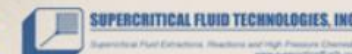
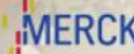




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environment due to its soil, which has an acid pH, high temperatures and high levels of aluminum.

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Antioxidant and anti-inflammatory activity of Chilean *Geoffroea decorticans* fruits ("Chañar")

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Geoffroea decorticans (Gill. ex Hook. et Arn.) is a native tree, popularly known as "Chañar" growing from I to IV regions of Chile. The distribution range of the species comprises the Chaco phytogeographic zone of South America, including Argentina, western Paraguay and Bolivia. The sweet and pleasant tasting fruits are much appreciated and are commonly used for both culinary and medicinal purposes. The fruits are consumed in different forms (chicha, arrope, hydroalcoholic beverage and jam). Arrope is very similar to honey or plant molasses and it is used instead.^{1,2} The aim of the current work was to assess the antioxidant and anti-inflammatory activities of chañar fruits and to compare the HPLC pattern of the Amberlite-retained methanolic extracts (ARME) from different Chilean collections of fruits. An arrope sample was included for comparison. The samples comprised different collection places from the Copiapo and Limari valleys associated with pre-columbian cultures. Large differences were found in the HPLC patterns of phenolics, allowing a differentiation of fruit samples. The antioxidant activity was measured by scavenging of the DPPH free radical and by ferric reducing antioxidant power (FRAP). The anti-inflammatory activity was assessed by the inhibition of the proinflammatory enzymes lipoxigenase (LOX), ciclooxigenases 1 and 2 (COX-1 and COX-2). At 50 µg/mL, all ARME inhibited the LOX from the beginning of the incubation, with inhibition values between 17.3 and 82.6%. Large differences were found for the activity towards COX-1 and COX-2 with values of 0-80.8% for COX-2 and 0-93.3% for COX-1. The COX-1 was not inhibited by the fruits collected in Alto del Carmen and Camino a El Tránsito. This finding is relevant considering the side effects like gastrointestinal toxicity, derived from COX-1 inhibition.

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