

Development of fried and baked tortilla chips with defatted soy flour and sorghum flour

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■ **Research chronicle** : Received : 14.11.2018; Revised : 21.11.2018; Accepted : 26.11.2018

SUMMARY :

The effects of the fortification of tortilla chips with de-fatted soy flour as well as baking and frying processes on the properties of tortilla chips were evaluated. Sensory characteristics, texture, thickness, color, protein and oil content were evaluated. Sensory properties were evaluated using a nine point hedonic scale. Soybeans were obtain partially defatted soy flour of 0.79 per cent final oil content. Sorghum flour (SF) was replaced with 0, 10, 20 and 30 per cent and Nixtamalized corn flour (NCF) 0,5,10 and 15 per cent de-fatted soy flour (DFSF). Overall, fried tortilla chips were harder and thicker than baked tortilla chips. Fried tortilla chips with DFSF with SF and NCF (100:20:10%) and DFSF with SF and NCF (100:30:15%) soy flour substitution required less force to break. Protein increased linearly in baked and fried tortilla chips where DFSF with SF and NCF (100:30:15%) resulted in the highest protein level. In fried tortilla chips, DFSF with SF and NCF (100:20:10%) had the highest sensory scores overall. DFSF with SF and NCF (100:20:10%) fortification in fried tortilla chips were the most acceptable of all. In all treatments, regardless of type of processing, panelists could not detect any “beany” flavours in any of the sample. Upto DFSF with SF and NCF (100:20:10%) would be recommended.

KEY WORDS : Soybean, Sorghum, Nixtamalized corn flour, Masa, Fried tortilla chips, Baked tortilla chips

How to cite this paper : Giram, K.K., Jadhav, B.N. and Mohalkar, S.S. (2018). Development of fried and baked tortilla chips with defatted soy flour and sorghum flour. *Internat. J. Proc. & Post Harvest Technol.*, **9** (2) : 49-54. DOI: 10.15740/HAS/IJPPHT/9.2/49-54. Copyright@ 2018: Hind Agri-Horticultural Society.