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Identification of commercial milling techniques to produce high sugar, high fiber, high protein, and high galactomannan gum fractions from Prosopis pods

R.M.Saunders¹R.Becker¹D.Meyer¹F.R.DeI Valle²E.Marco²M.E.Torres³

Western Regional Research Center, U.S. Department of Agriculture, Albany, CA 94710

U.S.A., FICAN, Chihuahua Mexico, INTEC, Santiago Chile

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Abstract

Prosopis velutina pods were milled into exo-mesocarp (55%), endocarp (25%), endosperm 'splits' (10%) and cotyledon (10%) fractions. These fractions had as their major components, respectively, sucrose (30–40%), fiber (35–45%), galactomannan (50–70%), and protein (56–63%). Each fraction showed potential for specific end uses in food systems. Similar results were obtained on Chilean species *P. chilensis* and *P. tamarugo*. The processes described have been used as a model for proposing a commercial process for quantities up to 1000 kg h⁻¹ of pods. Pin-milling followed by particle size fractionation of raw, toasted, or extruded *P. velutina* pods yielded flours with compositions suitable for baked foods.

Reference:

Gupta, M.C., Gandhi, B.M. and Tandon, B.N: An unconventional legume, *Prosopis cineraria*. *American Journal of Clinical Nutrition* 27: 1035-36, 1974