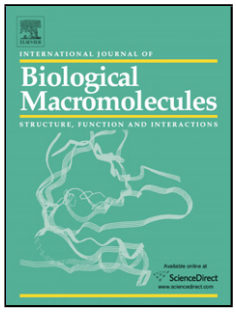

Title: Monosaccharide composition of acidic gum exudates from Indian *Acacia tortilis* ssp. *raddiana* (Savi) Brenan

Author: Ajeet Kumar Lakhera Vineet Kumar

PII: S0141-8130(16)30760-7
DOI: http://dx.doi.org/doi:10.1016/j.ijbiomac.2016.09.097
Reference: BIOMAC 6564

To appear in: *International Journal of Biological Macromolecules*

Received date: 5-7-2016
Revised date: 22-9-2016
Accepted date: 28-9-2016

Please cite this article as: Ajeet Kumar Lakhera, Vineet Kumar, Monosaccharide composition of acidic gum exudates from Indian Acacia tortilis ssp.raddiana (Savi) Brenan, International Journal of Biological Macromolecules http://dx.doi.org/10.1016/j.ijbiomac.2016.09.097

Monosaccharide composition of acidic gum exudates from Indian *Acacia tortilis* ssp. *raddiana* (Savi) Brenan

Ajeet Kumar Lakhera and Vineet Kumar*

Chemistry Division, Forest Research Institute**,** Dehradun-248006 India

*For correspondence: E-mail: drvineet@gmail.com, Phone: +91-135-2752671; Fax: +91-135-2756865

Abstract:

Acacia tortilis ssp. *raddiana* (Savi) Brenan commonly known as Israeli Babool has contributed immensely for sand dunes management in Indian desert leading to wind erosion control and increased biological productivity. The species is extensively used in traditional medicine system for a number of therapeutic applications and as nutraceutical. The polysaccharide was isolated in 43.6 % yield from gum exudates. The monosaccharides, L-Arabinose, D-galactose D-glucose, L-rhamnose and D-mannose were determined in molar ratio of 78.1%, 18.64%, 0.60%, 1.71% and 0.74% respectively. The molar ratio of uronic acids was studied using diverse spectrophotometric methods and compared with GLC. The content of D-galacturonic acid and D-glucuronic was determined as 3.88% and 4.35% respectively by GLC. The results were compared with the spectrophotometric methods. The results using DMP as chromogenic reagent are closer to that obtained by GLC. Structural analysis of the polysaccharide may provide scientific basis for nutraceutical, pharmaceutical and biological applications of gum exudates from *A. tortilis*, which is extensively planted in India.