Moringa oleifera: HEMAGGLUTINATING/ANTIOXIDANT ACTIVITIES OF TISSUE EXTRACTS AND PURIFICATION OF A SEED LECTIN

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Moringa oleifera is a plant with great economic importance; the aim of this work was to investigate hemagglutinating activity (HA) in saline extracts (E1) from flowers (a), inflorescence rachis (b), seeds (c), leaf tissue (d) and fundamental tissues of stem (e), as well as antioxidant activity in ethanolic extracts (E2) from a, b, c, d, e and leaf rachis (f). Also, a seed lectin was purified. All E1 showed specific HA (SHA; a: 1185, b: 680, c: 208, d: 8, e: 84). Seed saline soluble lectin (SSMoL) was isolated after guar gel chromatography. Basic SSMoL was thermostable (100 °C, 7 h) and active at pH range 4.0 to 9.0; denatured lectin migrated as two bands. Extracts and SSMoL HA were inhibited by carbohydrates and glycoproteins. Radical scavenging capacity (RSC) of E2 and standards were determined using dot-blot assays on thin layer chromatography stained with 0.4 mM 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical solution. Spectrophotometric assays (515 nm) were performed with DPPH methanolic solution. Antioxidant components were detected in all E2 by DPPH reduction (30 min). E2a, E2b and E2f contained at least three flavonoids. In conclusion, E1 have hemagglutinating proteins and a lectin was purified from seeds; E2 have antioxidant components.

Keywords: *Moringa oleifera* lectin, antioxidant activity, hemagglutinating activity.
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