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University College Cork, Ireland Coláiste na hOllscoile Corcaigh



Communication



## The effect of high pressure processing on polyphenol oxidase activity, phytochemicals and proximate composition of Irish potato cultivars

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**Figure S1:** HPLC-Q-Tof-MS profiling of the phytochemicals in the potato (Saxon) extract. Shown in the inset is the LC chromatogram where the polyphenols and glycoalkaloids elute between 2-9 minutes.



**Figure S2:** UPLC-TQD-MS quantification of polyphenols in the different potato cultivars prior to (left column) and post-HPP (right column). As evident from the total ion chromatograms (TIC) that chlorogenic acid is the most abundant polyphenol in potatoes, which is reduced in the post-HPP samples with an increase in caffeic acid.

RT (min.)	Observed [M-H] <sup>.</sup> ( <i>m/z</i> )	Calculated [M-H] <sup>-</sup> (m/z)	Molecular formula	MS/MS ions (m/z)	Tentative Identification
0.88	158.9764	158.9752	C5H4O4S	130.99, 115.00	Dihydroxythiophene- carboxylic acid
0.98	191.0541	191.0556	C7H12O6	147.05	Quinic acid
2.17	203.8050	203.0821	C11H12N2O2	159.09	Tryptophan
3.17	353.0858	353.0873	C16H18O9	191.08, 173.06, 135.06	Chlorogenic acid
3.46	179.0341	179.0344	C9H8O4	135.04	Caffeic acid
6.12	771.1978	771.1984	C33H40O21	300.03	Quercetin-O-glucosyl- rhamnosyl-glucoside
6.39	367.1015	367.1029	C17H20O9	193.04, 191.05, 173.05	Feruoyl-quinic acid
6.44	625.1384	625.1405	C27H30O17	300.03, 191.05	Quercetin- O-di-glucoside
7.16	609.1442	609.1456	C27H30O16	301.03	Rutin
7.19	163.0387	163.0395	C9H8O3	119.05	<i>p</i> -coumaric acid
7.51	193.0488	193.0501	$C_{10}H_{10}O_4$	134.04, 117.04	Ferulic acid
8.42	866.4885	866.4902	C45H73NO15	704.51, 701.32, 558.47	<i>a</i> -solanine
8.48	850.4915	850.4953	C45H73NO14	704.41, 422.14	<i>α</i> −chaconine

**Table S1.** Tentative identification of phytochemicals from the potato (Saxon) extract using accurate mass measurement and MS/MS fragment ions



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