Development of value added products from Black pepper (*Piper nigrum L.*)

Pooja, K. M., Airina, C. K, Neema, V. P. and Divya, K. K.
Pepper Research Station, Panniyur

Introduction

Black pepper (*Piper nigrum* L.) known as the king of spices, is the most important, and widely used spice in the world. Production of neutraceuticals and dietary supplements from black pepper has huge potential in commercial point of view. Two value added products- sauce and candy was developed from black pepper and its physic-chemical parameters, sensory characters and shelf life was studied.

Materials and methods

The experiments were conducted at Pepper research station, Panniyur during December 2019 to January 2020. Three types of sauce were prepared from black pepper *viz*; T_1 –Green pepper sauce, T_2 –Black pepper sauce and T_3 – White pepper sauce and three samples of candy was developed blending the ingredients such as pepper, ginger, thippali, thulsi, rock sugar and cardamom in different proportions. Immature green pepper spikes of black pepper variety, Panniyur-1 were collected for preparation of green pepper sauce and fully mature spikes of black pepper were processed for development of black pepper sauce and white pepper sauce. The final composition of the product was standardized based on brix value and organoleptic qualities.

Results

The sensory scores of sauce and candy for all the characters were on par for all the three samples and were rated good. Sensory score for overall acceptability of sauce samples was highest for sample 3 (7.46) followed by sample 2 (7.13). TSS content, titrable acidity and pH of the sauce samples ranged from 17.00- 19.00 0.21- 0.36 and 4.3- 4.6 respectively which were similar to the specifications of chilli sauce (Perera,2006)
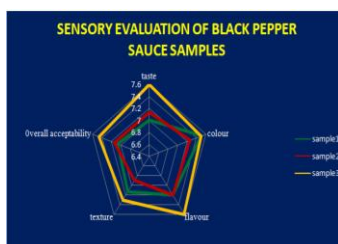
In microbial analysis, no bacterial, fungal and mould growth was found in the sauce samples (T_1, T_2 and T_3) stored under both normal and refrigerated conditions, even after 15 days of storage and after 30 days of storage under refrigerated conditions.

Sensory score of candy samples for overall acceptability was highest for sample 3 (8.20) followed by sample 2 (7.80). The physico-chemical characters of the candy were also good. The samples had an average moisture content of 4.29 per cent and average ash content of 2.35 per cent. Titrable acidity content of candy ranged from 0.31 to 0.42 percent and the mean pH of the candy samples was 6.57.

Candy samples

Hence, with respect to sensory characters and physico-chemical characters sample 3 *i.e.* white pepper sauce can be considered as the best product among the sauces and candy sample 3, which had higher proportions of pepper and thippali when compared to other samples is the best formulation in candy.

References

Perera, H. N. I. 2006. Studies on the manufacturing of green pepper (Piper nigrum L.) pickles and green pepper sauce. MSc. Food Tech. Thesis, University of Sri Jayewardenepura, Nugegoda, Sri Lanka. 62p.