A Research on Natural Acne Ointment Based on Yam Mucin

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Most teenagers often suffer from acne which mainly caused by the Propionibacterium acne, a usual inhabitant of human skin. However, almost all the treatment medicines contain antibiotics which may cause drug resistance. To address this problem, the study tried to find a resolution from Chinese herbs. The active ingredients extracted from them, such as pomegranate rind, clove, green tea, salvia miltiorrhiza and sophora were selected for the research. And their antibacterial activities were confirmed by the Oxford circle experiment. In addition, the yam extract prepared by the ethanol subsiding method was used as the matrix because of its property of gelatin which is essential for the ointment. The composition of the ingredients was optimized through an orthogonal experiment design, and the optimal ratio in terms of the extracts of pomegranate rind, clove and green tea was measured as1:2:1. The resulting mixture displayed an inhibition effect against Propionibacterium acne. And the influence of yam extract on the formation of gelatin was also tested. We found that 3:2 proportion between the yam extract and the mixture of the active ingredients can produce a gelatin-like ointment. The research developed a potential homemade ointment which can inhibit the Propionibacterium acne.

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