Toothpaste based on medical and therapeutic properties of essential oil of geranium (Pelargonium x hortorum)

Karolina V. Flores Huamán, Susan Laime Soto*

ABSTRACT

Due to the importance of geranium (Pelargonium x Hortorum) in our region as a plant that grows abundantly throughout the year and their crop doesn’t need greater care and have exceptional pharmacological and therapeutic properties, so a phytochemical study was conducted to verify and determine active ingredients that have therapeutic effects on health.

The study involves the purification of the secondary metabolites of the plant that it is within them which are the essential oils, through phytochemical functions to evidence and detect chemical and pharmacological tests.

The essential oil of geranium, once isolated and purified, was used in the preparation of toothpaste, extracts, mouthwashes which have the property to prevent dental caries and periodontal disease particularly in the poor, as a product very economical.

Bioassays were conducted to determine the activity of its active ingredients. Microbiological analysis was also performed to demonstrate the antibacterial effect of geraniol (essential oil of geranium). It was found that the extract oil is a considerable power of inhibition on bacterial growth, especially on the germs that cause plaque and tooth decay. In the experiment, nine out of ten plates in study inhibited completely the bacterial growth in treated areas and only one didn’t.

Quality control analysis was performed starting from the sample and in all stages of the physicochemical and bacteriological analysis.

Key words: metabolites, essential oils, geraniol.