# Ointment Formulation of Arumanis Mango (Mangifera indica L.) Leaf Extract with Chitosan Tripoliphosphate Matrix as Antibacterial

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| **Title** | Ointment Formulation of Arumanis Mango (Mangifera indica L.) Leaf Extract with Chitosan Tripoliphosphate Matrix as Antibacterial |
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| **Abstract** | This report presented the synthesis of Arumanis mango (Mangifera indica L.) leaf extract with chitosan tripolyphosphate matrix and its antibacterial activity. This research aimed to obtain an ointment formulation from mango leaf extract with chitosan tripolyphosphate matrix, to figure out the characteristics, including the particle morphology, and to determine the optimum formulation and the characterization of the antibacterial ointment. The research showed that extract morphology with chitosan tripolyphosphate was uneven-edge aggregates. Antibacterial tests were conducted on P. acnes and E. coli bacteria. The formula giving the greatest antibacterial activity was further utilized for the ointment preparations and then was characterized for 16 days. Formula C (chitosan and NaTPP 1: 0.0992(%)) gave the most excellent inhibition zone for P. acnes and E. Coli bacteria, at 7.94 mm and 10.02 mm, respectively. The obtained ointment preparation was white color homogeneous semi-solid with protective properties. The spreading power of the ointment was 5.25 Ã¢Â€Â“ 6.25 cm, with the adhesive power of 1 Ã¢Â€Â“ 5 seconds and pH of 6.0 Ã¢Â€Â“ 6.4. The ointment's antibacterial activity was tested against P. acnes and E. coli bacteria using the formation of inhibition zone method. The activity of ointment prepared on day one against P. acnes and E. coli was at 14.03 mm and 14.24 mm, respectively, while the activity on day 16 against P. acnes and E. coli was at 9.33 mm and 9.98 mm, respectively. |
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