ABSTRAK

KAJIAN PEMBUATAN *VEGAN LEATHER* DARI SERAT DAUN NANAS *(Ananas Comosus L. Merr)* DENGAN VARIASI KONSENTRASI SERAT DAUN NANAS DAN GLISEROL

Eka Putri Fatmawati, 2025, 46 Halaman, 3 Tabel, 6 Gambar, 3 Lampiran

Vegan leather merupakan material alternatif yang ramah lingkungan dan dapat menggantikan kulit hewani. Serat daun nanas memiliki potensi besar sebagai bahan baku pembuatan kulit vegan, terutama di Indonesia yang merupakan salah satu produsen nanas terbesar di dunia. Pemanfaatan limbah daun nanas sebagai bahan baku diharapkan dapat mengatasi permasalahan limbah pertanian sekaligus menghasilkan produk kulit vegan yang berkelanjutan. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi serat daun nanas dan gliserol terhadap sifat mekanik kulit vegan. Penelitian ini menggunakan metode eksperimen dan Rancangan Acak Lengkap (RAL) dengan variasi bahan yang digunakan meliputi konsentrasi serat daun nanas sebanyak 2 gram, 4 gram, 6 gram, 8 gram, dan 10 gram, serta variasi gliserol sebanyak 14 ml dan 16 ml. Hasil penelitian menunjukkan bahwa lembaran kulit vegan yang dihasilkan memiliki kondisi optimum pada variasi serat daun nanas 6 gram dan konsentrasi gliserol 14 ml dengan kuat tarik sebesar 0,472 MPa, elongasi sebesar 15,0 %, ketebalan sebesar 1,815 mm, serta ketahanan air 12,5 % Pengujian dilakukan sesuai standar SNI 1294:2009 dan JIS K7162-2 (DIN EN ISO 527-2)(ISO 527-2).

Kata kunci: *Vegan Leather*, Serat Daun Nanas, Gliserol, Pati Jagung, Kitosan, Asam Asetat, Poliuretan, Lateks Karet Alam

ABSTRACT

STUDY ON THE MANUFACTURE OF VEGAN LEATHER FROM PINEAPPLE LEAVES FIBER (Ananas Comosus L. Merr) WITH VARIATIONS IN THE CONCENTRATION OF PINEAPPLE LEAVES FIBER AND GLYCEROL

Eka Putri Fatmawati, 2025, 46 Pages, 3 Tables, 6 Figures, 3 Appendices

Vegan leather is an environmentally friendly alternative material that can replace animal leather. Pineapple leaf fibers have great potential as a raw material for producing vegan leather, especially in Indonesia, which is one of the largest pineapple producers in the world. The utilization of pineapple leaf waste as a raw material is expected to address agricultural waste issues while simultaneously producing sustainable vegan leather products. This research aims to determine the effect of varying concentrations of pineapple leaf fiber and glycerol on the mechanical properties of vegan leather. This study employs an experimental method and a Completely Randomized Design (CRD), with the variations in materials including pineapple leaf fiber concentrations of 2 grams, 4 grams, 6 grams, 8 grams, and 10 grams, as well as glycerol variations of 14 ml and 16 ml. The research results indicate that the produced vegan leather sheets have optimum conditions at a pineapple leaf fiber variation of 6 grams and a glycerol concentration of 14 ml, with a tensile strength of 0.472 MPa, elongation of 15.0%, thickness of 1.815 mm, and water resistance of 12.5%. The testing was conducted in accordance with the SNI 1294:2009 and JIS K7162-2 (DIN EN ISO 527-2)(ISO 527-2) standards.

Keywords: Vegan Leather, Pineapple Leaf Fiber, Glycerol, Corn Starch, Chitosan, Acetic Acid, Polyurethane, Natural Rubber Latex