

Antioxidant, α -amylase inhibitor and GC/MS analysis of chloroformic fraction of *Astragalus membranaceus*.

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Currently, the potential utilization of natural plant-derived extracts for medicinal and therapeutic purposes has increased remarkably. In this investigation potential inhibitors of α -amylase, one of the key regulatory enzymes in diabetes, and *in vitro* antioxidant activities using hydrogen atoms transfer methods DPPH, β -carotene, ABTS and cupric reducing antioxidant capacity assays were characterized from the chloroformic fraction of aerial part of *Astragalus membranaceus*. For viable use of the extract, qualitative analysis of phytochemicals and their identification was carried out by gas chromatography-mass spectroscopy. The powerful inhibitor of alpha amylase was (IC₅₀ = 36.73 ± 4.02 μ g/mL). The better antioxidant activity is observed in β -carotene which is estimated at (IC₅₀ = 131.78 ± 3.71 μ g/mL). The presence of 9, 12, 15 octadecatrienoic acid was identified by GC-MS and appeared as the most dominant constituent in chloroformic extract.

Keywords: *Astragalus membranaceus*, α -amylase, inhibitory activity, GC-MS analysis.