106/B

Production of tomato sauce and tomato leather using dehydrated tomato powder

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Tomato is one of the most popular and widely grown, vegetable crop in Sri Lanka and is easily grown in all agro-ecological zones of the country with an average yield of 9.8 metric tons per hectare. Tomato is consumed through out the year with different forms. A wide variety of tomato products are prepared by concentrated juice or pulp, which need high cost technology for good quality products. But cost of processing methods should be minimum to be successful in present competitive market systems. Therefore, drying is the most suitable method to fulfill the above requirements. This study was conducted to develop a suitable drying method for production of dehydrated tomato powder and to study the application of that in production of sauce and tomato leather at the post harvest and animal science laboratory, Faculty of Agriculture, Rajarata University of Sri Lanka. Ripe tomatoes were subjected to two different processing methods namely tomato pulp drying and tomato slice drying. Changes in moisture, total ash, crude fat, crude fiber, and crude protein contents were determined after dehydration. The acceptability of tomato sauce and leather produced using dried tomato powder was tested by a sensory evaluation panel consisting of 30 untrained panelist using a five point Hedonic scale. Then a suitable packaging material for storage of the tomato powder was selected based on the changes in moisture content, water activity and rehydration ratio of the product. Results revealed that blanching at 60 ^{0}C hot water with 5% citric acid and 5% salt was successful to preserve colour in dried powder. The drying at 55 ^{0}C for 48 h was sufficient to reduce the water activity up to 0.61 and to obtain a shelf stable product with good physico-chemical properties. Results further revealed that drying of tomato slices was better than that of tomato pulp in manufacturing tomato powder. Dried powder packed in pouches made out of triple laminated Al foil could be stored at 27±3 ^{0}C and 82±3 % relative humidity for three months without quality deterioration. Tomato powder produced using dried tomato slices and dried tomato powder could be effectively used in manufacturing sauce and tomato leather with excellent quality characteristics.

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