

## ABSTRAK

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### **SUBSTITUSI TEPUNG UBI JALAR PUTIH HASIL *HEAT MOISTURE TREATMENT* DALAM PEMBUATAN KUKIS**

Skripsi, Fakultas Sains dan Teknologi (2021)

(xv + 80 halaman; 28 gambar; 11 tabel; 15 lampiran)

Kukis merupakan makanan ringan yang dipanggang dan tergolong dalam jenis biskuit. Kukis memiliki tekstur yang renyah dan kurang padat. Pemanfaatan tepung ubi jalar putih hasil *heat moisture treatment* (HMT) diharapkan dapat meningkatkan kadar pati resisten kukis dengan tetap memperhatikan karakteristik sensori dan tekstur. Tujuan dari penelitian adalah untuk menentukan waktu dan suhu pemanasan HMT terbaik berdasarkan kadar amilosa tertinggi pada tepung ubi jalar putih dan menentukan rasio tepung terigu dan tepung ubi jalar putih HMT terbaik berdasarkan kandungan pati resisten, karakteristik sensori, dan tekstur kukis. Modifikasi tepung ubi jalar putih dilakukan dengan HMT (90°C, 100°C, dan 110°C; 30 menit, 60 menit, 90 menit, dan 120 menit). Kukis dibuat dengan variasi rasio tepung terigu dan tepung ubi jalar putih HMT (100:0, 75:25, 50:50, 25:75, dan 0:100). Hasil penelitian menunjukkan bahwa perlakuan HMT 90°C, 90 menit menghasilkan tepung ubi jalar putih dengan kadar amilosa tertinggi, yaitu  $31,45 \pm 1,21\%$ . Rasio terbaik tepung terigu dan tepung ubi jalar putih HMT dalam pembuatan kukis adalah 0:100. Kukis rasio 0:100 mengandung pati resisten  $5,36 \pm 0,02\%$ , memiliki tingkat kesukaan netral pada setiap parameter, kekerasan  $3445,74 \pm 265,50$  g, dan daya patah  $3284,84 \pm 238,33$  g.

Kata Kunci : amilosa, pati resisten, *heat moisture treatment*, ubi jalar, kukis

Referensi : 161 (1992-2020)

## ABSTRACT

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### **SUBSTITUTION OF HEAT MOISTURE TREATED WHITE SWEET POTATO FLOUR IN THE PRODUCTION OF COOKIES**

Thesis, Faculty of Science and Technology (2021)

(xv + 80 pages; 28 figures; 11 tables; 15 appendices)

Cookies are a part of baked goods, alongside with biscuits. Cookies are crunchy and less dense. The utilization of heat moisture treated white sweet potato flour is expected to increase the levels of cookies' resistant starch, while still considering the sensory characteristics and texture. The purposes of this research are to determine the best time and temperature of HMT based on highest amylose content of white sweet potato flour and determine the best ratio of wheat flour and heat moisture treated white sweet potato flour based on resistant starch content, sensory characteristics, and texture. Sweet potato flour modification was done by HMT (90°C, 100°C, and 110°C; 30 minutes, 60 minutes, 90 minutes, and 120 minutes). Cookies are made using a variety ratio of wheat flour and heat moisture treated white sweet potato flour (100:0, 75:25, 50:50, 25:75, and 0:100). The results show that HMT 90°C, 90 minutes gave the highest amylose content of white sweet potato flour ( $31.45 \pm 1.21\%$ ). The best ratio of wheat flour to heat moisture treated white sweet potato flour in the production of cookies is 0:100. It has  $5.06 \pm 0.02\%$  resistant starch content, a neutral preference level, a hardness of  $3445.74 \pm 265.50$  g, and a fracturability of  $3284.84 \pm 238.33$  g.

Keywords : amylose, resistant starch, heat moisture treatment, sweet potato, cookies

References : 161 (1992-2020)