

**AKTIVITAS INHIBISI ALFA GLUKOSIDASE PADA BEBERAPA  
JENIS KULIT KAYU RARU**  
*(Inhibition Activity of Alpha Glucosidase from Several Stem Bark  
of Raru)*

Oleh/ By:

**Gunawan Pasaribu**

Balai Penelitian Kehutanan Aek Nauli,

Jl. Raya Parapat KM 10.5. Sibaganding Simalungun-Sumatera Utara Telp. 0625-41659

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**ABSTRACT**

*Raru is an additional compound used in the processing of toddy traditional beverage such astuak (Batak's beverage). It is made from stem bark of certain species and is claimed to be a preservative as well as taste-enriching substance of the beverage. According to the local traditional knowledge, raru also can reduce the level of blood sugar. The objective of this study were to explore species that are used to produce raru, to determine their bioactive compounds, and to investigate the effectiveness of raru extractives in reducing blood sugar level. The last objective was approximated by evaluating the effectiveness of the substance to inhibit alpha glucosidase activity. Exploration at five locations in North Sumatra resulted in four raru-producing species, i.e. Cotylelobium melanoxydon Pierre, Cotylelobium lanceolatum Craib, Shorea balano carpoides Sym, and Vatica perakensis King. All of these raru-producing species contain flavonoid, saponin and tannin. The crude extracts obtained from reflux and maceration method were found to be able to inhibit alpha glucosidase activity up to 88-97%. The crude extract of Shore balano carpoides exhibits the best performance, with an inhibiting ability equivalent to patented drug (Glucobay).*

*Keywords: Raru, bioactive compounds, blood sugar, alpha glucosidase.*

**ABSTRAK**

Raru merupakan sebutan untuk jenis kulit kayu yang ditambahkan pada nira aren yang bertujuan untuk meningkatkan cita rasa, kadar alkohol dan mengawetkan minuman tradisional tuak. Sebagian masyarakat Tapanuli juga mengenal kulit kayu raru sebagai obat diabetes. Penelitian ini bertujuan untuk melakukan eksplorasi berbagai jenis kulit kayu raru, mengetahui kandungan bioaktifnya, dan mengetahui efek farmakologis ekstraktif raru terhadap penurunan kadar gula darah melalui aktivitas inhibisi alfa glukosidase. Hasil penelitian menunjukkan bahwa dari eksplorasi jenis raru di Sumatera Utara dan Riau diperoleh 4 jenis raru antara lain Cotylelobium melanoxydon Shorea balanocarpoides Cotylelobium lanceolatum Craib, dan Hasil penapisan fitokimia menunjukkan ekstrak kulit kayu tersebut di atas mengandung senyawa golongan flavonoid, tanin dan saponin. Aktivitas inhibisi berkisar antara 88-97% dan inhibisi terbaik ditunjukkan oleh Sym, dengan aktivitas inhibisi obat paten glucobay sebesar 97%.

Kata kunci : Raru, kulit kayu, ekstraktif, alfa glukosidase