

## Studies on dehydration of Fenugreek ( Methi )

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### ABSTRACT

In the present investigation, dehydration of fenugreek was carried out by sun drying and mechanical drying. The dehydrated fenugreek was tested for ascorbic acid content, b-carotene content, rehydration test and organoleptic evaluation. There was maximum retention of ascorbic acid in sun dried sample (1.156mg/100g). There was maximum loss of beta-carotene in samples dehydrated in tray dryer at 60°C (4.55 mg/100g). Moisture content decreased with dehydration time. Sun drying of fenugreek required period of 8 h duration and for mechanical drying varied between 4 to 6 h for temperature range from 40 to 60°C. It was found that sample dehydrated at 40°C was most acceptable as compared to other samples. It required 6h for dehydration.

**Key words :** Dehydration, Fenugreek, Methi.

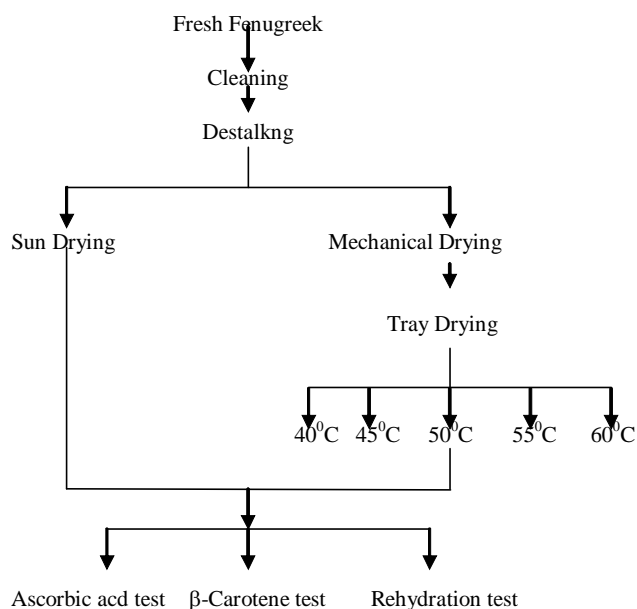
India is the largest producer of vegetable in the world next only to china with an annual production of 72.83 million tones from 5.63 million ha with an average productivity of 13t/ha (Lidhco, 2006). Though the vegetable requirement is 300g/day/person as recommended by dietician, we are able to meet about 1/9<sup>th</sup> of that requirement only (Anonymous<sup>a</sup>, 2008). The green leafy vegetables are rich source of calcium, iron, beta-carotene, vitamin C, riboflavin, and folic acid. They contain all major nutrients required for growth and maintenance of health. Vitamin C present in green leafy vegetable helps to absorb iron more efficiently. The dietary fibers supplied by leafy vegetables are useful for good bowl movement. (Anonymous<sup>b</sup>, 2008).

The recommended dietary allowance of green leafy vegetables for an adult woman is 100g/day, adult man 40g/day, preschool children (4-6 yrs) 50g/day. And for boys and girls beyond 10 yrs of age it is 50g/day. (Anonymous, 2008). Fenugreek (methi) is very popular leafy vegetable in India. Fenugreek is rich source of ascorbic acid and b-carotene. However, it is available during winter season only. It is highly perishable also. In order to make available fenugreek in lean season, preservation is essential. Dehydration is one of the best methods of preservations. Sun drying is traditional method of preservation of fenugreek. But sun dried product is of poor quality especially with regards to colour and flavour by the direct exposure to sun as often practiced. (Jayaraman *et. al.*, 1991). Considering the need of

preservation of fenugreek, the present study was undertaken to study chemical properties of dehydrated fenugreek (*Trigonella foenum graceum*) and to study dehydration of fenugreek (methi) by mechanical drying and sun drying.

### METHODOLOGY

The fresh, matured fenugreek were procured from local market. It was cleaned and destalked. Then it was used for dehydration by sun drying and mechanical drying (Fig. )1. Sample size of fenugreek leaves taken was 200g/ batch.



**Fig 1: Flowchart of dehydration of fenugreek**