

TITLE: ALTERNATIVE METHODS FOR THE CHLAMYDOCONIDIA TEST
PRODUCTION BY *Candida albicans* AND *Candida tropicalis*

AUTHORS: OLIVEIRA, L. A.; BONCI, M. M.; MAKITA, M. T.; ABREU, D. P. B.;
MENDES, C. A.; RIBEIRO, L. V.; DUARTE, G. A. B.; CAMPOS, S. G.; DIREITO, G.
M.; BARONI, F. A.

INSTITUTION: Universidade Federal Rural do Rio de Janeiro (BR-465, Km 7, CEP
23.897-000, Seropédica - RJ, Brazil)

ABSTRACT:

Fungi are extremely versatile organisms, capable of establishing themselves in a wide variety of environments, including human and animal organism as part of the microbiota or pathogens. The genus *Candida* comprises some of the most relevant yeasts species, often associated with the mucous membranes of man and animals. Several reasons can result in excessive growth of these yeasts, characterizing a clinical problem. Chlamydoconidia, which represents a resistance fungal form, is produced by *C. albicans*, *C. dubliniensis*, and *C. tropicalis*, serving as an initial screening test for the identification of these species. Rice Agar is often used as a nutrient-poor substrate for this test. The aim of the present research was to find an alternative substrate to Rice Agar to evaluate chlamydoconidia production since the industrial substrates to rice agar do not present good results. This application can be useful for research, diagnosis, and also in mycology teaching classes. The substrates evaluated were soybean, chia, tapioca, flax and sunflower seeds. The Rice agar formula has been followed, with 20 gr of rice (being replaced by the new sources), 18 gr of agar-agar, being added or not to olive oil, palm oil and Tween 80 (1% of oil for each liter of distilled water). Based on factors the major formation of chlamydoconidia in the largest possible variety of samples, and in homogeneity, it can be concluded that the use of Tapioca and Flaxseed, both added to Tween 80, presented the best results for this evaluation. Therefore, it was concluded that these substrates may be a useful alternative to the use of rice agar for the phenotypic identification of *C. albicans* and *C. tropicalis* species.

Keywords: *Candida*, alternative substrate, chlamydoconidia