

Title Identification and quantification of phenolic compounds in grapes
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Abstract

Grapes are a major source of phenolic compounds. Phenolic compounds play an important role in the quality of grapes and wines, and the antioxidant activity of grapes has been positively correlated with their phenolic composition. This work was focused on the identification of phenolic compounds in the fruit extracts of Norton, also known as Cynthiana grapes (*Vitis aestivalis*). Identification and quantification were performed using high performance liquid chromatography-mass spectrometry (HPLC-MS TOF) with an electrospray ionization interface in negative mode ion. Detection was carried out at 280 and 320 nm. Catechin, epicatechin, isoremetin, sinigrinic acid, caffeic acid, gallic acid, protocatechuic acid, miricetin, hydroxybenzoic acid, quercetin, stilbenes, such as resveratrol, pterostilbene, trans-piceid, piceatannol and ϵ -viniferin were identified in the extract, and caffeic acid, gallic acid, protocatechuic acid, miricetin, hydroxybenzoic acid and quercetin were also quantified. The major concentrations found were of epicatechin, caffeic acid and catechin, followed by protocatechuic acid, hydroxybenzoic acid, gallic miricetin and quercetin corresponding to 1.9065, 1.4506, 1.2131, 0.2424, 0.0835, 0.0529, 0.0297, 0.0030 $\mu\text{g/g}$ dry weight, respectively.