



SIFAT FISIK DAN KIMIAWI WATER KEFIR POMACE SEMANGKA
(*Citrullus vulgaris*)

ABSTRAK oleh:

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Limbah yang semakin banyak, hanya akan mengakibatkan pencemaran lingkungan, termasuk *pomace* semangka yang merupakan limbah industri dari sari buah, maupun rumah tangga dari buah semangka yang berupa ampas dari daging buah. Sedangkan *water kefir*, minuman fungsional-probiotik, belum banyak dikenal di Indonesia, memerlukan pengembangan. Maka dari itu, dilakukan penelitian sifat fisik, kimia serta organoleptik dari *water kefir pomace* semangka ini.

Penelitian bertujuan untuk mengetahui karakteristik dan memilih satu perlakuan *water kefir pomace* semangka berdasarkan tingkat kesukaan konsumen yang kemudian diuji sifat fisik dan kimianya lalu dibandingkan dengan control *water kefir* tanpa penambahan *pomace*.

Metode percobaan rancangan acak lengkap digunakan dalam penelitian ini. Pemilihan sampel terbaik dilakukan dengan uji organoleptik, metode *Acceptance/Preference Test*. Analisis statistik dengan ANOVA: *Two Way*. Sampel terbaik diuji sifat fisik (warna, viskositas, pH, total padatan terlarut) dan kimia (nilai antioksidan-DPPH, total fenolik, vitamin C). sertadilakukan uji korelasi Pearson Antara DPPH-Total Fenolik dan DPPH-Vitamin C.

Sampel terbaik ialah sampel dengan 1% *pomace* semangka, 1 hari fermentasi aerob, dan 1 hari fermentasi anaerob dengan karakteristik pH 4,52; viskositas 2,8 mPa.s; warna ($L^*a^*b^*$) 53,41; 4,12; 1,17; total padatan terlarut 1,33° Brix, total fenolik 0,10 mgGAE/g, vitamin C 33,52 mg/100 g, dan aktivitas antioksidan sebesar 19,94%. Dan menunjukkan nilai antioksidan yang lebih tinggi dari *water kefir* tanpa *pomace*.

Kata kunci: *water kefir*, *pomace* semangka, organoleptik, antioksidan.



PHYSICAL AND CHEMICAL CHARACTERISTICS OF WATER KEFIR WITH WATERMELON (*Citrullus vulgaris*) POMACE ADDITION

ABSTRACT by

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More and more waste, will only result in environmental pollution, including watermelon pomace which is an industrial waste from fruit juice, as well as households from watermelon in the form of pulp from fruit flesh. While water kefir, probiotic-functional drinks, not yet widely known in Indonesia, require development. Therefore, the physical, chemical and organoleptic properties of the water kefir with watermelon pomace addition were carried out.

The study aims to determine the characteristics and choose one treatment of watermelon water kefir based on the level of consumer preference which is then tested for physical and chemical properties and then compared with water kefir control without the addition of pomace.

The complete randomized design experiment method was used in this study. The best sample selection is done by organoleptic test, the Acceptance / Preference Test method and Statistical analysis with ANOVA: Two Way. The best samples were tested for physical properties (color, viscosity, pH, total dissolved solids) and chemistry (antioxidant-DPPH value, phenolic substance, vitamin C), as well as conducted the Pearson's correlation test between DPPH-Total Phenolic and DPPH-Vitamin C.

The best samples were samples with 1% watermelon pomace, 1 day aerobic fermentation, and 1 day anaerobic fermentation with characteristics pH 4.52; viscosity 2.8 mPa.s; color ($L^* a^* b^*$) 53.41; 4.12; 1.17; total dissolved solids of 1.33o Brix, phenolic total of 0.10 mgGAE / g, vitamin C 33.52 mg / 100 g, and antioxidant activity of 19.94%. Water kefir with watermelon pomace addition showed higher antioxidant values than water kefir without.

Keywords: *water kefir*, *watermelon pomace*, organoleptic, antioxidant.