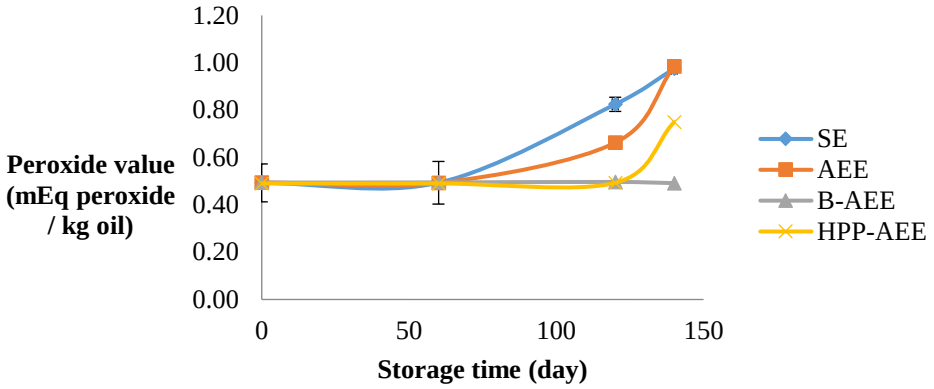
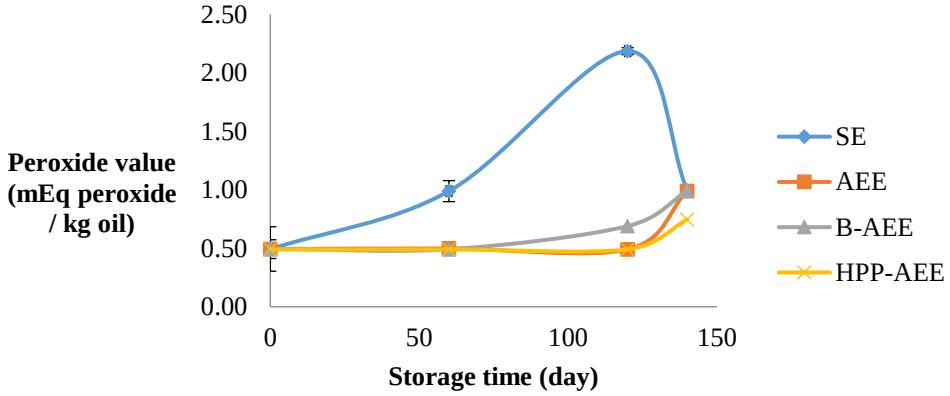
Oxidative properties of Moringa oleifera kernel oil from different extraction methods during storage

Article

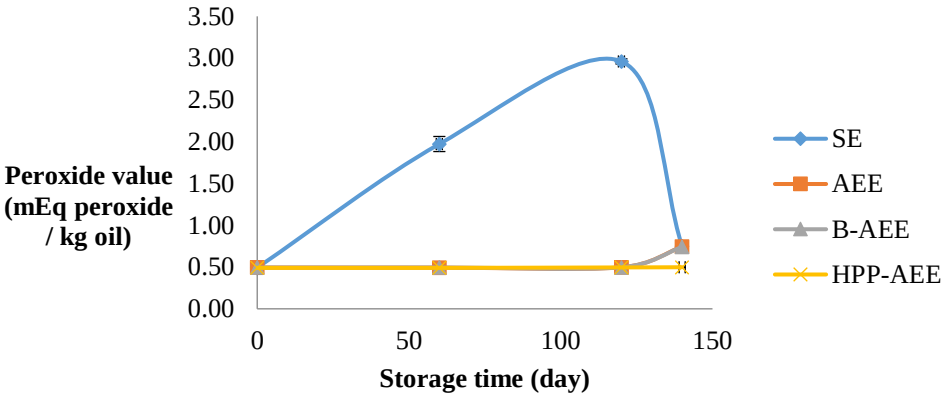
Supplemental Material



(a) storage temperature = 13 ºC

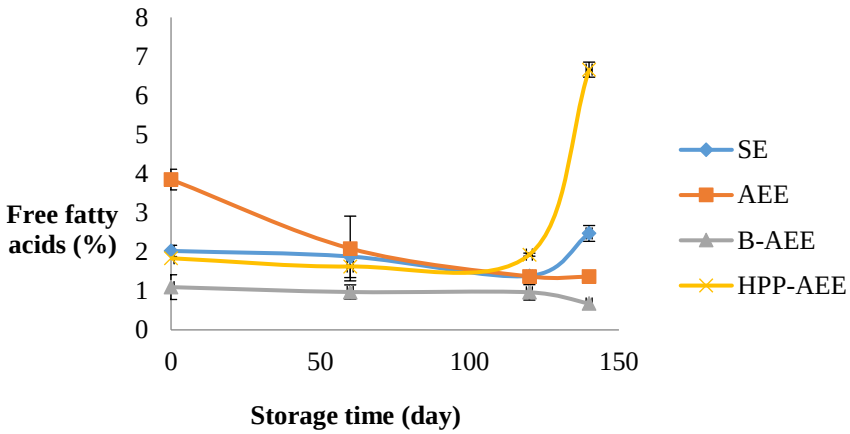


(b) storage temperature = 25 ºC

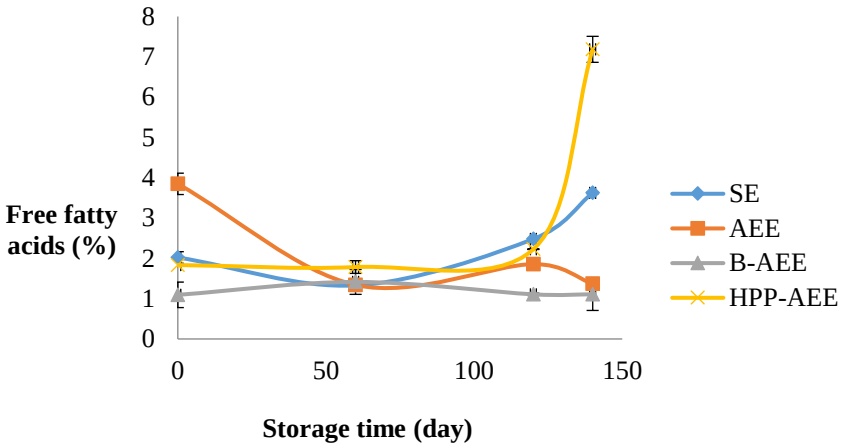


(c) storage temperature = 37 ºC

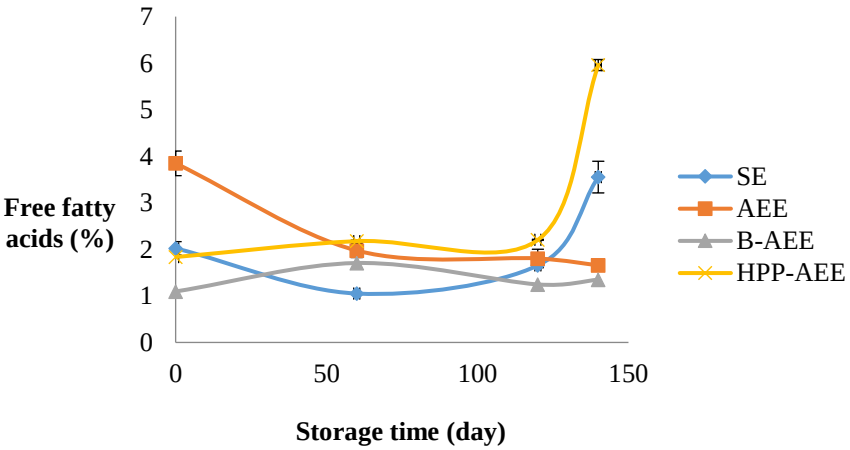
Fig. 1. Effect of different extraction methods on the peroxide values of *Moringa oleifera* kernel oil stored for 140 days at different temperatures of (a) 13 °C; (b) 25 °C; and (c) 37 °C. SE, solvent extraction; AEE, aqueous enzymatic extraction; B-AEE, aqueous enzymatic extraction with boiling pre-treatment; HPP-AEE, aqueous enzymatic extraction with high pressure processing pre-treatment.



(a) storage temperature = 13 ºC

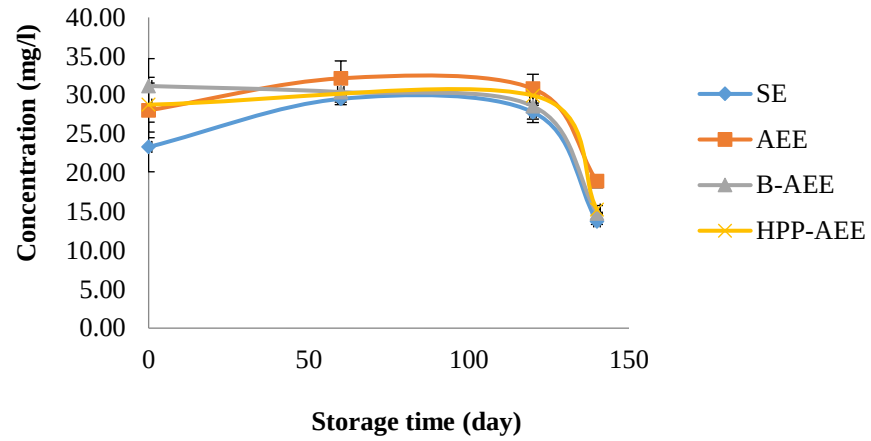


(b) storage temperature = 25 ºC

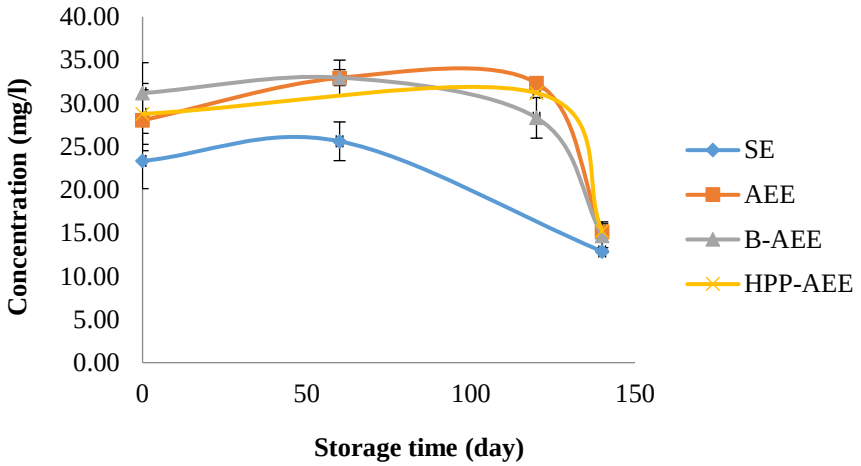


(c) storage temperature = 37 ºC

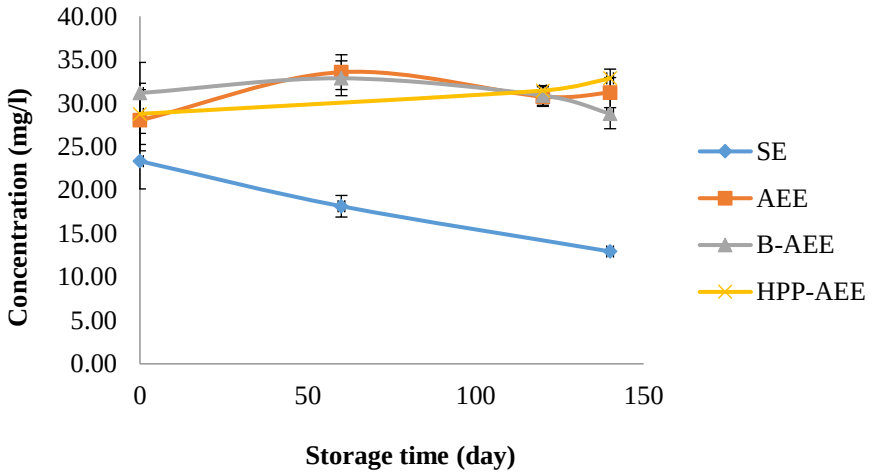
Fig. 2. Effect of different extraction methods on the free fatty acids of *Moringa oleifera* kernel oil stored for 140 days at different temperatures of (a) 13 °C; (b) 25 °C; and (c) 37 °C. SE, solvent extraction; AEE, aqueous enzymatic extraction; B-AEE, aqueous enzymatic extraction with boiling pre-treatment; HPP-AEE, aqueous enzymatic extraction with high pressure processing pre-treatment.



(a) storage temperature = 13 ºC

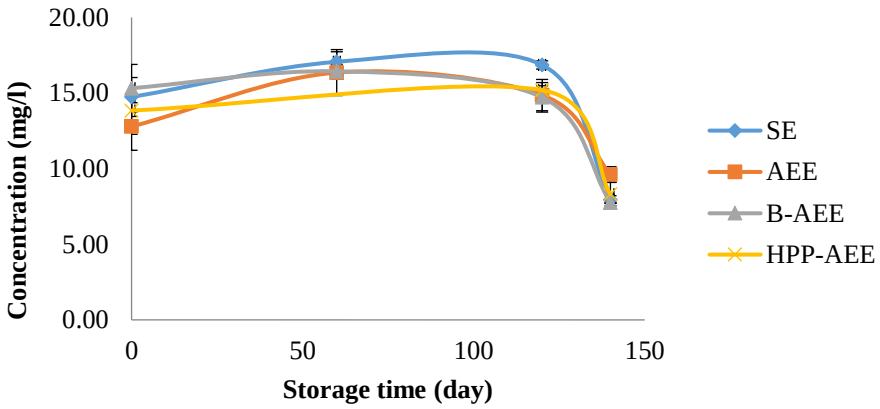


(b) storage temperature = 25 ºC

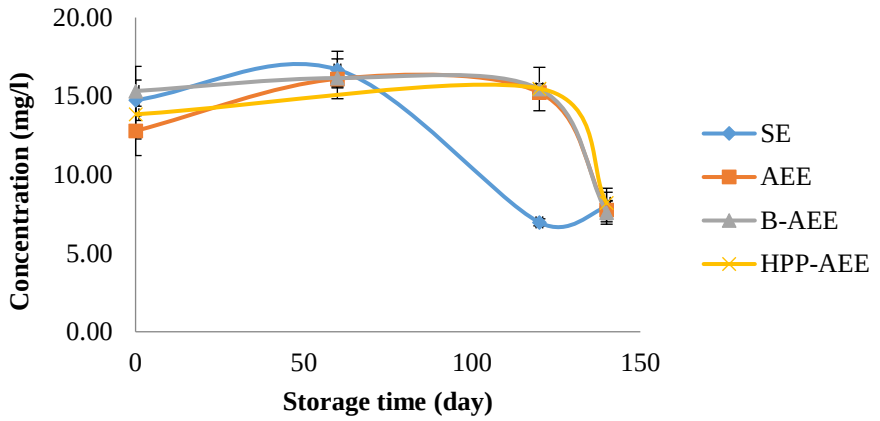


(c) storage temperature = 37 ºC

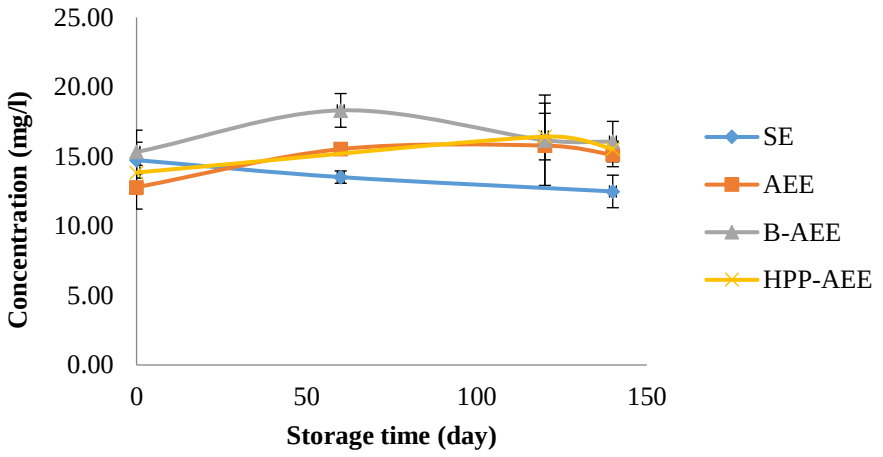
Fig. 3. Effect of different extraction methods on the alpha tocopherol content in *Moringa oleifera* kernel oil stored for 140 days at different temperatures of (a) 13 °C; (b) 25 °C; and (c) 37 °C. SE, solvent extraction; AEE, aqueous enzymatic extraction; B-AEE, aqueous enzymatic extraction with boiling pre-treatment; HPP-AEE, aqueous enzymatic extraction with high pressure processing pre-treatment.



(a) storage temperature = 13 ºC



(b) storage temperature = 25 ºC



(c) storage temperature = 37 ºC

Fig. 4 Effect of different extraction methods on the gamma tocopherol content in *Moringa oleifera* kernel oil stored for 140 days at different temperatures of (a) 13 °C; (b) 25 °C; and (c) 37 °C. SE, solvent extraction; AEE, aqueous enzymatic extraction; B-AEE, aqueous enzymatic extraction with boiling pre-treatment; HPP-AEE, aqueous enzymatic extraction with high pressure processing pre-treatment.