

Antioxidan activity of *Sargassum duplicatum* seaweed extract

Title	Antioxidan activity of <i>Sargassum duplicatum</i> seaweed extract
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Abstract	<p><i>Sargassum duplicatum</i> contains bioactive compounds that potential as antioxidants. The aims of the research were to study the antioxidant activity of <i>S. duplicatum</i>'s extract obtained from solvent extraction by one-step extraction and multi-step extraction methods. Solvents used were hexanes, ethyl acetate, methanol, ethanol, and water. Antioxidant activity of extract was measured by analyzing the peroxide value, malonaldehyde (MDA) from linoleic acid dan 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenger capacity. The result showed that the extract of <i>S. duplicatum</i> could inhibit linoleic acid oxidation and scavenge free radical. Antioxidant activity on linoleic acid of methanol extract from one-step extraction method was the highest, whereas antioxidant activity of ethanol and ethyl acetate extracts was not significantly different. Methanol extract from one step extraction could inhibit peroxide formation by 86.4%, and MDA formation by 77.5%. As reference, α-tocopherol inhibited peroxide formation by 89.1% and MDA formation by 60.6%. The DPPH radical scavenger capacity of all extracts of <i>S. duplicatum</i> was lower than α-tocopherol. Activity of antioxidant of those extracts was closely related to their total phenolic content. Key words: Extraction, antioxidant, <i>Sargassum duplicatum</i></p>
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