



## LURIA AGAR BASE, MILLER (7212)

### **Intended Use**

**Luria Agar Base, Miller** is used for the maintenance and propagation of microorganisms in molecular microbiology procedures.

### **Product Summary and Explanation**

Luria Agar Base, Miller is a nutritionally rich medium developed for growth and maintenance of pure cultures of recombinant strains. Luria Agar Base, Miller is based on the Luria Agar formula developed by Miller.<sup>1</sup> This medium was originally developed for the growth and maintenance of *E. coli* strains used in molecular studies.

*E. coli* is grown to late log phase in LB Medium. Some plasmid vectors replicate to high copy numbers and do not require selective amplification, while some vectors do not replicate so freely and need to be selectively amplified. Chloramphenicol may be added to inhibit host synthesis and prevent replication of the bacterial chromosome.<sup>2</sup>

Luria Agar Base, Miller contains one-tenth and one-twentieth the sodium chloride level of the LB Agar, Lennox and LB Agar, Miller formulations.<sup>1,2,3</sup> Varying sodium chloride concentrations permits the researcher to select the preferred salt concentration for specific strains. Luria Agar Base, Miller may be aseptically supplemented with glucose.

### **Principles of the Procedure**

The nitrogen, amino acids, and carbon sources are provided by Enzymatic Digest of Casein. Vitamins and certain trace elements are contained in Yeast Extract. Sodium ions for transport and osmotic balance are provided by Sodium Chloride. Agar is the solidifying agent.

### **Formula / Liter**

Enzymatic Digest of Casein.....	10 g
Yeast Extract .....	5 g
Sodium Chloride .....	0.5 g
Agar .....	15 g

Final pH: 7.0 ± 0.2 at 25°C

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

### **Precautions**

1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

### **Directions**

1. Suspend 30.5 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 beige.

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

**Expected Cultural Response:** Cultural response on Luria Agar Base, Miller at 35 ± 2°C and examined for growth after 18 – 24 hours incubation.

Microorganism	Response
<i>Escherichia coli</i> ATCC® 33526	good to excellent growth

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

### **Test Procedure**

Consult appropriate references for recommended test procedures.<sup>1,2</sup>

### **Results**

After sufficient incubation, the medium should show growth as evidenced by formation of isolated colonies and/or a confluent lawn of growth on the surface of the agar.

### **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.

### **Limitation of the Procedure**

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

### **Packaging**

<b>Luria Agar Base, Miller</b>	<b>Code No.</b>	<b>7212A</b>	<b>500 g</b>
		<b>7212B</b>	<b>2 kg</b>
		<b>7212C</b>	<b>10 kg</b>

### **References**

1. **Miller, J. H.** 1972. Experiments in molecular genetics. Cold Spring Harbor Laboratory. Cold Spring Harbor, New York.
2. **Sambrook J., E. F. Fritsch, and T. Maniatis.** 1989. Molecular cloning: a laboratory manual, 2<sup>nd</sup> ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.
3. **Lennox, E. S.** 1955. Transduction of linked genetic characters of the host by bacteriophage P1. Virology. **1**:190.

### **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.