Effect of two production methods on macro nutrient and isoflavone-aglycone composition in tempeh produced by household industries

Abstract
Background: Tempeh was used as nutrition source and healthy food. Tempeh household industries apply different production methods. Those different could lead to different microbial composition and hence different chemical composition of tempeh. Therefore it is necessary to evaluate the effect of different tempeh production methods on the content of macro nutrient and active compound such as isoflavone-aglycone in tempeh.

Methods: The design of the study was field study and laboratory analyses. Samples of tempeh were collected from two tempeh household industries in Bogor, who applied different production methods in March 2011 and kept frozen before analyses. Analyses of macro nutrient and isoflavone-aglycone were carried out in the laboratory from April-July 2013 using AOAC methods. Results: Except for ash content, on wet bases, all macro nutrient and isoflavone-aglycone composition of tempeh produced by method A was slightly higher than method B. However based on dry weight, tempeh produced by method B contained higher macro nutrient and isoflavone-aglycone than tempeh produced by method A, except carbohydrates. Conclusion: Different tempeh production methods affected macro nutrient and isoflavone-aglycone content. However, tempeh from two household industries applying different method could be used as good sources of macro nutrient and isoflavone-aglycone.

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