SRK

Environmental Swab Systems

Comprehensive Surface Sampling Systems for:

Bio-Pharmaceutical Industry

Food - Hygiene & Cosmetics

Biological Sample Collection

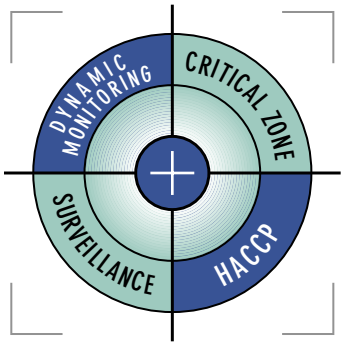
COPAN innovation

Environmental Swab Sampling Systems

BIO-PHARMA • FOOD-HYGIENE • BIOLOGICAL SAMPLING

Swabbing is one of the most widely used methods for microbiological examination of surfaces today.

SRK is an acronym for Swab-Rinse Kits. Swabbing is one of oldest and most widely used methods for microbiological examination of surfaces. When swabs are used together as a kit with a tube of solution to pre-moisten the swab before sampling and then to transport and rinse the swab after sample collection, it is an effective method for the detection and quantitation of microorganisms.



Templates to Define Sampling Area

Two sizes of sampling templates are available: 4 x 5cm (20cm^2) and 10 x 10cm (100cm^2). For flat surfaces, templates help define the sample size and allows the investigator to determine the number of organisms per cm^2. With a defined and standardized sampling area this can be used to validate microbial bioburden in clean rooms and critical areas in which sterile drugs are exposed to the environment and in food processing plants to establish hygiene scores based on cfus per cm^2.

SRK - Rapid, Simple, Low Cost

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Rapid, simple and low cost systems for assessing the microbial presence on various surfaces and equipment.

Each SRK unit is typically comprised of a labeled screw cap tube with a swab stick attached to the cap and the tube filled with a specified volume of rinse solution. Each unit constitutes a complete collection kit. SRK Kits are available in bulk packs or individually sterile wrapped. In addition to regular collection kits, **Combo Sets** are also available comprising two tubes: one screw cap tube with attached sterile swab and filled with a small volume of saline solution. The small volume of saline is intended to simply moisten the tip of the swab. The Combo Set has a second tube containing nutrient broth which functions as a rinse solution, diluent or recovery medium.

Easy to Use on-site or in the field by inspectors and QA personnel.

Easy Visual Interpretation of Positive Growth using innovative **K-resin**™ plastic tubes. For analysis of swab samples that require visual interpretation of positivity based upon growth or no-growth in the nutrient medium. Copan provides specific SRK kits that incorporate very clear plastic tubes with the clarity similar to a glass tube. This glass like clarity is very advantageous and makes reading of turbidity or cloudiness resulting from organism growth very easy to see.

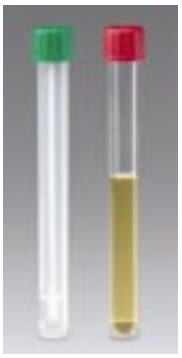
Wide Selection for All Applications
Buffered Peptone Water, Letheen Broth, DE Neutralizing Broth, Butterfields and Copan SRK Neutralizing Solution. Choice of different swab lengths and different medium fill volumes to suit a wide range of industries and applications.

Bioburden Control System
Facilitates routine surface monitoring in sterile pharmaceutical manufacturing sites to determine the microbial bioburden of surfaces within a manufacturing area as well as on equipment and product contact areas.

Sanitization Validation
Convenient system for verification and validation of effective sanitization and disinfection procedures.

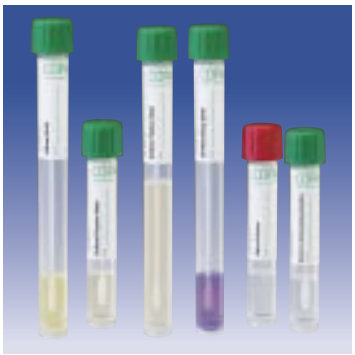
Hygienic Assessment
Enables routine hygiene monitoring of food contact surfaces and assessment of hygienic status of food processing environments.

Superior Method for sampling uneven or irregular surfaces, equipment, difficult to reach sites and heavily contaminated surfaces SRK system is superior.



Glass-like clarity with K-resin™ plastic

Unique **K-resin**™ tube sets for easy visual growth interpretations



- **Choice** of Media
- **Choice** of Fill Volume

SRK

- **Easy** to Use
- **Easy** to Store
- **Easy** to Transport

Environmental Swab Sampling Systems

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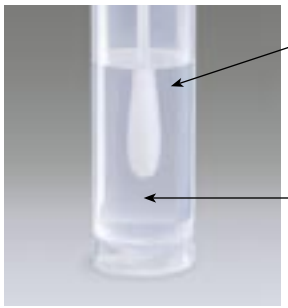
SRK - Versatile System
Wide range of choices



Choice of rinse solution

Buffered Peptone Water, Letheen Broth, DE Neutralizing Broth, TSB, Butterfields and Copan SRK Neutralizing Solution.

Choice of liquid fill volume

Different liquid fill volume available allows users to select the optimal sample dilution compatible with their laboratory analysis.

Choice of swab and tube length

Both short (9.5cm) and long (15cm) swab lengths supplied in 10.5cm and 16.0cm tubes respectively.

Choice of packaging formats

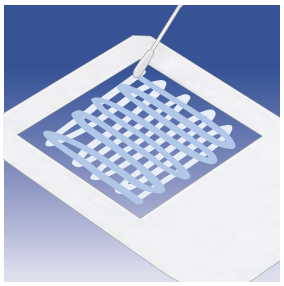
Bulk Packs, Individually Sterile Wrapped and Combo Packs to suit different applications.

products shown actual size

No Growth Positive

Clear glass-like tube appearance
Certain models of SRK are available with tubes made of crystal clear **K-resin**™ plastic which offers the clarity of glass but is made of plastic. Innovative **K-resin**™ plastic allows easy interpretation of growth and no-growth in media tubes because turbidity and cloudiness resulting from bacterial growth is very easy to read.

Combo Sets are also available comprising of two tubes: one screw cap tube with attached sterile swab and filled with a small volume of saline solution. The small volume of saline is intended to moisten the tip of the swab. The Combo Set has a second tube containing nutrient broth which functions as a rinse solution, diluent or recovery medium. The saline moistened swab is used to collect the surface sample and then it is inserted into the second companion tube containing the nutrient broth.



- **Easy** to Use
- **Easy** to Store
- **Easy** to Transport

Pre-moistened swabs are believed to significantly improve the uptake of sample material particularly when sampling dry surfaces. However, there are situations where it is undesirable to leave behind any organic residue or trace of nutrients. The Combo Set is ideal for this application as the sampling swab is supplied pre-moistened with a simple saline solution.

SRK - Easy to Use, Easy to Transport

blue lines are for illustrative purpose

How to Use Guide

1. Identify the site or surface to be sampled. When sampling flat surfaces it is advisable to use a sterile Square Sampling Template to define a specified area or sample size. 10 x 10cm and 4 x 5cm sampling templates are available separately from Copan.

2. Unscrew the SRK swab cap and lift the swab above the solution in the tube. Press the tip of the swab against the wall of the tube to remove excess liquid.

3. When sampling flat surfaces using a square template, place the tip of the swab on the surface to be sampled in the inside top left corner of the template and sweep from left to right. Slowly moving down the length of the template to make a complete left to right sweep of the area designated by the template. Rotate the swab between the thumb and forefinger during the sweeping action to maximize the uptake of surface material.

4. A second complete sweep is made inside the square template at right angles to the first sweep. See photo which demonstrates the bi-directional sampling action.

5. When sampling is complete return the swab to the original tube of solution from where it came or in the case of Combo Sets place the swab in the accompanying tube of Buffered Peptone Water or Letheen Broth. Make sure the cap is properly tightened.

6. Write specific information on the SRK tube label to identify the site or surface under investigation.

7. Transport samples to the laboratory for analysis as soon as possible, preferably within 4 hours, in a cool box at 1 - 4°C. Samples can be refrigerated at 2 - 8°C for up to 24 hours before laboratory analysis.

Processing the SRK sample

1. In the laboratory vortex mix the swab thoroughly in the solution provided in the tube to release sample material from the swab and make an even suspension.

2. Removed measured aliquots of the solution and perform a Surface Plate Count or Pour Plate Count. For Surface Plate Counts inoculate aliquots directly onto the surface of suitable plate count agar and spread the sample evenly using a sterile spreader. For Pour Plate Counts place an aliquot into a sterile Petri dish and mix with 15 or 20ml of melted agar (maintained at approximately 45°C) then allow the agar to cool and solidify.

3. If the concentration of organisms in the sample is expected to be high, serial ten-fold dilutions of the solution inside the SRK tube can be performed and the ten-fold dilutions can be cultured.

Formula for calculation of the number of cfu per cm² of the surface investigated:

$$\frac{N \times F}{A} \times D$$, where

N = the number of cfu in 1ml dilution liquid (rinse solution or broth)

F = the amount (ml) of dilution fluid (rinse solution or broth in the tube)

A = the surface investigated (cm^2)

D = the reciprocal of the dilution used

Wide Selection of Products to Suit Different Applications

SRK Kits - Bulk Box (50 per box)

Each box contains 50 screw cap tubes filled with various types of rinse solution, diluent or broth. Swab applicators are attached to the tube caps. There is a choice of two swab sizes short (9.5cm) and long (15cm) with different medium BPW, DE, Letheen Broth, Butterfield's and Copan SRK Solution and different fill volume.

Solution	Code	Volume	Size	TubeSize/Swab Length	Packaging
Dry Swab BioSampler	R217	Dry	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R237	Dry	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
Buffered Peptone Water (BPW)	R2114	4mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2410	10mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2314	4mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
	R2310	10mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
DE Neutralizing Broth	R2124	4mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2120	10mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2324	4mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
	R2320	10mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
Letheen Broth	R2131	1mL	short	10.5cm / 9.5cm	50 tubes per box; 6 boxes per case
	R2134K	4mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2130K	10mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2331K	1mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
	R2334K	4mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
	R2330K	10mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
Butterfield's Solution	R2144	4mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2140	10mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2344	4mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
	R2340	10mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case
Copan SRK Solution (Non-Nutrient Phosphate Buffered Neutralizing Rinse Solution)	R2160	10mL	short	10.5cm / 8.5cm	50 tubes per box; 6 boxes per case
	R2360	10mL	long	16 cm / 15 cm	50 tubes per box; 6 boxes per case

K = media tube made of crystal clear K-resin™ plastic which has the clarity similar to a glass tube.

SRK Combo Sets - Bulk Box (25 combo sets per box)

Box contains 25 screw cap tubes incorporating swab applicator and saline moistening solution and another 25 screw cap tubes containing BPW or Letheen Broth. Tubes have color coded caps to differentiate moistened swabs from tubes of BPW or Letheen Broth. Combo Sets are available with short (9.5cm) and long (15cm) swabs.

Solution	Code	Volume	Size	TubeSize/Swab Length	Packaging
Buffered Peptone Water and saline moistening solution	R3110	10mL, 2mL	short	10.5cm / 8.5cm	25 Combo sets per box; 6 boxes per case
	R3310	10mL, 2mL	long	16 cm / 15 cm	25 Combo sets per box; 6 boxes per case
Letheen Broth and saline moistening solution	R3131	1mL, 2mL	short	10.5cm / 9.5cm	25 Combo sets per box; 6 boxes per case
	R3331	1mL, 2mL	long	16 cm / 15 cm	25 Combo sets per box; 6 boxes per case
	R3130K	10mL, 2mL	short	10.5cm / 8.5cm	25 Combo sets per box; 6 boxes per case
	R3330K	10mL, 2mL	long	16 cm / 15 cm	25 Combo sets per box; 6 boxes per case

SRK Mini - Bulk Box (50 per box)

Each box contains 50 screw cap tubes filled with Letheen broth and 50 sterile, individually wrapped, sample collection swabs. Swab length 15cm. This is a convenient system for use in conjunction with 3M Petrifilm® products.

Solution	Code	Volume	Size	TubeSize/Swab Length	Packaging
Letheen Broth	R6331M	1mL	mini	8cm / 15 cm	50 tubes and swabs; 6 boxes per case

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Bulk Packs

Sterile Individually Wrapped Tubes & Combo Sets

Sterile Individually Wrapped SRK kits (50 per box)

Box contains 50 SRK Kits comprising a sterile peel pouch containing screw cap tube filled with rinse solution, diluent or broth. Swab applicator is attached to the tube cap. There is a choice of two swab sizes short (9.5cm) and long (15cm) with different medium BPW, TSB, Letheen Broth, Butterfield's and Copan SRK Solution and different fill volume.

Solution	Code	Volume	Size	TubeSize/Swab Length	Packaging
Buffered Peptone Water (BPW)	R4114	4mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4110	10mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4314	4mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4310	10mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
Tryptic Soy Broth (TSB)	R4194K	4mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4190K	10mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4394K	4mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4390K	10mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
Letheen Broth	R4131	1mL	short	10.5cm / 9.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4134K	4mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4130K	10mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4331	1mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4334K	4mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4330K	10mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
Butterfield's Solution	R4144	4mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4140	10mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4344	4mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4340	10mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
Copan SRK Solution (Non-Nutrient Phosphate Buffered Neutralizing Rinse Solution)	R4160	10mL	short	10.5cm / 8.5cm	1 tube/pouch; 50 tubes/box; 6 boxes/case
	R4360	10mL	long	16 cm / 15 cm	1 tube/pouch; 50 tubes/box; 6 boxes/case

K = media tube made of crystal clear K-resin™ plastic which has the clarity similar to a glass tube.

Sterile Individually Wrapped SRK Combo Sets (25 combo sets per box)

Box contains 25 sterile individually wrapped Combo Sets. Each Combo set comprises a peel pouch containing two screw cap tubes. One tube contains saline moistening solution and swab applicator attached to the cap. The second tube in the Combo Set contains either BPW or Letheen Broth. Tubes have color coded caps to differentiate moistened swabs from tubes of BPW or Letheen Broth. Available with short (9.5cm) and long (15cm) swabs.

Solution	Code	Volume	Size	TubeSize/Swab Length	Packaging
Buffered Peptone Water (BPW) & saline moistening solution	R5110	10mL, 2mL	short	10.5cm / 8.5cm	2 tubes/pouch; 25 sets/box; 6 boxes/case
	R5310	10mL, 2mL	long	16 cm / 15 cm	2 tubes/pouch; 25 sets/box; 6 boxes/case
Letheen Broth & saline moistening solution	R5130K	10mL, 2mL	short	10.5cm / 8.5cm	2 tubes/pouch; 25 sets/box; 6 boxes/case
	R5330K	10mL, 2mL	long	16 cm / 15 cm	2 tubes/pouch; 25 sets/box; 6 boxes/case
	R5131	1mL, 2mL	short	10.5cm / 9.5cm	2 tubes/pouch; 25 sets/box; 6 boxes/case
	R5331	1mL, 2mL	long	16 cm / 15 cm	2 tubes/pouch; 25 sets/box; 6 boxes/case

Environmental Sampling Templates & Spreaders

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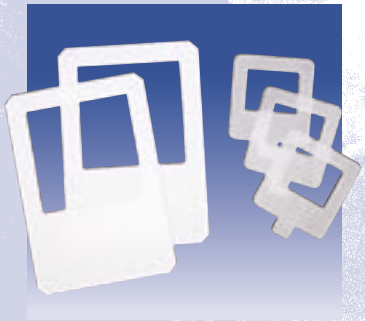
Sampling Templates to Define Sampling Area

Two sizes of sampling templates are available: 4 x 5cm (20cm^2) and 10 x 10cm (100cm^2). For flat surfaces, templates help define the sample size and allows the investigator to determine the number of organisms per cm^2. With a defined and standardized sampling area this can be used to validate microbial bioburden in clean rooms and critical areas in which sterile drugs are exposed to the environment and in food processing plants to establish hygiene scores based on cfus per cm^2.



Sampling Templates – Sampling templates in sterile packs

Code	Description	Packaging	
T2906CS01	4 x 5cm Square Sampling Template	sterile pack containing one template	50 templates/box
T2906C	4 x 5cm Square Sampling Templates	sterile pack containing five templates	50 templates/box
T2905CS01	10 x 10cm Square Sampling Template	sterile pack containing one template	50 templates/box
T2905C	10 x 10cm Square Sampling Templates	sterile pack containing five templates	50 templates/box

Sterile T-Shaped Plastic Spreaders

Sterile T–Shaped Spreaders are designed for spreading and dispersing liquids across the surface of agar culture plates. Spreaders are used for performing bacterial cfu plate counts on water, milk, urine and other liquid samples. Copan T-Shaped Spreaders have all smooth rounded surfaces to prevent any cutting or gouging of agar during inoculation of culture plates. The T–Shape design means that even pressure is applied across the entire length of the T–bar in contact with the agar surface.

Available in three sterile configurations:
Single wrapped, five spreaders per pack and ten spreaders per pack.

Sterile L-Shape Plastic Spreaders

The foot of the spreader has a completely smooth rounded surface, free of rough edges and imperfections in the plastic. This feature enables even spreading of liquid samples across the surface of agar plates without gouging or cutting the medium.

T and L Shaped Spreaders

Code	Description	Packaging	
COPTS-1	T-Shaped Spreader	1/peel pack	500 spreaders/box
COPTS-5	T-Shaped Spreader	5/peel pack	1000 spreaders/box
COPTS-10	T-Shaped Spreader	10/peel pack	500 spreaders/box
174CS01	L-Shaped Spreader	1/peel pack	500 spreaders/box
174CS05	L-Shaped Spreader	5/peel pack	1000 spreaders/box
174CS10	L-Shaped Spreader	10/peel pack	500 spreaders/box

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