

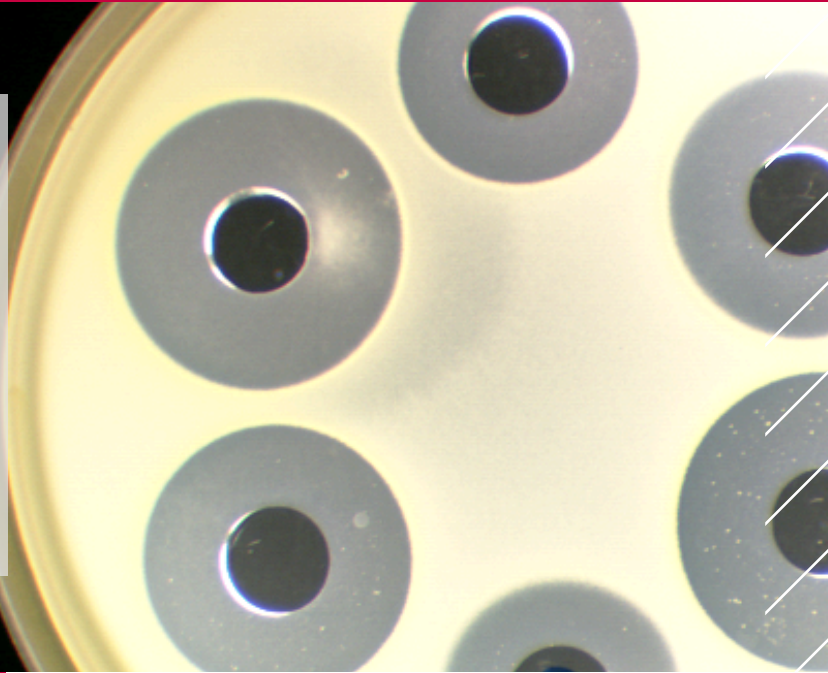
# PROTOCOL 3 HDE



PRECISE AND RELIABLE  
AUTOMATED ZONE MEASUREMENT  
SYSTEM SUITABLE FOR ALL YOUR  
MICROBIOLOGY APPLICATIONS

# Key Features

## PROTOCOL 3 HDE – THE MOST ACCURATE ZONE MEASUREMENT SYSTEM YET FROM SYNBIOSIS



Model	PROTOCOL 3 HDE
Design	Light-weight, ergonomic system with sliding doors and embedded PC
Camera	Integrated Camera: 5 megapixel
PC Specifications	<p>Operating System: Windows 10 Professional + Windows 11 license</p> <p>Processor: 12th Generation Intel Core i5-12500T (6 Cores/18MB/12T/2.0GHz to 4.4GHz/35W)</p> <p>Ram: 8 GB DDR 4</p> <p>Storage: M.2 2230 256GB PCIe NVMe Class 35 SSD</p>
Dimensions (WxHxD) cm	40x70x50
Weight (kg)	30
Power Input (V)	100 - 240
Validation Documents	<p>IQ/OQ/PQ</p> <p>Application specific validation plates</p>

### Accurate

The ProtoCOL 3 HDE is the latest addition to the ProtoCOL family aimed at providing the most accurate zone measurement ability so far. The new set up of the system can reliably measure zones to within +/-0.2mm, which can be paired with our eAST software for referencing EUCAST and CLSI databases for trustworthy antibiotic susceptibility testing results. It can also be paired with our third-party statistics package UNISTAT for immediate interpretation of your data.

### Flexible

ProtoCOL 3 HDE 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.

### Quick

At the press of a button, you can automatically read and analyse your 90mm plates in a matter of seconds, whether that be zone measurements, colony counting, or any other application.

### Traceable

ProtoCOL 3 HDE is suitable for any highly regulated microbiology laboratory. The device is compliant for use in a 21 CFR Part 11 environment with three customisable user tier levels. Results, manual edits, permission changes, log ins, and much more are all tracked and available to be displayed in audit trail reports.

# System Features

## Integrated Software

The ProtoCOL 3HDE comes with simple, user-friendly software that can be customised to suit the needs of your application. The data you generate is 21 CFR Part 11 compliant with detailed audit trails which can be easily exported into .CSV, Excel, PDF or transferred directly to your LIMS.

## High-Quality Camera

Our newly developed camera set-up utilises a 5-megapixel HD camera and specialised lens to maximise image quality, measuring zones to  $\pm 0.2\text{mm}$  and detecting colonies as small as  $35\mu\text{m}$ .

## Unique Lighting

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

## Versatile Platform

The sample platform has interchangeable backgrounds for using bright-field or dark-field exposures. The ProtoCOL 3 HDE can measure any plate up to 90mm circular dishes or 100x100 square dishes. Custom-designed plate holders are also available for any dish.

## Flexible Applications

While designed for increased zone accuracy, the ProtoCOL 3 HDE can still perform colony counts, spiral plates, chromogenic ID, and all other applications associated with the standard ProtoCOL 3. Thus, it caters to all of your microbiology needs within one device.

## High Throughput

The ProtoCOL 3HDE is perfect for high-throughput applications where you need to count colonies or measure zones rapidly and accurately. At the touch of a button, you can read up to 75 plates in 5 minutes, and results and images are instantly saved to your chosen location.





# Application Modules

At the heart of every ProtoCOL 3 is a 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

### Inhibition Zone Measurement

You can measure the diameter of inhibition zones for applications, including Single Radial Immunodiffusion (SRID) plates and combine them with UNISTAT to determine vaccine potency.

### Pour Plates

Counting colonies on pour, settle and spread plates. This method is 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.



## Optional Modules

### Antibiotic Susceptibility Testing

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

### Spiral Plate

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

### Minimum Inhibition Concentration

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

### Serum Bactericidal Assay

You can count colonies on SBA plates to determine the efficacy of specific bacterial vaccines.

### Chromogenic ID

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

### Multiwell

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

### AMES Testing

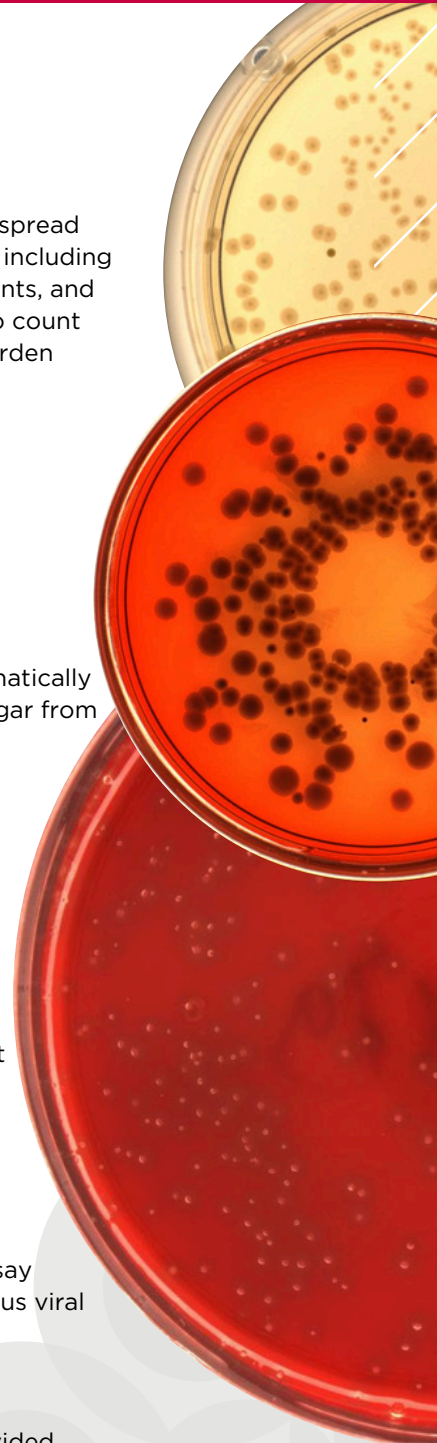
To determine the mutagenic activity of different chemicals, you can count colonies and automatically compare plate results.

### Opsonophagocytic Killing Assay

You can count colonies on OPKA assay plates to assess the potency of various viral vaccines automatically.

### Multi-Sector

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



# Providing innovative imaging and analysis systems for the microbiological process



## About Synbiosis

Synbiosis is part of the Synoptics family, with over 35 years of experience designing and producing scientific instruments based on digital imaging technology.

At Synbiosis, we are passionate about making colony counting and zone analysis easier. That's why we have developed products specifically designed to automate colony counting and inhibition zone measurement to save you time and manpower involved with these repetitive manual tasks.

Our unique, ground-breaking technologies and practical experience have been applied to various companies' needs, from pharma to microbiology. We want to partner with companies requiring unique versions of our existing products or completely new designs. If you have a challenge for us, book a demo!



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