

PERFORMANCE OF SRI LANKAN VEGETABLES AT PROCESSING  
I. BITTERGOURD (*MORMODICA CHARANTIA*)

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Bittergourd (more commonly known as "Karavila") a vegetable grown in Sri Lanka, was subjected to several methods of processing. The methods adopted were solar and mechanical dehydration and freezing. The processed products, dehydrated and frozen, were stored at room temperature and in a deep-freezer at  $-15^{\circ}\text{C}$  respectively. More important chemical constituents such as vitamin C,  $\beta$ -carotene and chlorophyll of fresh vegetables and processed products were monitored at the end of 8 and 18 weeks. Structural examination of fresh, dehy-

drated and frozen samples was also carried out.

Blanching cut pieces in boiling distilled water for 1.5 minutes completely inactivated peroxidase. In the case of mechanically dehydrated products, blanching in a solution of 1%  $\text{Na}_2\text{CO}_3$  was found to retain 65% of chlorophyll while blanching in a solution containing 2000 ppm of  $\text{SO}_2$  showed only a trace amount of chlorophyll. The retention of vitamin C was found to be 7% in the sample treated with  $\text{SO}_2$  while the  $\text{Na}_2\text{CO}_3$  treatment enabled only a retention of 2% of its initial value.

Of the three solar dryers employed the maximum drying rate (1.5 g/min) was observed in mesh bottomed solar dryer, while solar cabinet dryer with its green-house effect permitted operation at higher temperatures ( $\sim 52^\circ\text{C}$ ). Microscopic examination of frozen vegetables showed very little structural deviation from fresh vegetables while blanched samples consisted of irregular shaped cells, evident after rehydration as well. The results tend to show the superiority of mechanical drying when compared to solar drying, while the frozen products tend to retain more of the investigated components.

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#### References

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