*Liquid Based Microbiology*

# Simplify Specimen Collection, Transport, and Processing

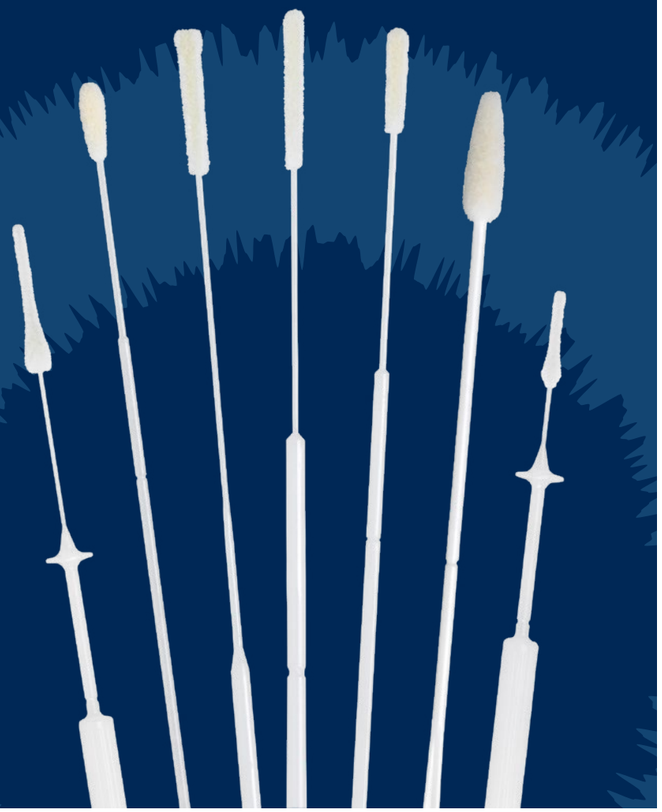
Copan

innovating together

FLOQSwabs®

*Better Specimen Collection*

# Better Diagnostics



Patented Original Technology for Optimal Sample Collection and Diagnostics

**FLOQSWAB®**

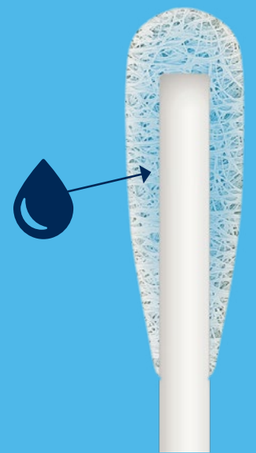
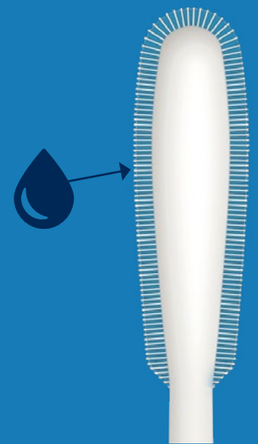
A molded plastic applicator shaft with tip (in varying dimensions) coated with Nylon® fibers, creating a thin absorbent layer allowing for quick sample uptake and elution of more than 90% of the sample.[1]

## THE HISTORY OF SWAB COLLECTION AND TRANSPORT

Bacteriology transport systems date back to 1940, with the invention of Stuart transport medium, however 60 years would pass before the first international published standard for Microbiological transport systems was established.

The CLSI (NCCLS) M40-A created a new performance challenge for transport devices and ignited Copan's devotion to quality and pre-analytical innovation. In 2003, flocked swabs (branded FLOQSwabs®) were invented by Copan, paving the way for Liquid Based Microbiology (LBM) and a new era of specimen collection, transport and processing in Clinical Microbiology.

# Why Flocked?

| *Traditional Fiber Swab* | *FLOQSwabs®* |
|---|---|
| Yards of fiber wrapped around applicator | Nylon® fibers are applied to applicator using a proprietary flocking process |
|  |  |
| Sample is trapped in swab fibers | Sample diffuses and becomes trapped in the fibers. Sample stays close to the surface, eluting upon contact with transport media. Brush like texture dislodges and collects cells. |
| | More sample available for testing |
| One swab for one test ← | How many tests from one sample? → Multiple aliquots for various tests |

***Patent Information***
*US 8,317,728 8,114,027 8,979,784 9,011,358 13/657,949 16/448,398 9,173,779 14/448398 10,327,741 | EP1608268 | JP4579902 | AU2004226798 | CA2,515,205 | NZ541560 | SG170654 | CNZL200610099310.9*

*A Liquid Solution*

# For Microbiology Samples

**DEVELOPED BY COPAN IN 2006,** Liquid Based Microbiology (LBM) combines state-of-the-art flocked swabs with media – transforming challenging samples into easy to process, multi-purpose liquid samples.

The LBM line includes collection, transport and processing systems for Clinical Microbiology samples.

eSwab®

**SWABS**

Learn More

FecalSwab®

**FECES**

Learn More

SnotBuster™

**SPUTUM**

Learn More

UriSponge®

**URINE**

Learn More

### *Better Diagnostics*

FLOQSwabs® paired with a liquid based system give way to quantitative, measurable and consistent sample transfer. Evidence-based research shows that samples collected using FLOQSwabs® improve test sensitivity, eluting more than 90% of the specimen.[1]

### *Reduce Costs*

A broad range of testing applications eliminates costs associated with stocking and management of numerous collection devices.[2]

### *Patient Comfort*

Clinicians report better patient comfort due to ergonomic, anatomic swab design and softer texture. Additionally, because one sample can be used for multiple tests, fewer samples are collected from the patient.[2,3]

### *Automation Ready*

Liquid Based Microbiology systems are easily processed on automated specimen processors and liquid handling pipetting systems, minimizing manual handling.[2]

## Change Management

Ready to make the switch to better Microbiology, improved patient care and laboratory cost savings? Copan provides hands-on expertise to facilitate new product implementation. We are available to guide you with training, verification guidance, and more!

# eSwab®

*Evidence based, improved pathogen recovery, expanded testing capabilities, and better patient care*

## Patented Liquid Based Collection and Transport System for Microbiology Swab Samples

ESwab® is a collection and transport system FDA cleared for aerobic, anaerobic and fastidious bacteria, maintaining viability for up to 48 hours at room or refrigerator temperature (*N. gonorrhoeae* survival 24 hours per CLSI standard).[4]

**Swabs**

Improved pathogen recovery for traditional bacteriology culture[5-7]

Swab samples are easily processed on automated specimen processors, and automatic pipettors minimizing manual handling and maximizing investment in automation

Homogeneous sample for more consistent and precise Gram stains[8]

Validated for molecular and rapid antigen testing on many manufacturers' platforms* [9-12]

* *Always read the manufacturer's package insert for specific instructions regarding specimen collection and transport for the type of test kit being used.*

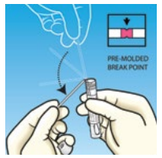
**Innovative ESwab® system elutes over 90% of patient specimen** into the Liquid Amies transport medium. Multiple investigations can be performed from the same sample:

- Multiple culture plates[9, 12-14]
- Automation[15]
- Gram stains[8]
- Rapid antigen tests* [9, 11, 12]
- Molecular testing* [9, 11, 12]

## ESwab® Collection - Quick Guide

### COLLECT

- Collect the patient sample using the swab. Avoid touching the swab applicator below the pink molded breakpoint.




### SNAP

- Remove cap and insert the swab to the bottom of the tube.
- Holding the tube away from face, grasp the end of swab shaft and bend to break at the pink breakpoint.
- Screw the cap on tightly to prevent leakage.


### SEND

- Identify tube with patient information and send to laboratory.

*Specimen collection should be performed by health care personnel who have completed training and demonstrated competency. Always read the manufacturer's package insert for specific instruction regarding specimen collection and transport for the type of test kit being used.*

# FecalSwab®

*Simplify and standardize fecal sample collection, transport and processing, converting fecal matter into liquid samples*

## Patented Sample Collection and Preservation System for Enteric Bacteria

FecalSwab™ is a collection and transport system FDA cleared for enteric pathogen recovery using traditional bacteriology culture.[16-17]

The system is also compatible with enteric molecular assays for bacteria, viruses and parasites where package inserts indicate Cary-Blair systems for sample collection.*[9, 11, 12]


***Stool***

** Always read the manufacturer's package insert for specific instructions regarding specimen collection and transport for the type of test kit being used.*

Smaller sample quantity, eliminating the need to vent container, preventing messy accidents during processing

Compact alternative for space efficient transport compared with traditional bulky fecal containers

Stool samples are easily processed on automated specimen processors, and automatic pipettors minimizing manual handling and mess and maximizing investment in automation

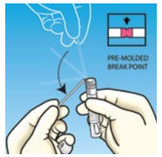
## FECALSWAB™ SYSTEM FOR RECTAL COLLECTION

Speed time to treatment by collecting a sample immediately, without having to wait for the patient to submit a fecal specimen [22-24]

Pediatric sample collection is simplified using the rectal swab rather than feces taken from diapers, which contain material that may cause interference in some tests[25]

Available with intuitive stopper anatomically designed to ensure the swab tip reaches the transition zone of the rectum for standardized rectal swab sample collection

# FecalSwab™ Collection - Quick Guide





### COLLECT

- Collect a small amount of sample by rotating swab tip to cover it with feces. Avoid touching the swab applicator below the pink molded breakpoint. Bloody, slimy or watery areas should be selected when present.

  *Rectal swab samples may also be used (refer to assay package insert and institution SOP).*

### SNAP

- Remove cap from the tube and insert the swab to the bottom of the tube.
- Mash and mix stool specimen against the side of the tube to disperse.
- Holding the tube away from face, grasp the end of swab shaft and bend to break at the pink breakpoint.
- Screw the cap on tightly to prevent leakage.

### SEND

- Identify tube with patient information and send to laboratory.

*Specimen collection should be performed by health care personnel who have completed training and demonstrated competency. Always read the manufacturer's package insert for specific instruction regarding specimen collection and transport for the type of test kit being used.*

# SnotBuster™

*Save cost and avoid reagent waste when liquifying sputum*

## Sputum Liquefying System

SnotBuster™ is a mucolytic agent validated for liquefying sputum samples prior to culturing for the isolation of bacteria and fungi, without affecting morphology, growth or microscopic staining, and appearance of pathogens.[26-29]

Easily transfer sputum samples using Copan invented Sputum Dipper™, a unique drill-shaped tool for managing challenging sputum samples.


***Sputum***

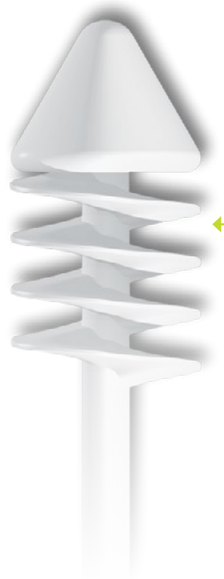
Sputum samples are easily managed on automated specimen processors, minimizing manual handling and maximizing investment in automation [27, 29]

Tubes of reagent are ready to mix with sputum sample with no need for re-hydration of powder or dilution of liquid concentrate [26]

SL Solution allows for easier more consistent and reproducible specimen planting and streaking [26,29]

Minimize reagent waste and save cost by avoiding large batch mixing

## UNIQUE SPUTUM DIPPER FOR SIMPLIFIED SAMPLE PROCESSING



Simplify handling of challenging sputum specimens using the efficient Sputum Dipper™ tool to transfer both fluid and viscous samples

## SnotBuster™ Processing - Quick Guide

### TRANSFER

- Transfer specimen from patient container by rotating the dipper to cover with sputum.

### SNAP

- Remove cap and insert the dipper to the bottom of the tube.
- Holding the tube away from face, grasp the dipper shaft to break at the breakpoint.
- Screw the cap on tightly to prevent leakage.

### PROCESS

- Vortex for 30 seconds and leave at ambient temperature for at least 15 minutes (not to exceed 6 hours).
- Mix by vortexing for an additional 3 seconds.

*Always read the manufacturer's package insert for specific instruction regarding specimen collection and transport for the type of test kit being used.*

UriSponge®

*For urine collection, transport and preservation*

## Seamless Integration for High-Volume Urine Processing

Copan's UriSponge® is an FDA-cleared, innovative urine specimen collection, transport, and preservation system designed to streamline laboratory workflow. By combining a user-friendly dip-and-close method with a unique boric acid-free preservative formulation, UriSponge® simplifies the collection process, and maintains specimen integrity minimizing risk of specimen rejection. The system preserves bacterial and yeast load for up to 48 hours at both room and refrigerated temperatures, supporting accurate detection and cultivation of uropathogenic organisms. Ideal for standard clinical laboratory procedures, UriSponge® offers a dependable solution for efficient specimen handling from collection to analysis.


***Urine***

Simply dip into the sample cup, close, and send for analysis.

Reduces expenses and waste by eliminating additional consumables and simplifying collection with a quick dip-and-close method —no need for transfer devices or mixing.

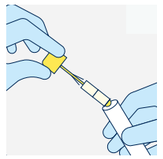
Maintains correct urine-to-preservative ratio, reducing bacterial overgrowth and minimizing specimen rejection.

Standardized tubes designed for automatic specimen processors.

### FOR URINE COLLECTION, TRANSPORT AND PRESERVATION

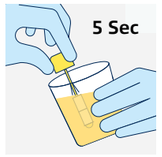
UriSponge® features a screw-cap tube with a plastic applicator and dual cylindrical sponges, simplifying urine collection. The sponges are loaded with preservatives, that upon contact with urine maintain sample stability throughout transport.


## UriSponge® Collection - Quick Guide



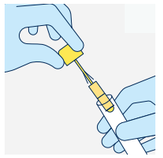
**PREPARE**

- Unscrew cap and remove UriSponge® applicator.




**COLLECT**

- Dip applicator sponge into the urine sample for 5 sec.



**PROCESS**

- Return applicator to tube, label and send to laboratory.

WASP®

*Liquid Based Microbiology Opens the Door*

# for Automated Specimen Processing




Converting Microbiology samples to a liquid format in standardized tubes allows laboratories to enjoy maximum utility from WASP® automated specimen processor.

## Full Laboratory Automation

**Copan's full laboratory automation line** is a modular, scalable, and customizable solution for automated specimen processing and full specimen management, automated incubation and Digital Microbiology

**CONTACT COPAN TODAY** to streamline and standardize your specimen collection and to learn more about automation in Clinical Microbiology.

# Ordering Information

**ESwab® combines a Copan invented flocked swab with 1 mL of Liquid Amies in a plastic Self standing tube. The innovative system elutes over 90% of patient specimen into the liquid medium.**

| Cat. No. | Product Description | Packaging |
|---|---|---|
| | **ESWAB® SINGLE SWAB KIT** | |
| **480C** | 12x80mm tube with white capture cap filled with 1mL Liquid Amies Transport Medium<br>+ **1 Regular Size Flocked Swab with 80mm Breakpoint** | 50/Pack;<br>10 Packs/Case |
| **481C** | 12x80mm tube with green capture cap filled with 1mL Liquid Amies Transport Medium<br>+ **1 Minitip Size Flocked Swab with 80mm Breakpoint** | 50/Pack;<br>10 Packs/Case |
| **482C** | 12x80mm tube with blue non-capture cap filled with 1mL Liquid Amies Transport Medium<br>+ **1 Flexible Minitip Size Flocked Swab with 100mm Breakpoint** | 50/Pack;<br>10 Packs/Case |

More configurations available. Please visit our website or contact your Copan representative for complete list.

**FecalSwab™ combines a Copan invented flocked swab with 2 mL of Cary-Blair medium in a plastic Self standing tube with orange capture cap.**

| Cat. No. | Product Description | Packaging |
|---|---|---|
| **4C024S** | 12x80mm tube filled with 2 mL Cary-Blair Medium<br>+ **1 Regular Size Nylon® Flocked Swab with 80 mm Breakpoint** | 50/Pack;<br>10 Packs/Case |
| **4C028S** | 12x80mm tube filled with 2 mL Cary-Blair Medium<br>+ **1 Regular Size Nylon® Flocked Swab with 80 mm Breakpoint and Swab Stopper** | 50/Pack;<br>10 Packs/Case |

**The SnotBuster™ (also known as SLSolution™) system combines the Copan invented Sputum Dipper™ with a ready to use mucolytic agent in a vacuum sealed plastic tube with capture cap.**

| Cat. No. | Product Description | Packaging |
|---|---|---|
| | **SNOTBUSTER™ KIT** | |
| **0U020N.A** | 1 mL SnotBuster™ (SLSolution™) in PET Tube<br>+ Sputum Dipper™ Transfer Device | 50/box,<br>300/case |
| | **SNOTBUSTER™ BULK MEDIA** | |
| **0U019N** | 1 mL SnotBuster™ (SLSolution™) in PET Tube | 50/box,<br>300/case |
| | **SNOTBUSTER™ BULK TRANSFER DEVICE** | |
| **2U063S01** | Sputum Dipper™ Transfer Device, Individually Packaged | 100/box,<br>1000/case |

**UriSponge® combines a user-friendly dip-and-close method with a unique boric acid-free preservative formulation. Its design simplifies the collection process and maintains specimen integrity minimizing risk of specimen rejection.**

| Cat. No. | Product Description | Packaging |
|---|---|---|
| **8U033S50** | UriSponge® in 12x80 mm tube | 300 pieces<br>(6 boxes of 50 pieces) |
| | UriSponge® in 16x100 mm tube<br>Coming Soon! | 300 pieces<br>(6 boxes of 50 pieces) |

**COPAN LIQUID BASED MICROBIOLOGY PRODUCTS** are sold through our valued distribution partners. Please contact your Copan representative or your preferred vendor for pricing and further ordering details.

## Scientific References


1 Copan Group. Data on file - Internal elution studies.

2 Fontana, C., Favaro, M., & Favalli, C. (2013). *How liquid-based microbiology can change the workflow in microbiology laboratories*. Advances in Microbiology, 3(6), 504-510. https://doi.org/10.4236/aim.2013.36067

3 Bjerre, R. D., Hugerth, L. W., et al. (2019). *Effects of sampling strategy and DNA extraction on human skin microbiome investigations*. Scientific Reports, 9, 17287. https://doi.org/10.1038/s41598-019-53599-z

4 Copan Diagnostics. (2023). Copan Liquid Amies Elution Swab (ESwab®) Collection and Transport System: Product insert & how-to-use guide (HPC030R05). Copan Diagnostics.

5 Van Horn, K. G., Audette, C. D., et al. (2008). *Comparison of 3 swab transport systems for direct release and recovery of aerobic and anaerobic bacteria*. Diagnostic Microbiology and Infectious Disease, 62(4), 455-461. https://doi.org/10.1016/j.diagmicrobio.2008.08.004

6 Tan, T. Y., Ng, L. S. Y., Sim, D. M. F., et al. (2014). *Evaluation of bacterial recovery and viability from three different swab transport systems*. Pathology, 46(3), 261-266. https://doi.org/10.1097/PAT.0000000000000074

7 Yarbrough, M. L., Warren, D. K., et al. (2018). *Multicenter evaluation of the Xpert MRSA NxG assay for detection of methicillin-resistant Staphylococcus aureus in nasal swabs*. Journal of Clinical Microbiology, 56(1), e01381-17. https://doi.org/10.1128/JCM.01381-17

8 Fontana, C., Favaro, M., Limongi, D., Pivonkova, J., & Favalli, C. (2009). *Comparison of the ESwab collection and transportation system to an Amies gel transystem for Gram stain of clinical specimens*. BMC Research Notes, 2, 244. https://doi.org/10.1186/1756-0500-2-244

9 Van, T. T., Cox, L. M., et al. (2017). *Prevalence of Fusobacterium necrophorum in children presenting with pharyngitis*. Journal of Clinical Microbiology, 55(4), 1147-1153. https://doi.org/10.1128/JCM.02174-16

10 Bjerre, R. D., Hugerth, L. W., et al. (2019). *Effects of sampling strategy and DNA extraction on human skin microbiome investigations*. Scientific Reports, 9(1), 17287. https://doi.org/10.1038/s41598-019-53599-z

11 Beck, E., Ross, P., et al. (2018). *Evaluation of three rapid molecular assays for the detection of Group A Streptococcus*. Open Forum Infectious Diseases, 5(Suppl 1), S679-S680. https://doi.org/10.1093/ofid/ofy210.1942

12 Van, T. T., Cox, L. M., et al. (2017). *Prevalence of Fusobacterium necrophorum in children presenting with pharyngitis*. Journal of Clinical Microbiology, 55(4), 1147-1153. https://doi.org/10.1128/JCM.02174-16

13. Cleveland Clinic Laboratories. (2024). *Microbiology specimen collection & transport guidelines*. Cleveland Clinic. Retrieved from https://clevelandcliniclabs.com/laboratory-resources/specimen-collection-transport/

14. Plapp, F. (2014). E Swab Collection System. ClinLab Navigator. https://www.clinlabnavigator.com/blog/e-swab-collection-system

15 Fontana, C., Favaro, M., & Favalli, C. (2013). *How liquid-based microbiology can change the workflow in microbiology laboratories*. Advances in Microbiology, 3(6), 504-510. https://doi.org/10.4236/aim.2013.36067

16 Copan Diagnostics. (2016). *Copan FecalSwab Collection, Transport, and Preservation System of Enteric Bacteria: Product insert & how-to-use guide* (HPC021B Rev. 02). Copan Diagnostics.

17 Massip, C., Guet-Revillet, H., Grare, M., Sommet, A., & Dubois, D. (2018). Enhanced culture recovery of *Campylobacter* with modified Cary-Blair medium: A practical field experience. *Journal of Microbiological Methods, 149*, 20–24. https://doi.org/10.1016/j.mimet.2018.05.001

18 Walker, C. R., et al. (2019). Evaluation of anatomically designed flocked rectal swabs for use with the BioFire FilmArray® gastrointestinal panel for detection of enteric pathogens in children admitted to hospital with severe gastroenteritis. Journal of Clinical Microbiology, 57(12), e00962-19. https://doi.org/10.1128/jcm.00962-19

19 Richard-Greenblatt, M., Rutherford, C., Luinstra, K., Cárdenas, A. M., Pang, X. L., Jayaratne, P., & Smieja, M. (2020). *Evaluation of the FecalSwab for stool specimen storage and molecular detection of enteropathogens on the BD Max system*. Journal of Clinical Microbiology, 58(9), e00178-20. https://doi.org/10.1128/JCM.00178-20 .

20 Rojas, H., Luinstra, K., Smieja, M., & Jayaratne, P. (2020). *FecalSwab with BD MAX Panels*. Diagnostic Microbiology and Infectious Disease, 97(1), 115055. https://doi.org/10.1016/j.diagmicrobio.2019.115055.

21 Silbert, S., Gostnell, A., Kubasek, C., & Widen, R. (2017). *Evaluation of the new FecalSwab system for maintaining stability of stool samples submitted for molecular tests*. Journal of Clinical Microbiology, 55(5), 1588-1590. https://doi.org/10.1128/JCM.00273-17

22 Chapin, K., & Leblanc, L. (2016). *Evaluation of two multiplex molecular gastrointestinal panels using rectal swab specimens versus Cary-Blair stool in pediatric patients with acute gastroenteritis*. Open Forum Infectious Diseases, 3(Suppl 1), 1214. https://doi.org/10.1093/ofid/ofx1214

23 Freedman, S. B., Xie, J., Nettel-Aguirre, A., Lee, B., Chui, L., Pang, X. L., et al. (2017). *Enteropathogen detection in children with diarrhoea or vomiting comparing rectal flocked swabs with stool specimens: An outpatient cohort study*. Lancet Gastroenterology & Hepatology, 2(9), 662-669. https://doi.org/10.1016/S2468-1253(17)30160-7

24 Jean, S., Yarbrough, M. L., Anderson, N. W., & Burnham, C.-A. D. (2019). *Culture of rectal swab specimens for enteric bacterial pathogens decreases time to test result while preserving assay sensitivity compared to bulk fecal specimens*. Journal of Clinical Microbiology, 57(6), e02077-18. https://doi.org/10.1128/JCM.02077-18

25 Rady Children's Hospital. (2024). *Stool test: Bacteria culture*. Rady Children's Hospital. https://www.rchsd.org/health-article/muestra-de-heces-cultivo-bacteriano

26 Copan Diagnostics. (2018). *SL Solution: Package insert and how-to-use guide* (HPC129 Rev. 00). Copan Diagnostics.

27 McCarter, Y. S., Reynolds, M., & Goglia, A. (2021). *Efficacy of a novel device using dithiothreitol in processing lower respiratory tract specimens for routine Gram stain and culture*. Poster presented at the American Society for Microbiology (ASM) Annual Meeting, Jacksonville, FL.

28 Young, C., Cullen, K., LeBar, W., & Newton, D. (2011). *Use of Copan SL solution for processing sputum from patients with and without cystic fibrosis*. Poster presented at the American Society for Microbiology (ASM) Annual Meeting, New Orleans, LA.

29 Silbert, S., Knight, S., Fenton, L., & Widen, R. (2012). *Evaluation of the Copan SL solution to improve sputum culture*. Poster presented at the American Society for Microbiology (ASM) Annual Meeting, San Francisco, CA.

innovating together


Code: LBM Brochure_04_2025

**CopanUSA.com** **800.216.4016** **@CopanUSA** **communications@copanusa.net** **/Copan.USA**

**Copan Diagnostics, Inc.**
26055 Jefferson Avenue | Murrieta, CA 92562 USA