

***THE EFFECT OF GIVING RED DRAGON FRUIT JUICE AND LEMON ON
FAT MASS IN OBESITY STUDENTS IN THE HEALTH DEPARTMENT OF
THE STATE POLYTECHNIC OF JEMBER***

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ABSTRACT

*Body fat mass refers to the fat mass found in adipose tissue and other tissues within the body. Red dragon fruit is a source of antioxidants, specifically flavonoids. Red dragon fruit contains total phenolic and flavonoid levels ranging from 25 - 55 mg GAE and 15–35 mg CE per 100 g, respectively. Red dragon fruit (*H. polyrhizus*) possesses significantly higher phenolic content and antioxidant potential than white dragon fruit (*H. undatus*) (Arivalagan et al., 2021). Lemon was added in this study to impart a natural, fresh flavor to the red dragon fruit juice. The objective of this study was to determine the effect of consuming red dragon fruit and lemon juice on the body fat mass of obese health-major students at the State Polytechnic of Jember. A quasi-experimental method with a pretest-posttest control group design was employed. Subjects were selected using a non-random accidental sampling technique, resulting in a total of 26 obese students divided into two groups: a treatment group (n=13) and a control group (n=13). The treatment group received 130 ml of red dragon fruit and lemon juice daily for 21 days, while the control group received 220 ml of mineral water daily for the same period. Body fat mass was measured using the InBody 270 Bioelectrical Impedance Analysis (BIA) device. The study concluded that the consumption of red dragon fruit and lemon juice had no effect on the body fat mass of obese health-major students at the State Polytechnic of Jember.*

Keywords: Obesity, fat mass, flavonoids, red dragon and lemon fruit juice