Preliminary Investigation on Antimycotic Synergism of Raw Honey and Essential Oil of Thyme (Thymus vulgaris L.)

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Abstract

Aims: Several natural products have exhibited synergistic activity against microorganisms. In this study we investigated the existence of synergistic antifungal effect between Thyme (Thymus vulgaris L.) essential oil and different varieties of raw honey from Algeria.

Methodology: To evaluate antimycotic effects of mixtures of raw honey (RH) and Thymus vulgaris oil (TVO) using agar disc diffusion assay. The antimycotic capacity was determined against two pathogenic yeasts clinical isolates Candida albicans and Rhodotorula mucilaginosa.

Results: The results indicated that the essential oil of TVO and raw honey are efficient against the tested yeasts. The diameters of inhibition Zone (DIZ) values were all between 8.26-9.5 mm for the RH and between 8.56-10.3 mm for the TVO. RH and TVO interacted synergistically to inhibit Candida albicans and Rhodotorula mucilaginosa.

Conclusion: These results revealed that combinations of TVO with RH can be used for the development of potent and novel antifungal agents.

Keywords: Synergism; Antimycotic activity; Honey; T. vulgaris