

## Kajian Pustaka Penelitian Jamu Anti Aterosklerosis Berpelarut Air: Aktifitas Anti Hipertensi = Literature Review Anti-Atherosclerosis Herbs with Water Solvent: Anti-Hypertension Activity

Fadel Putra Wicaksono, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20506018&lokasi=lokal>

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### Abstrak

Hipertensi atau tekanan darah tinggi adalah kondisi saat tekanan darah berada pada nilai 130/80 mmHg atau lebih dimana keadaan normal sekitar 120/80 mmHg. Hipertensi jika dibiarkan dapat mengakibatkan penyakit yang lebih berbahaya seperti stroke, serangan jantung, dan penyakit ginjal. Saat ini untuk mengurangi tekanan darah maka dapat digunakan obat seperti ACE inhibitor, Alpha-2 receptor agonist, dan Captoril. Reaksi terhadap obat-obat hipertensi beragam, namun jika dikonsumsi lebih dari yang dianjurkan dapat menimbulkan efek samping seperti mual, diare, sakit kepala, dan berat badan turun atau naik secara drastis. Oleh karena itu diperlupakan kajian tentang jamu anti aterosklerosis memiliki kemampuan menurunkan tekanan darah. Jamu antiaterosklerosis terdiri dari daun tanjung (*Mimusops elengi* L.), daun belimbing manis (*Averrhoa carambola* L.), dan temulawak (*Curcuma xanthorrhiza* L.). Daun tanjung mempunyai kemampuan antioksidan yang tinggi dengan nilai IC50 (inhibitory concentration 50) sebesar 10,6, dan memiliki keaktifan anti kolesterol dapat menurunkan kolesterol sebanyak 36%. Daun belimbing mempunyai kemampuan antioksidan yang sedang dengan nilai IC50 sebesar 75,43, dan sebagai antihiperqlikemik dapat menurunkan gula darah sebesar 42 mg/dl. Temulawak mempunyai kemampuan antioksidan yang sedang dengan nilai IC50 sebesar 70,3, dan sebagai hepatoprotector dapat menurunkan kadar ALT (Alanine transaminase) sebanding dengan 80% kurkumin, dan kadar AST (Aspartate transaminase) sebanding dengan 85% kurkumin. Kombinasi dari ketiga jenis tumbuhan tersebut dijadikan formula jamu antiaterosklerosis yang memiliki efek anti hipertensi, dengan dosis 52,8 mg/200g dapat menurunkan tekanan darah sistolik sebesar 22,03% dan menurunkan tekanan darah diastolik sebesar 25,14%.

Hypertension or high blood pressure is a condition when a person blood pressure is higher than 130/80 mmHg, where normal blood pressure is around 120/80 mmHg. Hypertension if leave alone could cause further complication such as stroke, heart attack, and kidney failure. Today, the common medicine to decrease blood presure is ACE inhibitor, Alpha-2 receptor agonist, and Captoril. Reaction to these medicines is varied if these medicine is consumed over the recommended dosage could cause nausea, diarrhea, headache, and drastic fluctuation of weight. According to this there is a need for literature review for anti-atherosclerosis herbs has the ability to decrease blood pressure. Anti-atherosclerosis herbs consist of tanjung leaves (*Mimusops elengi* L.), starfruit leaves (*Averrhoa carambola* L.), and curcuma (*Curcuma xanthorrhiza* L.). Tanjung leaves have high antioxidant potential with IC50(inhibitory concentration 50) as high as 10.6, and the ability as an anti-cholesterol and could decrease 36% of cholesterol level. Starfruit leaves have moderate antioxidant potential with IC50 as high as 75.43, and act as anti-hyperqlicemic agent and could decrease bloos sugar level as much as 42 mg/dl. Curcuma have moderate antioxidant potential with IC50 as high as 70.3, and act as hepatoprotector and could decrease ALT (Alanine transaminase) level as much as 80% of curcumin, and decrease AST (Aspartate transaminase) level as much as 85 of curcumin. The combination of the three herbs is formulated as anti-atherosclerosis herbs which have hypotensive

effect. With a dose of 52.8 mg/200 g the herbs could decrease 22.03% of systolic blood pressure and decrease 25.14% of diastolic blood pressure.