

**Addition Effect of Red Dragon Fruit Powder (*Hylocereus polyrhizus*) on the
Physical Properties of Viscosity, Antioxidant Activity, and Organoleptic
Properties of Red Dragon Fruit Latte**

Shine Himayatus Shorofil
Clinical Nutrition
Department of Health

ABSTRACT

The escalation of free radicals in the body can lead to disturbances in cell growth, giving rise to degenerative diseases. Maintaining a balance of free radicals in the body necessitates adequate consumption of antioxidants. One such source of antioxidants is the red dragon fruit. This study focuses on the creation of Red Dragon Fruit Latte using red dragon fruit powder with the addition of soy milk. The experimental design employed here is a Completely Randomized Design. The formulation determination in this research pertains to the weight percentage of red dragon fruit powder to hot water: P1 40%; P2 47%; P3 53%; and P4 60%. Each treatment will be replicated 6 times. The analysis encompassed viscosity content, antioxidant activity, organoleptic attributes, and proximate analysis for the most promising treatment. The research findings reveal that red dragon fruit latte significantly affects viscosity content, antioxidant activity, hedonic quality of color, taste, aroma, thickness, and hedonic test of color. However, it does not notably impact the hedonic test for taste, aroma, and thickness. The optimal treatment involves red dragon fruit latte with the incorporation of 18 grams of dragon fruit powder, exhibiting characteristics of 7.25 cP viscosity, 59.97% antioxidant activity, a red hue, a sweet taste, a distinctive and relatively potent aroma of red dragon fruit, and a relatively dense consistency. The color parameter is more favored in P4, and for taste, aroma, and thickness parameters, they are generally favored by the panelists across all treatments. Consumption of one serving (240 ml) of red dragon fruit latte fulfills 9% of total energy requirements, 7% of protein, 13% of fat, and 9% of carbohydrates based on %Recommended Daily Allowance.

Keywords: Antioxidant, Beverage, Free radicals, Latte, Red dragon fruit powder