

# Synthetic Broth AOAC

## Intended Use

Synthetic Broth AOAC is used for maintaining disinfectant test cultures.

## Summary and Explanation

Synthetic Broth AOAC is a chemically defined broth recommended by AOAC International (AOAC).<sup>1</sup> It contains all the nutrients essential for growth of the test cultures used in determining the phenol coefficients of disinfectants.

## Principles of the Procedure

The chemically-defined ingredients in Synthetic Broth AOAC provide nitrogen, carbon, vitamins and minerals required for bacterial growth.

## Formula

### Difco™ Synthetic Broth AOAC

Approximate Formula\* Per Liter

L-Cystine.....	0.05 g
DL-Methionine.....	0.37 g
L-Arginine Hydrochloride.....	0.4 g
DL-Histidine Hydrochloride.....	0.3 g
L-Lysine Hydrochloride.....	0.85 g
L-Tyrosine.....	0.21 g
DL-Threonine.....	0.5 g
DL-Valine.....	1.0 g
L-Leucine.....	0.8 g
DL-Isoleucine.....	0.44 g
Glycine.....	0.06 g
DL-Serine.....	0.61 g
DL-Alanine.....	0.43 g
L-Glutamic Acid Hydrochloride.....	1.3 g
L-Aspartic Acid.....	0.45 g
DL-Phenylalanine.....	0.26 g
DL-Tryptophan.....	0.05 g
L-Proline.....	0.05 g
Sodium Chloride.....	3.0 g
Potassium Chloride.....	0.2 g
Magnesium Sulfate (anhydrous).....	0.05 g
Monopotassium Phosphate.....	1.5 g
Disodium Phosphate.....	4.0 g
Thiamine Hydrochloride.....	0.01 g
Nicotinamide.....	0.01 g

\*Adjusted and/or supplemented as required to meet performance criteria.

## Directions for Preparation from Dehydrated Product

1. Suspend 17 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1-2 minutes to completely dissolve the powder.
3. Dispense 10 mL amounts into 20 × 150 mm culture tubes.
4. Autoclave at 121°C for 20 minutes.
5. Before inoculating, aseptically add 0.1 mL sterile 10% dextrose solution per tube.
6. Test samples of the finished product for performance using stable, typical control cultures.

## User Quality Control

### Identity Specifications

#### Difco™ Synthetic Broth AOAC

Dehydrated Appearance: White, homogeneous, free-flowing.

Solution: 1.7% solution, soluble in purified water upon boiling. Solution is colorless and clear.

Prepared Appearance: Colorless, clear.

Reaction of 1.7%

Solution at 25°C: pH 7.1 ± 0.1

### Cultural Response

#### Difco™ Synthetic Broth AOAC

Prepare the medium per label directions (with 0.1 mL 10% dextrose added per tube). Inoculate and incubate the tubes at 35 ± 2°C for 48 ± 2 hours.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Salmonella enterica</i> subsp. <i>enterica</i> serotype Choleraesuis	10708	~10 <sup>2</sup>	Good

## Procedure

See the reference for specific procedures.<sup>1</sup>

## Expected Results

Refer to the reference and procedures for results.<sup>1</sup>

## Reference

1. Horwitz (ed.). 2007. Official methods of analysis of AOAC International, 18th ed., online. AOAC International, Gaithersburg, Md.

## Availability

### Difco™ Synthetic Broth AOAC

**AOAC**

Cat. No. 235220 Dehydrated – 500 g