

## **Determination of 3-Monochloropropane-1,2-Diol (3-MCPD) in Palm Oil Products.**

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The determination of 3-monochloropropane-1,2-diol (3-MCPD) in different types of palm oil products namely refined, bleached and deodorised (RBD) palm oil and palm olein as well as neutralised, bleached and deodorised (NBD) palm olein for the total, free and ester bound of 3-MCPD content is reported. The analyses were carried out using gas chromatography mass selective detector (GC-MSD) and deuterium-labelled 3-MCPD as an internal standard. It was found that free 3-MCPD content was in the range from 0.03 – 0.06 mgkg<sup>-1</sup>. However, the total and ester bound 3-MCPD content were found to be in the range from 0.52 – 1.33 mgkg<sup>-1</sup> and 0.46 – 1.30 mgkg<sup>-1</sup>, respectively. Even though the maximum level detected was 1.33 mgkg<sup>-1</sup>, it was significantly low compared to other vegetable oils products.

**Keywords:** 3-monochloropropane-1,2-diol (3-MCPD), palm oil products, GC-MSD, deuterium-labelled 3-MCPD, vegetable oils.