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Product Information

40545 $CaCO_3$ Agar (Custer's Chalk Medium)

$CaCO_3$ Agar is a medium for the differentiation of microorganisms based on the production of acid from glucose. Kurtzman and Fell (1998) recommended the formulation for the yeast identification.

Composition:

Ingredients	Grams/Litre
Yeast extract	5.0
Glucose	50.0
$CaCO_3$ (fine granulated)	5.0
Agar	15.0

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance:	Almost white to faintly brown coloured, homogeneous, free flowing powder.
Gelling:	Firm
Colour and Clarity:	light yellow to brown coloured, clear to slightly turbid gel forms in petri plates.

Directions:
Suspend 75g in 1000 ml distilled water and heat rapidly to boiling (Do NOT autoclave). A residue of calcium carbonate may remains. Pour into petri plates making sure that the residue is evenly distributed.

Principle and Interpretation:
Calcium Carbonate Agar is differentiation agar recommended by Kurtzman and Fell (1) for the identification of yeasts.

Yeast extract provide the nitrogen, vitamins and amino acids for the growth and glucose is the carbohydrate source. Calcium Carbonate serves as indicator as it makes the plate milky and turbid and in case of acid is produced the media clears up. The acid is built because of the characteristic fermentation of glucose to for example acetic acid and together with calcium carbonate it results in calcium acetate which is good soluble in water.
Yeasts from the genus *Dekkera* (*Bretanomyces*) forms acetic acid and show a positive result. Sometimes the acid production is quite weak. Also some other yeasts like *Candida* species produce also some citric acid and show a weak positive reaction.
Incubation time is up to 2 weeks at 25°C.

Cultural characteristics after up to 2 weeks at 25°C.

Organisms (ATCC)	Growth	Acid production (zone clearing)
Dekkera bruxellensis (10560)	+++	+
Saccharomyces cerevisiae (9763)	+++	-

References:

1. C.P. Kurtzman, J.D. Fell (ed.), The yeast, a taxonomic study, 4th edition, Elsevier (1998)
2. I.R. Maldonade, A.R.P. Scamparini, Selection and characterization of carotenoid-producing yeasts from Campinas region, Brazil, Braz. J. Microbiol. vol.38 no.1 (2007)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.