

ABSTRAK

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KARAKTERISTIK *INFUSED WATER* DENGAN PENGGUNAAN JAHE MERAH, LEMON, DAN SERAI SERTA VARIASI LAMA PERENDAMAN
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(xvii + 97 halaman; 34 gambar; 8 tabel; 26 lampiran)

Infused water merupakan hasil perendaman potongan buah-buahan, sayuran, atau rempah di dalam air yang didiamkan selama beberapa jam pada suhu ruang maupun suhu refrigerator. Penggunaan campuran rempah dan buah sebagai bahan dasar pembuatan *infused water* masih terbatas, sehingga penelitian ini bertujuan untuk mengetahui pengaruh rasio lemon : serai, suhu penyimpanan, dan lama perendaman serta memperoleh karakteristik *infused water* terbaik dengan bahan dasar jahe merah, lemon, dan serai. Penelitian ini dibagi menjadi 2 tahap. Penelitian tahap I dilakukan untuk menentukan rasio lemon : serai (1:1, 1:2, dan 2:1) dan suhu penyimpanan (ruang dan refrigerator) terbaik berdasarkan aktivitas antioksidan dan karakteristik *infused water*. Rasio dan suhu penyimpanan terpilih digunakan pada penelitian tahap II untuk menentukan lama perendaman (1 jam, 3 jam, 5 jam, 7 jam, dan 9 jam) *infused water* dengan karakteristik terbaik. Analisis parameter uji yang dilakukan meliputi aktivitas antioksidan, total fenolik, total flavonoid, vitamin C, pH, warna, dan organoleptik (skoring dan hedonik). Berdasarkan analisis tahap I, formulasi *infused water* terpilih adalah *infused water* dengan rasio lemon : serai 1:1 yang disimpan pada suhu ruang. *Infused water* terbaik adalah *infused water* dengan lama perendaman selama 9 jam yang memiliki nilai IC_{50} $155169,87 \pm 1811,69$ ppm, total fenolik $0,35 \pm 0,00$ mg GAE/ml, total flavonoid $0,14 \pm 0,00$ mg QE/ml, nilai vitamin C $2,16 \pm 0,16$ mg/100 ml, pH $3,80 \pm 0,01$, *lightness* $52,05 \pm 0,91$, nilai $^{\circ}Hue$ $45,91 \pm 1,40$, memiliki warna merah muda, beraroma jahe, sangat terasa asam, terdapat sensasi pedas, dan paling disukai secara keseluruhan oleh panelis.

Kata Kunci : aktivitas antioksidan, *infused water*, lama perendaman, rasio lemon : serai, suhu penyimpanan

Referensi : 118 (2005-2020)

ABSTRACT

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THE CHARACTERISTICS OF INFUSED WATER CONTAINING RED GINGER, LEMON, AND LEMONGRASS, WITH RESPECT TO THE VARIATIONS OF SOAKING TIME

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(xvii + 97 pages; 34 figures; 8 tables; 26 appendices)

Infused water is the result of soaking fruit chunks, vegetables, or spices in water, left for several hours at room temperature or in the refrigerator. Infused water combining basic ingredients of spices and fruits is still rarely used. For that reason, this study aims to determine the effects of manipulating different ratios of lemon and lemongrass, storage temperature, and soaking time whilst also finding the best characteristics mentioned containing red ginger, lemon and lemongrass as basic ingredients. This study is divided into 2 stages: the first phase was conducted to determine the lemon and lemongrass ratio (1:1, 1:2, and 2:1), including the most suitable storage temperature (room and refrigerator) based on the antioxidant activity and infused water characteristics. The selected ones are used in the second phase to establish the best soaking time (1, 3, 5, 7, and 9 hours) of infused water with the best characteristics. The test parameters analyzed include antioxidant activity, total phenolic, total flavonoids, vitamin C, pH, color, and organoleptic (scoring and hedonic), and are chosen based on the best analysis results and organoleptic. Based on the analysis from phase one, the selected formulation for the infused water is 1:1 for lemon and lemongrass, and stored in room temperature. Infused water with the best results are soaked for 9 hours in water and have IC_{50} value of 155169.87 ± 1811.69 ppm, total phenolic of 0.35 ± 0.00 mg GAE/ml, total flavonoids of 0.14 ± 0.00 mg QE/ml, vitamin C value of 2.16 ± 0.16 mg/100 ml, pH of 3.80 ± 0.01 , lightness of 52.05 ± 0.91 , °Hue value of 45.91 ± 1.40 , pink in color, gingery smell, acidic taste, spicy sensation, and overall most preferred by panelists.

Keywords : antioxidant activity, infused water, lemon : lemongrass ratio, soaking time, storage temperature

References : 118 (2005-2020)