

Evaluation of an efficient extraction process for Mee oil

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Madhuca longifolia, synonym *M. indica*, belonging to the family Sapotaceae, is an important economic tree growing throughout India and it is also grown in Sri Lanka. But, the consumption occurs among only the grown areas such as Kurunagala, Kegale, Kandy ect. In fact People that are used to consume mee, still use only traditional method called “Paha” for preparing mee oil using sesame seed. The kernels are 70% of seed by weight, are seed contains two kernels, having 2.5 cm x 1.75 cm size oil content in latifolia is 46% and 52% in longifolia. In seeds oil content is +35% and protein in 16%.

This research study aims to test a small scale screw type oil expeller for extracting Mee oil. The screw press is basically a helical screw mount on a conical shaft supported by bearing with the shaft rotating in a stationary cylindrical barrel. As the shaft rotates, the screw towards discharge end of the assembly moves the oil seed that is fed through the hopper to the inlet where it is pressed. The mee seed that were to be pressed were put inside the hopper while 4 kW motor continuous to rotate the screw shaft at three different speeds. For this experiment, the popular Chinese origin screw type oil expeller machine with 25 mm pitch of screw shaft, 75x315 mm internal barrel were used. The machine mainly consists of pressing part, adjustment part and transmission part. This machine, common in coconut oil extraction was used to modify for mee oil extraction in custom level and it is previously tested for sesame oil extraction.