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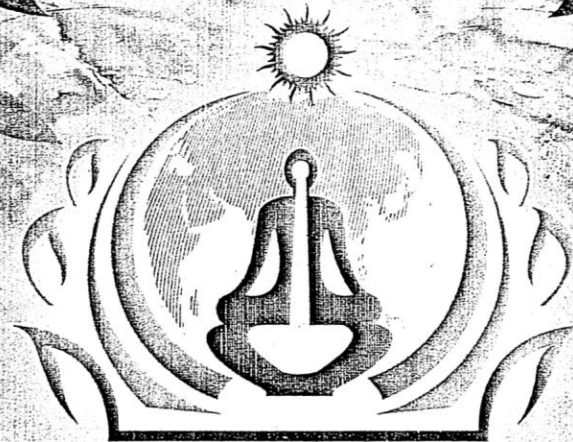
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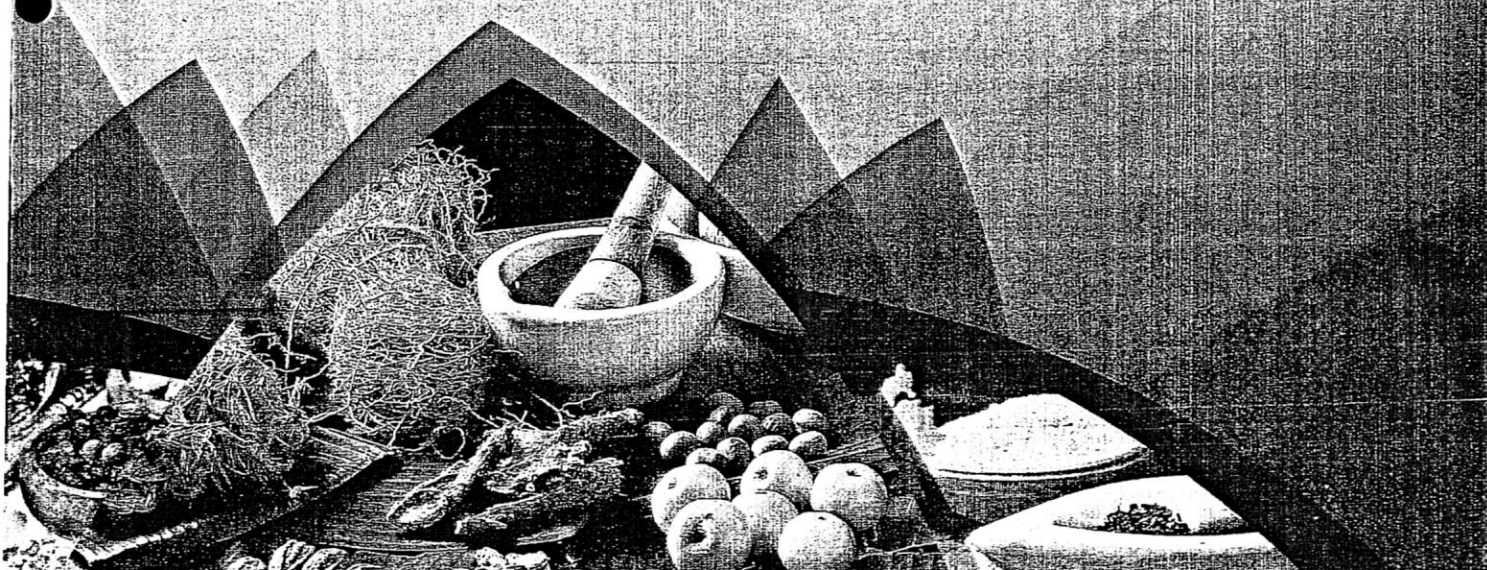
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PP 052: Evaluation of the potential antioxidant properties and proximate chemical compositions of Indian and Ethiopian black cumin (*Nigella sativa*)

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This study was carried out to evaluate the possibility of using Indian and Ethiopian varieties of black cumin for the food and pharmaceutical industries by analyzing their phytochemical and proximate compositions. The antioxidant capacities of ethanol extracts of the two varieties were preliminary determined for the presence of antioxidants by testing reducing power and following quantification by DPPH radical-scavenging activity and ABTS assay. Proximate chemical compositions were compared in these two varieties. Higher antioxidant capacity was observed in the Ethiopian variety than in the Indian variety. DPPH radical scavenging assay: IC₅₀ value of 8.30 ± 1.34 mg and 7.22 ± 0.27 mg of Gallic acid equivalents per mL. ABTS radical scavenging assay: IC₅₀ value of 9.29 ± 0.31 mg and 6.82 ± 1.9 mg of Gallic acid equivalents per mL respectively. Proximate analysis of Indian *Nigella* seeds showed that moisture content (8.11%), crude protein (23.13%) and total carbohydrate (32.70%) were slightly higher than the quantities of Indian variety and fat (37.03%), fiber (6.90%) contents were slightly higher in the Ethiopian variety. Both Ethiopian and Indian varieties of black cumin could be identified as a great potential to be used in food and pharmaceutical industries because of its high antioxidant capacity and both are potential sources of dietary fibre and fat.

Keywords: *nigella sativa*, Indian and Ethiopian varieties, antioxidant

PP 053: Evaluation of the potential antioxidant properties of three varieties of sea weed collected from Sri Lankan coastal areas

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This study was conducted to evaluate the possibility of using three underutilized sea weed species found in Sri Lankan coastal areas; *Sargassum crassifolium*, *Sargassum muticum* and *Caulerpa racemosa*, for the food and pharmaceutical industries by analyzing their antioxidant capacity and total phenolic content. *Sargassum crassifolium* and *Caulerpa racemosa* from the south western coast, Hikkaduwa, and *Sargassum muticum* from the Northern coast, Jaffna, were manually collected, cleaned and were oven dried at 60°C for 6-7 hours. The antioxidant potential of the three varieties were determined both in dried and fresh form after being extracted into methanol by evaluating DPPH radical-scavenging activity and ABTS assay. The highest antioxidant capacity and total phenolics were observed in *Sargassum muticum* (DPPH radical scavenging assay: IC₅₀ value of 3.17 ± 0.35 mg of GAE per mL & the TPC of 23.62 ± 0.84 ppm) whereas the lowest was recorded in *Caulerpa racemosa*. (DPPH radical scavenging assay: IC₅₀ value of 0.98 ± 0.62 mg of GAE per mL & the TPC of 16.49 ± 0.53 ppm) All three varieties showed higher antioxidant capacity in fresh form than in dried form. *Sargassum muticum* shows the greatest potential to be used in food and pharmaceutical industries because of its high antioxidant capacity and it is best utilized in fresh form.

Keywords: seaweeds, *Sargassum*, *Caulerpa*, antioxidant, total phenolics