



Research article

Preparation of Beijing Grass Tablets from Spray-dried Powder of Juice of *Murdannia loriformis* (Hassk.) Rolla Rao *et* Kammathy

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Key words: *Murdannia loriformis*, Beijing grass tablets, spray dried powder, formulations.

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Abstract

Murdannia loriformis (Hassk.) Rolla Rao *et* Kammathy, namely Beijing grass (BJG) is a favourite herb utilized to treat various cancers and improve the life quality for patients. The purpose of this study is aimed to develop BJG tablet formulations (Rxs) from 4 formulas of spray dried BJG powder. For the juices extracted from BJG, formula I to IV contained 4.0% of 4 ratios of maltodextrin (MDX):lactose, i.e., 3:1, 2:2, 1:3, and 4:0 that provided spray dried BJG powder formula I to IV, respectively. The 12 batch Rxs of BJG tablets were prepared by a wet granulation method. Microcrystalline cellulose (MCC) was used as a binder and disintegrant at the content of BJG powder formula I to IV as follows: 6.0% for Rx 1- 4, 10.0% for Rx 5- 8, and 16.0% for Rx 9 -12, respectively. Four concentrations of 100 ml ethanol were used as granulants at 90%, 80%, 70%, and 60% v/v for the Rxs of BJG powder formula I, II, III, and IV, respectively. Croscarmellose sodium, magnesium stearate, and fumed silica were used as an external disintegrant, a lubricant and a glidant, respectively. All Rxs met the weight variation criteria of Dietary Supplements, USP 40. Rx 5-12 significantly provided tablets with higher hardness, and thinner thickness than Rx 1- 4 did. For tablet friability, the decreased content of MDX in BJG powder formula III or IV would significantly cause more friable tablets than that of powder formula I or II. For tablet disintegration time (DT), both increases in lactose content of BJG powder, and in MCC content could significantly reduce DT. For chemical ID test, same ID was obtained from BJG tablet Rx 12 compared with BJG juice.