

Supplementary material

Table1S: Individual anthocyanin concentration of aronia juice during heat treatment at 60°C. The values are expressed as mean±standard deviation. The letters indicate the significant differences. lower case: comparison of time levels at fixed % of GSE; upper case: comparison of samples treated with different % of GSE with control at fixed time level.

Temperature	GSE ratio	Heat treatment time (min)	CyGa	CyAr	CyXy
60°C	0%	0	947.79±1.15 ^{Ab}	753.93±4.48 ^{Aab}	1075.63±5.29 ^{Cb}
		5	1018.62±18.94 ^{Ab}	790.42±20.82 ^{ABb}	923.85±21.47 ^{Ab}
		10	1050.12±44.56 ^{Aab}	774.28±21.26 ^{Ab}	948.44±21.37 ^{Ab}
		30	1024.72±20.61 ^{Bab}	768.59±20.94 ^{Bb}	920.73±21.16 ^{BCb}
		60	962.14±19.47 ^{Bab}	711.57±22.93 ^{A^Bb}	860.37±17.59 ^{Bb}
		120	654.66±2.72 ^{Aa}	529.20±22.26 ^{Aa}	618.10±16.71 ^{Aa}
	1%	0	1155.63±12.29 ^{Bb}	879.06±13.72 ^{Cb}	990.27±13.45 ^{Bb}
		5	1208.11±4.10 ^{Cb}	828.80±3.08 ^{Bb}	1141.84±8.19 ^{Cc}
		10	1108.97±24.71 ^{ABab}	785.23±15.07 ^{Aab}	1032.27±21.97 ^{Babc}
		30	857.705±5.82 ^{Aa}	654.81±3.80 ^{Aa}	829.49±6.36 ^{Aa}
		60	1197.01±8.53 ^{Db}	851.69±17.03 ^{Cab}	1124.46±34.65 ^{Cabc}
		120	1158.66±39.60 ^{Cab}	794.05±9.63 ^{Cb}	1066.34±13.38 ^{D^bc}
	2%	0	1172.28±7.67 ^{Bc}	889.29±10.12 ^{Cd}	976.07±9.62 ^{Bbc}
		5	1139.05±10.34 ^{Bb}	815.10±10.82 ^{Bbcd}	1026.82±21.90 ^{Bb}
		10	1198.82±8.73 ^{Bab}	853.79±7.84 ^{Bcd}	1117.45±8.28 ^{Cac}
		30	1082.71±9.27 ^{Ca}	772.12±9.29 ^{Bb}	956.66±10.95 ^{Cbc}
		60	858.38±13.87 ^{Ab}	647.95±13.06 ^{Aa}	760.90±11.63 ^{Aac}
		120	1069.47±10.08 ^{Bab}	763.66±12.78 ^{BCbc}	917.30±11.81 ^{Cbc}
	3%	0	1140.44±11.19 ^{Ba}	841.33±12.69 ^{Bb}	929.13±10.41 ^{Aa}
		5	1077.75±33.48 ^{ABa}	761.09±8.54 ^{Aa}	897.52±6.26 ^{Aa}
		10	1055.56±25.99 ^{Aa}	756.17±17.91 ^{Aa}	890.22±18.04 ^{Aa}
		30	1106.44±13.44 ^{Ca}	775.29±18.22 ^{Ba}	876.48±19.06 ^{ABa}
		60	1053.36±27.88 ^{Ca}	740.94±20.32 ^{Ba}	814.77±17.92 ^{ABa}
		120	1040.22±13.22 ^{Ba}	727.4±9.94 ^{Ba}	809.58±15.94 ^{Ba}

TableS2: Individual anthocyanin concentration of aronia juice during heat treatment at 80°C. The values are expressed as mean±standard deviation. The letters indicate the significant differences. lower case: comparison of time levels at fixed % of GSE; upper case: comparison of samples treated with different % of GSE with control at fixed time level.

Temperature	GSE ratio	Heat treatment time (min)	CyGa	CyAr	CyXy
80°C	0%	0	947.79±1.15 ^{Ab}	753.93±4.48 ^{Ab}	1075.63±5.29 ^{Ca}
		5	916.79±22.04 ^{Ab}	753.16±21.01 ^{Ab}	1078.91±15.09 ^{Ba}
		10	806.74±21.32 ^{Aa}	691.10±17.81 ^{Aa}	918.82±16.94 ^{Aa}
		30	838±13.04 ^{Aa}	684.81±18.78 ^{Aa}	664.73±383.27 ^{Aa}
		60	803.31±16.50 ^{Aa}	659.09±18.90 ^{Aa}	920.25±17.37 ^{Ba}
		120	802.27±11.43 ^{Ba}	642±1.12 ^{Ba}	910.76±7.20 ^{Da}
	1%	0	1155.63±12.29 ^{Bd}	879.06±13.72 ^{Cd}	990.27±13.45 ^{Bc}
		5	1051.9±14.82 ^{Bc}	850.29±11.19 ^{Ad}	1122±19.56 ^{Bd}
		10	994.66±15.67 ^{Bb}	802.13±4.84 ^{Bc}	1027.44±15.61 ^{Bc}
		30	984.16±19.94 ^{Bb}	770.70±21.84 ^{Bc}	1027.09±15.93 ^{Ac}
		60	1040.44±10.92 ^{Bc}	694.46±4.26 ^{Ab}	932.70±8.26 ^{Bb}
		120	689±6.78 ^{Aa}	551.55±1.85 ^{Aa}	639.35±2.82 ^{Aa}
	2%	0	1172.28±7.67 ^{Bd}	889.29±10.12 ^{Cd}	976.07±9.62 ^{Be}
		5	1147.57±5.95 ^{Ccd}	857.71±9.33 ^{Ad}	971.85±16.32 ^{Ade}
		10	1114.81±11.75 ^{Cc}	850.84±19.13 ^{Bc}	933.57±4.61 ^{Accd}
		30	1137.59±12.37 ^{Dcd}	799.48±12.34 ^{Bc}	926.09±13.91 ^{Ac}
		60	1000.01±15 ^{Bb}	776.94±15.59 ^{Bb}	854.78±13.23 ^{Ab}
		120	909.02±16.65 ^{Ca}	683±14.92 ^{Ca}	786.28±10.41 ^{Ca}
	3%	0	1140.44±11.19 ^{Bd}	841.33±12.69 ^{Ba}	929.13±10.41 ^{Ad}
		5	1118.64±12.71 ^{Cd}	610.59±314.89 ^{Aa}	938.14±13.25 ^{Ad}
		10	1107.17±10.34 ^{Cd}	829.97±13.16 ^{Ba}	925.15±16.56 ^{Ad}
		30	1049.10±14.82 ^{Cc}	796.03±10.71 ^{Ba}	867.38±8.97 ^{Ac}
		60	1008.23±13.05 ^{Bb}	746.24±13.94 ^{Ba}	823.56±13.22 ^{Ab}
		120	872.08±12.40 ^{Ca}	657.29±11.18 ^{BCa}	735.48±12.21 ^{Ba}