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**Determination of vanillin content in Vanilla (*Vanilla fragrans* L) beans processed using different curing methods**

T.Liyanage\*<sup>1</sup>, E.D.K.Edirisinghe<sup>1</sup>, P.D.Liyanage<sup>2</sup> and I.K.Indrasena<sup>1</sup>

1. Division of Post Harvest Technology, Central Research Station, Department of Export Agriculture, Matale.

2. SGS Lanka (Pvt) Ltd, Colombo 02

Vanilla (*Vanilla fragrans* L) belongs to the family Orchidaceae. Following harvesting, the beans are cured using special processing methods to develop vanillin, the most important constituent in the beans. Typically, curing involves four steps namely, killing/scalding, sunning/sweating, drying and conditioning. The objective of the study was to find the most suitable method to cure vanilla by determining the vanillin content of four different curing methods practiced in different countries.

Bourbon, Mexican, Indian and oven dry method were selected using 6 kg of fresh vanilla beans for each method. Beans were blanched for killing in Bourbon, Indian and oven dry method. In the Mexican method beans were kept in sun for killing and all were dried in sun except in the oven method where beans were oven dried.

Vanillin extraction involves recirculation of alcohol – water menstrum through vanilla sample. 35 % (v/v) ethanol – water menstrum was used. Fifty grams of processed beans were cut into small pieces and chopped for each method and 150 mL of 35 % ethanol water menstrum was added. Then four samples were shaken for 48 hours for complete extraction of flavour compounds which contribute to the overall flavour and aroma of the vanilla extract. Quantification of vanillin is essential in order to evaluate the efficiency of each extraction. High Performance Liquid Chromatograph Shimadzu UFLC equipped with C8 column, UV detector at wave length of 254 nm and flow rate 2.5 mL/min was used. The mobile phase is methanol- acidified water (800 mL water to 10 mL of acetic acid) at a10:90 ratio. Vanillin content was determined using a standard curve. Results were analyzed using SAS statistical software.

The highest vanillin percentage (4.6%) was observed in oven dry method and the lowest percentage (0.06%) was observed in cured vanilla beans of Bourbon method. There was no significant difference between oven dry method and Indian method (4.1%).The vanillin percentage of cured vanilla beans of Mexican method was observed 2.78%. In conclusion, of the four methods tested the two most suitable methods for curing vanilla are the oven dry method and Indian method.