

Refining of palm oil: A review on palm oil refining process, 3-MCPD esters in refined palm oil, and possible reduction tactics for 3-MCPD esters

■ **Pratik Vispute and Surekha Dabhade**

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See end of the Paper for authors' affiliation

Correspondence to :

Pratik Vispute

Department of Agricultural Engineering, Maharashtra Institute of Technology, Aurangabad (M.S.) India
Email : pratikvispute5@gmail.com

■ **Abstract** : Palm oil is one of the basic edible vegetable oil which is used in almost every food processing industries. The palm oil is derived from the oil palm. Globally, About 80% fractions of oil palm are used for edible purposes. Therefore for the healthy life, the quality of palm oil should be good. The process of palm oil manufacturing is same as other vegetable oil manufacturing. As other vegetable oil, in palm oil manufacturing involves four major steps which are neutralization, degumming, bleaching and deodorization. These four steps were jointly known as refining process. 3-MCPD is a process contaminant forms during high heat processing mainly in the deodorization process. The recent studies shows that 3-MCPD is carcinogenic and genotoxic in nature. This review work mainly focuses on the hazards of 3-MCPD and possible routes to reduce its level to tolerable limits.

■ **Key words** : 3-MCPD, Bleaching, Degumming, Deodorization, Palm oil, Refining

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