

## TM 466 – TRYPTONE GLUCOSE YEAST EXTRACT AGAR

### INTENDED USE

For enumeration of bacteria in water, air, milk and dairy products.

### PRODUCT SUMMARY AND EXPLANATION

Tryptone Glucose Yeast Extract Agar was originally developed by Bowers and Hucker which they called as Tryptone Glucose Skim Milk Agar. Later on it was modified to the present composition for the cultivation and enumeration of bacteria in air, water, milk and dairy products. Various authors have studied different aspects of this medium like study of thermophilic bacteria in milk, influence of incubation temperature etc. It is used as a standard medium for the bacteriological plate count of milk and dairy products.

### COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.000
Yeast extract	3.000
Glucose	1.000
Agar	15.000

### PRINCIPLE

Tryptone, yeast extract provide nitrogenous and carbonaceous compounds, long chain amino acids, vitamin B complex and other essential growth nutrients. Glucose is the energy source. For the enumeration purposes, pour plate method is suggested. Medium must be quickly poured into Petri dishes if milk sample is to be tested, because the milk may get flocculated if the medium remains hot for longer period of time.

### INSTRUCTION FOR USE

- Dissolve 24 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

<b>Appearance of Powder</b>	: Cream to yellow homogeneous free flowing powder.
<b>Appearance of prepared medium</b>	: Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
<b>pH (at 25°C)</b>	: 7.0±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Bacillus subtilis</i> subsp. <i>spizizenii</i>	6633	50-100	Good-luxuriant	≥50%	35-37°C	18-48 Hours



<i>Klebsiella aerogenes</i>	13048	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
<i>Escherichia coli</i>	25922	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
<i>Lactobacillus casei</i>	9595	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours
<i>Staphylococcus aureus subsp.aureus</i>	25923	50-100	Good-luxuriant	>=50%	35-37°C	18-48 Hours

#### PACKAGING:

In pack size of 100 gm and 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

#### DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

#### REFERENCES

1. Abele C. A., Am. J. Pub. Health, 1939, 29: 821.
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Bowers and Hucker, 1935, Tech. Bull., 228, N.Y.State Agr. Expt. Station.
4. Dennis and Weiser, 1937, J.Dairy Science, 20 : 445.
5. Pickett, 1928, Tech. Bull. 147, N.Y. State Agr. Expt. Station
6. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.



 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
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