

## Supplementary Materials

**Table 1.** Soil characteristics and climatic conditions of the Paucar district (Acobamba province of Huancavelica region of Peru). The values are taken from bibliographical sources [35–37].

	Values
Annual Relative Umidity	43% - 65%
Altitude	3800 asl
Annual rainfall	398-800 mm
Mean temperature	12-14 C
N total (%)	0.24 (high)
P (ppm)	4.30 (low)
K (ppm)	115 (medium)
pH	4.6
Sand (%)	32.8
Slime (%)	43.6
Clay (%)	23.6

**Table S2.** MS data obtained in the positive and negative ion mode of the anthocyanins and the phenolic acids found in the potato extracts.

Anthocyanins	Rt (min)	Molecular ion (m/z)	Fragment ions and adducts (m/z)
pet 3- <i>O</i> -caf-rut-5- <i>O</i> -glu	11.2	949	317, 479, 787
pet 3- <i>O</i> - <i>p</i> -coum-rut-5- <i>O</i> -glu	12.5	933	317, 479, 771, 787
pet 3- <i>O</i> -ferul-rut-5- <i>O</i> -glu	12.6	963	317, 479, 787, 801
peo 3- <i>O</i> -rut-5- <i>O</i> -glu	9.1	771	301, 463, 609
peo 3- <i>O</i> - <i>p</i> -coum-rut-5- <i>O</i> -glu	13.1	917	301, 463, 755, 771
peo 3- <i>O</i> -ferul-rut-5- <i>O</i> -glu	13.3	947	301, 463, 771, 785
pel 3- <i>O</i> -rut-5- <i>O</i> -glu	8.4	741	271, 433, 579
pel 3- <i>O</i> -rut	10.6	579	271
pel 3- <i>O</i> - <i>p</i> -coum-rut-5- <i>O</i> -glu	8.0	887	271, 433, 725, 741
pel 3- <i>O</i> -ferul-rut	11.9	755	271
pel 3- <i>O</i> - <i>cis-p</i> -coum-rut-5- <i>O</i> -glu	13.0	887	271, 433, 725
<b>Phenolic acids</b>	<b>Rt (min)</b>	<b>Molecular ion (m/z)</b>	<b>Fragment ions and adducts (m/z)</b>
cinnamic acid	5.5	315	669
3-caffeoyquinic acid	6.3	353	375, 191, 179
5-caffeoyquinic acid	9.1	353	729, 375, 191
cinnamic acid	9.5	443	267

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4-caffeoyquinic acid	10.1	353	383, 191
caffeic acid	10.3	179	-
cinnamic acid	10.7	-	431
cinnamic acid	10.9	443	267
cinnamic acid	11.1	-	471

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