

Airiza Sekardina. NPM 200331100005. *Pengembangan Produk Hard Candy Cabe Jamu (Piper Retrofractum Vahl.) Penambahan Ekstrak Bunga Rosella (Hibiscus Sabdariffa L.) Tinggi Antioksidan Sebagai Alternatif Pewarna Alami Di bawah Bimbingan Dr. Supriyanto, S.TP., M.P. dan Mojiono, S.TP., M.Si*

ABSTRAK

Minat penelitian mengenai alternative pewarna alami semakin meningkat, terutama dipicu oleh meningkatnya kesadaran terhadap kesehatan masyarakat di seluruh dunia. Penelitian ini bertujuan untuk mengetahui karakteristik *hard candy* cabe jamu dan mengetahui formula terbaik melalui penambahan rosella dengan kadar berbeda (6-15 g) sebagai pewarna alternatif. Uji yang dilakukan yaitu pH, waktu larut, warna RGB, aktivitas antioksidan, dan uji sensoris. Beberapa parameter penelitian (pH, warna, dan aktivitas antioksidan) berbeda secara signifikan, namun waktu larut tidak berbeda secara signifikan. Kadar pH semakin menurun seiring dengan semakin tingginya kandungan ekstrak rosella. Sebaliknya, nilai RGB dan aktivitas antioksidan menjadi lebih tinggi seiring bertambahnya kandungan ekstrak rosella. Parameter warna, proporsi ekstrak rosella yang lebih tinggi menyebabkan nilai RGB yang lebih tinggi pada *hard candy*, dan F2 menunjukkan intensitas merah tertinggi. Selain itu, perlakuan tersebut menghasilkan efek nyata pada semua atribut sensorik secara signifikan, kecuali aroma. F1 mencapai skor sensorik tertinggi untuk rasa, tekstur, dan atribut keseluruhan, sedangkan F2 mencapai skor tertinggi untuk warna. Hasil penelitian ini mengkonfirmasi penggunaan lebih lanjut bunga rosella dalam formulasi *hard candy* cabe jamu.

Kata Kunci: Cabe Jamu, Ekstrak Bunga Rosella, *Hard Candy*, Pewarna Alami

Airiza Sekardina. NPM 200331100005. *Product Development of Javanese Long Pepper Hard Candy (*Piper Retrofractum* Vahl.) Addition of Rosella Flower Extract (*Hibiscus Sabdariffa* L.) High in Antioxidants as an Alternative to Natural Coloring Under The Guidance of Dr. Supriyanto, S.TP., M.P and Mojiono, S.TP., M. Si.*

ABSTRACT

There has been a growing research interest on the replacement of synthetic dyes with natural coloring agents, primarily instigated by the rise of health concern of consumers over the globe. This work aimed to reformulate hard candy, enriched with Javanese long pepper extract and added with xylitol as an alternative sweetener. This research aims to find out characteristics and the best formula of hard candy with the addition of rosella through incorporating different levels of roselle flower extracts (6-15 g) as alternative coloring agent. The properties of hard candy, namely pH, solubility time, RGB color, antioxidant activity, and sensory acceptability, were observed. As a result, some research parameters (pH, color, and antioxidant activity) were significantly altered by the treatments, but they did not affect solubility time. The level of pH diminished consistently with the higher content of roselle flower extract. On the contrary, RGB values and antioxidant activity were higher when more roselle flower extracts were incorporated into the formulation. In case of color, higher proportion of the extract led to higher RGB values in hard candy, and F2 demonstrated the highest red intensity. Furthermore, the treatments resulted in noticeable effects on all sensory attributes significantly, except for aroma. F1 reached the highest sensory score for taste, texture, and overall attributes, while F2 reached the highest for color. This work results confirm the further use of roselle flower in the formulation of hard candy.

Keywords: Hard Candy, Javanese Long Pepper, Natural Coloring, Rosella Flower Extract