VALUE ADDITION TO BITTER GOURD (*Momordica charantia*) BY PREPARING A LOW BITTERNESS SPREAD

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ABSTRACT

This study was conducted to find a suitable processing method to make a low bitterness spread to increase the year round availability and consumer preference of bitter gourd (*Momordica Charantia*). Variety Thinnaweli white was selected to prepare the spread due to its lower blanching time (2 minutes), higher edible portion and ascorbic acid content, less acidity, higher market availability and consumer preference. Blanched bitter gourds slices were prepared into a paste and mixed with 0 %, 20 %, 40 %, 60 % tomato paste. In the sensory evaluation, spread having bitter gourd paste 60 % and tomato paste 40 % was highly accepted except for color. This product had a pH of 4.47, 6.3 of TSS, moisture content of 90.7 % and orange color. Thus this ratio was selected to determine the best pretreatment method. Five pretreatment methods were tested to reduce the bitterness in bitter gourd spread. Each method consists of washing for 10 minutes and blanching for 2 minutes. As washing methods normal tap water, 2 % brine solution, coconut water and 2% brine with coconut water were used. For blanching hot water and 2 % brine solutions were used. All products were tested for physicochemical, microbiological and sensory characteristics. Within the treatments pH and ascorbic acid content declined during storage while TSS and TA content increased. There were no color changes observed after one month. Least number of microbial colonies after three months were present on 2 % brine washed and 2 % brine blanched and 2 % brine with coconut water washed and 2 % brine blanched bitter gourd spreads. In the sensory evaluation 2 % brine washed and 2 % brine blanched spread was highly accepted. Thus, 2 % brine washing and 2% brine blanching can be recommended as the best pretreatment to get the lowest bitterness spread by mixing with tomato paste at 60 : 40 ratio.

Key words: Bitter gourd, Thinnaweli White, Tomato, Blanching, Brine solution, Physicochemical attributes