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The anti-fungal effect of flax seed on oral candidiasis : Comparative in-vitro study (Article)

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Abstract

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Flaxseed is a natural product with a wide array of anticancer, antibacterial, antiviral and also antifungal properties. Flaxseed extracts; either oil or water based can be incorporated into pharmaceutical compounds to be used in clinical setting. This study aims to compare the in-vitro antifungal effectiveness of flaxseed extract against the commonly used synthetic compound, Nystatin. Methodically, antifungal effectiveness of flaxseed extract and Nystatin was tested upon the Candida albicans culture growth in petri dishes. Disc diffusion method was performed and the zones of inhibition around the disc within each petri dish were measured after 48 hours of incubation period. Oil-based and water-based flaxseed extract types were evaluated using disc diffusion method at different volume per disc (5µl, 10µl and 15µl) and its result was compared to Nystatin's effectiveness. The principle result shows that the oil-based extract exhibited no antifungal activity despite of the increasing quantity used. Interestingly the comparison of mean value for candidal growth inhibition diameter between flaxseed aqueous extract and Nystatin was significant based on p-value less than 0.05. Clearly, Candida albicans growth diameter mean value was greater with higher increment of flaxseed aqueous extract when compared to the Nystatin 100 units control test. The greatest zone of inhibition was seen with 15µl of flaxseed aqueous extract. Thus, water-based flaxseed extract has a great potential to be used as a clinical product to control oral fungal infection while eliminating the unwanted side effects commonly occurring with synthetic products.

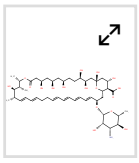
SciVal Topic Prominence

Topic: Flax | Lignans | Diglucoside SDG

Prominence percentile: 91.986

Chemistry database information

Substances



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