

**Title** Antimicrobial activities of fruit peel extract against bacteria in peanut seed  
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#### **Abstract**

The inhibitory effects of crude extracts from 3 fruit peels, pomelo, pomegranate and mangosteen were tested against 4 isolations of bacteria Isolated from peanut seeds *Bacillus licheniformis* (B02), *B. megaterium* (B04) and two isolations of *B. cereus* (B09, B18) on disc diffusion assays. It was found that crude extract from pomegranate peel extract (PME) showed the most active effect and pomelo peel extract (POE) showed lesser effect, then mangosteen peel extract (MGE). The minimum inhibitory concentration (MIC) of PME against *B. licheniformis* was 12% (w/v), and The MIC for *B. megaterium* was 5%. Both isolations of *B. cereus* showed the MIC at 5 %. The MIC for POE against *B. licheniformis* was 15% (w/v). The MIC *B. megaterium* was at 75%. The MIC for both isolations of *B. cereus* was at 100%. The mixtures made from PME at MIC and POE at  $1/2 \times \text{MIC}$  could inhibited the growth of *B. licheniformis*. The mixtures made from PME at MIC and POE at MIC also could inhibit the growth of *B. licheniformis*. The mixture of PME at MIC and POE at  $1/4 \times \text{MIC}$  could also inhibited the growth of *B. megaterium*. The mixture of PME at MIC and POE at  $1/4 \times \text{MIC}$  could inhibit the growth *B. cereus* isolate 1. The mixture of PME at MIC and POE at  $1/2 \times \text{MIC}$  could also inhibit the growth *B. cereus* isolate 2. From the results obtained it is suggested that the mixtures of PEM and POE can enhance the antibacterial activity.