

Córdoba, March 13th

Summary of Rancimat results

Methodology

Partially defatted chia flour, mesquite flour and chia:mesquite mixtures in different proportions (85:15, 70:30, 55:45) were analysed in order to determine their oxidative stability in a Rancimat apparatus (Rancimat METROHM, Herisau, Switzerland). The experiments were performed under the following conditions of accelerated thermal oxidation:

-Block temperature: 100 °C

-Air flow: 20 L/h

-Mass of sample: 1.5 g

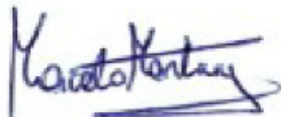
Results

Sample name	Chia flour (%)	Mesquite flour (%)	Induction time (h)
Partially defatted chia flour	100	0	10.88 ^a ± 0.80
Mixture 1	85	15	17.13 ^b ± 0.34

The table shows the results of the accelerated thermal oxidation assay of partially defatted chia flour and chia:mesquite flours mixture (85:15). Under these conditions, the above induction times show that mesquite flour significantly increases the oxidative stability of the system. The longer the induction time, the greater stability of the sample.

By the time the samples shown in the table (100% chia flour and chia:mesquite mixture 85:15) reached their inflection points during the measurements, mesquite flour (100%) and chia:mesquite mixtures (70:30 and 55:45) were still stable against thermal oxidation. These latter results suggest that mesquite flour could be implemented as a promising alternative to control the rancidity problems in food products containing chia flour.

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