

RHODOTORULA: NEW TAXONOMY

Authors: Raquel Maria Lima Lemes¹; Mateus Fonseca Ferreira¹; Nathália Ariela Duque Pereira¹; Matheus Andrade Bueno¹; Pamela Godinho Gonçalves¹; Monica Correa Del Peloso¹

E-mail to correspondence: raquel.lemes@unifal-mg.edu.br

Institution: ¹UNIVERSIDADE FEDERAL DE ALFENAS -UNIFAL-MG

Key words: Yeast; Classic Method; Phylogenetics

Support: UNIFAL-MG

Abstract:

Genetic engineering has allowed the differentiation between microorganisms with a high degree of genetic kinship leading to an increase in the number of genera and yeast species, and the genus *Rhodotorula* was one of the ones that presented the most changes. However, the classical method is still widely used in small and medium-sized laboratories. Therefore, we aimed to identify strains previously classified as belonging to the genus *Rhodothorula* using the table proposed by Wang et al. A total of 100 samples of pigeon excreta found in Getúlio Vargas Square, in Alfenas, MG. were collected. About 1g of each sample was homogenized in saline with 300mg / L chloramphenicol, allowed to stand at 25 ° C for up to 8 hours. Subsequently, 1 mL of the supernatant and 1 mL of the precipitate were seeded separately on 300 mg / L chloramphenicol plates of Niger agar, which were incubated at 25 ° C and observed daily for up to 7 days, on the appearance of yeast colonies and macroscopic aspects such as pigment, consistency, relief, gloss and margin. Yeasts suspected of belonging to the genus *Rhodothorula* were reviewed using physiological, morphological and biochemical characteristics. The number of samples that presented yeast growth was 91 (91%), totalizing 101 strains. Yeasts of the genus *Candida*, *Trichosporon*, *Rhodotorula* and *Cryptococcus* were isolated. Among these, 25 (24.75%) strains were identified belonging to the genus *Rhodotorula*. Tests were carried out to determine the assimilation of carbohydrates (Sucrose, Trehalose, Maltose, Lactose, Raffinose, L-Arabinose, D-Arabinose, Soluble Starch and Glycerol) and nitrogen assimilation test. Thus, it was possible to identify the new genera, which according to the new taxonomy were classified: 10 (40%) strains belonging to the genus *Trigonosporomyces*, 5 (20%) to the genus *Sporobolomyces*, 5 (20%) *Symmetrospora*, 4 samples of the genus *Rhodotorula*, and 1 (4%) sample belonging to the genus *Ruinenia*. These new genres require more detailed studies, including their virulence profile, since *Rhodotorula* is important in infections in humans.