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## THE APPLICATION OF MICRONIZATION TECHNOLOGY ON A FRUITING BODY EXTRACT OF *ANTRODIA CINNAMOMEA*

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### ABSTRACT

Micronization has been applied in many drug preparations—including traditional Chinese medicine—to optimize oral bioavailability. The commonest technique used is mechanical comminution (e.g., by crushing, grinding, and milling). Particles produced through the micronization process are quite easy to re-aggregate due to the Van der Waals effect, and therefore dispersants are added to maintain the stability of the micronized mixture and prevent them from aggregating into larger particles. In this study, the particles of *Antrodia cinnamomea* suspended in water extract are micronized by the impact between two currents of liquid generated by a liquid micronizer made specifically for the task. *Antrodia cinnamomea* fruiting bodies were extracted using 95% alcohol. The extraction was then diluted 20 times with water and underwent a micronization process for 240 minutes. Appropriate amounts of dispersant were then added to the micronized *Antrodia cinnamomea* extract, with each dispersant divided into three concentrations — 0.5%, 0.75%, and 1.0%. Three different dispersants were tested in this study, namely microcrystalline cellulose, silicon dioxide, and polyethylene glycol. Monitoring of the degree of aggregation over 56 days showed that a silicon dioxide concentration of 0.75% gives the best dispersion effect.

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