

# Study of Eggplant Peduncle for Cure Periodontal Disease and Remove Bad Breath in Countries Lacking Medical Supplies

Kim, Yong Su

Our ancestors used eggplant peduncle to cure gum disease. Periodontal disease is commonly a decayed tooth that has inflammation and the bacteria will advance to a disease. Also, decayed or infected teeth leads to some complications. So I want to prevent periodontal disease cheaply in country using eggplant peduncle and would like to gather discarded eggplant peduncle world wide and recycle them. In addition, I would like to supply the halitosis remover and make pleasant environment. So, I set some purposes. First I contrasted the antibacterial effect on periodontal disease. As a result, the eggplant peduncle is effective against cavity and inflammation. And tested the antibacterial effect with four method of decocting like low-temperature extract, high-temperature, ultrasonic extract and extract with cooling in high temperature. The result is, the low-temperature extract is the most effective. And after then, I investigated what antibiotic substance an eggplant peduncle has. So, I Analyzes the four extracts which are effective to periodontal diseases by liquid chromatography and liquid mass chromatography and I confirm that the substance is Solasonine. Finally, to Verify the effective removal of bad breath, I designed the experiment similar to oral cavity. And spray the same amount of liquid on each medium. Use four different liquids: distilled water, extraction from eggplant peduncle, solution of solasonine, solution of CPC, which is the commercialized substance used to remove bad breath. And I analyze it each methods. As a result, It is more efficient than CPC, which is the commercialized breath freshener.