

Antimicrobial Activity of Goat Colostrum Against Bacterial Strains Causing Food Poisoning Diseases

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Abstract	<p>The study was aimed to investigate the antimicrobial activity of bacterial isolates <i>L.plantarum</i> 3CT7 and 20CT8 from goat colostrum. The antimicrobial activity of cell-free supernatant was tested using a well-diffusion method on several indicators: temperature, time of storage, and pH. Antimicrobial activity was recorded in both isolates at pH 2.0; 4.0; 6.0 and 8.0, temperature at 0, 50 and 100 oC, and in cold storage for 0, 15, 30, 45 and 60 days. <i>L.plantarum</i> 7CT3 and <i>L.plantarum</i> 20CT8 have a bigger zone of inhibition than that of <i>Pseudomonas</i> spp. as compared to other bacteria. Testing the cell-free activity was aimed to investigate the metabolite inhibition by <i>L.plantarum</i>. The isolates were capable of inhibiting all pathogenic bacteria in the experiment (<i>S. thypimurium</i>, <i>E. coli</i>, and <i>S. aureus</i>) as evidenced from the similar zone of inhibition from 15.83 to 16.06 mm. Isolates (<i>L. plantarum</i> 7CT3 dan 20CT8) exhibit inhibitory properties against <i>S.thypimurium</i>, <i>S. aureus</i>, <i>Pseudomonas</i> spp.. and <i>L. monocytogenes</i> at 0, 50 and 100oC. <i>L.plantarum</i> 7CT3 and <i>L.plantarum</i> 20CT8 exhibit antimicrobial activity during cold storage. Both isolates grown in the range of pH from 2 to 8 could inhibit <i>S. thypimurium</i>, <i>E. coli</i>, <i>S. aureus</i> and <i>Pseudomonas</i> spp. In general, the two isolates are the potential antimicrobial activity with broad ranges of pH, temperature and storage time.</p>
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