SNAPSHOOT
ENGINEERED FOR A SAFER TOMORROW

현장을 이해하고, 필요한 솔루션을 연결합니다.

산업안전 · 추락방지 시스템
산업용 소재 · 건축자재
제품 제안부터 공급·시공·설치·교육까지



COMPANY INFORMATION

스냅슛 (SNAPSHOOT)

ADDRESS (15431) 경기도 안산시 단원구 풍전로 37-9 트리플렉스 301동 118호
TEL 0507-1374-9229
FAX 0504-481-6749
E-MAIL bkkim@snapshoot.co.kr

TECHNICAL DOCUMENTS

인증서 · 데이터시트 · 기술자료

제품의 규격과 성능, 인증 및 적용 조건을 확인하기 위한 자료입니다.

ABOUT SNAPSHOOT

제품 공급을 넘어, 현장에 맞는 해결책으로

스냅슛은 산업현장의 작업 환경과 요구 조건을 바탕으로
적합한 제품과 시스템을 제안합니다. 현장 실사를 통해 설치 조건을 확인하고,
공급부터 시공·설치 및 사용 교육까지 필요한 과정을 함께합니다.

추락방지 시스템

안전대부착설비 · 수평·수직 라이프라인
레일 시스템 · 리지드 포스트

밀폐공간 진입·구조 솔루션

데빗암 · 삼각대 · 구조용 윈치
윈치 안전블록 · 구조장비

산업안전 보호구

전신형 안전대 · 랜야드 · 안전블록
작업 환경에 맞춘 개인보호구

산업용 소재·건축자재

산업용 테이프 · 접착제 · 기능성 소재
구조용 스크류 · 목조건축 자재

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홈페이지 바로가기 →
문서 라이브러리 바로가기 →
시공사례 바로가기 →
문의하기 →

본 페이지는 스냅슛의 자료 제공 안내용 표지입니다. 첨부된 인증서 및 기술자료의 발행 주체, 인증 대상과 적용 범위는 해당 원문을 기준으로 확인해 주세요.

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Minerals Modified Glutamate Agar (MMGA) (NCM0179)
Sodium Glutamate (NCM0181) & Ammonium Chloride (NCM0178)

Intended Use
Minerals Modified Glutamate Agar is used as a resuscitation medium for the enumeration of β-glucuronidase-positive *Escherichia coli*, and is not intended for use in the diagnosis of disease or other conditions in humans.

Description
MMGA is a highly defined medium recommended in ISO 16649-1:2018, containing various amino acids, vitamins and salts formulated to promote the recovery of stressed or damaged organisms. According to ISO 16649-1 organisms are inoculated onto a cellulose membrane overlaid on MMGA for a resuscitation stage, followed by transfer of the membrane onto Tryptone Bile Glucuronide Agar (TBX) for isolation and counting. This medium conforms to the formulation requirements of ISO 16649-1:2018.

Typical Formulation

Lactose	10.0 g/L
Sodium Formate	0.25 g/L
L-(-)-Cystine	0.02 g/L
L-(-)-Aspartic Acid	0.024 g/L
L-(+)-Arginine	0.02 g/L
Thiamine	0.001 g/L
Nicotinic Acid	0.001 g/L
Pantothenic Acid	0.001 g/L
Magnesium Sulfate Heptahydrate	0.1 g/L
Ferric Ammonium Citrate	0.01 g/L
Calcium Chloride Dihydrate	0.01 g/L
Dipotassium Hydrogen Phosphate	0.9 g/L
Agar	12.25 g/L

NCM0181

Sodium Glutamate	6.35 g/L

NCM0178

Ammonium Chloride	2.5 g/L

Final pH: 6.7 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution
1. Refer to SDS

Preparation
1. Suspend 23.5 grams of base medium together with 6.35 grams of sodium glutamate (NCM0181) in one liter of purified water containing 2.5 grams of ammonium chloride (NCM0178).
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

620 Lesher Place • Lansing, MI 48912
800-234-5333 (USA/Canada) • 517-372-9200
foodsafety@neogen.com • foodsafety.neogen.com

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Test Procedure - According to ISO 16649-1:2018

Resuscitation (MMGA):

Sterile forceps are used to aseptically place a cellulose membrane (0.45-1.20µm pore size and 85mm diameter) onto each of two plates of MMGA. Care should be taken to avoid trapping air beneath the membrane. 1mL of the test sample is placed on each of the center of the membranes and spread evenly using a sterile spreader, taking care to avoid spillage beyond the edge of the membrane. Plates should be left at room temperature in a horizontal position for 15 minutes to completely absorb the inoculum. Plates are incubated upright 37°C for 4 hours ± 1 hour.

Repeat the procedure with further decimal dilutions as required.

Transfer to selective medium (TBX):

After resuscitation sterile forceps are used to transfer membranes from MMGA to TBX medium (NCM1001). Avoid trapping air bubbles and do not use a spreader. Plates are incubated upright 44°C for 18-24 hours. Do not stack agar plates more than three high.

Quality Control Specifications

Dehydrated Appearance (NCM0179): Powder is homogeneous, free flowing and buff

Prepared Appearance: Complete prepared medium is pale straw gel, clear with or without precipitate.

Minimum QC:

Escherichia coli WDCM 00012	Recovery >70%
Escherichia coli WDCM 00013	Recovery >70%
Escherichia coli WDCM 00202	Recovery >70%

Results

All colonies exhibiting a blue/green color are counted as β-glucuronidase positive *Escherichia coli*.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedures

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. ISO 16649-1:2018 – Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of β-glucuronidase-positive *Escherichia coli* – Part 1: Colony-count technique at 44°C using membranes and 5-bromo-4-chloro-3indolyl β-D-glucuronide.

NEOGEN
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foodsafety@neogen.com • foodsafety.neogen.com