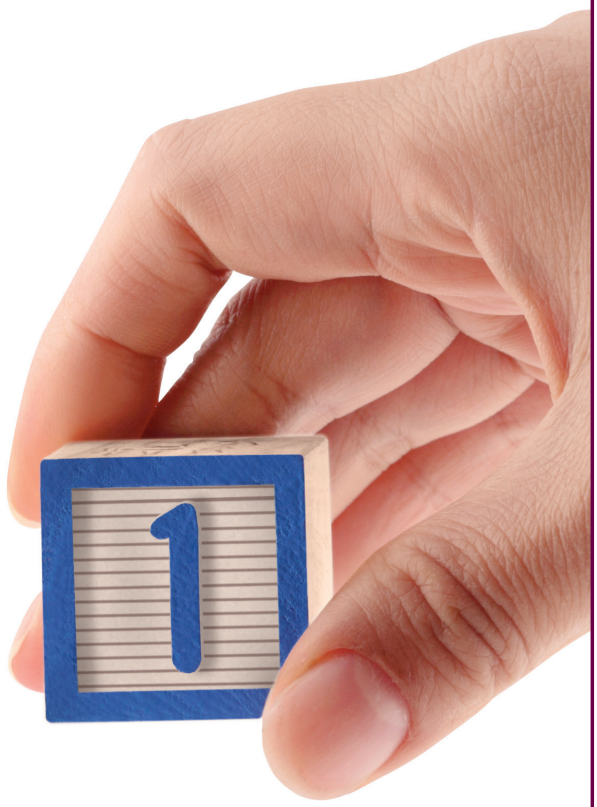
Swab and Samplers Test Kits

Quality control as easy as 1, 2, 3



EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

Environmental monitoring
Sample, incubate, count

Merck Millipore's Samplers and Swab Test Kits simplify routine microbiological analysis of liquids and surfaces for bioburden levels of bacteria, yeast, or mold.

This technique eliminates the cumbersome and expensive hardware and materials associated with traditional testing techniques.

Benefits

- Easy-to-Use: Just add a small sample of liquid to the Pre-sterilized Sampler or wipe a surface of interest with the Swab
- Ready-to-Use: Pre-measured dehydrated agar in the Sampler
- Stable at room temperature for storage and for incubation
- Results achieved by visual counting of colonies
- Low cost per test

The Testing is as simple as

1. Sample: Obtain a sample. Samplers are filled to a top line. Swabs are wiped across a surface.
2. Incubate: Place in an incubator oven or incubate at room temperature. See incubation conditions below.
3. Count: Identify colonies of bacteria, yeast, and/or mold that are growing in your sample.

Results are available in 48 - 72 hours using an incubator or in 7 days at room temperature depending on the test. Recoveries of microorganism levels are equivalent to pour plates, streak plates, and open funnel filtration in some cases.

Liquid Monitoring using Samplers

A Sampler consists of two parts:

- A plastic dip test handle with a 0.45 µm Millipore filter and an absorbent pad. This part contains the dehydrated nutrient medium for recovery of specific organisms.
- An outer plastic sheath. This piece is filled with the sample liquid of choice.

When the Sampler is immersed in a liquid, the absorbent pad rapidly absorbs 1 mL* into the filter membrane. Bacteria, yeast, or mold larger than the rated pore size are retained on the filter surface. The liquid hydrates the agar medium which provides nutrients to the organisms on the filter. These organisms will grow into defined colonies, which can be examined and counted. The number of bacteria, yeast, or mold colonies counted, can then be recorded and reported internally or externally.

**Samplers should only be used when counts >10 colonies/mL are anticipated. Samplers are not recommended for testing drinking water or when a 100 mL sample is required due to a low number of organisms*

Surface Monitoring using Swab Test Kits

Swab test kits combine a Sampler with a Swab.
A Swab consists of two parts:

- A plastic cap connected to a polyester swab,
- An outer sheath containing pre-measured sterile phosphate buffer solution.

The Swab enables you to monitor surface cleanliness, test machine surfaces, and reach difficult areas where bacteria, yeast, or mold can grow.

A variety of media
For a range of microorganisms

Media Range

HPC Sampler

Contains m-HPC medium for recovery of "stressed" aerobic bacteria (i.e. partially sanitized or nutritionally starved).

Coli-Count™ Sampler

A "Total Count" of coliforms. Contains a proprietary coliform medium for recovery of coliform organisms.

Yeast & Mold Sampler

Contains m-Green medium for recovery of yeast and mold.

Swab Design

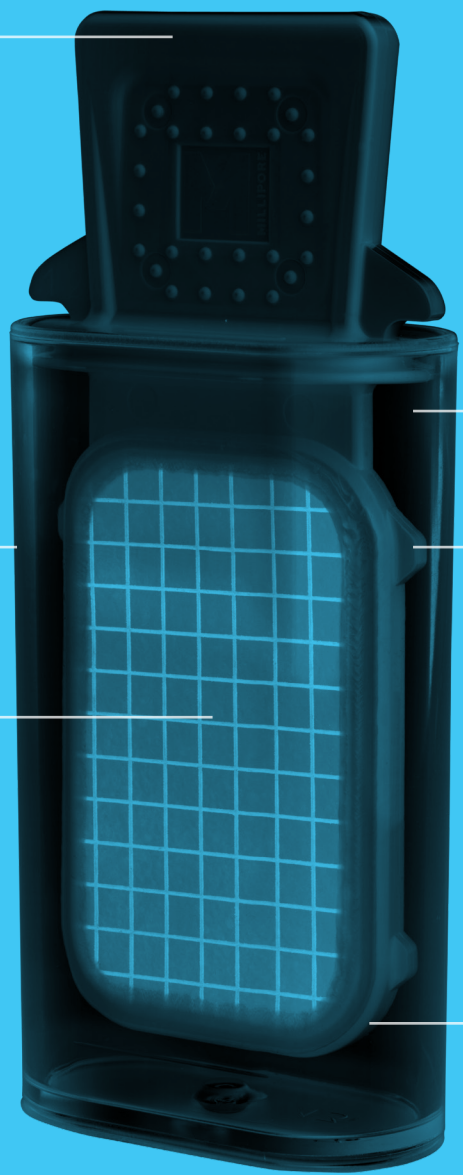
- Cap design is easy to use and safe
- Polyester Swab fixed on the cap enables efficient surface sampling
- Transparent chamber

Sampler Design

The image shows the Sampler with a cut away showing half of the membrane and half of the pad

- 0.45 µm, black-gridded Millipore filter for collection of microorganisms
- Absorbent pad contains dehydrated nutrient medium for bacteria, yeast, or mold growth. This pad absorbs 1 mL of sample liquid into the Sampler. Example: if 66 colonies of bacteria appear after incubation, the reported result would be "66 Colonies per 1 mL"

Sampler components:



Handle

Allows operator to hold paddle without contaminating sterile surfaces

Clear plastic case

Paddle

Vent

Allows passage of air as the membrane filter and pad absorb water

Filter

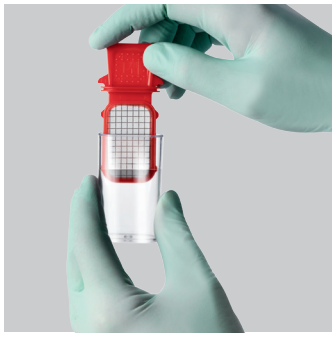
Captures microorganisms

Absorbant Pad

Supports the growth of microorganisms with nutrient media

Science made simple
Ready, set, test

1. Sample liquids OR surfaces



- Fill the outer sheath with the fluid to be tested to the top line.
- Insert the Sampler into the outer sheath.
- Lay the Sampler membrane face down for 30 seconds.
- Discard the sample.

- Wipe the surface of interest to be tested with the Swab.
- Re-insert the Swab into the sheath containing sterile buffer solution.
- Shake both pieces together 30 times. By shaking the swab surface into the buffer solution, the buffer solution now becomes your liquid sample.
- Discard the Swab.
- Once your sample is available, use the Sampler as a second part of the continuous test to determine and count bacteria, yeast, or mold that may be present.

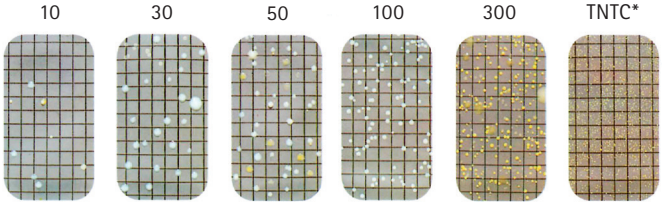
2. Incubate

- Incubate with the membrane-side down.
- See incubation conditions below.

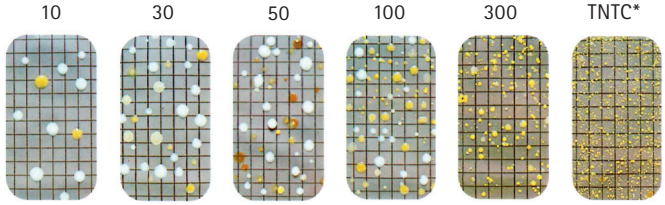
3. Count

- Count the colonies or make a quick estimate using the Comparison Chart provided in the package and this brochure.

Small Colonies



Large Colonies



*too numerous to count

Applications

Targeted Organism	Sampler Type	Sampler Color	Application	Incubation Conditions
Total Count in stressed environment	HPC	Red	• Raw material, Equipment surface, treated water and finished product in food, beverage or cosmetics applications • High purity waters (electronics or laboratory grade) • Environmental waters, cooling tower waters, process water, • Public inspection	7 days at room temperature or 72 hours at 25 °C +/–0.2 or 48 hours at 35 °C +/–0.2
Coliform	Coli-Count	Blue	• Environmental waters, electronics HP waters, raw material and equipment surfaces • Public inspection	22 – 24 hours at 35 °C +/–0.2
Yeast & Mold	Yeast & Mold	Yellow	• Process waters, electronics HP waters, raw material and equipment surfaces	72 hours at 28 °C +/–0.2 or 48 hours at 32 °C +/–0.2

Note: The same incubation time and temperature should be used for routine testing to establish a standard for comparison. Incubation time and temperature for coliform testing is specific and follows accepted standards.

Ordering Information

Description	Color	Qty/Pk	Catalogue No.
Samplers			
HPC Total Count Sampler	Red	25	MHPC 100 25
Coli-Count Sampler	Blue	25	MC00 100 25
Yeast & Mold Sampler	Yellow	25	MY00 100 25
Swaps			
Swabs in vials of phosphate buffer	–	25	MMSB 100 25
Test Kits (One kit is composed of 25 Samplers and 25 Swabs)			
HPC Total Count Swab Test Kit	Red	25 tests	MSSK 100 25
Coli-Count Test Kit	Blue	25 tests	MCSK 100 25
Yeast & Mold Swab Test Kit	Yellow	25 tests	MYSK 100 25