



## **Chemical constituents and antioxidant activity of *Camellia sinensis* var. *assamica***

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Nowadays, tea is the most widely consumed beverage in the world. It has potential application in pharmaceutical industry applications because it contains many nutrients and phytochemical beneficial for human health. Thus, this research was aimed to investigate the chemical constituents by GC-MS and HPLC and evaluate antioxidant activity of *Camellia sinensis* var. *assamica*. The main chemical constituents identified by HPLC demonstrated the presence of caffeine, gallic acid (GC), catechin (C), epicatechin (EC), epigallocatechin gallate (EGCG), gallic acid (GCG), epigallocatechin (EGC), epicatechin gallate (ECG) and gallic acid (GA). GC-MS analysis showed the presence of phytol, phenylethyl alcohol and linalool. Furthermore, total phenolic content was measured by Folin-Ciocalteu method while antioxidant activity was evaluated by using DPPH radical scavenging assay and FRAP assay. It was found that tea leaves extracted with 80% acetone showed the antioxidant activities with IC<sub>50</sub> value of 24.22 µg/mL and 211.12 mg GAE/g of FRAP assay and also contained the total phenolic content of 231.64 mg GAE/g.

**Keywords:** *Camellia sinensis* var. *assamica*; Antioxidant activity; Phenolic content