V- Summary

This study was conducted in the farm of medicinal and aromatic plants Research Branch, Barrage, Horticulture Research Institute, Agriculture Research Center, Ministry of Agriculture.

The objective of this investigation was to study the effect of time of cutting on the physical and chemical properties of basil oil \( (ocimum basilicum L.) \) and the effect of different parts used for producing the oil of cardamom oil \( (elettaria cardamomum) \).

The various results can be summarized as follows:

A- Basil Oil.
1- To study the effect of cutting time on the physical and chemical properties of basil oil, the oil samples were obtained in four times, the first (before flowering stage) the second (start of flowering stage) the third (after 50 % flowering stage) and the fourth (approximately 100 % seeding stage). The results revealed that, The oil samples obtained in third stage (after 50 % flowering) had a good quality and quantity than that obtained in the other time, which contained the largest amount of linalool, eugenol and methyl chavicol and the quality of basil oil is referred mainly by its methyl chavicol content. On the other hand, Cutting after 50 % flowering stage was suitable time to give a largest amount of oil.
2- By gas chromatographic analysis, components were identified namely a Pinene, 13 Pinene, Myrcene, Cineol, Limonene, Linalool, Methyl Chavicol, Citral, Borneol, Carvon, Geraniol and Eugenol.

B- Cardamom oil

1- To study the production of cardamom oil from the different parts of the fruits, the oil samples were obtained from the whole fruits, the seeds and the coats of fruits. It could be generally concluded that the oil sample obtained from the seed was the highest quality and quantity. On the other hand the oil samples distilled from the whole fruits and the coats were a good quality, while the seeds was the suitable part on the fruits to give a largest amount of oil.

2- By gas chromatographic analysis, seven components were identified namely a ternbinol acetate, menthane, linalool, limonene, menthol geraniol, 1.8 cineol and geranyl acetate.