

Glucose Yeast Extract Agar

Medium for detection, cultivation and enumeration of spore-forming organisms.

TYPICAL FORMULA	(g/l)
Casein Acid Hydrolysate	1.0
Soluble Starch	1.0
Glucose	2.5
Yeast Extract	5.0
Ferrous Sulphate (FeSO ₄)	0.1
Manganese Sulphate Hydrated (MnSO ₄ H ₂ O)	0.0001
Agar	15.0
Final pH 6.8 ± 0.2	

DESCRIPTION

Glucose Yeast Extract Agar (GYEA) is a medium used for the identification of mesophilic and thermophilic aerobic bacteria in food and other materials by promoting sporulation.

This medium complies with the recommendations of UNE-EN-13704 standard for the evaluation of sporicidal activity of chemical disinfectants.

PRINCIPLE

Casein acid hydrolysate provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Starch aids in the recovery of injured cells. Glucose is the fermentable carbohydrate. Yeast extract is a source of vitamins, particularly of B-group. Iron and manganese sulphates enhance sporulation in *Bacillus* species.

PREPARATION

Melt the content of the tube in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the tube upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into a Petri dish.

TECHNIQUE

Inoculate GYEA with the sample or spore suspension.

Thermophilic bacteria such as *B. stearothermophilus* are capable of growth at 55-65°C while an incubation temperature of 30-35°C is favorable for culture and sporulation of mesophilic spore formers.

When other media are used for primary isolation and sporulation is not evident, the isolates can be subcultured on GYEA at the temperature of initial isolation. After incubation for up to 10 days, if spore production has taken place, the spores are heat shocked to destroy all vegetative cells and cultured on GYEA at both 30-35°C and 55°C.

INTERPRETATION OF RESULTS

Examine for growth and spore formation.

The temperature at which outgrowth occurs from the spore state indicates whether the isolate is an obligate mesophile (growth at 30 to 35°C), an obligate thermophile (growth at 55°C) or a facultative thermophile (growth at 30 to 35°C and at 55°C).

STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

1. García-de-Lomas J. et al. (2008) Evaluation of the in-vitro cidal activity and toxicity of a novel peroxygen biocide: 2-butanone peroxide. J Hosp Infect; 68(3):248-54.
2. UNE-EN-1276 (1997) Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic, and institutional areas. Test methods and requirements (phase 2, step 1). Bruxelles: European Committee for Standardization.
3. Maunder D. T. (1970) Examination of canned foods for microbial spoilage. Microbiology, Metal Div. R. and D, Continental Can Co., Inc., Oak Brook, Ill.



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PRODUCT SPECIFICATIONS

NAME

Glucose Yeast Extract Agar (GYEA)

PRESENTATION

Glass tubes containing 20 ml of medium

STORAGE

10-25°C

PACKAGING

Ref.	Content	Packaging
26473	100 x 20 ml tubes	100 tubes in cardboard box

pH OF THE MEDIUM

6.8 ± 0.2

USE

Glucose Yeast Extract Agar (GYEA) is a medium used for the cultivation of spore-forming organisms and differentiation of mesophilic from thermophilic spoilage bacteria

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Appearance: clear to slightly opalescent

Colour: light amber

SHELF LIFE

2 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
7 days at 22 ± 2°C, in aerobiosis
7 days at 35 ± 2°C, in aerobiosis
- Microbiological control
Inoculum for productivity: 50-100 CFU
Incubation Conditions: 30-35°C/55°C for up to 5 days

Microorganism

Bacillus subtilis

ATCC® 6633

Growth










Good

Bacillus stearothermophilus

ATCC® 7953

Good

TABLE OF SYMBOLS

 LOT	Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 REF	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instruction for use	



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