

ABSTRACT

Hidayah, Nurul. 2011. **The Effects of Rosella Growing Altitude and Rosella Material Type on The Antioxidant Activity of Kombucha Rosella Tea.** Thesis, Department of Biology, Faculty of Science and Technology, State Islamic University (UIN) Malang Maulana Malik Ibrahim. Advisor I: Evika Sandi Savitri, M.P. Advisor II: M. Imamudin, M.A.

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At this traditional medicine has been widely used by the public. One is roselle (*H. sabdariffa*) and kombucha tea. Roselle contains antioxidants that are good for the body, but levels of antioxidants will be reduced if drying roselle experience. The purpose of this study was to determine the effect of three grown altitude (21 meters above sea level, 450 masl and 110 masl) and the type of material roselle calyx on the antioxidant activity of kombucha roselle tea.

The study was conducted in June-July 2011, with an experimental method with the pattern of Completely Randomized design (CRD) factorial. The first factor is the height of the growing roselle covers three areas: Lamongan (21 masl), Malang (450 masl), and Batu (1100 masl). The second factor is the type of materials include the type of fresh roselle petals and dry type. Roselle petals are obtained fermented with kombucha culture obtained from kombucha employers. Parameter is observed antioxidant activity of Kombucha tea set with Rosella UV Vis spectrophotometer using DPPH reagent. The data obtained were analyzed using two-way analysis ANAVA. Next test using BNJ 5%.

The results showed that there is an effect of the different growing heights of the antioxidant activity of Kombucha Rosella tea. The antioxidant activity of fresh roselle calyx types also differ with the type of dry. The mean antioxidant activity altitude 21 masl, 450 masl, and 1100 meters above sea level respectively is 66.888%, 61.999% and 53.600%. While the antioxidant activity of Kombucha rosella tea between types of fresh and dried roselle higher fresh rosella is 63.615% compared to the types of dried roselle is 58.044%. The antioxidant activity of Kombucha rosella tea generated from the lowlands (21 masl) and the type of material fresh rosella better.