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Polyphenolics are an important class of biologically active compounds found in plants and are purported to have benefits for human health. To assess their significance in foods, improved methods are required for their detection and classification. In this paper, we describe a targeted MS2 approach using an ion-trap mass spectrometer for the analysis and classification of proanthocyanidins (PAs) in crude plant-derived extracts, which has been applied to compare green, oolong and black tea crude extracts and a grape seed extract. The method could separate, detect and provide qualitative information (full scan MS2 spectra) to enable chromatographic and mass spectral confirmation of PAs in the crude tea extracts. Using the developed methodology we report here for the first time the detection of PA tetramers in black tea, and PA trimers and tetramers in oolong tea.

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