Correlation Between Antioxidant Activity and Antimutagenicity of Various Mistletoe Grown on Different Host Plants

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Abstrak

Analysis of various mistletoe grown on different host plants showed that the amount or value of mistletoe antioxidant activity, which were based on its ability to reduce K3Fe(CN)6 and Cerium (IV) Sulphate, were 0.092 - 2.403 mequiv and 0.103 - 3.309 mequiv for each gram of mistletoe.
The ability of mistletoe samples to scavenge H202 were (1322 - 12.567 mmol for each gram of mistletoe. In general those three antioxidant methods showed the same order of activity, Dendrophthoe pentandra (L) Miq on tea as host plant gave the highest value, where Scurrula lepidota (G) Don on tea as host plant gave the smallest value. In general thin layer chromatogram profile with Rf 0.68; (180 and 0.91 are specific for all mistletoe genus examined. Dendrophthoe pentandra grown on tea has a big spot at Rf 0.80 when compared to other genus. Lepeostegeres gemmiflorus grown on tea has a big spot at Rf 0.51 but no spot at Rf 0.68. Scurrula lepidota grown on tea has the smallest spots at all Rf values when compared to other genus. Macroscopically mistletoe genus can be distinguished by its shape and size of stern, flowers and leaves. Microscopically Dendrophthoe and Lepeostegeres are specific for having astrosclereid while Scurrula and Macrosolen has stellate trichomes.