

# #146

## New Processing Technology of High Quality and Fragrant Rapeseed Oil

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*Li Wen-lin*

HUANG Feng-hong, LIU  
Chan-sheng, WAN Chu-  
yun

Institute of Oil Crops  
Research, Chinese  
Academy of Agricultural  
Sciences, Wuhan, China

Rapeseed oil is the largest one in the domestic vegetable oils. In these days, the industry predominant methods for extracting oils are primarily physical pressing and solvent extraction for the salad-type oil. However, the people in China have the traditional habit of consuming the fragrant rapeseed oils (FROs). The FROs made by the traditional process with frying seeds over 150 oC could have some benzopyrene, the Trans fats, and also the flavor and the micronutrients of FROs would be reduced massively if they were refined with the traditional refining process. Therefore, the new process for preparing the FROs was investigated in this study, and the process was composed primarily of seed cleaning, conditioning, pressing and oil refining. The seed cleaner was designed in combined style, and the microwave was applied in conditioning the rapeseed from the room temperature to 138 oC, before the seed was pressed at the temperature of 90 oC. In the refining operation, the FROs was adsorbed with the montmorillonite to separate the phospholipids and free fatty acids at 45°C. The results showed that the qualities of FROs were superior to the Chinese national standard of edible rapeseed oils, and the retention rate of tocopherols, phytosterols and phenols were more than 85%, and the FROs yield of refining was 98% at least. The FROs made by the new process showed a pleasant nutty and roasted flavor with light color.

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