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Characteristic of sausages as influenced by partial replacement of pork back-fat using pre-emulsified soybean oil stabilized by fish proteins isolate

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23 **Abstract**

24 Substitution of animal fat with oils rich in *n*-3 is a feasible way to improve the  
25 nutritive value of comminuted meat product. The effect on the characteristics of sausages was  
26 investigated of partial replacement of porcine fat with soybean oil (SBO) using a pre-  
27 emulsification technique. Fish protein isolate (FPI) produced from yellow stripe trevally  
28 (*Selaroides leptolepis*) was used as an emulsifier to prepare pre-emulsified SBO (preSBO),  
29 and its concentration effect (1%, 2% and 3%, w/v) was observed in comparison with soy  
30 protein isolate (SPI). Substitution of porcine fat using preSBO enhanced the product stability.  
31 SPI exhibited better emulsifying ability than FPI. However, FPI was more effective at  
32 reinforcing the protein matrix of the sausages than SPI, as suggested by a lowered cooking  
33 loss and the restored textural attributes of the sausages formulated with FPI stabilized

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