

## Influence of pre-drying treatments and drying methods on bio-chemical properties of different recipes of aonla (*Emblica officinalis* Gaertn.) product preparation

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### ABSTRACT

An experiment was conducted on "Influence of pre-drying treatments and drying methods on storability of different recipes of aonla (*Emblica officinalis* Gaertn.) product preparation" and revealed that among various treatments, the acidity and ascorbic acid was recorded minimum when fruits of aonla blanched or blanching with sulphitation (KMS @ 1000 mg/l) and pieces were treated with common salt at 3% were dried under sun as compared to oven drying treatment. In case of total soluble solid, reducing sugar and total sugar content of aonla product increased with increase of storage period and they were recorded maximum in control as compared to other treatment combinations throughout the storage period with non-significant result.

**Key words :** Aonla, Total soluble solid, Ascorbic acid, Pre drying treatments

The aonla or Indian goose berry (*Emblica officinalis* Gaertn, syn *Phyllanthus emblica* Linn) is one of the most important indigenous fruit crop of India. It is a very hardy and prolific bearer and highly remunerative crop without much care. Aonla is known for its great medicinal and therapeutic properties from the ancient times in India. It is not only a source of nutrients and medicine for human being, but growing this crop has also proved to be highly remunerative. Huge harvest of produce during peak harvesting season creates glut and the growers are compelled to sell their produce at distress prices. Owing to restricted availability and high perishability of aonla fruits, value addition through processing would be the only effective tool for economic utilization for increase production of aonla fruits. A number of economically cheaper techniques have been evaluated to improve the quality of dehydrated fruits and vegetables. Among these the treatment of blanching before drying, checks the enzymatic spoilage, removes astringency and also improved the texture of fruits. After blanching sulphitation is done, since it improves the quality and increases the shelf life of dehydrate products (Bhatia *et al.*, 1962). This entirely depends on the process, *i.e.*, blanching and drying. Sun drying of fruits and vegetables is a cheap method of preservation. This method can be used on commercial scale as well as home scale provided that sunshine intensity is relatively more after the normal harvesting period. The sun drying is simple and cheaper to several condition and small scale food processing industries.

### MATERIALS AND METHODS

The Fully matured and uniform shape and size fruits of aonla cultivar 'Anand-2' were used for experiment during the year 2006-2007 at P.G Laboratory, Department of Horticulture, N.M. College of Agriculture, Navsari Agricultural University, Navsari. Experiment conducted under Completely Randomized Design (CRD) with factorial concept and replicated thrice for various treatments, two levels of pre-drying (*i.e.* blanching and blanching with sulphitation), four levels of recipe (*i.e.*, Fruit pieces with 3 per cent black salt and 3 per cent common salt with and without ginger juice 10 per cent), two drying methods (*i.e.*, sun drying and oven drying) and their combinations were used. Therefore, seventeen treatment combinations were tried in the present investigations. The selected fruits were thoroughly washed with tap water and cut into small pieces, then placed under different treatments after initial bio-chemical analysis.

### RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under following heads

#### Acidity (%):

The data presented in Table 1 reveal that pre-drying treatments *i.e.* blanching and blanching with sulphitation significantly affected the acidity of dehydrated aonla product. The highest acidity was recorded at control while, minimum acidity at blanching with sulphitation treatment.