

# The Phytochemical Analysis and the Effect of Soxhlet and Ultrasonic-assisted Extraction on Antioxidant Content of *Vigna radiate* †

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**Abstract:** The primary objective of this project is to study the effect of two different extraction techniques, namely soxhlet extraction and ultrasonic-assisted extraction, for evaluation of total antioxidant content of mung bean (*Vigna radiata*) and qualitative phytochemical analysis of the same. For the soxhlet method, n-hexane was used as a solvent and maintained an extraction temperature of 70°C. For ultrasonic-assisted extraction (UAE), a 20 kHz probe was used, and n-hexane was used as a solvent. A rotary evaporator at high pressure and low temperature was used to get yield extract. 96 well plates were used to perform radical scavenging activity assay (DPPH assay), and a multi-mode plate reader was used to observe absorbance at 517nm. Comparing the soxhlet and UAE methods, sonication tends to be a faster and more efficient technique.

**Keywords:** soxhlet; sonication; UAE; antioxidant; mung bean; *Vigna radiata*; phytochemical; DPPH assay.

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## Conflicts of Interest

The authors declare no conflict of interest.