

Pomegranate Juices: Analytical and Bio-Toxicological Comparison of Pasteurization and High-Pressure Processing in the Development of Healthy Products

Francesco Cairone ¹, Stefania Cesa ^{1,*}, Irene Arpante ¹, Simonetta Cristina Di Simone ², Alejandro Han Mendez ¹, Claudio Ferrante ², Luigi Menghini ², Antonello Filippi ¹, Caterina Fraschetti ¹, Gokhan Zengin ³, Simone Carradori ², Marialucia Gallorini ², Luisa Mannina ¹ and Mattia Spano ¹

¹ Department of Chemistry and Technologies of Drug, "Sapienza" University of Rome, 00185 Rome, Italy; francesco.cairone@uniroma1.it (F.C.); irene.arpante@uniroma1.it (I.A.); alejandrohan.mendez@uniroma1.it (A.H.M.); antonello.filippi@uniroma1.it (A.F.); caterina.fraschetti@uniroma1.it (C.F.); luisa.mannina@uniroma1.it (L.M.); mattia.spano@uniroma1.it (M.S.)

² Department of Pharmacy, University "G. d'Annunzio" of Chieti-Pescara, 66100 Chieti, Italy; simonetta.disimone@unich.it (S.C.D.S.); claudio.ferrante@unich.it (C.F.); luigi.menghini@unich.it (L.M.); simone.carradori@unich.it (S.C.); marialucia.gallorini@unich.it (M.G.)

³ Department of Biology, Science Faculty, Selcuk University, Konya 42130, Turkey; gokhanzengin@selcuk.edu.tr

* Correspondence: stefania.cesa@uniroma1.it

Equation S1. Calculated color difference

$$\Delta E = \sqrt{(L_2 - L_1)^2 + (a_2 - a_1)^2 + (b_2 - b_1)^2}$$

Table S1. Standards calibration curves

Name	Wavelength (nm)	Retention Time (min)	Calibration Curve	R ²
Punicalin $\alpha+\beta$	360	5.0 - 5.2	$y = 8.43x + 83.61$	0.9977
Punicalagin $\alpha+\beta$		6.9; 9.7	$y = 4.00x + 2.88$	0.9996
Ellagic Acid		37.1	$y = 11.60x - 38.34$	0.9995
Cyanidin-3-glucoside	520	24.2	$y = 16.61x - 77.14$	0.9994

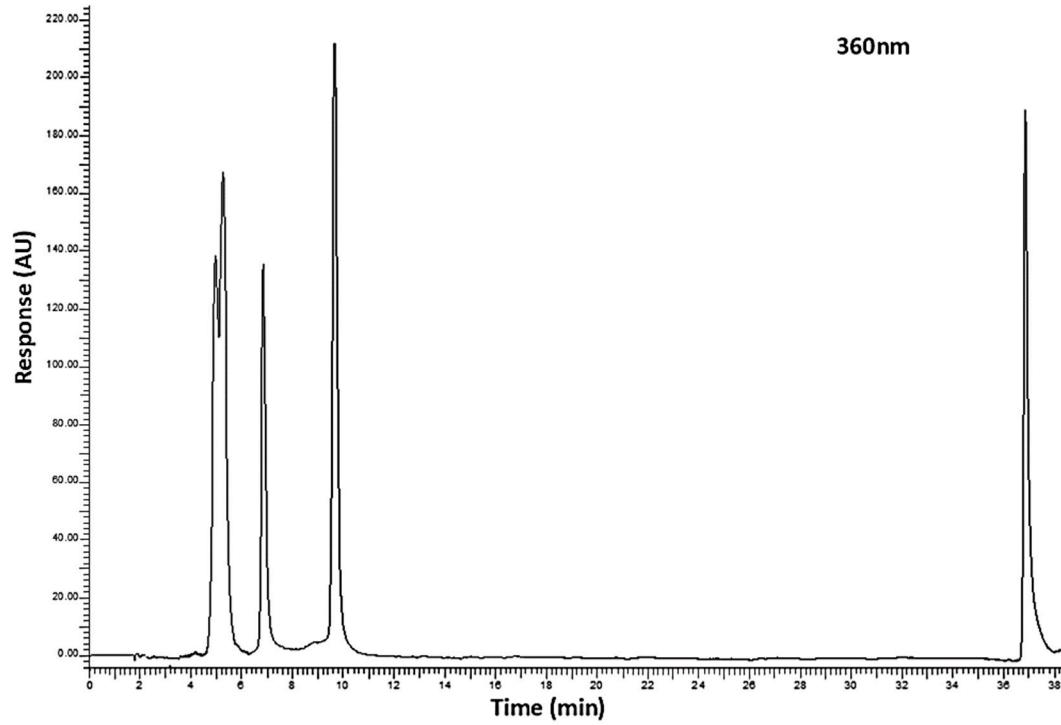


Figure S1. Standards chromatogram registered at 360 nm.

Punicalin ($\alpha+\beta$), $R_T = 5.0\text{-}5.2$; Punicalagin (α and β), $RT = 6.9$ and 9.7 ; Ellagic acid, $RT = 37.1$.

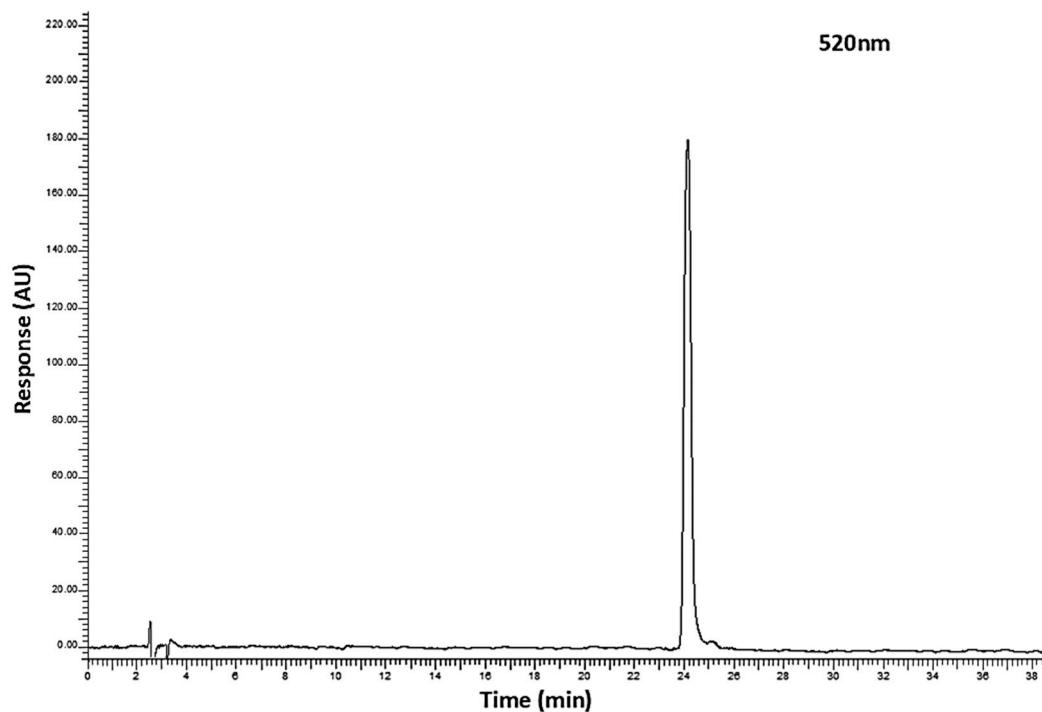


Figure S2. Standard chromatogram registered at 520 nm.

Cyanidin-3-glucoside, $RT = 24.2$.