

easySpiral[®]

Automatic diluter & platers



3 dilutions on only 1 Petri dish!

interscience



1979

Spiral® DS



1996

Spiral® DS+



2010

easySpiral®
easySpiral Pro®



2012

easySpiral Dilute®



2020

easySpiral Pro® Milk

45 years of **Spiral®** method experience

- 1973** The Spiral® method is invented by Dr. Ed Campbell, researcher at the FDA (Food and Drug Administration) in Cincinnati, USA.
- 1992** Dr Ed. Campbell and his friend François Jalenques, founder of **interscience**, patent together an updated version of the Spiral® method in France.
- 2010** **interscience** introduces the **easySpiral®** and **easySpiral Pro®** with a brand-new architecture: they are faster, simpler and cheaper than the competition.
- 2012** Launching of **easySpiral Dilute®** is the 1st automatic diluter and plater: quickly becomes our best-selling Spiral® plater **interscience**.
- 2019** The introduction of the **easySpiral Pro® Milk** expands the widest range on the market.

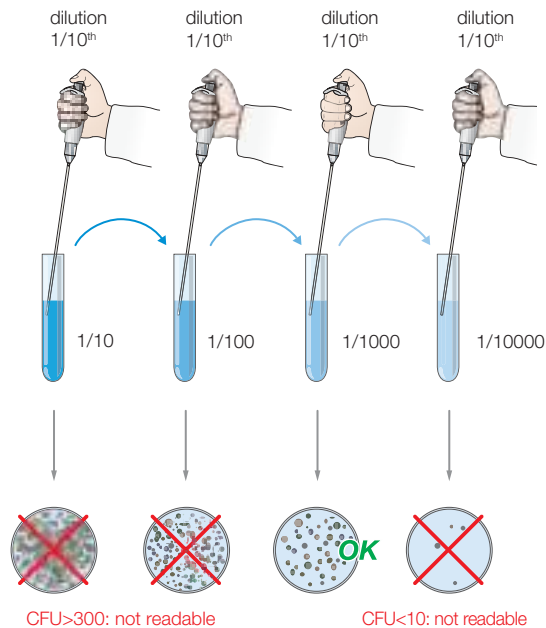
Since 45 years, **interscience's** automatic Spiral® platers have been a reference for food, medical, public institutes research, cosmetics, pharma and probiotics labs throughout the world. ISO 7218, ISO 4833-2, FDA-BAM and AOAC 977.27 standards recommends the use of Spiral® platers for bacterial analysis.

What is Spiral[®] method?

With easySpiral[®] automatic platers, increase your lab capacity with a **counting range from 100 to 1x10⁷ CFU/mL on 1 single Petri dish** without prior dilution.

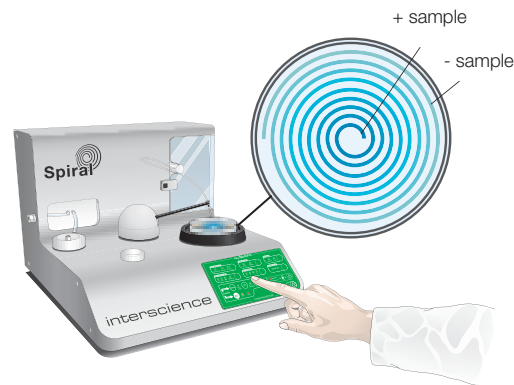
Manual plating method

This method requires repetitive actions: at least 4 dilutions and 4 successive platings are necessary to obtain one good and readable Petri dish.



Automatic Spiral[®] method

With this method, make your analyses on **1 single Petri dish!**



- From **100 to 1x10⁷ CFU/mL** on 1 single Petri dish
- Up to **75% less consumables**
- Full plating cycle in **25 seconds!**

How to count?

The sample is deposited on the surface of a rotating Petri dish by a precise measuring microsyringe, according to a **logarithmically decreasing Archimedes spiral** from the center of the dish to its periphery. The volume is calibrated and known at every point of the Petri dish. Bacterial concentration is determined by dividing the number of colonies found by the volume dispensed in the same sector of the dish, either manually, or by using an automatic colony counter.

Manual colony counting

Scan[®] 100 with Spiral[®] counting grid



Automatic colony counting

Scan[®] 300 | 500 | 1200 | 4000



Real-time incubation and colony counting

ScanStation[®] 100 | 200 | 300



Key features

Compact

40 cm wide, can be used inside and outside a laminar flow

Stainless steel housing

Automatic disinfection

Overflow technology cleaning system

No cross contamination

PATENTED

Easy serial dilutions*

Choose your dilution factor

Do 10^{-5} dilution or more automatically

No more 9 mL tube preparation

PATENTED

One-touch plating

Intuitive control panel

Choose from 4 plating modes*

Plate on Ø 55, 90 and 150 mm*

Petri dishes

USB programmable volume & traceability*

Easy PC connectivity via USB

From 10 to 1000 microliters programmable volumes

3 preset plating modes

Monitoring software with traceability

COMPLIANT WITH



* Depending on model (see technical specifications p11)



Direct sampling from a tube on easySpiral Pro® Milk*

Ideal for raw materials and the milk payment

Direct intake from the holder/pill container



High precision

Glass syringe typical accuracy of 0.5%
No more pipet calibration

Cleaning autonomy

2 fully autoclavable bottles
and CPC connectors
Alarm when bottle is empty

High speed automation

Fast rotating arm
Plating cycle: 25 s
1 disinfection, 5 dilutions
and 1 plating in 134 s*

PATENTED



easySpiral®

easySpiral Pro®

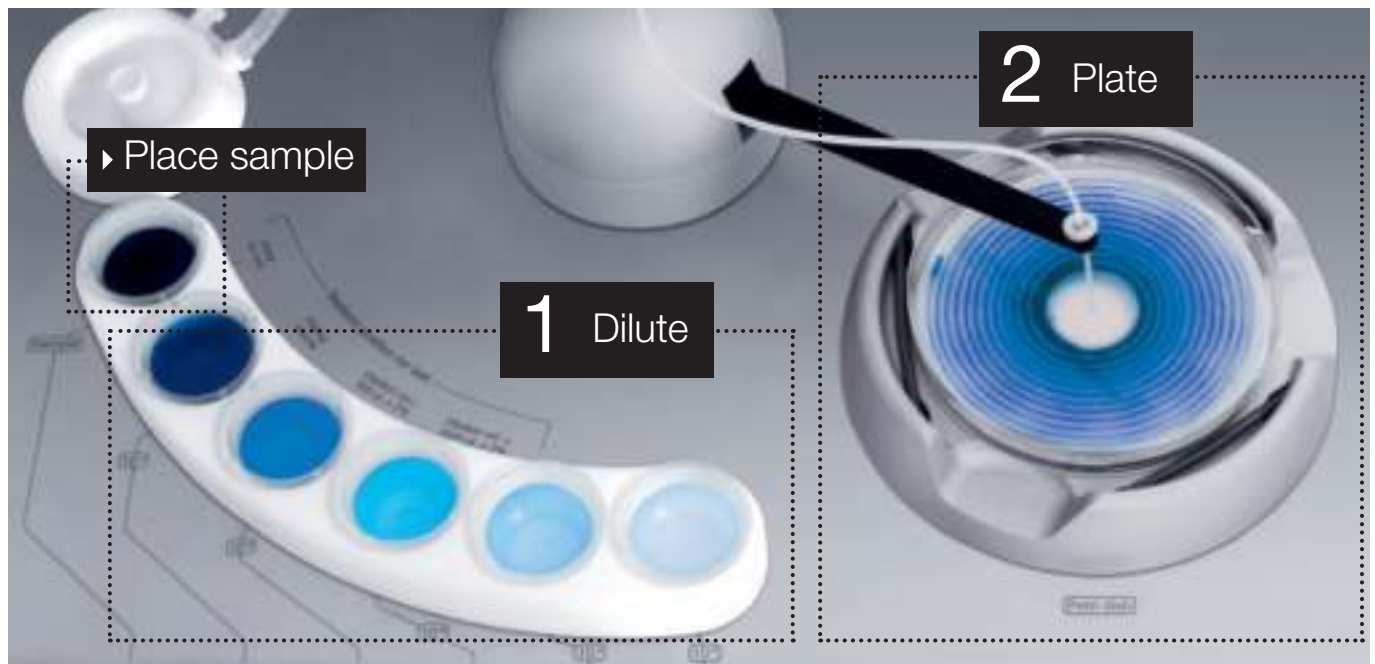
easySpiral Pro® Milk

easySpiral Dilute®

Full plating cycle in 25 s	✓	✓	✓	✓
Controlled by microprocessor	✓	✓	✓	✓
Overflow stylus disinfection system (patented)	✓	✓	✓	✓
Programmable dispensed volume via USB	-	✓	✓	✓
Traceability	-	✓	✓	✓
Compatible with dataLink™	-	✓	✓	✓
Sampling from a tube	-	-	✓	-
Dilution mode (patented)	-	-	-	✓
Counting range up to 1x10 ¹² CFU/mL	-	-	-	✓
Sample mixing before dilution/plating	-	-	-	✓

easySpiral Dilute®

World 1st and only automatic diluter & plater



easySpiral Dilute® is a **2-in-1 automatic diluter and plater**, which allows you to do **5 x 1/10th serial dilutions**. It will then automatically plate on 1 single Petri dish, with a countable range from **30 to 1 x 10¹² countable CFU/mL**.

No more manual dilutions and plating is automatic!

► Place your sample in the beaker

1 The easySpiral Dilute® will automatically dilute the sample up to 5 times

2 The easySpiral Dilute® will automatically plate the sample on a Petri dish from 30 to 1x10¹² countable CFU/mL

Questions

Which diluents can I use?

easySpiral Dilute® works with saline solutions (e.g.: Ringer's solution, physiological saline).

Avoid connecting diluents with nutrients to the easySpiral Dilute® as they may cause contaminations. Bacteria only remain a few seconds in the beakers before being deposited on the Petri dish so using a saline diluent has no effect on the final enumeration.

It is however possible to use nutrient solutions as diluent in the semi-automatic "My Diluent" mode. In that case, fill in the beakers with 4.5 mL diluent before processing.

I need to make a 10⁻⁷ dilution. How can I do it?

The easySpiral Dilute® can do as many dilutions as you wish.

Proceed with a 10⁻⁵ dilution, take the last beaker and place it as the mother sample and then proceed with a new automatic dilution sequence...

The accuracy of the volumes plated, intaken or distributed by the easySpiral Dilute® is high: 2% error. How can I check it?

It is easy and automatic.

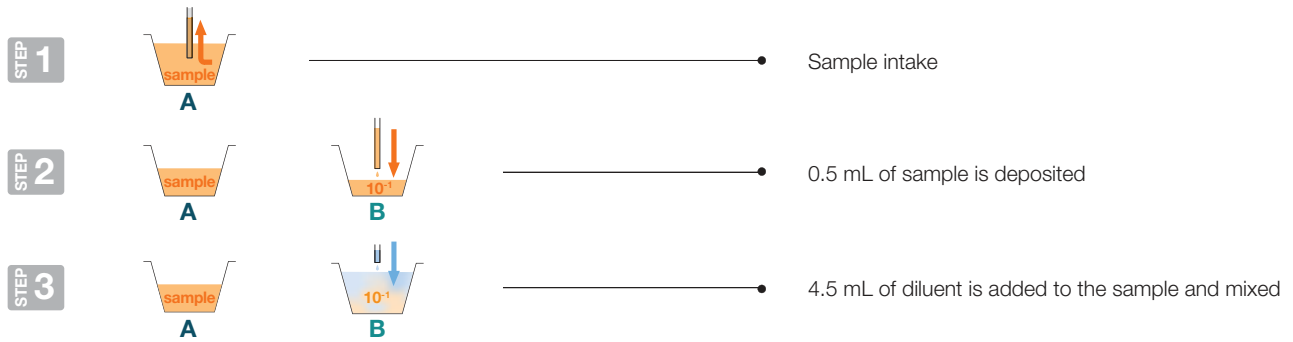
Test of the deposited volume during plating:

Press on the plating volume test button. This function will fill a previously weighed beaker with 500 µL. Weigh the distributed volume to check the results.

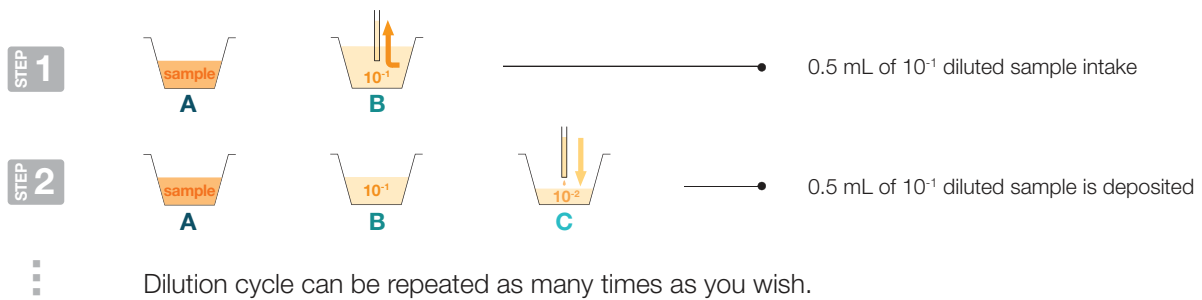
Test of the volume of the dilutions:

Press on the dilution volumes test button. This function will fill 2 previously weighed beakers: one with 0.5 mL and the 2nd one with 4.5 mL. Weigh the distributed volumes to check the results.

How does it work?



The above dilution cycle is repeated for the next serial dilution.



Why use an automatic diluter & plater?

easySpiral Dilute® allows you to **save 50 % on consumables and 50 % on your time.**

Comparison between manual and automatic method below.

Example of 50 samples: Dilution: 10^{-7}
Plating: 10^{-5} , 10^{-6} and 10^{-7}

Manual method	–	+	Automatic method
CONSUMABLES Dilution • 400 tubes • 350 pipet tips Plating • 450 Petri dishes TIME 10h10			CONSUMABLES Dilution • 350 beakers Plating • 150 Petri dishes TIME 5h50

Plating modes

Exponential mode

Decreasing surface concentration

50 µL, 100 µL, 200 µL and USB programmable

Counting on Petri dish from 30 to 1×10^{12} CFU/mL

Constant⁽¹⁾ mode

Homogeneous surface deposition

50 µL, 100 µL, 200 µL and USB programmable

Easy colony counting:
No colonies on the edge of the Petri dish

Circle mode

3 or 6 dilutions on 1 Petri dish

10 µL inner circle, 16 µL middle circle and 25 µL outer circle

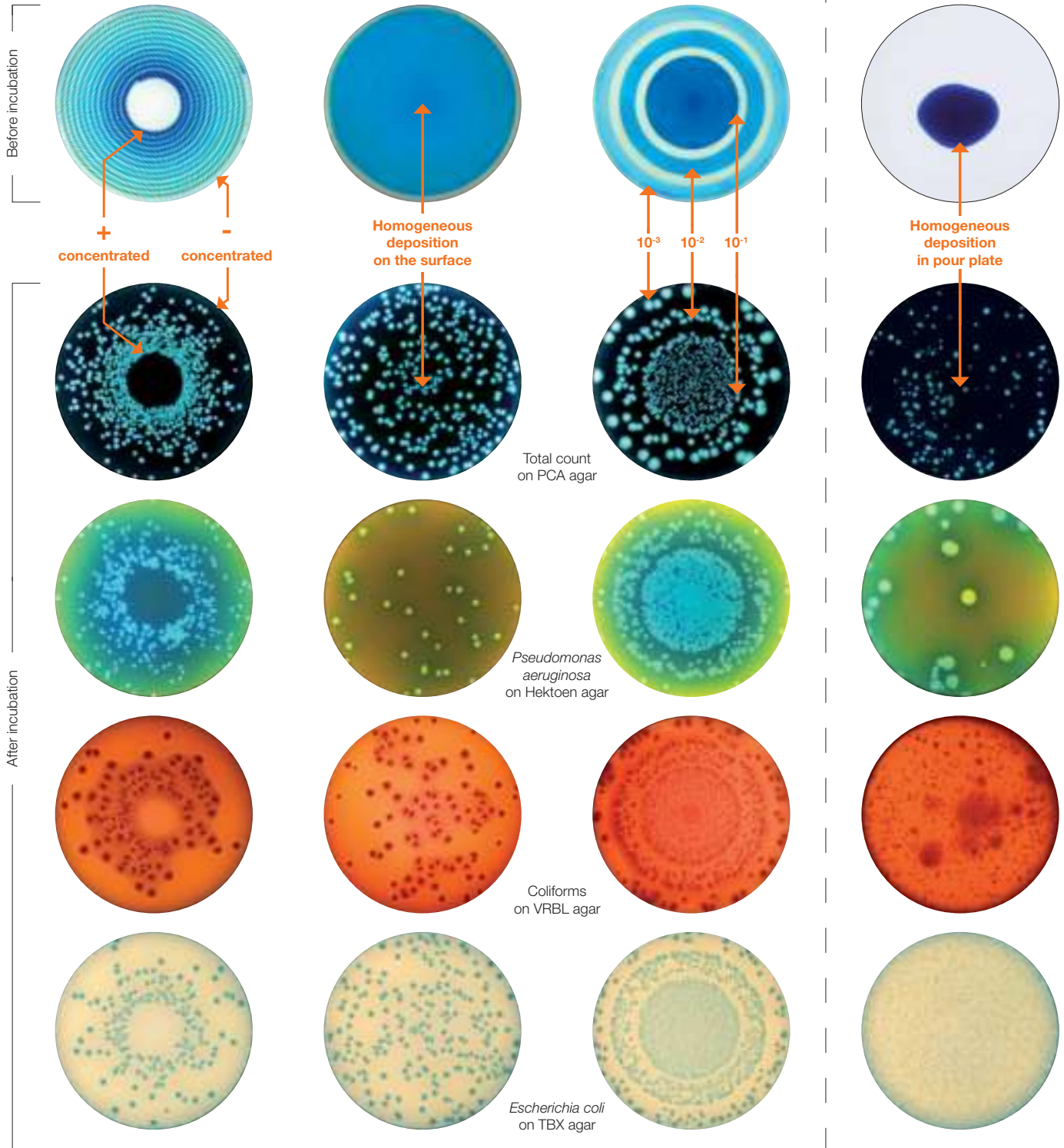
Savings on Petri dishes

Pour⁽¹⁾ mode

Homogeneous deposition in a plate without agar⁽³⁾

50 µL, 100 µL, 200 µL and USB programmable

Easy colony counting for invasive colonies.
Pharmacopoeia compliant



⁽¹⁾ Depending on model (see technical specifications p11) ⁽³⁾ In pour mode, easySpiral Dilute® deposits one sample drop at the bottom of an empty Petri dish. Then, the user adds the molten agar on top and homogenizes it with the sample.

Choose your automatic plater



easySpiral®

Counting range from:
300 to 1.3×10^5 CFU/mL

easySpiral Pro® & easySpiral Pro® Milk




Counting range from:
100 to 1×10^7 CFU/mL

easySpiral Dilute®

Counting range from:
30 to 1×10^{12} CFU/mL

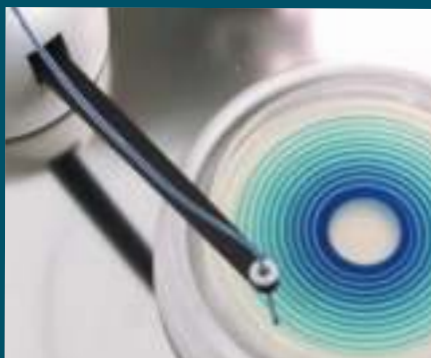
Top features	Overflow stylus disinfection system (patented)	✓	✓	✓
	Traceability	-	✓	✓
	Dilution mode (patented)	-	-	✓

Plating modes	 Exponential plating mode	✓	✓	✓
	 Circle plating mode (patented)	✓	✓	✓
	 Constant plating mode	-	✓	✓
	 Pour plating mode	-	-	✓

Petri dish size	 90 mm Petri dishes	✓	✓	✓
	 150 mm Petri dishes	-	✓	✓
	 55 mm Petri dishes	-	-	✓

easySpiral[®] technology

Delivering the fastest cycle time ever, easySpiral[®] has an **impressive rotating arm architecture**, **patented disinfection system avoiding risks of cross-contamination** and **full traceability** of the operations with a **counting range from 30 to 1x10¹² CFU/mL on 1 Petri dish**.



PATENTED

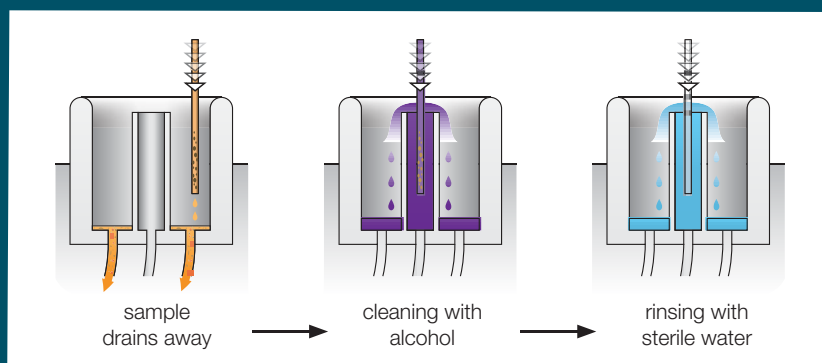
Only 25 seconds for a plating cycle!

- 25 seconds for a plating cycle (disinfection, sample-taking and plating)
- Rotating arm with high speed movement
- Patented electronic robot system
- 10 Petri dishes plated in less than 2 mn (with the same sample)

Overflow technology⁽²⁾

- No cross-contamination
- Unique patented disinfection system by overflow
- 600 cleanings without changing bottles (2L)

PATENTED



Accessible fluidics

- Change the stylus in 30 seconds
- Visible and accessible connections in the event of a leak
- Removable bathtub

Traceability with dataLinkTM

- All the sample data are set on the Datamatrix label (volume, dilution, plating mode, lighting settings...).



Technical specifications

		easySpiral®	easySpiral Pro®	easySpiral Pro® Milk	easySpiral Dilute®
OVERVIEW	Reference	412 000	413 000	413 090	414 000
	Number of dilutions at 1/10th for 1 cycle	-	-	-	5
	Syringe capacity	1 000 µL			
	Autonomy in disinfection (in normal mode)	1000 (with 2 L bottles)			
	Autonomy in distilled water (in normal mode)	600 cycles (2L bottles)			
	Autonomy in diluents	-	-	-	63 cycles (2 L bottle)
	Approved diluents	-	-	-	Saline water Ringer solution
	Pressure in the stylus	up to 8 bars			
	Traceability	-	Excel™, LIMS, dataLink™		
PLATINGS	Exponential mode (Spiral® mode): Petri dishes diameters (Ø) available	90 mm	90 mm and 150 mm		90 mm and 150 mm
	Circle mode: Petri dishes diameters (Ø) available	90 mm	90 mm and 150 mm		3 dilutions on 90 mm and 6 dilutions on 150 mm
	Constant mode: Petri dishes diameters (Ø) available	-	90 mm and 150 mm		55 mm, 90 mm and 150 mm
	Pour plate mode: Petri dishes diameters (Ø) available	-	-	-	55 mm, 90 mm and 150 mm
	Counting range	300 to 1.3x10 ⁵ UFC/mL	100 to 1x10 ⁷ UFC/mL		30 to 1x10 ¹² UFC/mL
	Programmable dispensed volume via USB	-	from 10 µL to 1 000 µL		
	Preset dispensed volume	50 µL and 100 µL	50 µL, 100 µL and 200 µL		
	Successive plating capacity with the same sample	up to 20 Petri dishes (50 µL)			
TIME	Sample intake + 1 disinfection + 1 plating	25 s			
	1 disinfection + 5 dilutions + 1 plating of 1 dilution	-	-	-	134 s
	1 disinfection + 5 dilutions + 1 plating of each dilution	-	-	-	234 s
SPECIFICATIONS	Controlled by microprocessor	✓	✓	✓	✓
	All stainless steel	✓	✓	✓	✓
	1 year warranty	✓	✓	✓	✓
	Disinfection process	✓	✓	✓	✓
	Filling time and volume programmable via USB	-	✓	✓	✓
	Sampling from beakers (DB50)	✓	✓	-	✓
	Sampling from tubes (Dim: 80 x 35 mm)	-	-	✓	-
	My Diluent key	-	-	-	✓
	Sample mixing before dilution/plating	-	-	-	✓
	WEIGHT AND DIMENSIONS	Dimensions (w x d x h)	40 x 41.5 x 29 cm		
Weight		16.4 kg			
Voltage - frequencies		100-240V~ 50-60 Hz			
Power		45 W			

easySpiral®, easySpiral Pro®, easySpiral Pro® Milk, easySpiral Dilute® are delivered with 1 turntable ring for Ø 90 mm Petri dishes (by default on the unit), 1 blue dye for testing, 1 syringe with silicone tubing, 1 plating ring for Ø 55 mm Petri dishes⁽¹⁾, 1 plating ring for Ø 150 mm Petri dishes⁽¹⁾, 1 Spiral® counting grid for Ø 90 mm Petri dishes, 1 circle mode counting grid for Ø 90 mm Petri dishes⁽¹⁾, 1 container stand for testing⁽¹⁾, 1 set of 2 filters, 1 software⁽¹⁾, 1 USB cable A/B⁽¹⁾, 1 Spiral® counting grid for Ø 150 mm Petri dishes⁽¹⁾, 1 circle mode counting grid for Ø 150 mm Petri dishes⁽¹⁾, 1000 DB50 beakers⁽¹⁾, 1 EnzyClear® liquid detergent, 4 connection kits for GL45 bottle, 1 double kit for GL45 bottles, 1 stylus, 1 power cable, 1 user's manual, 1 EnzyClear® quick user guide.

Certified production



Product made for INTERSCIENCE by Interlab, an ISO 9001 certified company.

Accessories

 <p>Housing protection⁽²⁾ Transparent housing for working outside laminar flow.</p> <p>Ref 413 001</p>	 <p>dataLink™ Traceability system</p> <p>Ref 410 100</p>	 <p>Beakers (DB50) 1 000 beakers for Spiral® platers (5 mL)</p> <p>Ref 415 100</p>	 <p>Barcode reader Bar-code reader (1D)</p> <p>Ref 522 000</p>
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⁽¹⁾ Depending on model (see technical file) ⁽²⁾ Not available on easySpiral Pro® Milk

Plate & Count system®

The winning team
from sample to result



The **Plate & Count system®** with **automatic diluting, plating and colony counting** are now the perfect solution when it comes to meeting efficiency and traceability requirements for microbiological analyses.

- **75% time-saving and consumables savings**
- **Secured and traceable bacterial results**
- **Top-of-the-line technology made in France**

For more info on Plate & Count system, please refer to the brochure.

Your local distributor

interscience in the world

PARIS

Phone: +33 (0)1 34 62 62 61 - Email: info@interscience.com

FRANKFURT

Phone: +49 611 7238 7770 - Email: sales.germany@interscience.com

BOSTON

Phone: +1 781 937 0007 - Email: sales.usa@intersciencelab.com

SHANGHAI

电话: +86 (0)21-64739390 - 邮箱: sales.china@interscience.com

SINGAPORE

Phone: +65 6977 7232 - Email: sales.asia@interscience.com