ABSTRACT

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UTILIZATION OF ROSEMARY (Rosmarinus officinalis L.) LEAVES IN THE MAKING OF ROSEMARY DRINK
(xvi + 73 pages: 12 tables, 36 figures, and 33 appendices)

Rosemary leaves (Rosmarinus officinalis L.) have many functional properties that are beneficial as anticancer due to its antioxidant activity. The potential antioxidants in rosemary mainly come from their phenolic compounds which are from carnosic acid, carnosol, and rosmarinic acid. The aim of this research was to utilize rosemary leaves to develop a beverage product that is acceptable by the panelists. Rosemary leaves was dried with three levels of drying temperature (40˚C, 50˚C, and 60˚C) for 24 hours. Dried rosemary leaves were analyzed for its antioxidant activity, total phenolic content, total flavonoid content, and moisture content. The selected drying temperature was at 50˚C, it has antioxidant activity (IC₅₀) of 343.0885 ± 3.4222 ppm, total phenolic content of 47.7680 ± 0.8333 mg GAE/g sample, and total flavonoid content of 2.1063 ± 0.0649 mg QE/g sample. Subsequently, the selected dried rosemary leaves was used in the production of rosemary drink. Rosemary drink was made with three levels of concentration of sugar and acid mixture (5%, 10%, and 15%) and three levels of ratio between sugar - acid (6:4, 7:3, and 8:2). Then, it was subjected to antioxidant activity, total phenolic content, total flavonoid content, pH, color, and sensory analyses (scoring and hedonic tests). The selected formulation of rosemary drink is the one prepared with concentration of sugar and acid of 10% and ratio sugar - acid of 8:2. It has antioxidant activity (IC₅₀) of 114550.9049 ± 898.3781 ppm, total phenolic content of 0.5601 ± 0.0154 mg GAE/ml sample, and total flavonoid content of 0.1111 ± 0.0004 mg QE/ml sample. The rosemary drink made from fresh and dried rosemary leaves with selected formulation was also analyzed. The result shows that rosemary drink made from dried leaves have higher antioxidant activity, total phenolic content, and total flavonoid content than the one made from fresh leaves.

Keywords: Antioxidant activity, total phenolic content, total flavonoid content, Rosmarinus officinalis L., rosemary drink.