

Effect of Drying Temperatures on Chemical compounds and Antioxidant properties of *Vitex negundo* leaves

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Abstract : The effect of drying temperature on the leaves of *Vitex negundo* was determined. Three levels of temperatures (40, 50 and 60°C) were used in the presented study. The initial moisture content of the leaves was 69.98%. Continuous drying at the above mentioned temperature levels was conducted to determine the drying time required to achieve equilibrium moisture content. The quality of dried leaves was evaluated based on the quantity of agnuside, a major compound in *V. negundo* using HPLC analysis. The fastest drying of the leaves was achieved at 60°C, followed by at 50°C, but HPLC results showed that dried *V. negundo* suffered at 40% reduction in agnuside content when drying at 60°C as compared to at 40°C. Slight reduction of agnuside was found in the sample dried at 50°C as compared to at 40°C. Whereas, antioxidant results showed that *V. negundo* leaves have significant level of phenolic content and the effect of drying at higher temperature has significantly reduce the amount of phenolics in *V. negundo* leaves. Total phenolic content of *V. negundo* leaves was highest at 50 °C drying temperature. Based on the findings of this work, the best convection oven drying condition for *V. negundo* leaves was at 50°C with the highest agnuside concentration of 502.224 mg/L and phenolic content of 286.7 ± 11.0 mg GAE/100g.

Key Words : *Vitex negundo*, agnuside, drying, phytochemical.

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