

**PHYTOCHEMICAL SCREENING AND ANTIOXIDANT  
ACTIVITY OF RAW AND BLANCHED ULAM RAJA  
(*COSMOS CAUDATUS*) AND SELOM (*OENANTHE  
JAVANICA*)**

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## ABSTRACT

### PHYTOCHEMICAL SCREENING AND ANTIOXIDANT ACTIVITY OF RAW AND BLANCHED ULAM RAJA (*COSMOS CAUDATUS*) AND SELOM (*OENANTHE JAVANICA*)

Malaysians love to eat their “ulam” (especially ulam raja and selom) either raw or blanched with boiling water. Nevertheless, blanching the “ulam” might destroy some nutrients in them such as antioxidant content, phenolic content, beta-carotene content, and vitamin C content. The objective of this research is to determine the antioxidant (DPPH), total phenolic, beta-carotene, and vitamin C contents in fresh and blanched ulam raja (*Cosmos caudatus*) and selom (*Oenanthe javanica*). Ulam raja and selom were blanched in boiling water for 90 seconds and were used raw. In conclusion, there was a reduction of percentage inhibition of DPPH in ulam raja where raw ulam raja contained  $69.34 \pm 2.4596$  % and blanched ulam raja contained  $57.05 \pm 9.1140$  %. The same pattern showed by selom where raw selom contained higher percentage with  $76.08 \pm 0.7356$  % than blanched selom that contained  $29.65 \pm 0.7366$  %. Next, raw ulam raja contained higher total phenolic content than blanched ulam raja with  $526.48 \pm 0.1488$  mg/GAE g and  $277.02 \pm 0.3207$  mg/GAE g respectively. Meanwhile raw selom also contained higher total phenolic content than blanched selom with  $680.82 \pm 0.2712$  mg/GAE g and  $606.23 \pm 0.1871$  mg/GAE g respectively. Thirdly, beta-carotene content showed a lower content in raw ulam raja than blanched ulam raja with  $0.0149 \pm 0.0539$  mg/100 g and  $0.0799 \pm 0.0005$  mg/100 g. However, beta-carotene content in raw selom and blanched were similar in content and no reduction occurred with  $0.0799 \pm 0.0005$  mg/100 g. Finally, vitamin C content in raw ulam raja was higher in content than blanched ulam raja with  $25.81 \pm 0.0816$  mg/100 g and  $12.90 \pm 0.5477$  respectively. The similar pattern was portrayed as raw selom contained more vitamin C than in blanched selom with  $63.59 \pm 0.9882$  mg/100 g and  $19.35 \pm 0.3696$  mg/100 g.