

## **Strategies for incorporation of chia (*Salvia hispanica L.*) in frankfurters as a health-promoting ingredient**

*Meat Science* (2016) 114, 75-84

Tatiana Pintado, Ana María Herrero, Francisco Jiménez-Colmenero, Claudia Ruiz-Capillas\*.

Institute of Food Science, Technology and Nutrition (ICTAN-CSIC). José Antonio Novais, 10, 28040 Madrid, Spain.

\* Corresponding author: [claudia@ictan.csic.es](mailto:claudia@ictan.csic.es)

### **Abstract**

Different strategies were examined for incorporation of chia flour (10%) and olive oil to improve the fat content in frankfurters. Nutritional composition, technological properties, sensory and microbiological analyses were studied as affected by the strategy used and by chilling storage. Chia increased total dietary fibre (98% insoluble dietary fibre) and minerals (K, Mg, Ca, Mn) irrespective of the incorporation strategy. Fat and energy content reduction (> 26%) were achieved in all frankfurters reformulated with chia and olive oil. Chia addition increased linolenic acid and reduced processing and purge in all samples. Lightness and redness of frankfurters were affected by the presence of chia, but there was no clear evidence of influence by the mode of addition. Frankfurter texture was influenced by the strategy used to incorporate chia and olive oil and by chilling storage. Samples were judged acceptable and contained low microorganism levels. Frankfurters containing chia were suitable for labelling with certain nutrition and health claims.