

# Identifikasi isolat spesies candida dari berbagai bahan klinik menggunakan medium kromogenik dibandingkan dengan fisiologi dan morfologi

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## Abstrak

Latar belakang penelitian: Identifikasi spesies *Candida* penting untuk diagnosis, penentuan jenis obat dan prediksi kepekaan jamur terhadap obat anti fungal. Selama ini identifikasi dilakukan dengan uji konvensional: fisiologi-morfologi, yang relatif lama, hingga diagnosis dini sukar ditegakkan. Mengatasi masalah tersebut telah dikembangkan medium kromogenik yang mampu membedakan beberapa spesies *Candida* berdasarkan warna koloni. medium kromogenik yang saat ini tersedia di Indonesia adalah CHROMagar-*Candida*.

Tujuan penelitian: Membandingkan cara identifikasi *Candida* spp. dengan metode konvensional dan medium kromogenik CHROMagar *Candida*, serta mengetahui spesifisitas dan sensitivitasnya

Metodologi penelitian: Penelitian merupakan uji diagnostik. Sebanyak 134 sampel ditanam pada agar Sabouraud Dektrosa dan dipurifikasi (340 isolat). Setiap isolat diidentifikasi dengan CHROMagar *Candida*, uji fisiologi dan morfologi (agar tajin/tepung jagung-Tween 80, dan uji pembentukan germ tube).

Hasil dan kesimpulan: Dengan CHROMagar-*Candida*, dapat diidentifikasi 148 (43,5%) isolat, 192 (56,7%) tidak dapat diidentifikasi. Spesies yang teridentifikasi: *C. tropicalis* (21,5%) koloni berwarna ungu di tengah pucat di tepi, *C. albicans* (11,8%) warna koloni hijau terang, *C. parapsilosis* (5,9%) koloni berwarna putih hingga merah jambu pucat, *C. glabrata* (2,1%) koloni merah jambu pucat dengan permukaan koloni halus, *C. krusei* (0,3%) koloni merah jambu pucat dengan permukaan koloni kasar dan *Trichosporon* sp (2,1%) koloni berwarna abu-abu dengan tipe koloni halus dan kasar. Yang tidak dapat diidentifikasi, *C. pelliculosa*, *C. guilliermondii*, *C. langeroni*, *C. Intermedia*, *C. mogii*, *C. lusitaniae*, *C. utilis*, *C. fennica*, *C. obtuse*, *C. sphaerica*, *C. famata* dan *R. rubra*.

Spesifisitas dan sensitivitas CHROMagar-*Candida* untuk identifikasi *C. trop/calls* 80,8% dan 27,8%, *C. albicans* 99,3% dan 65,5%, *C. parapsilosis* 96,9% dan 100%, *Trichosporon* sp 100% dan 21,8%.

CHROMagar-*Candida* tidak dapat menggantikan uji konvensional dalam mengidentifikasi *Candida* spp, terutama *Candida non-C albicans*.

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Identification Of *Candida* Species From Clinical Specimens, Using Chromogenic Medium, Physiology And Morphology Test. Background : Species identification of *Candida* is important to establish to diagnosis, to determine the medicine needed and also to predict susceptibility of fungi to antifungal drugs. Up to now, identification is conducting using conventional method i.e. physiology-morphology which is time consuming. Thus early diagnosis could not be established. To offer come this problem chromogenic medium has been develop to distinguish species of *Candida* based on the colour of colony. Chromogenic medium that find on Indonesia is CHROMagar-*Candida*.

Aim :To compare CHROMagar Candida and conventional method in identification of Candida spp. specificity and sensitivity of CHROMagar Candida was also determined. Research Methodology: This study diagnostic investigation using cross sectional design. Those were 134 samples plated on Sabouraud Dektrosa Agar/SDA than purified that yields 340 isolates. It is isolate was identified by CHROMagar Candida and conventional method.

Result and Conclusions: Using CHROMagar 148 (43.5%) isolates can be identified were as 192 (56.7%) could not be identified. Species that can be identify were : *C. tropicalis* (21.5%) with purple colour in the centre and pale purple at the edge of colony, *C alb/cans* (11.8%) with bright green colour, *C parapsilosis* (5.9%) with white to pale pink, *C. glabrata* (2.1%) has a pale pink colour and smooth surface, *C krusei* (0.3%) is pale pink and rough surface, and *Trichosporon sp.* (2.1%) is gray with smooth or rough surface. Species that can not be identified by CHROMagar-Candida were : *C pelliculosa*, *C guilliermondii*, *C langeroni*, *C intermedia*, *C mogii*, *C.lusitaniae*, *C utilis*, *C fenica*, *C. obtuse*, *C. sphaerica*, *C fanata*, and *R. rubs*

Specificity and sensitivity CHROMagar Candida identifying *C. tropicalis* is 80.8% and 27.8%, *C. alb/cans* is ' 99.3% and 65.5%, *C.parapsilosis* is 96.9% and 100%, *Trichosporon sp* is 100% and 21.8% consecutively. Although conventional can not replace by CHROMagar Candida especially for Candida non *C alb/cans* identifications.</i>