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**The effectiveness of tamarind seeds and fruit extract toothpaste as the antibacterial agent and calculus softener****Andikha Dara Asmara Putri, Agung Widiyanto Ismana and Ika Andriani**  
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Tamarind seeds and fruit (*Tamarindus indica* L.) have some useful active substances that inhibit bacterial activity and can decrease the level of calculus hardness. Active compounds contained in seeds and fruit of tamarind, such as albuminoid and tannin. Tannin is a compound that can inhibit microbial growth by inhibiting the action of enzymes. Albuminoid is a common name of a group of proteins in the form of colloid solutions that play a role in binding calcium and phosphate ions, which are responsible for the formation of calcium phosphate salts (calculus-forming minerals). In the event of a bond between the albuminoid and the minerals, the process of calculus formation is impaired. This study aims to determine the effectiveness of tamarind seeds and fruit extract toothpaste as antibacterial agent and calculus softener. This research was a pure laboratory experimental with tamarind seeds and fruit toothpaste as a research subject. The toothpaste combination made according to composition of Volk and ash with 3 comparisons of concentration combination, seed extract 50%-50% fruit extract, 75% seed extract-25% fruit extract and 25% seed extract-fruit extract 75%. Microbial test materials were using *Staphylococcus aureus* ATCC 25923 and hardness test materials were using post-scaling calculus. Minimal inhibitory level (KHM) and minimal kill content (KBM) of tamarind seeds and fruit extract toothpaste showed the antibacterial activity against the germ with Mueller Hinton method. The hardness test was using micro Vickers hardness tester.

**Biography**

Andikha Dara Asmara Putri is currently pursuing her Bachelor of Dentistry from Muhammadiyah University of Yogyakarta. She is also active in some dental activities such as dental voluntary project, being a Committee of International Dental Summer School and organizing dental seminars.

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