42347 Corn Meal Agar

Corn Meal Agar is recommended for chlamydospore production by *Candida albicans* and the maintenance of fungal stock cultures.

Composition:

Ingredients	Grams/Litre
Corn meal infusion (from 50 g whole maize)	2.0
Agar	15.0
Final pH 6.0 +/- 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 2-25°C.

Appearance: Light yellow coloured, coarse, free flowing powder.
Gelling: Firm, comparable with 1.5% Agar gel.
Colour and Clarity: Light amber coloured, opalescent gel forms in petri plates.

Directions:
Suspend 17g in 1 litre of distilled water. Bring to the boil to dissolve completely. If desired add 1% polysorbate 80. Sterilise by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Corn Meal Agar is used as a general purpose medium for cultivation of fungi, for studying mycelium or pseudomycelium formation, and for the study of *Candida* species for the chlamydospore production. With the addition of dextrose (2 g/l) the medium is well suited for cultivation of commonly occurring phytopathological fungi. Corn Meal Agar with dextrose should not be used for chlamydospores production. Pollack and Benham [1] have described the use of this medium for studying the morphology of *Candida* species. Walker and Huppert [2] modified the medium by adding polysorbate 80, which stimulates the formation of chlamydospores of *Candida albicans, Candida stellatoides* and *Candida tropicalis* [3]. Some Candida species lose their ability to form chlamydospores by repeated subculturing.
Corn meal infusion from maize is a very nutritive compound rich in carbon and amino acid sources as well as many other trace elements supporting growth of fungi. With the addition of dextrose a more luxuriant growth of some fungi can be seen. Polysorbate 80 is a mixture of oleic esters which activates the production of chlamydospores by *Candida* species.

Cultural characteristics after up to 4 days at 25°C.

Organisms (ATCC)	Growth	Chlamydospores
Aspergillus niger (16404)	+++	-
Candida albicans (10231)	+++	+
Saccharomyces uvarum (9080)	+++	-
Saccharomyces cerevisiae (9763)	+++	-

References:
1. J.D. Pollack, R.W. Benham, The chlamydospores of *Candida albicans*: comparison of three media for their induction, J. Lab. Clin. Med., 50, 313-317 (1960)
2. L. Walker, M. Huppert, Corn meal-Tween agar: an improved medium for the identification of *Candida albicans*, Tech. Bull. Reg. Med. Technol., 30, 10-14 (1960)
3. B.H. Cooper, M. Silva-Hutner, Yeasts of medical importance, In E.H. Lennette, A. Balows, W.J. Hausler (Jr.), H.J. Shadomy (ed.), Manual of clinical microbiology, 4th ed. American Society for Microbiology, Washington, D.C., p. 526-541 (1985)
4. P. Nash, M.M. Krenz, Culture media, In A. Balows, W.J. Hausler, (Jr.), K.L. Herrmann, H.D. Isenberg, H.J. Shadomy (ed.), Manual of clinical microbiology, 5th ed. American Society for Microbiology, Washington, D.C., p. 1226-1288 (1991)

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.