

Evaluation of oil percentage in different varieties/types of cardamom

India is the biggest producer of cardamom. The export of cardamom has crossed 2700 M.T. valued at Rs. 48 crores in 1977-78. The cardamom oil is mainly derived from the seeds and it is used in the food and pharmaceutical industry. At present, very little cardamom oil is distilled within India. A large number of varieties of cardamom are known in trade and the oils from these varieties have characteristically different flavours. The present study aims at a comparison of the average oil percentage in different varieties/types of cardamom.

The capsules of three different varieties of cardamom (*Elettaria cardamomum*), viz. Malabar (Prostrate), Mysore (Erect) and Vazhukka (Semi-erect) and eleven distinct types, viz. Ceylon, Hema, Malai, Ceylon-Semi-erect, APG, C1-53, C1-54, C1-37, C1-1228, C1-1258 and C1-1259 were selected for oil analysis. The well ripened capsules harvested from each type were uniformly mixed and subjected to flue-curing. At random, 100 g. of capsules were selected for carrying out oil analysis. The oil analysis was carried out at C.S.I.R.'s Trivandrum complex. The seeds obtained from the dehusked capsules of each variety were mildly crushed in a waring blender, and 25 g. material of each variety was distilled for 30 minutes and the oil content determined by using the Clevenger trap.

The oil contents of different varieties/types of cardamom are presented in the Table-1. It can be seen from the Table that the varieties 'Mysore' and 'Vazhukka' contain the highest percentage of oil (8.0) each, and the lowest percentage of oil (6.4) was recorded in Malai, APG and C1-1259. In general, the percentage by weight of cardamom seeds in the capsules ranged from 68 to 75. Percentage of cardamom seeds is positively correlated ($r=0.4365$) with the volatile oil V/W on dry seed basis; whereas the percentage of husk to volatile oil is negatively correlated ($r=-0.4365$).

In India, the spice extraction industry has bright prospects. Most of the spices are exported in bulk which involve heavy expenditure towards handling and freight charges. It is reported that cardamom oil has made a breakthrough in the export front. It is also fetching remunerative prices conducive to the growth of cardamom oil extraction industry, i.e. Rs. 2,400 to 2,800 per kg. In the light of the present studies, it appears that greater attention has to be paid towards the selection of clones for higher percentage of volatile oil.

TABLE-I
Analysis of Cardamom samples

Sl. No.	Samples	Cardamom capsules		Volatile oil % V/W on dry seed
		Seed %	Husk %	
1.	Mysore	68	32	8.0
2.	Vazhukka	69	31	8.0
3.	Hema	70	30	7.6
4.	Malabar	68	32	7.6
5.	Ceylon-Semi-erect	62	38	7.6
6.	C1-1258	73	27	7.5
7.	Ceylon-Erect	69	31	7.2
8.	C1-54	69	31	7.2
9.	C1-37	69	31	7.2
10.	C1-1228	75	25	7.2
11.	C1-53	68	32	6.8
12.	Malai	72	28	6.4
13.	APG	70	30	6.4
14.	C1-1259	71	29	6.4

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1. Anonymous 1977.
2. Anonymous 1978.

'Queen' excels the 'King'
Cardamom, 9 (6)

Breakthrough in cardamom oil
export. Cardamom, 10 (2)