ABSTRAK

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PENGARUH PENAMBAHAN SARI *Citrus aurantifolia* DAN *Eucalyptus globulus* TERHADAP KARAKTERISTIK FISIKOKIMIA TEH HERBAL DAUN SALAM

Skripsi, Fakultas Sains dan Teknologi (2021).

(xvii + 84 halaman; 35 gambar; 13 tabel; 24 lampiran)

Teh herbal adalah teh yang tidak terbuat dari daun teh (*Camellia sinensis*), salah satunya dapat dengan menggunakan daun salam (*Syzygium polyanthum*). Pada penelitian ini, teh herbal daun salam dibuat dengan menggunakan metode pembuatan teh hitam. Penelitian ini bertujuan untuk mengetahui pengaruh suhu dan lama perebusan, serta pengaruh penambahan minyak asiri *Eucalyptus globulus* dan sari jeruk nipis (*Citrus aurantifolia*) terhadap karakteristik fisikokimia teh herbal daun salam. Daun teh herbal salam direbus dengan variasi suhu 70°C, 80°C, dan 90°C, dan lama perebusan 10 menit, 20 menit, dan 30 menit. Perlakuan terpilih adalah perebusan pada 90°C selama 30 menit, dengan aktivitas antioksidan (IC_{50}) sebesar (9038,31±266,05) ppm, total fenolik (564,06±11,33) mg GAE/L sampel, total flavonoid (140,11±14,10) mg QE/L sampel, dan kandungan tanin terkondensasi (1328,40±66,32) mg CE/L sampel. Teh herbal kemudian ditambahkan minyak asiri *E. globulus* dengan konsentrasi 0,05%, 0,10%, dan 0,15%, dan sari jeruk nipis dengan konsentrasi 1%, 2%, dan 3%. Jika dibandingkan dengan teh herbal tanpa penambahan minyak asiri *E. globulus* dan sari jeruk nipis, teh herbal daun salam dengan penambahan minyak asiri *E. globulus* 0,15% dan sari jeruk nipis 3% terpilih memiliki aktivitas antioksidan (IC_{50}) yang lebih tinggi, yaitu sebesar (8020,62±485,79) ppm, dengan total fenolik (601,40±12,44) mg GAE/L sampel, total flavonoid (145,20±2,50) mg QE/L sampel, dan kandungan tanin terkondensasi (1029,97±55,56) mg CE/L sampel. Penambahan minyak asiri *E. globulus* dan sari jeruk nipis ini juga meningkatkan penerimaan keseluruhan panelis terhadap teh herbal daun salam.

Kata Kunci : daun salam, *Eucalyptus globulus*, perebusan, sari jeruk nipis, teh herbal

Referensi : 87 (2002-2020)

ABSTRACT

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THE EFFECT OF *Citrus aurantifolia* JUICE AND *Eucalyptus globulus* ADDITION ON PHYSICOCHEMICAL CHARACTERISTICS OF BAY LEAVES HERBAL TEA

Thesis, Faculty of Science and Technology (2021).

(xvii + 84 pages; 35 figures; 13 tables; 24 appendices)

Herbal tea is a tea made without tea leaves (*Camellia sinensis*), as in using bay (*Syzygium polyanthum*) leaves. Bay leaves herbal tea in this research was made using black tea processing method. This research was conducted to know the effects of boiling time and temperature, as well as the effects of *Eucalyptus globulus* essential oil and key lime (*Citrus aurantifolia*) juice addition on physicochemical characteristics of bay leaves herbal tea. Bay herbal tea leaves were boiled at 70°C, 80°C, and 90°C boiling temperature and 10 minutes, 20 minutes, and 30 minutes boiling time variations. The chosen treatment was 90°C, 30 minutes with antioxidant activity (IC_{50}) of (9038.31±266.05) ppm, total phenolics of (564.06±11.33) mg GAE/L sample, total flavonoids of (140.11±14.10) mg QE/L sample, and condensed tannin content of (1328.40±66.32) mg CE/L sample. The herbal tea was then added with 0.05%, 0.10%, and 0.15% of *E. globulus* essential oil and 1%, 2%, 3% of key lime juice. In comparison with herbal tea without the addition of *E. globulus* essential oil and key lime juice, the chosen bay leaves herbal tea with 0.15% *E. globulus* essential oil and 3% key lime juice addition had better antioxidant activity (IC_{50}) of (8020.62±485.79) ppm, total phenolics of (601.40±12.44) mg GAE/L sample, total flavonoids of (145.20±2.50) mg QE/L sample, and condensed tannin content of (1029.97±55.56) mg CE/L sample. The addition of *E. globulus* essential oil and key lime juice also increased panelists' overall acceptability toward bay leaves herbal tea.

Keywords : bay leaves, boiling, *Eucalyptus globulus*, herbal tea, key lime juice

References : 87 (2002-2020)