



Product Information Sheet

M5516 mD5A Medium

Synonyms: Modified D-5 Agar medium, Modified D5 Agar medium, mD5 Agar Medium, mD5 Medium

Properties

Form: Powder
Appearance: Off-White to Tan
Solubility: Suspension in Cold Water, Soluble in Boiling Water
Application: Seed Testing, Microbiology, Phytopathology
Storage Temp: Room Temperature
Typical Working Concentration: 20.45 g/L

Formula (mg/L)

Magnesium Sulfate, Heptahydrate	300	Agar	15000
Sodium Phosphate, Monobasic	1150	Ammonium Chloride	1000
Potassium Phosphate, Dibasic	3000		

Application Notes

Recommended by ISTA (International Seed Testing Association) in method 7-020 for the selection of *Xanthomonas campestris* pv. *carotae* (*Xccar*) on carrot seeds (ISTA 2012). *Xccar* colonies that develop on mD5A medium will be straw-yellow, smooth, round, convex and roughly 2-3 mm in diameter.

Directions:

Add 20.45 g of mD5A medium to 900 mL of DI water.
Dissolve 10.0 g of Cellobiose (C1842) in 100 mL of DI water.
Autoclave solutions separately (121 °C, 15 psi).
Prepare the following amino acid and antibiotic solutions (sterile) and add the listed amounts per liter:

5 mg/L	L-Glutamic Acid (G399)
1 mg/L	L-Methionine (M539)
35 mg/L	Nystatin (N581)
10 mg/L	Cephalexin Monohydrate (C1970, C2112)
10 mg/L	Bacitracin (B132)

Allow medium to cool before adding the sterile solutions.

According to Suresh et al., (2013), mD5 Medium produced the best growth of *Xanthomonas oryzae* pv. *oryzae* when compared to 9 other common micro media (Glucose Yeast Chalk Agar, Nutrient Agar, Nutrient Sucrose Agar, Yeast Extract Dextrose Calcium Carbonate Agar, Yeast Extract Nutrient Agar, BSCAA medium, Modified D-5 medium, SX agar, Tween medium and XTS agar).

References

International Seed Testing Association (2012) International Rules for Seed Testing: Annexe to Chapter 7 Seed Health Testing Methods. <http://www.seedtest.org/en/content---1--1132.html>.
Suresh S.R., S. T. Yenjerappa, M. K. Naik, S. B. Mallesh and C. M. Kalibavi (2013) Studies on cultural and physiological characters of *Xanthomonas oryzae* pv. *oryzae* causing bacterial blight of rice. Karnataka J. Agric. Sci.,26(2): (214-216).

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