

# Effect of rosa mosqueta (rosa rubiginosa) extract on the performance of Chilean hazelnut oil (gevuina avellana mol.) at high temperature

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The effect of the addition of rosa mosqueta husk extract (RME) on thermal oxidation of nontreated (HZO) and treated (THZO) Chilean hazelnut seed oil was evaluated at 180°C for 18 h. THZO to which was added 339 mg/kg of  $\alpha$ -tocopherol was used as a comparison model because RME supplied 314 mg/kg of  $\alpha$ -tocopherol. Formation of polar compounds and degradation of tocopherols and carotenoid pigments were studied in these model systems. Degradation of trans-rubixanthin, trans-lycopene, and trans- $\beta$ -carotene followed a pseudo first-order kinetics model. These pigments showed the same degradation rate in both HZO and THZO. The addition of RME to HZO and THZO decreased significantly ( $P < 0.05$ ) the formation of polar compounds, lead to less degradation of tocopherols, and improved their oxidative stability with respect to oils without RME. This behavior can be attributed to carotenoid-tocopherol interaction, suggesting that these pigments can protect tocopherols against degradation at high temperature. Copyright ©