

Product Information

P6851 Pantothenate Assay Medium

Pantothenate Assay Medium is recommended for the microbiological assay of pantothenic acid or its salts using *Lactobacillus plantarum* ATCC 8014.

Composition:

Ingredients	Grams/Litre
Casein Acid Hydrolysate	10.0
Dextrose	40.0
Sodium Acetate	20.0
L-Cystine	0.4
DL-Tryptophan	0.2
Adenine Sulfate	0.02
Guanine Hydrochloride	0.02
Uracil	0.02
Thiamine Hydrochloride	0.0002
Riboflavin	0.0004
Niacin	0.001
Pyridoxine	0.0008
p-Aminobenzoic Acid	0.0002
Biotin	0.0000008
Monopotassium Phosphate	1.0
Dipotassium Phosphate	1.0
Magnesium Sulfate	0.4
Sodium Chloride	0.02
Ferrous Sulfate	0.02
Manganese Sulfate	0.02
Final pH 6.8 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder in a dry place in tightly-sealed containers at 4°C.

Appearance: Light yellow colored, homogenous, free flowing powder.

Color and Clarity: Light yellow colored, clear solution which may have a slight precipitate.

Directions:

Suspend 7.31 g of Pantothenate Assay Medium in 100 ml of distilled water. Boil to dissolve the medium completely. Mix well to distribute the slight precipitate evenly. Dispense 5 ml amounts into each assay tube and add increasing amounts of standard or test sample. Adjust the total volume in each tube to 10 ml with distilled water. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 10 minutes. Cool the medium immediately. Satisfactory results are obtained with a standard curve consisting of 25, 50, 75, 100, 125, 150, and 200 ng of calcium pantothenate (Fluka 21210) per tube.

Principle and Interpretation:

The medium contains amino acids, carbohydrates, purine, pyrimidine bases, salts and vitamins, but not pantothenic acid. Since the pantothenate is required for the growth of *Lactobacillus plantarum*, growth of the microorganism will not occur unless pantothenate is present in the testing compounds.

Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth
<i>Lactobacillus plantarum</i> (8014)	Increase in growth with increasing concentrations of calcium pantothenate (0, 25, 50, 75, 125, 150, 200, 250 ng/tube (10 ml); turbidimetric readings at 620 nm).

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References:

1. U.S. Pharmacopeia, National Formulary, (1995). XXIII/NFXVII. U.S. Pharmacopeial Convention. Rockville, Maryland.
2. Official Methods of Analysis of AOAC, (1970). 11th, Edition. AOAC International. Virginia, U.S.A.
3. American Type Culture Collection, Manassas, Va., U.S.A