

Formulation of zero-trans and Low-trans Iranian Vanaspati by High-Oleic sunflower oil

M. Jozi¹, M. Aghighi Ravan¹, S. Najdpoor¹, P. Rashtchi², ¹R&D Department, Jahan Vegetable Oil Co, Zanjan, Zanjan, Iran, ²Department of Food Science and agriculture, Tabriz university, Tabriz, Iran

Iranian Vanaspati fats were formulated by high-Oleic sunflower (HOSFO) oil in order to produce Zero-trans and low-trans fat. Blends of High-oleic sunflower oil, Hydrogenated soybean oil, Interesterified oil and palm-olein oil were used to produce a range of products with different melting points.

Final products were investigated for slip melting point (SMP), fatty acid profile (FAP), Oil Stability Index (OSI), Induction period (IP) of crystallization at 20 °C and oil separation after crystallization.

A comparison was made between results of these blends and results from common current formulations of Iranian Vanspati in the market.

Products that were formulated by HOSFO have higher OSI values and Lower saturated fatty acid content and no oil separation was seen after crystallization.

Required amounts of antioxidant were added to the final products in order to obtain the required OSI value according to the local standards and it was determined that the mixtures that were formulated by HOSFO needs minimum levels of antioxidant to reach to the Desired OSI values.