



**Thermo Scientific**  
Sterilin Single-Use Laboratory Plastics

# Quality and Reliability

for microbiology

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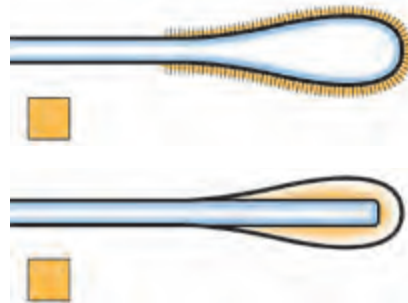
# flocked swabs

The invention of the Flocked Swabs (by Copan Italia) presents a revolution in sample collection and a major breakthrough in the development of automation in microbiology laboratories by providing samples in a liquid phase.

## How does the flocked swab work?

Traditional fiber-tipped swabs are made from a compact fiber matrix – Rayon, Dacron or Cotton – that is formed into the shape of the swab tip.

Due to the complex network of interwoven fibers, once the sample is collected, much of the sample will remain trapped within the fiber network unable to be released. With particularly small samples this could mean that all of the sample may remain within the swab tip, prohibiting subsequent sample analysis, resulting in both the loss of time and results.



To help rectify this situation the **Sterilin flocked swab** utilizes a new nylon fiber spray on technology, whereby short strands of nylon are propelled at high velocity onto the plastic-molded swab tip. This forms a high density perpendicular flocked pile. The resulting brush-like effect allows the efficient collection of both cellular and liquid samples. Due to the depth of the flocked pile, the sample collected always lies close to the swab surface at all times, enabling efficient sample release.



## Flocked Swab

**Large volume of liquid sample stays close to the surface and elutes out rapidly and spontaneously**

For independent scientific studies to support these products, email [sterilin@thermofisher.com](mailto:sterilin@thermofisher.com).

# fiber swabs

## Swabs, Applicator Type

Depending on the area of the body where the sample is taken, one applicator may be more relevant than others.

- Plastic shaft (polystyrene), inert nontoxic material
- Twisted wire shaft due to its flexibility is designed specifically for nasopharyngeal sampling
- Aluminum shaft is generally used for ear, nose, eye and male urethral sampling

## Swabs, Tip Material

- Viscose (Rayon) – a derivative of cellulose and nontoxic to organisms
- Polyester (Dacron) – a synthetic fiber. Essential for use with PCR or similar DNA tests where the DNA of viscose could interfere with the results

## Swabs, Transport Medium

- As there is often a delay between sampling and the subsequent analysis, medium is added to preserve (not inhibit or enhance) the microorganism that may be present on the swab
- Due to the broad spectrum use of swabs and differing environmental requirements, it is important that the transport medium is suitable for all microorganisms
- Amies is the most common medium and is ideal for general purpose use
- The transport media can be in gel or liquid form

### a) Gel or Liquid

- Gel is generally good for general sampling and processing needs
- Liquid medium is ideal for automated processing requirements

### b) Charcoal or Without Charcoal

- The property of charcoal is to absorb pollutants and other substances that could be toxic to bacteria
- Advised for use with difficult bacteria, particularly *Neisseria gonorrhoea*

## Swabs, Packaging

### a) Venturi Design

- Sterilin gel transport swabs have been carefully designed and engineered to provide superior swab performance
- A carefully engineered neck constriction and molded fins create a deliberate Venturi effect when the swab is introduced
- The Venturi action works to immediately surround and seal in the swab tip, eliminating any bubbles, cracks and breaks that would normally occur in the agar, protecting bacteria from the harmful effects of atmospheric oxygen

### b) Unique Swab Packaging System

- Unique packaging for Sterilin transport swabs combines an outer foil pack and an inner plastic pouch
- The outer foil bag serves to reduce evaporation and dehydration of the media while also protecting the product from harmful effects of sunlight
- The inner plastic pouch has notable benefits over traditional porous paper-plastic film packaging
  - Totally waterproof, protecting the product from accidental contamination
  - Prevents evaporation and dehydration, keeping the transport medium fresh until the moment the product is opened for maximum bacterial recovery
  - Airtight to prevent oxygen penetration and subsequent media oxidation
  - Simpler to recycle than traditional paper and plastic packaging and therefore more likely to be disposed of in the correct way

## Swabs, M40

The culture swab is one of the most widely used devices for the transport and collection of patient specimens. The key to accurate diagnosis lies with the collection and maintenance of the initial patient sample where the organisms collected need to be kept alive until processed in the laboratory. To help improve overall patient care it was recognized that there should be a minimum acceptable performance for all swabs – as such, the M40 standard was formulated. The basic criteria of the standard are as follows:

- Must cover all extremes of the microbiology spectrum from aerobes to anaerobes and fastidious bacteria – all organisms under all conditions
- Compliant at room temperature +70°F (21°C) and +39°F (4°C)
- Length of time for bacterial survival – 48 hours
- Performance must be the same throughout the shelf life

Sterilin M40 swabs comply with the new NCCLS M40-A and German DIN 58942-A performance standards.

## ► Thermo Scientific Sterilin E-Swab Transport System



**NEW**

**CE**

**Sterile**

**M40 Compliant**

**Sterilin E-Swab Transport System features a pre-labeled tube with 1mL liquid amies medium and flocked swab.**

Ideal for the collection and transport of clinical specimens containing aerobes, anaerobes, fastidious bacteria, viruses and Chlamydia. Can be processed using standard laboratory procedures for bacterial culture and molecular detection of bacteria, viruses and Chlamydia.

### details

- 1mL medium enables multi-test analysis
- Ideal for automated processing systems
- The flocked swab improves both sample collection and release
- Complies with NCCLS40-A standard. Maintains the viability of aerobes, anaerobes and fastidious bacteria for up to 48 hours at room temperature
- E-Swab MRSA kits contain multiple swabs for ease of sample collection and processing
- Free of enzymes and inhibitors that may interfere with nucleic acid amplification assays
- Supplied sterile by irradiation
- *In vitro* use only

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

### Sterilin E-Swab and Transport System

Cat. No.	Description	Applicator/Tip	Sterility	Case Qty.
480CE	Liquid amies, regular flocked swab	Plastic/nylon fiber	IRR	50
481CE	Liquid amies, minitip flocked swab	Plastic/nylon fiber	IRR	50
482CE	Liquid amies, pernasal flocked swab	Plastic/nylon fiber	IRR	50
483CE	Liquid amies, urethral flocked swab	Plastic/nylon fiber	IRR	50
484CE	Liquid amies, pediatric flocked swab	Plastic/nylon fiber	IRR	50
493CE02	e-Swab MRSA kit - liquid amies, 2 x regular flocked swab for use with automation	Plastic/nylon fiber	IRR	50
493CE03	e-Swab MRSA kit - liquid amies, 3 x regular flocked swab for use with automation	Plastic/nylon fiber	IRR	50
490CE.A	Liquid amies, regular flocked swab, for automation	Plastic/nylon fiber	IRR	50

## ► Thermo Scientific Sterilin Swabs, Fecal



**Sterilin Fecal Swabs are designed for the collection, transportation and preservation of fecal samples.**

### details

- Ideally suited for either automation or standard culture
- Capture cap design facilitates plating during manual bacterial culture
- Transport medium is semi-liquid Cary Blair — suitable for the transport of enteric bacteria
- Aids easy and speedy patient diagnosis

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

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### Sterilin Swabs, Fecal

Cat. No.	Description	Applicator/Tip	Sterility	Case Qty.
470CE.A	2mL Cary Blair + regular flocked swab	Plastic/Nylon fiber	IRR	300

## ► Thermo Scientific Sterilin Swabs, UTM (Universal Transport Medium)



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**Sterilin UTM (Universal Transport Medium) Swabs are ideal for the collection, transport, maintenance and frozen storage of Viruses, Chlamydia, Mycoplasma and Ureaplasma.**

Suitable for cell culture, Rapid Antigen Detection, DFA, EIA, PCR and nucleic acid amplification assays

### details

- Room temperature stable and incorporates a cryoprotectant
- Formulation includes antibiotics to inhibit bacterial and fungal flora in patient samples
- Free-standing polypropylene skirted tube with conical base enabling convenient sample preparation — simply vortex and inoculate direct into tissue culture
- Available as filled tubes with a choice of separate individually wrapped swabs or a collection kit with the swab included
- Glass beads in the tube help with the release and dispersion of the patient sample from the swab
- All swabs feature molded breakpoint to enable safe, reliable breaking of the swab into the tube — enables the regular swab to be captured by the cap as it is replaced on the tube

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

### Sterilin Swabs, UTM (Universal Transport Medium)

Cat. No.	Description	Applicator/Tip	Sterility	Case Qty.
305C	Collection kit, 3mL medium, nasopharyngeal flocked swab	Plastic/Nylon	IRR	50
328C	Collection kit, 3mL medium, regular dacron swab	Plastic/Nylon	AS/IRR	50
330C	Bulk tubes, 3mL medium	—	AS	50
346C	Collection kit, 3mL medium, regular flocked swab	Plastic/Nylon	AS/IRR	50
347C	Collection kit, 3mL medium, neonatal flocked swab	Plastic/Nylon	AS/IRR	50
350C	Bulk tubes, 1mL medium	—	AS	50
359C	1mL medium, regular flocked swab	Plastic/Nylon	AS/IRR	50
360C	1mL medium, nasopharyngeal flocked swab	Plastic/Nylon	IRR	50
361C	1mL medium, minitip flocked swab	Plastic/Nylon	IRR	50

## ► Thermo Scientific Sterilin Swabs, Flocked Plain



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RNase/DNase-free

Human DNA-free

**Sterilin Plain Flocked Swabs utilize innovative nylon fiber technology that provide outstanding sample collection and release.**

### details

Sample release from the flocked swab is at least 95% compared with 25% with a regular fiber swab, which is critical if the sample to be collected is particularly small.

- PCR compatible for molecular analysis
  - Manufactured from completely inert components
  - Certified RNase/DNase-free
  - For forensic purposes product is available certified human DNA free and with a molded breakpoint so that it can be easily broken into a 2mL collection vial
- Available either in a paper peel pouch or in a plain dry tube

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

### Sterilin Swabs, Flocked Plain

Cat. No.	Description	Breakpoint	Applicator/Tip	Sterility	Case Qty.
<b>Flocked Swabs — Individually wrapped in paper peel pouch</b>					
501CS01	Minitip nylon flocked swab	80mm	Plastic/Nylon	IRR	100
502CS01	Regular nylon flocked swab	80mm	Plastic/Nylon	IRR	100
520CS01	Regular nylon flocked swab	30mm	Plastic/Nylon	IRR	100
503CS01	Flexible nasopharyngeal minitip nylon flocked swab	80mm	Plastic/Nylon	IRR	100
511CS01	Endocervical nylon flocked swab	80mm	Plastic/Nylon	IRR	50
516CS01	Neonatal minitip nylon flocked swab	80mm	Plastic/Nylon	IRR	100
<b>Flocked Swabs — Individually wrapped in plain dry tube</b>					
551C	Minitip nylon flocked swab	80mm	Plastic/Nylon	E0	100
552C	Regular nylon flocked swab	80mm	Plastic/Nylon	E0	100
553C	Flexible nasopharyngeal minitip nylon flocked swab	80mm	Plastic/Nylon	E0	100
516C	Neonatal minitip nylon flocked swab	80mm	Plastic/Nylon	E0	100
<b>Forensic Swabs — Certified human DNA free</b>					
3509CS01	Regular flocked swab	20mm	Plastic/Nylon	E0	100
3520CA	Regular flocked swab, 2mL tube	20mm	Plastic/Nylon	E0	100
3520CF	Regular flocked swab, tube with evaporation duct	20mm	Plastic/Nylon	E0	100

## ► Thermo Scientific Sterilin Swabs, Gel Transport



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M40 Compliant

**Sterilin Transport Swabs are primary sample collection and transport device for bacteria.**

### details

- Contains media for the maintenance of bacterial sample during transport to the laboratory
- *In vitro* use only
- Each batch of product is tested for performance using a wide range of aerobic and anaerobic pathogens to ensure adequate recoveries
- Certificate of Sterility and Quality Assurance is available on request
- Lot number/expiry date and tamper-evident tube ensure complete traceability and sterility

### Transport, M40

- Complies with American NCCLS M40-A and the German DIN 58942-4 standards
- Extended length of time for bacterial survival — 48 hours (minimum)
- Wider temperature range — comparable performance at both room temperature and 4°C

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

### Sterilin Swabs, Gel Transport

Cat. No.	Media	Applicator/Tip	Cap Color	Use	Sterility	Inner Pack Qty.	Shelf Pack Qty.	Case Qty.
<b>Standard Transport Swabs</b>								
18108CST	Amies	Plastic/Rayon	Blue	Throat, vagina, wound and skin	IRR	1	50	500
18114CST	Amies w/charcoal	Plastic/Rayon	Black	Throat, vagina, wound and urogenital	IRR	1	50	500
18110CST	Amies	Aluminum/Rayon	Orange	Pediatric or urethral	IRR	1	50	500
18116CST	Amies w/charcoal	Aluminum/Rayon	Orange	Urogenital	IRR	1	50	500
18190CST	Amies	Twisted wire/Rayon	Blue	Pernasal	IRR	1	50	500
18192CST	Amies w/charcoal	Twisted wire/Rayon	Blue	Pernasal	IRR	1	50	500
18111CST	Stuart agar	Plastic/Rayon	Blue	General purpose	IRR	1	50	500
<b>M40 Transport Swabs</b>								
408CST	Amies	Plastic/Rayon	Red	General Purpose	IRR	1	50	500
414CST	Amies w/charcoal	Plastic/Rayon	Black	Urogenital	IRR	1	50	500

## ► Thermo Scientific Sterilin Swabs, Plain



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**Sterilin Plain Swabs** are supplied in either a peel pouch or in a tube for ease of handling and transportation.

### details

- Primary sample collection device for bacteria
- Color-coded caps for ease of identification

**Ordering Information:** Available in UK only

**Certifications:** CE marked as Class IIa in accordance with the Medical Device Directive 93/42/EEC (for transient invasive use)

**Notes:** Must be processed as soon as possible after sampling (ideally within two-hour period) to avoid dehydration of the sample and possible non-recovery of pathogens

### Sterilin Swabs, Plain

Cat. No.	Applicator/Tip	Cap Color	Use	Sterility	Inner Pack Qty.	Case Qty.
<b>Swabs in tube</b>						
F150CA	Wood/Cotton	Red	General purpose	IRR	1	100
F155CA	Plastic/Rayon	White	General purpose	IRR	1	100
F160CA	Aluminum/Rayon	Orange	Ear, nose, vaginal or urethral	IRR	1	100
F168CA	Twisted wire/Rayon	Blue	Pernasal and nasopharyngeal	IRR	1	100
451CST	Plastic/Cotton, Vegetal protein coated	Yellow	Vegetal protein coating reduces overgrowth	IRR	1	100
F152CA	Wood/Cotton, Charcoal coated	Black	Charcoal neutralizes inhibitory effects of cotton	IRR	1	100
<b>Swabs in peel pouch</b>						
165KS01	Wood/Cotton	N/A	General purpose	EO	1	1,000
165KS100	Wood/Cotton	N/A	General purpose	IRR	100	2,500

## ► Thermo Scientific Sterilin Swabs, Environmental



Sterile

**Sterilin Environmental Swabs are for environmental sampling, particularly in the food and pharmaceutical industries.**

### details

- Available in easy-to-use kit format consisting of a sealed tube with neutralizing buffer/ capped swab and sampling template
- Sterile sampling templates 10 x 10cm (100cm<sup>2</sup>) enable accurate calculation of colony forming units per cm<sup>2</sup>
- Alginate tipped swabs (903C) dissolve fully to ensure complete delivery of microbial sample into the solution

### Method of use

- Peel open the pouch and remove the sampling swab
- Swab the test site. If the surface is dry pre-moisten the swab in the rinse solution provided. If a template is being used swab the designated area
- After sampling, break the swab applicator into the tube of solution (if using the Alginate tip, the swab will dissolve)
- Transport back to the laboratory as soon as possible
- Plate the required dilution into the appropriate media, preferably within 4 hours of swabbing. Where this is not possible, refrigerate at 4°C and analyze within 24 hours of swabbing
- To calculate the number of colony-forming units per cm<sup>2</sup> (CFU/cm<sup>2</sup>) when using the 10 x 10cm template use the following: (number of colonies x volume of rinse solution x serial dilution (if necessary))/100
- Used in environmental monitoring situations, the solution constituents are:
  - Ringers balanced salt solution
  - Tween 80\*
  - Lecithin
  - Sodium Thiosulphate
  - Sodium Thioglycollate
  - Sodium Disulphate
  - Sodium Pyruvate
  - Sodium Hexametaphosphate

**Ordering Information:** Available in UK only

### Sterilin Swabs, Environmental

Cat. No.	Description	Shaft Length	Applicator Material	Sterility	Inner Pack Qty.	Case Qty.
902C	10mL solution, separate swab, dacron tip	13cm	PS	IRR	1	25
903C	10mL solution, separate swab, alginate tip	13cm	PS	IRR	1	25
904C	10mL solution, separate swab, large rayon tip	13cm	PS	IRR	1	25
922C	10mL solution, integral dacron tip swab	9cm	PS	IRR	1	50
926C	10mL solution, integral dacron tip swab	9cm	PS	IRR	50	50
905C	Square sampling kit, 902C with square sampling template	13cm	PS	IRR	1	10
T2905C	Plastic square sampling template 10 x 10cm			IRR	5	50



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