

Impact Assessment Oil Mill Layout on Production Cycle Time and Output Quality

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Cinnamon leaf oil is produced by steam distillation of dried leaves on rather simple, but nevertheless effective, equipment. Eugenol content (60-65 %), while the oil produced in the Ambalangoda and Matara of the extreme south was darker and contained 75 – 80 % of eugenol. Study aimed to conduct impact assessment of oil distillation unit layout on production cycle time, efficiency and output quality of cinnamon oil. Study sample composed of 45 cinnamon oil distillation units located in Galle and Matara districts and focus group discussion, in depth interviews, pre tested interviewer administrated questionnaires were main data collecting tools. Leaf oil is a product of the leaves and twigs, by product of cinnamon processing industry. Cost of raw material is negligible and the only costs encountered were the cost of labour for collecting leaves, bundling and the distillation. Poor efficiency, low productivity, poor quality and high cost of production were common issues of cinnamon oil distillation. Average production cycle time was 4-7 days including the collection and weathering time of leaves. The traditional stills used by many distillers were large wooden vessels capable of holding a charge of about 200 kg of leaves. Steam is generated in a separate wood-fired boiler and the leaves are distilled usually for 8 to 9 hours. Average oil yield was 4-6 bottles and oil yield and quality varied with geographical location, cultivar and method of distillation. Efficiency, cost of production, oil quality varied in traditional oil distillers with improper distillery layout and modernized distillery layouts.

Keywords: Cinnamon leaf oil, Cycle time, Factory layout, Oil distillation