

Vitamin E and fatty acid composition of blended palm oils

ABSTRACT

Vitamin E content (ppm) (4 tocopherols and 3 tocotrienols without γ -tocotrienol) and fatty acid composition (FAC) of blended unsaturated oils [corn oil (CO), sesame oil (SO) and rice bran oil (RBO)] with palm olein (PO) at 1 to 1 ratio (v/v) were determined using HPLC and GC, respectively. The vitamin E content in blended oils was significantly different ($P < 0.05$) from levels in the native oils that made the blending with values of 348.6 ± 5.6 , 452.0 ± 3.2 and 2774.0 ± 6.3 ppm respectively for PO-CO, PO-RBO and PO-SO. In general, blending of unsaturated oils with PO changed SFA, MUFA and PUFA content of the resulting oils in the range of 21-26, 34-37 and 34-41%, respectively that compatible to the NCEP recommendation. Thus, the use of blended unsaturated oils with palm olein could be beneficial and results in nutritionally balanced fatty acid oils, improved omega-6/omega-3 ratio and increased vitamin E level, particularly the tocotrienol. Finally the use of these blended oils may favor overall dietary nutrient adequacy.

Keyword: Fatty acid composition; Palm oil; Vitamin E.