

**FAKULTAS KEDOKTERAN DAN ILMU KESEHATAN
UNIVERSITAS MUHAMMADIYAH MAKASSAR**

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**UJI EFEKTIVITAS TEH HERBAL DAUN KELOR (*Moringa oleifera*)
KOMBINASI DAUN SIRSAK (*Annona muricata*) TERHADAP
PENURUNAN KADAR ASAM URAT MENCIT (*Mus musculus*)**

ABSTRAK

Latar Belakang: Asam urat merupakan hasil akhir metabolisme purin yang apabila terakumulasi berlebihan dalam tubuh dapat menyebabkan gangguan seperti nyeri sendi dan peradangan. Pemanfaatan bahan alami sebagai alternatif terapi, seperti daun kelor (*Moringa oleifera*) dan daun sirsak (*Annona muricata*), semakin banyak dilirik karena kandungan senyawa aktifnya seperti flavonoid, polifenol, dan saponin yang berpotensi menurunkan kadar asam urat. Kombinasi keduanya dalam bentuk teh herbal diharapkan mampu memberikan efek sinergis yang lebih optimal.

Tujuan Penelitian: Untuk mengetahui efektivitas kombinasi teh herbal daun kelor dan daun sirsak dalam menurunkan kadar asam urat mencit serta menentukan kombinasi yang paling efektif.

Metode: Penelitian ini menggunakan rancangan eksperimental *pre-posttest control group design* pada mencit jantan. Tiga kombinasi formula digunakan: 85:15, 50:50, dan 15:85 (kelor:sirsak). Kadar asam urat diukur sebelum induksi, setelah 2 jam induksi, dan setiap 1 jam selama 3 jam setelah pemberian perlakuan. Data dianalisis menggunakan ANOVA satu arah, yaitu uji statistik untuk melihat perbedaan signifikan antar lebih dari dua kelompok perlakuan.

Hasil: Formula 85:15 menunjukkan penurunan kadar asam urat tertinggi sebesar 31,06%, diikuti oleh formula 50:50 (27,01%) dan 15:85 (17,88%). Hasil pengujian kadar air dan kadar sari larut air seluruh formula telah memenuhi syarat mutu teh herbal kering berdasarkan SNI. Pada hasil pengujian ALT (Angka Lempeng Total) menunjukkan bahwa seluruh formula melebihi ambang batas SNI (3×10^3 CFU/g). Namun masih berada dibawah ambang batas berdasarkan ketentuan dari BPOM (5×10^7 koloni/gram) sehingga dapat dikatakan memenuhi standar mutu mikrobiologi.

Kesimpulan: Kombinasi teh herbal daun kelor dan daun sirsak memiliki efektivitas dalam menurunkan kadar asam urat mencit, dengan formula 85:15 sebagai kombinasi paling optimal. Meskipun demikian, perbaikan proses sanitasi dan pengemasan diperlukan untuk memenuhi standar ALT.

Kata kunci: Teh herbal, daun kelor, daun sirsak, kadar asam urat, ANOVA satu arah, kadar air, sari larut air, ALT.

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THE EFFECTIVENESS OF HERBAL TEA FROM MORINGA LEAVES
(*Moringa oleifera*) COMBINED WITH SOURSOP LEAVES (*Annona
muricata*) ON THE REDUCTION OF URIC ACID
LEVELS IN MICE (*Mus musculus*)

ABSTRAC

Background: Uric acid is the end product of purine metabolism, and its excessive accumulation can lead to gout and inflammation in the joints. Recently, natural ingredients have gained attention for their potential in managing uric acid levels. *Moringa oleifera* (moringa leaf) and *Annona muricata* (soursop leaf) are known to contain beneficial bioactive compounds such as flavonoids and polyphenols that may contribute to lowering uric acid levels.

Objective: This study aims to determine the effectiveness of herbal tea made from a combination of moringa and soursop leaves in reducing uric acid levels in mice (*Mus musculus*), and to identify the most effective formulation ratio.

Method: This research employed a pre- and post-test control group design using male Swiss Webster mice. Herbal tea was formulated in three ratios (85:15, 50:50, and 15:85 w/w of moringa to soursop). Uric acid levels were measured before induction, after 2 hours of induction, and every hour for 3 hours post-treatment. One-way ANOVA was used for statistical analysis.

Results: The 85:15 formulation showed the highest reduction in uric acid level (31.06%), followed by 50:50 (27.01%) and 15:85 (17.88%). The moisture content and water-soluble extract levels of all formulations met the Indonesian National Standard (SNI) for herbal tea. However, microbial contamination in all samples exceeded the permitted limit (3×10^3 CFU/g). However, the result is still below the threshold set by BPOM (5×10^7 colonies/gram), indicating that it meets the microbiological quality standards.

Conclusion: Herbal tea made from moringa and soursop leaves is effective in reducing uric acid levels in mice, particularly at the 85:15 formulation. However, improvements in microbial quality are needed for it to comply with health standards.

Keywords: *Moringa oleifera*, *Annona muricata*, uric acid, herbal tea, mice, one-way ANOVA, microbial contamination.