

**A COMPARISON ON THE EFFECTS OF *Citrus maxima* (POMELO) AND  
*Citrus aurantium* (SOOR ORANGE) FRUIT JUICE IN THE BONE  
DENSITY OF THE LONG BONES OF *Rattus rattus domesticus*  
(SPRAGUE-DAWLEY RATS)**



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## ABSTRACT

The study compared the effects of pomelo and sour orange fruit juice in the bone density of long bones using Sprague-Dawley rats as test organism. Randomized Complete Block Design (RCBD) was employed with three treatments, T<sub>0</sub> (control group with pellets and distilled water), T<sub>1</sub> (*Citrus maxima* or pomelo fruit juice, and T<sub>2</sub> (*Citrus aurantium* or sour orange fruit juice). The Sprague-Dawley rats had undergone acclimatization, mating, preparation and administration of treatments. Citrus fruit juices were administered to female Sprague-Dawley rats for 21 days of gestation period. The pups were sacrificed on the 22<sup>nd</sup> day after birth. The length and width of the long bones of the pups were measured and subjected to histotechnique procedure. As a result, the treated organisms obtained higher values compared to the control group, in this case bone density increases due to the presence of calcium and vitamin C, but it is statistically not significant, only the length of femur showed a significant difference, however there was no significant difference found in the histotechnique exam of the bone tissue sections, it only differed based on the arrangement of calcium deposits and intensity of the stain.

