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# Effect of acidulants on shelf-life quality of chilli (*Capsicum annum* L.) traditional product – *Ranjaka*

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Study was undertaken to know the effect of different acidulants (tamarind and lime juice) on shelf life quality of a traditional product *Ranjaka* from green chillies. Seventeen chilli cultivars (*Capsicum annum* L.) grown during *Rabi* season at green matured stage were subjected to *Ranjaka* preparation and the products were evaluated for shelf life study for six months. The low pungent cultivar product had shelf-life up to fourth month considering all sensory attributes, while the cultivars which had low moisture and high capsaicin could store for six months with good sensory acceptability scores. Incase of *Ranjaka* prepared by using tamarind as acidulant only less pungent cultivars were acceptable initially, but at the end of the storage period all the products were found acceptable this could be due to increase in pungency taste acceptability which indicates decline in capsaicin content with natural fermentation process. The addition of tamarind was found better for *Ranjaka* with extended shelf life of more than six months and masking the deteriorated green colour. However, for short term storage (4 months) lime juice can be used for *Ranjaka* preparation. It was observed that, the highly pungent cultivar products acceptability increased for taste with an increase in duration of storage

**Key Words :** Capsaicin, Moisture, Sensory quality, Chlorophyll, Acidulants

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## INTRODUCTION

Chilli has been identified in herbal medicines as one of the purest and most effective natural stimulating botanical since ancient times. Use of chilli in daily life has several health benefits. When taken with food, it stimulates taste buds, increases flow of saliva which contains enzyme amylase that helps in digestion of starchy foods. When eaten fresh with salads they serve as a good vitamin supplements in addition to appetizing property. It is rich in ascorbic acid and also contains vitamin P (ratin) which has antioxidant properties and strengthens blood capillaries and regulates permeability. Green chilli also helps in cancer retardation due to the presence of an enzyme "asperginase" which is effective when used in pure or isolated form. *Ranjaka* is a type of *Chutney* a traditional product of Northern Karnataka and relished along with meals as an appetizer. The study was undertaken to know the effect of acidulants on shelf life quality of the product by using different chilli cultivars at green stage.

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## METHODOLOGY

Seventeen chilli cultivars (*Capsicum annum* L.) of private and public sectors cultivated in the University of Agricultural Sciences, Dharwad during *Rabi* season were selected for the experiment. Freshly harvested matured green chillies were thoroughly washed in clean water to remove dirt and extraneous matter. Further pat dried with clean cloth and were studied for *Ranjaka* preparation by using tamarind and lime juice as acidulants. The selected cultivars were subjected to chemical parameters in triplicates for moisture (AOAC, 1990), ascorbic acid (AOAC,1990), capsaicin (Palicio, 1977) and total chlorophyll ( Bajracharya,1998).

Chillies were thoroughly washed in water and dried with thin cloth to remove dirt. For product *Ranjaka* (lime juice) preparation, chilli stalks were removed and ground with salt, sugar, lime juice, turmeric , methi powder in electric grinder and for *Ranjaka* (Tamarind), chillies were destalked and ground with salt, tamarind, methi powder, jaggery, turmeric. Immediately