



## YEAST EXTRACT AGAR (7707)

### Intended Use

**Yeast Extract Agar** is used for the enumeration of microorganisms in potable and freshwater samples.

### Product Summary and Explanation

In nature, all water contains some impurities. As water flows in streams, sits in lakes, and filters through layers of soil and rock in the ground, it dissolves or absorbs the substances that it touches. Microbial pathogens are often found in water frequently as a result of fecal matter from sewage discharges, leaking septic tanks, or runoff from animal feedlots.<sup>1</sup> Yeast Extract Agar is a rich, nutritious medium for the recovery of a wide range of bacteria, yeast, and molds. The combination of media ingredients and the appropriate incubation temperature of 36°C and 22°C allow the detection of a large number of microbial contaminants.

Yeast Extract Agar complies with the recommendation of ISO 6222<sup>2</sup> and the Swedish Standard SS 028171.

### Principles of the Procedure

Yeast Extract and Peptone provide sources of nitrogen, amino acids, essential vitamins, and carbon required for organism growth. Agar is the solidifying agent.

### Formula / Liter

Yeast Extract ..... 3 g  
Peptone..... 5 g  
Agar ..... 15 g

Final pH: 7.2 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precautions

1. For Laboratory Use.

### Directions

1. Dissolve 23 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.

### Quality Control Specifications

**Dehydrated Appearance:** Powder is homogeneous, free flowing, and light to medium beige.

**Prepared Appearance:** Prepared medium is trace to slightly hazy and light beige.

**Expected Cultural Response:** Cultural response on Yeast Extract Agar were inoculated by the pour plate method and incubated aerobically at 37°C and 22°C. The cultures were examined for growth at 24 hours and 72 hours, respectively.

Microorganism	Expected Results 24 hours at 37°C
<i>Escherichia coli</i> ATCC® 25922	growth

Microorganism	Expected Results 72 hours at 20 - 22°C
<i>Escherichia coli</i> ATCC® 25922	growth

The organisms listed are the minimum that should be used for quality control testing.

## **Test Procedure**

### **Pour Plate Method**

1. Prepare Yeast Extract Agar.
2. Add 1 mL of the sample into a sterile Petri dish.
3. Pour 15 – 20 mL of the molten agar, at 45°C, into the Petri dish containing the sample.
4. Gently swirl Petri dish to mix evenly.
5. Incubate at 37°C and 20 - 22°C for the appropriate incubation time.

## **Results**

Count colonies per plate for each incubation temperature. The results are counted as quantity / mL.

## **Storage**

Store sealed bottle containing the dehydrated medium at 2 - 30°C. 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.

## **Expiration**

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

## **Limitations of the Procedure**

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

## **Packaging**

<b>Yeast Extract Agar</b>	<b>Code No.</b>	<b>7707A</b>	<b>500 g</b>
		<b>7707B</b>	<b>2 kg</b>
		<b>7707C</b>	<b>10 kg</b>

## **References**

1. <http://www.epa.gov/safewater/dwh/contams.html>
2. **International Organization for Standardization:** 1999. Water Quality – Enumeration of culturable microorganisms – Colony count by inoculation in a nutrient agar culture medium. International Standard IS: 6222.

## **Technical Information**

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.