



LBM™  
**Thiol Broth**

Package insert and How to use guide

## THIOL Broth - Product Package Leaflet and Use Instructions

### INTENDED USE

THIOL broth is an enrichment medium which facilitates the growth of facultative and obligate aerobic and anaerobic microorganisms. COPAN Thiol Broth is used for the enrichment of anaerobic bacteria isolated from cultures of clinical samples. THIOL Broth can be used with automatic plate culture systems (Copan WASP™ or Copan WASPLab™).

### SUMMARY

THIOL broth is an enrichment medium consisting of dextrose, peptone and L-cystine solution and yeast extract, which provide the essential growth factors for bacterial reproduction.

The essential ions are provided by sodium chloride. Sodium thioglycollate and L-cystine act as reducing agents, which contribute to maintaining a low redox potential, supporting anaerobiosis.

Thiol broth also contains growth supplements such as Hemin and Vitamin K1 which facilitate the reproduction of some particularly demanding anaerobic bacterial strains.

### REAGENTS

Components of THIOL Broth:

Names of components
L-cystine
Sodium chloride
Glucose
Yeast extract
Pancreatic digest of casein
Sodium thioglycollate
Hemin
Vitamin K1
Distilled water

### STORAGE

Thiol Broth is a ready-made product and no additional preparation operations are required. The batch packed in its original package can be kept at 5-25°C until it is used or until the expiry date indicated on the tube and on the box. Do not overheat. Do not incubate or freeze before use. Inappropriate storage may cause a loss of product effectiveness.

### PRODUCT DETERIORATION

Do not use THIOL Broth if: (1) the product shows visible signs of damage or contamination; (2) there are indications of leakages from the tube; (3) it is past its expiry date; (4) there are other visible deterioration signs.

### SUPPLIED MATERIALS

Code	Product Description	Package Dimensions	Suitable for automation
4U002N	12x80 mm PET test tubes with PE perforated screw cap. One test tube contains 4 ml of THIOL Broth.	50 units per internal package. 50x6 units per box.	YES

### MATERIALS REQUIRED BUT NOT SUPPLIED

Appropriate materials for culture and isolation of bacteria; refer to laboratory reference manuals for the protocols recommended for the culture and identification techniques.

### INSTRUCTIONS FOR USE

For specific guidelines on sampling procedures, consult the reference manuals published. The Copan eSwab system can be used as a system for sampling, transport and preservation of the clinical sample. Refer to Copan for information on the most appropriate code, and refer to the product package leaflet for use instructions.

## USER INSTRUCTIONS MANUAL OPERATIONS

1. Unscrew the THIOLO broth tube cap.
2. Inoculate the sample into the open tube.  
For liquid samples, use a 10 µl loop or micropipette to transfer the sample to the tube.  
For samples in eSwab:
  - a) Homogenize the tube for 10 sec with vortex at 2000/2500 RPM, unscrew the eSwab tube cap, immerse the swab in the Thiol Broth medium and shake vigorously for 5/10 seconds to release the sample into the enrichment medium, dispose of the swab and re-close the Thiol Broth tube.
  - b) Using a micropipette, transfer 30 µl of liquid Amies medium directly into the THIOLO Broth. Fit the caps on the eSwab and Thiol Broth tubes.
3. Homogenize for 5-10 seconds at 2000/2500 rpm by a vortex.
4. Incubate the inoculated THIOLO Broth tubes at 35°C ± 2°C.
5. Examine the THIOLO Broth tube after 24-48 hours. The tube must be checked daily. Absence of turbidity in the tube does not indicate absence of the microbe growth.
6. Proceed with surface culture on appropriate medium in a plate. Surface culture on plate can be performed through surface culture of a sample portion taken by a micropipette or a loop, followed by distribution on plate. The minimum recommended quantity for surface culture in a plate after incubation of the Thiol Broth tube is 1-10 ul. Incubate the plates for 24-96 hours at 35°C ± 2°C in appropriate anaerobiosis conditions, or according to standard laboratory procedure.
7. At the end of incubation, proceed with plate reading.
8. You are advised to plate the inoculated Thiol Broth sample daily.
9. You are advised to check growth in the plate daily.

## OPERATIONS WITH AUTOMATIC SYSTEM (WASP™)

Thiol Broth can be used on automatic culture systems like COPAN WASP™. For correct use, see the WASP™/WASPLab™ instruction manual.

## LIMITATIONS

1. Some difficult samples with specific requirements may not grow in this medium.
2. The conditions and the volume of the sample collected for culture are significant variables for obtaining reliable culture results.
3. An appropriate sample collection from patients is an extremely critical factor for isolation and identification of the bacterial strains of interest.
4. Absence of turbidity in the Thiol Broth tube is not indicative of a negative result.
5. Check the tube daily until the end of incubation.
6. You are advised to plate both after incubation of 24 hours and after incubation of 48 hours in an appropriate growth medium.
7. Maintain the Thiol Broth tube in incubation for a maximum of 96 hours at 35°C ± 2°C.

## NOTICES

1. For diagnostic use in vitro.
2. Ⓜ This product is designed for single use; reuse may lead to unreliable results.
3. Not appropriate for any application other than its intended use.
4. Follow the recommended guidelines for collection of the samples.
5. Work in a laminar flow cabinet after inoculation of the product, wear gloves and other protections in line with universally recognized precautions for handling of clinical samples.
6. The use of this product with any diagnostic test or with any diagnostic tool shall be assessed and if necessary validated by the user before use.
7. Do not use the product if it is visibly damaged.
8. Do not ingest.
9. Do not inhale.
10. Do not inject.
11. The manufacturer shall not be considered liable for any inappropriate or non-qualified use of the product.
12. All clinical samples are considered potentially infective and shall be handled with appropriate precautions.
13. The THIOLO Broth shall only be used for in vitro diagnostics. Its use for therapeutic or prevention purposes is not allowed under any circumstances.
14. Take appropriate precautions against biological hazards and apply aseptic techniques. The product may only be used by properly trained and qualified operators.
15. The instructions must be read and observed carefully.
16. Do not keep the tube in anaerobiosis conditions during incubation.
17. Do not place in an autoclave.
18. Do not filter.

## WASTE DISPOSAL

Unused reagents can be considered as non-hazardous waste and disposed of accordingly. For disposal, refer to the product MSDS.

Used reagents and any other contaminated waste material shall be disposed of according to the procedures established for infected or potentially infected products. The laboratory shall be responsible for managing waste materials by treatment and disposal, as established in all applicable regulations.

## QUALITY CONTROL PROCEDURE

### PERFORMANCE TEST

- > From a fresh culture, prepare a 0.5 McFarland suspension in PBS of every ATCC organism.



- > Inoculate with 400 µl of the dilution in PBS directly in THIOI broth.
- > Put the caps back on the tubes.
- > Homogenize for 10 seconds at 2000/2500 RPM with vortex.
- > For the control at zero time, seed 100 µl of the bacterial suspension on nutrient medium (e.g. blood agar plate) and incubate in appropriate growth conditions.
- > Incubate THIOI broth tube at 35°C ± 2°C for 24-48 hours.
- > After incubation, seed 100 µl THIOI broth on appropriate nutrient medium (e.g. blood agar plate).
- > Incubate the plates at 35°C ± 2°C for 24-48 hours in appropriate growth conditions.

LIMITS OF ACCEPTABILITY: Time zero: CFU counting 30-300 CFU/100 µl  
Time 24-48 h: growth

**RESULTS**

STRAIN	ZERO DEAD TIME COUNTING: CFU/PLATE	CFU COUNTING AFTER 18-24 HOURS AT 35°C±2°C; CFU/PLATE
Peptostreptococcus anaerobius ATCC 27337*	216	GROWTH
Bacteroides Vulgatus ATCC 8482*	198	GROWTH
Clostridium Perfringens ATCC 13124*	134	GROWTH
Prevotella Melaninogenica ATCC 25845	121	GROWTH
Propionibacterium acnes ATCC 6919	166	GROWTH
Bacteroides fragilis ATCC 25285	200	GROWTH
Staphylococcus aureus ATCC 25923	210	GROWTH

The results obtained and presented are representative of the values obtained during general evaluation of the product.  
The results obtained and presented are representative of tests performed at the COPAN laboratory with ATCC strains.  
The results obtained and presented were NOT obtained using clinical samples.

\* Bacterial performance tests conducted using strains established by the CLSI-M22-A3 reference standard, specific for quality control of enrichment mediums for the growth of anaerobic bacteria.



## THIOL Broth - Notice du produit & guide d'utilisation

### UTILISATION ENVISAGÉE

Le THIOL Broth est un milieu d'enrichissement qui favorise la croissance de microorganismes aérobie et anaérobie facultatifs et obligatoires. Le COPAN THIOL Broth est utilisé pour l'enrichissement de bactéries anaérobies isolées de cultures d'échantillons cliniques.

Le THIOL Broth peut être utilisé avec les systèmes automatiques pour l'ensemencement sur plaque (Copan WASP™ ou Copan WASPLab™).

### SOMMAIRE

Le THIOL Broth est un milieu d'enrichissement composé par du dextrose, peptone et L-cystina et extrait de levain qui fournissent les facteurs de croissance essentiels pour la reproduction bactérienne.

Les ions essentiels sont fournis par le chlorure de sodium. Le thioglycolate de sodium et L-cystina agissent comme des agents réducteurs qui contribuent à maintenir un potentiel redox bas en supportant l'anaérobie.

Le THIOL Broth est additionné de suppléments de croissance comme Hémine et Vitamine K1 qui favorisent la reproduction de certaines souches bactériennes anaérobies particulièrement exigeantes.

### RÉACTIFS

Composants du bouillon THIOL Broth:

Nom des composants
L-cystina
Chlorure de sodium
Glucose
Extrait de levain
Peptone pancréatique de caséine
Thioglycolate de sodium
Hémine
Vitamine K1
Eau distillée

### STOCKAGE

Le Thiol Broth est un produit prêt à l'emploi et ne requiert pas d'autres préparations. Le produit dans son emballage d'origine peut être conservé à 5—25°C jusqu'au moment de l'utilisation ou la date d'échéance. Ne pas surchauffer. Ne pas incuber ou congeler avant l'emploi. Un stockage inapproprié du produit diminue son efficacité.

### DÉTÉRIORATION DU PRODUIT

Ne pas utiliser le THIOL Broth si (1) le produit présente des signes visibles d'endommagement ou de contamination ; (2) le produit présente des signes visibles de fuites du tube, (3) la date d'échéance est échuë, (4) en présence d'autres signes de détérioration visibles.

### MATÉRIELS FOURNIS

Code	Product Description	Package Dimensions	Suitable for automation
4U002N	Tubes en PET dimensions 12X80 mm avec bouchon à vis percé en PE. Un tube contient 4ml de THIOL Broth.	50 unités par boîte. 50X6 unités par emballage externe	OUI

### MATÉRIELS NÉCESSAIRES NON COMPRIS DANS LE KIT

Le kit ne comprend pas les matériels pour l'isolation et la culture des bactéries. Pour les protocoles relatifs aux techniques de culture et d'identification des bactéries, se reporter aux manuels de laboratoire.

### INSTRUCTIONS D'EMPLOI

Pour avoir des instructions plus détaillées sur les procédures de collecte, consulter les manuels de référence publiés à ce sujet

Le système Copan Swab peut être utilisé comme système de prélèvement, transport et conservation de l'échantillon clinique. Demander le code le plus approprié à Copan et se reporter au document d'illustration pour les instructions d'emploi.

### INSTRUCTIONS D'EMPLOI OPÉRATIONS MANUELLES

1. Dévisser le bouchon du tube de THIOL broth.