

Fortifikasi dan Ketersediaan Zat Besi Pada Bahan Pangan Berbasis Kedelai Menggunakan Fortifikan Besi EDTA, Glisinat, Fumarat, dan Suksinat = Fortification and Iron Availibilty Iron in soybean basis Using Fortifican Iron EDTA, Glycinate, Fumarate, and succinate

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Abstrak

[ABSTRAK

Penyebab utama dari anemia adalah rendahnya asupan zat besi dari makanan. Salah satu cara untuk mengurangi resiko anemia zat besi adalah dengan menambahkan fortifikan zat besi pada bahan pangan berbasis kedelai, seperti tempe, tahu, dan susu. Beberapa fortifikan zat besi yang biasa digunakan adalah besi EDTA, Glisinat, Fumarat, dan Suksinat. Namun, belum diketahui jenis dan jumlah fortifikan terbaik untuk pangan berbasis kedelai. Tujuan penelitian ini adalah menentukan fortifikan terbaik untuk fortifikasi zat besi pada pangan berbasis kedelai dan menentukan jumlah fortifikan ideal yang ditambahkan pada sampel tempe, tahu, dan susu. Hasil penelitian menunjukkan bahwa besi EDTA merupakan fortifikan terbaik diantara besi Glisinat, fumarat, dan suksinat dengan kadar Fe 5,0709 mg/48 gram pada tempe, 1,5313 mg/30 gram pada tahu, dan 7,5684 mg/200 mL pada susu. Fortifikan ideal diperoleh dengan melakukan kombinasi dalam mengkonsumsi pangan berbasis kedelai perhari, misalnya susu kedelai sebanyak 200 mL terfortifikasi 50 mg besi EDTA dengan tempe terfortifikasi 10 mg besi EDTA. Kombinasi lainnya juga bisa dilakukan untuk mencapai kadar Fe yang direkomendasikan (8-15 mg).

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ABSTRACT

The major cause of iron deficiency in human body is the low intake of iron from foods. One of strategy to overcome the iron deficiency anemia (IDA) in Indonesia is iron fortification to soya-based (i.e., soya milk, tempeh, and tofu) by adding iron fortificant. Some iron fortificants commonly used are iron EDTA, Glycinate, Fumarate, and succinate. However, number and the best fortificant in soybean basis is not yet known well. The objective of this research is to compare iron availibilty from these fortificant and to know ideal fortification in soybean basis. The result showed that iron EDTA was the best fortificant between iron glycinate, fumarate, and succinate with iron level 5,0709 mg/48 gram in tempe, 1,5313 mg/30 gram in tofu, and 7,5684 mg/200 mL in soyamilk. The Ideal fortification was obtained by combination sample and fortificant. For example, we can consume soyamilk fortified 50 mg iron EDTA and tempe fortified 10 mg iron EDTA or another combination can be done to get iron level appropriate Reccommendation Dietary Allowance (8 -15 mg/day).

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