

Cassia roxburghii and *Moringa oleifera* - potential binding agent for paracetamol formulation

K.S.G. Arulkumar
KMCH College of Pharmacy, India

Plant gums and mucilage have widely been used in various industries like paper, textile, food, ink, and in pharmaceuticals mainly as thickening, binding, emulsifying, suspending, and stabilizing agents and coating materials in micro encapsulation. The objectives of this study were to identify and isolate new sources of seed gums and formulate Paracetamol tablets using different natural and synthetic binding agents of different concentrations. The *Cassia roxburghii* (Patent-Application No. 2168/CHE/2010. Date of Filing 30/07/2010) seed galactomannan was isolated mainly by Defatted seed gum and Filtered seed gum method, while the gum of *Moringa Oleifera* was collected directly from the trees. The Paracetamol granules were prepared and evaluated for precompression parameters and found to be within the limits. A total of about 13 formulations such as F1 - F13 were formulated by wet granulation method using different concentrations of *C.roxburghii*, *Moringa Oleifera*, Sodium carboxy methyl cellulose, Guar gum and Gelatin. Regarding the drug release, increase in the concentration from 2% to 6% of filtered *C.roxburghii*, *Moringa*, defatted *C.roxburghii* gum, decreases the drug release. Combination of 2% binders (1% filtered *C.roxburghii* gum + 1% *Moringa Oleifera*) shows increase in hardness, decrease in % fines, friability, drug release, and disintegration time when compared to individual 2% gums.

The study has finally concluded that the seeds of *Cassia roxburghii*, *Moringa oleifera* gum have great potentialities to become the new source of gums.

Biography

K.S.G. Arulkumar has completed his Ph.D. from Tamil University, Thanjavur, India and working as a vice-principal in KMCH College of Pharmacy, Coimbatore. Received 48 lakhs as research grant from Department of Science and Technology (DST), New Delhi and 10 lakhs from Defense Research and Development organization (DRDO), New Delhi. He filled a patent entitled 'Novel Compound Extracted From a Natural Source and its uses as a Pharmaceutical Excipient' He has published more than 30 papers in reputed journals and serving as an ethical committee member of KMCH. Recently he has received "Best Teacher Award from The Tamil Nadu Dr. M.G.R. Medical University, Chennai, India.

yesmiarul@yahoo.com