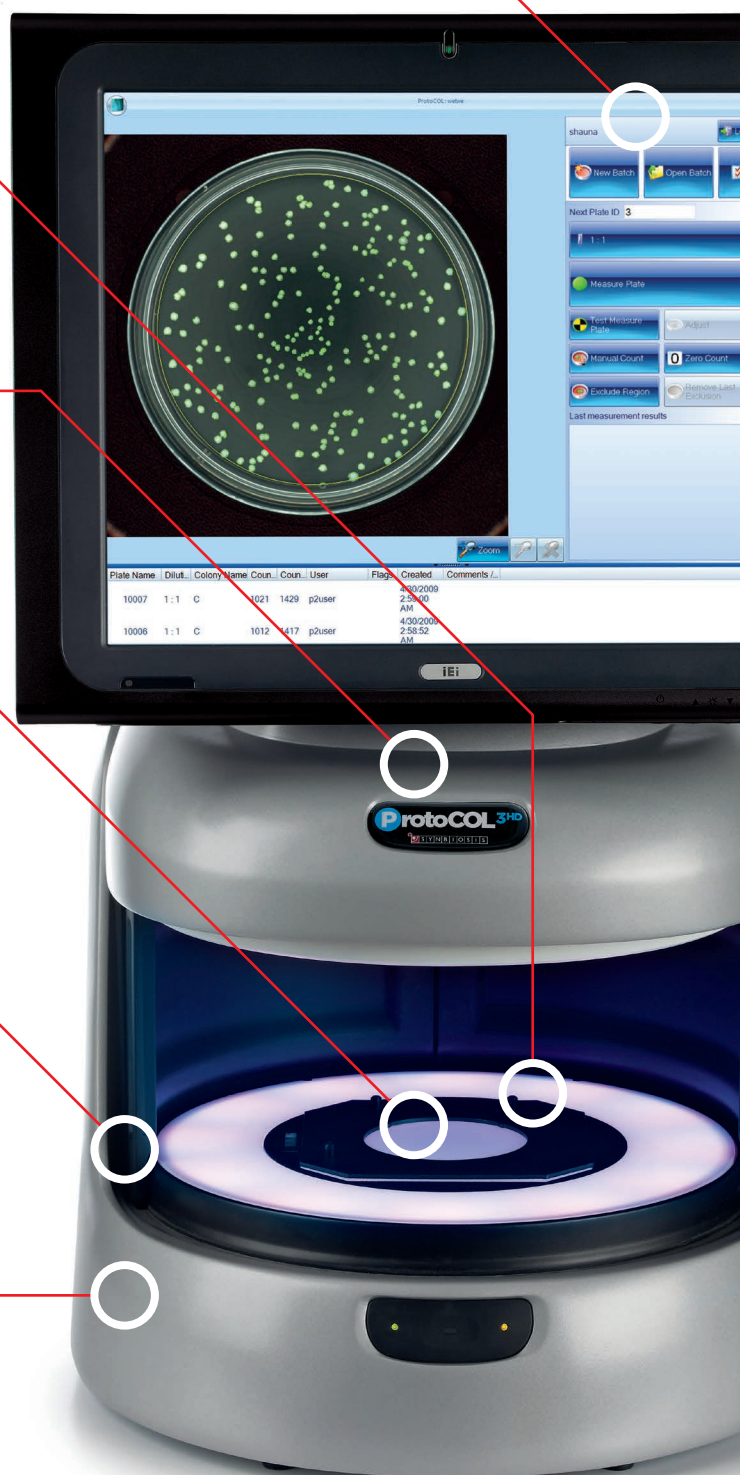
ERGONOMIC DESIGN

The lightweight and compact **ProtoCOL 3** cabinet features two sliding doors to prevent excessive ambient light. The system comes with the option of a mounted touchscreen PC (**ProtoCOL 3 Plus**) which is ideal if you need to save space in your laboratory.



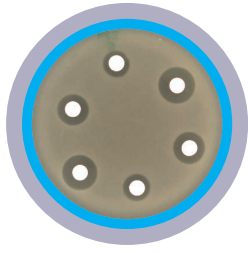
HIGH THROUGHPUT

ProtoCOL 3 is perfect for high throughput applications, where you need to count colonies or measure zones rapidly and accurately. You can read, at the touch of a button, up to 75 plates in 5 minutes with results and images being instantly saved.



PROTOCOL 3 APPLICATION MODULES

At the heart of every **ProtoCOL 3** is versatile software, which includes Pour Plate and Inhibition Zone Measurement modules as standard. To cost-effectively customise your system to your laboratory's needs you can add a range of other modules.



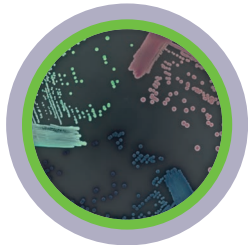
STANDARD MODULES POUR PLATES

You can count colonies on pour, settle and spread plates for applications including microbial limit testing, total viable counts and pour plate dilution series. You can also count colonies on membranes such as bioburden testing.



● INHIBITION ZONE MEASUREMENT

You can measure the diameter of inhibition zones for applications including Single Radial Immunodiffusion (SRD) plates. This module can be combined with UNISTAT to determine vaccine potency.

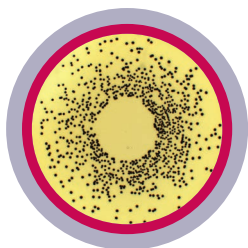


OPTIONAL MODULES ANTIBIOTIC SUSCEPTIBILITY TESTING (eAST)

You can measure zones on antibiotic susceptibility testing (AST) plates and then compare your results to data in the eAST software containing breakpoint values from EUCAST or CLSI databases to automatically determine sensitivity or resistance.

● MINIMUM INHIBITION CONCENTRATION (MIC)

This allows you to read zones around MIC strips on agar plates to automatically determine your antibiotic's MIC breakpoint value.

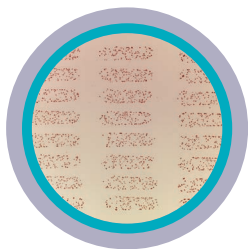


● CHROMOGENIC ID

This allows you to automatically identify microbes on chromogenic agar from many of the major media suppliers.

AMES TESTING

To determine the mutagenic activity of different chemicals, you can count colonies and automatically compare plate results.



● SPIRAL PLATE

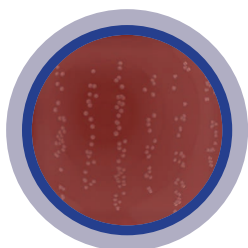
You can read spiral plates generated from all major spiral plater manufacturers, to generate CFU/ml results automatically.

● OPSONOPHAGOCYtic KILLING ASSAY (OPKA)

You can count colonies on OPK assay plates to automatically assess the potency of a range of viral vaccines.

● SERUM BACTERICIDAL ASSAY (SBA)

To determine the efficacy of specific bacterial vaccines you can count colonies on SBA plates.



MULTI-SECTOR

You can count colonies on plates which are divided into different sections, making this module ideal for use with air monitoring plates.

MULTI-WELL

This enables you to count colonies within individual wells of multi-well plates.



SPECIFICATION



SYSTEM SPECIFICATIONS	PROTOCOL 3	PROTOCOL 3 PLUS
Design	Light-weight, ergonomic system with sliding doors	
Camera	Integrated camera. Options - 1.4 megapixel CCD with f1.2 lens (ProtoCOL 3) or 5 megapixel CMOS with f1.5 lens (ProtoCOL 3 HD)	
PC options (ProtoCOL 3 Plus)	Integrated PC with i3 (Skylake) 2.7GHz processor 4GB Ram 500GB hard drive 17" touchscreen monitor (mounted or standalone)	
W x H x D (cm)	45 x 50 x 40	70 x 50 x 40
Weight (kg)	20	30
Power input (V)	100 - 240	
Validation documentation	IQ/OQ/PQ Application specific validation plates	
ACCESSORIES		
ProcScan	External scanner for reading plates up to 300mm x 300mm	
Barcode reader	1D barcode reader	
Plate holders	Customisable plate holders	

Many of the major pharmaceutical and biotechnology companies use **ProtoCOL 3** systems for their microbiology needs. If you'd like to find out why, please contact us or one of our distributors for more information and a demonstration.

Please refer to www.synbiosis.com for all ordering information

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