Antioxidant and eicosanoid enzyme inhibition properties of pomegranate seed oil and fermented juice flavonoids.

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Source

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Abstract

The antioxidant and eicosanoid enzyme inhibition properties of pomegranate (Punica granatum) fermented juice and seed oil flavonoids were studied. The pomegranate fermented juice (pfj) and cold pressed seed oil (pcpso) showed strong antioxidant activity close to that of butylated hydroxyanisole (BHA) and green tea (Thea sinensis), and significantly greater than that of red wine (Vitis vitifera). Flavonoids extracted from pcpso showed 31-44% inhibition of sheep cyclooxygenase and 69-81% inhibition of soybean lipoxygenase. Flavonoids extracted from pfj showed 21-30% inhibition of soybean lipoxygenase though no significant inhibition of sheep cyclooxygenase. The pcpso was analyzed for its polyphenol content and fatty acid composition. Total polyphenols in pcpso showed a concentration by weight of approximately 0.015%. Pcpso fatty acid composition showed punicic acid (65.3%) along with palmitic acid (4.8%), stearic acid (2.3%), oleic acid (6.3%), linoleic acid (6.6%) and three unidentified peaks from which two (14.2%) are probably isomers of punicic acid (El-Shaarawy, M.I., Nahpetian, A., 1983). Studies on pomegranate seed oil. Fette Seifen Anstrichmittel 83(3), 123-126).

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