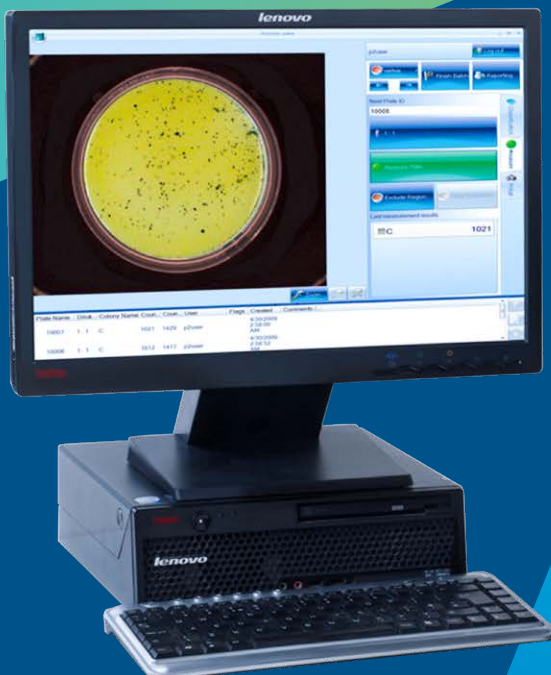# VWR®
Colony counters

01. FOR ALL MICROBIOLOGY APPLICATIONS

02. MANUAL TO HIGHLY ACCURATE AUTOMATED COLONY COUNTING

03. ZONE MEASUREMENT WITH FULL TRACEABILITY

VWR® automatic colony counters, making colony counting easy and accurate

Counting colonies manually is time consuming and human error is understandable.

Our new range of automatic colony counters includes units from low cost for rapid count of pour, spread and spiral plates, up to high-end, extended applications and IQ/OQ. With the HR model the highest resolution is offered.

If you only need to check your colonies a few times a week, and automation is not needed, we offer you an easy, low cost manual colony counter.

If you want to start your first adventure with automatic devices, we have the perfect solution for you – Auto *lite* model.

AUTOMATIC COLONY COUNTER - PREMIUM RANGE

FLEXIBLE
For automatic colony counting (two different counting options, contrast analysis or counting colonies of different colour, size or shape).

ACCURATE
Featuring three-colour lighting for unrivalled illumination, and a high resolution camera that captures high quality colour images, detecting colonies as small as 75 µm (Premium 90HR) and measuring zones to 0,5 mm with an accuracy of more than 99,9%. The instrument captures 1.4 MP images per colour channel and then combines these to maintain the full resolution and true colour representation of samples.

FAST
At the press of a button, you can automatically read plates of up to 150 mm diameter with Premium 150 and up to 90 mm with Premium 90HR.

TRACEABLE
With 1-D 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 Premium suitable for any highly regulated microbiology laboratory.

Standard applications included

– **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

– **Spiral plate:** You can read spiral plates generated from all major spiral plater manufacturers, to generate CFU/ml results automatically

– **Ames testing:** To determine the mutagenic activity of different chemicals, you can count colonies and automatically compare plate results

– **Multi-sector:** You can count colonies on plates which are divided into different sections, making this module ideal for use with air monitoring plates

Optional modules (factory installed on request)

– **Antibiotic susceptibility testing:** You can measure zones on Antibiotic Susceptibility Testing (AST) plates and then compare your results to data in the software containing break point 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 break point value

– **Chromogenic ID:** This allows you to automatically identify microbes on chromogenic agar from many of the major media suppliers

– **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

– **Multiwell:** This enables you to count colonies within individual wells of multiwell plates. (only with Premium 150)

PREMIUM 150

Premium 150 colony counter and zone measurements system - plates of up to 150 mm in diameter can be automatically read at the press of a button. Designed for use across a wide range of applications.

– Detect colonies as small as 100 μm and measure zones accurately to 0,5 mm

– A unique 3-channel LED lighting system configured for exceptional illumination of all sample types

– High definition colour images taken with a 1,4 MP scientific grade CCD camera ensure that even the smallest colony can be seen and counted, while zone measurements are fast, accurate and reproducible

– Can be used with a new or existing stand-alone desktop or laptop computers via USB connection – no additional PCI cards are required

The Premium 150 includes colony counting and inhibition zone measuring ability, spiral plate counting, Ames testing and multi-sector measurements. Other applications on demand. Results can be automatically transferred to Excel, PDF or a LIMS system. All data generated is GLP/GMP/21 CFR Part 11 compliant with a full audit trail and can be used to produce professional reports. Each system comes complete with two validation plates.

PC is not included.

PREMIUM 90 HR

Premium 90 HR colony counter and zone measurements system – equipped with high resolution lens - plates of up to 90 mm diameter can be automatically read at the press of a button. Suitable for a wide range of applications in a pharma environment. The high resolution system produces a 1,4 MP image on 90 mm plates.

– Detect colonies as small as 75 μm and measure zones accurately to 0,5 mm

– A unique 3-channel LED lighting system configured for exceptional illumination of all sample types

– High definition, colour images, taken with a 1,4 MP scientific grade CCD camera with a 12 mm F1.4 lens, ensures that even the smallest colony can be seen and counted, while zone measurements are fast, accurate and reproducible

– Can be used with a new or existing stand-alone desktop or laptop computer via USB connection – no additional PCI cards are required

The Premium 90 HR includes colony counting and inhibition zone measuring ability, spiral plate counting, Ames testing and multi-sector measurements. Other applications on demand. Results can be automatically transferred to Excel, PDF or a LIMS system. All data generated is GLP/GMP/21 CFR Part 11 compliant with a full audit trail and can be used to produce professional reports. Each system comes complete with two validation plates.

PC is not included.

Description	Cat.No.
Automatic colony counter Premium 150	**710-2073**

Description	Cat.No.
Automatic colony counter Premium 90 HR	**710-2074**

	Premium 150	Premium 90HR
Design	Ergonomic housing constructed from high density foam	
	Integral CCD camera and lens	
Light Shield	2 sliding doors to prevent excessive ambient light	
Camera	Integrated, sensitive 1.4 MP	
Optics	6 mm F1.2 lens	12 mm F1.4 lens
Resolution	For standard 150 mm Petri dishes, smallest detectable colony is 100 μm	For standard 90 mm Petri dish, smallest detectable colony is 75 μm
Imaging	3-channel capture for colour images	
Lighting	Unique 3-channel (red, green, blue) LED lighting	
	Multi-array LED lighting (computer controlled)	
	Lower lighting with upper reflective lighting for all applications	
Count modes	Separation of touching colonies, exclusion areas, colour mode, shape mode, size mode	
Software	Windows 7/10 compatible	
Database	SQL database stores all data and image locations	
WxDxH	400x500x450 mm	
Weight	20 kg	

AUTOMATIC COLONY COUNTERS - AUTO *lite*

ENTRY LEVEL
Auto *lite* is a low cost entry into electronic colony counting, pour and spiral. Results and plate images are saved to a PC enabling traceability, consistency and report generation in Excel.

FAST
With the Auto *lite*, plates can be counted in under 1 second.

IMAGE DISPLAY
Unlike any manual system the Auto *lite* displays the image on your computer screen with counted colonies clearly marked. The zoom function allows the user to closely view plates, confirming accurate counting.

SENSITIVE
An integral CCD colour camera can be adjusted to increase the sensitivity of the detection, enabling colonies as small as 0,1 mm to be imaged and counted.

FLEXIBLE
With switchable LED lighting from upper to lower, both light and dark media can be counted in best conditions.

AUTO *lite*
Auto *lite* is the latest affordable, automated colony counting device. The Auto *lite* is available in one configuration and features simple to use software that greatly improves efficiency, reliability and productivity. The Auto *lite* software uses a powerful algorithm for colony counting on pour and spiral plates. A colony separator automatically splits touching colonies to further improve the accuracy of the counting process.

Plates are automatically counted with results directly transferred to PDF, Excel or Open office. The Auto *lite* accepts plates up to 90 mm in diameter. Lighting is provided by LEDs mounted above and below the sample area for both transmitted and epi illumination. A detachable screen can be used to eliminate strong ambient light if required. Auto *lite* can be used with any conforming laptop or desktop PC and connects simply by using a USB port.

Data is stored in a SQL Server Express database automatically saving data in a secure manner.

Description	Cat.No.
Automatic colony counter Auto *lite*	**710-2072**

	Auto *lite*
Design	Ergonomic housing constructed from high density foam
	Integral CCD camera and lens
Light Shield	2 magnetic curtains to prevent excessive ambient light
Camera	Integrated, sensitive 1 MP
Optics	White LED
Resolution	For standard 90 mm Petri dish, smallest detectable colony is 100 - 120 μm
Imaging	High quality colour images
Lighting	Multi-array LED lighting (computer controlled)
	Lower lighting with upper reflective lighting for all applications
Count modes	Separation of touching colonies, exclusion areas
Software	Windows 7/10 compatible
Database	SQL database stores all data and image locations
WxDxH	260x260x260 mm
Weight	3,3 kg

MANUAL COLONY COUNTER - STC 100

The STC 100 is designed for the rapid and accurate counting of bacterial colonies.

– Multifunctional graphic display shows the number of colonies, average, time and date

– Audible and visible confirmation of each count

– Values can be saved on a memory card (optional)

There is a choice between single mode (count on one Petri dish) and multiple mode (count up to 20 dishes, and the average continuously calculated and displayed). The instrument has a pressure-sensitive dish holder so it can be used with any kind of marker pen or probe. An optional external counting marker can also be connected. With the communication package, count values can be stored with date and time. Additionally, there is the possibility to add sample IDs or barcodes (optional reader) to the count value.

Delivery information: Supplied with a black background plate, magnifying glass, standard marker, Wolffhügel grid, adapter for 90 mm Petri dishes and cable with universal plug.

COUNTER-PEN

Counter-Pen is a combination marker and digital counter designed for the lab and plant. Each time a black mark is made with the felt-tipped pen, it automatically beeps, and the LCD displays the counts.

– Touch, sound, and count occur simultaneously

– Audio/visual counts to 99999 with reset button

– On/off switch

Used to count cell growth on Petri dishes, inventory parts, and tally samples received. With pen cap. Impossible to make an error, even when interrupted marks hold your place and counter holds your total.

Description	Cat.No.
Manual colony counter	710-0710

Manual colony counter - STC 100	
Count	0 to 999
Dish size	90 mm
Illumination	LED
W×D×H	260×330×110 mm

Description	Cat.No.
Counter-Pen	710-0858

PC AND MONITOR REQUIREMENTS FOR AUTOMATIC COLONY COUNTERS

MONITOR AND DISPLAY SETTINGS
– **Display resolution:** Minimum: 1280x1024
  Recommended: 1280x1024

– **Operating system:** The following operating systems are supported in both the 32- and 64-bit versions:
  - Windows 7 Professional (recommended)
  - Other Windows 7, 8.1 and 10 operating systems can be used

HARDWARE
– **Processor:**
  - Minimum: Intel Core i3 6100 TE (or better)
  - Minimum number of processor cores: 2

MEMORY:
– **Recommended for 32-bit operating systems:**
  4 GB RAM or more

– **Recommended for 64-bit operating systems:**
  4 GB RAM or more

GRAPHICS CHIP
– Intel HD graphics 530 (or better)

WINDOWS EXPERIENCE INDEX
– Windows Experience Index of at least 3.0 in the 'Graphics' category

DISC REQUIREMENTS:
– HDD (hard disc drive) or SSD (solid state drive) with 2 GB or more free space

– Disc of at least 500 GB total capacity recommended

CONNECTIVITY
– One high speed USB 2.0 port for connecting to the VWR colony counters system

PRODUCT OVERVIEW

AUTOMATIC COLONY COUNTERS

Description	Cat.No.
Auto *lite* automatic colony counter	710-2072
Premium 150 automatic colony counter	710-2073
Premium 90 HR automatic colony counter	710-2074
Validation kit for ACC Auto *lite*	710-2075
Custom plate holder for ACC	On request

PC is not included in the standard delivery.

MANUAL COLONY COUNTER

Description	Cat.No.
Manual colony counter	710-0710
Adapter for Petri dishes Ø 80 mm	710-0724
Adapter for Petri dishes Ø 90 mm	710-0721
Adapter set for Petri dishes Ø 50 / 60 / 80 / 90 mm	710-0725
External marker with waterproof pen and cable	710-0717
Fuse	710-0720
Magnifier glass, 2×	710-0713
Memory SD card	710-0719
Waterproof pen	710-0716
Wolffhügel grid	710-0718

COUNTER-PEN

Description	Cat.No.
Pen	710-0858
Ink cartridge	710-0859

INSTALLATION AND AFTER SALES SERVICE

Contact our local technical sales support for IQ/OQ, installation or services.

vwr.com/services

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to create a better world

avantor™
delivered by **vwr™**

AUSTRIA
VWR International GmbH
Graumanngasse 7
1150 Wien
Tel.: +43 1 97 002 0
info.at@vwr.com

BELGIUM
VWR International bv
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 (0) 16 385 011
vwr.be@vwr.com

CZECH REPUBLIC
VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67 Stříbrná Skalice
Tel.: +420 321 570 321
info.cz@vwr.com

DENMARK
VWR International A/S
Tobaksvejen 21
2860 Søborg
Tel.: +45 43 86 87 88
info.dk@vwr.com

FINLAND
VWR International Oy
Valimotie 9
00380 Helsinki
Tel.: +358 (0) 9 80 45 51
info.fi@vwr.com

FRANCE
VWR International S.A.S.
Le Périgares – Bâtiment B
201, rue Carnot
94126 Fontenay-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00 (international)
info.fr@vwr.com
* 0,18 € TTC/min + prix appel

GERMANY
VWR International GmbH
Hilpertstraße 20a
D - 64295 Darmstadt
Tel.: 0800 702 00 07* (national)
Tel.: +49 (0) 6151 3972 0 (international)
info.de@vwr.com
*Freecall

HUNGARY
VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 52 521130
info.hu@vwr.com

IRELAND
VWR International Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 (0) 1 88 22 222
sales.ie@vwr.com

ITALY
VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02 3320311
info.it@vwr.com

THE NETHERLANDS
VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 (0) 20 4808 400
info.nl@vwr.com

NORWAY
VWR International AS
Brynsalleen 4,
0667 Oslo
Tel.: +47 22 90 00 00
info.no@vwr.com

POLAND
VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 58 32 38 200
info.pl@vwr.com

PORTUGAL
VWR International - Material de
Laboratório, Lda
Centro Empresarial de Alfragide
Rua da Indústria, n° 6
2610-088 Amadora
Tel.: +351 21 3600 770
info.pt@vwr.com

SPAIN
VWR International Eurolab S.L.U.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
info.es@vwr.com

SWEDEN
VWR International AB
Fagerstagatan 18a
163 94 Stockholm
Tel.: +46 (0) 8 621 34 00
kundservice.se@vwr.com

SWITZERLAND
VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 (0) 44 745 13 13
info.ch@vwr.com

UK
VWR International Ltd
Customer Service Centre
Hunter Boulevard - Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
uksales@vwr.com

CHINA
VWR (Shanghai) Co., Ltd
Bld.No.1, No.3728 Jinke Rd,
Pudong New District
Shanghai, 201203- China
Tel.: 400 821 8006
info_china@vwr.com

ÍNDIA
Avantor Performance Materials India
Limited
17th Floor, Building No. 5, Tower C
DLF Cyber City Phase – III
Gurgaon - 122002, Haryana
Tel.: +91-1244-65-6700
help@avantorinc.com

KOREA
VWR International ~
17, Daehak 4-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do
Tel.: +82 31 645 7256
saleskorea@avantorsciences.com

MIDDLE EAST & AFRICA
VWR International FZ-LLC
Office 203, DSP Lab Complex,
Dubai Science Park,
Dubai, United Arab Emirates
Tel: +971 4 5573271
Info.mea@vwr.com

SINGAPORE
VWR Singapore Pte Ltd
18 Gul Drive
Singapore 629468
Tel: +65 6505 0760
sales.sg@vwr.com

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