

Table 1 Chemical composition of Aronia berries and juice

Constituents	Juice (g/L)*		Berries (different cultivars)
	<a href="#">fresh pressed</a> [8]*	<a href="#">pasteurised</a> [28]	
Rel. density	1.081	1.064	–
Dry matter, in %	19.5 °Brix	15.5	15.6 [24]; 20 [44]; 16.7–28.8 [9]
pH	3.6	3.3	<a href="#">3.3–3.7</a> [2]
Glucose	41	40	NA
Fructose	38	37	NA
Glucose + Fructose	79	77	66–100 [24]; 130–176 g/kg FW [9]
Sucrose	ND	ND	ND
Sorbitol	80	55.6	NA
Dietary fibre	<a href="#">trace</a> [2]	NA	<a href="#">56 g/kg FW</a> [24]
- Pectins	<a href="#">3.7 g/kg</a> [12]	NA	<a href="#">3.4–5.8 g/kg FW</a> [9]
Fat	NA	NA	<a href="#">0.14% FW</a> [24]
Protein	NA	NA	<a href="#">0.7% FW</a> [24]
<b>Organic acids</b>			
l-Malic acid	9.0	11.1	<a href="#">13.1 g/kg FW</a> [24]
Tartaric acid	ND	NA	NA
Citric acid	500 mg/L	247 mg/L	<a href="#">2.1 g/kg FW</a> [24]
Isocitric acid	65 mg/L	NA	NA
Shikimic acid	80 mg/L	NA	NA
Succinic acid	1.5	0.160	ND (fresh berries) <a href="#">800 mg/kg (3 months stored berries) FW</a> [9]
<b>Vitamins</b>			
Vitamin C	200 mg/L	ND	<a href="#">137 mg/kg FW</a> [24] <a href="#">13–270 mg/kg FW</a> [9]
Folate, µg/L	NA	35 µg/L	<a href="#">200 µg/kg FW</a> [33]
Vitamin B1	500 µg/L	NA	<a href="#">180 µg/kg FW</a> [24]
Vitamin B2	600 µg/L	NA	<a href="#">200 µg/kg FW</a> [24]
Vitamin B6	550 µg/L	NA	<a href="#">280 µg/kg FW</a> [24]
Niacin	3400 µg/L	NA	<a href="#">3 000 µg/kg FW</a> [24]
Pantothenic acid	2200 µg/L	NA	<a href="#">2 790 µg/kg FW</a> [24]
Tocopherols	NA	NA	<a href="#">17.1 mg/kg FW</a> [24]
Vitamin K	NA	NA	<a href="#">242 µg/kg FW</a> [24]
<b>Minerals</b>			
Ash	<a href="#">6.4; 4.6</a> [9]	<a href="#">3.6; 4.1</a> [9]	4400 [24]; 5800 mg/kg FW [9]
Na, mg/L	5	5.7	<a href="#">26 mg/kg FW</a> [24]
K, mg/L	2850	1969	<a href="#">2 180 mg/kg FW</a> [24]

Ca, mg/L	150	185	<a href="#">322 mg/kg FW [24]</a>
Mg, mg/L	140	160	<a href="#">162 mg/kg FW [24]</a>
Fe, mg/L	4 (2–8)	0.4	<a href="#">9.3 mg/kg FW [24]</a>
Zn, mg/L	1.3 (0.8–2.5)	0.6	<a href="#">1.47 mg/kg FW [24]</a>
I, µg/L	NA	< 5	NA
<b>Phytochemicals</b>			
Carotenoids	NA	70 µg/L	<a href="#">48.6 mg/kg FW [34]</a>
- β-Carotene	NA	32 µg/L	7.7 FW [24], 16.7 mg/kg FW [34]
- β-Cryptoxanthin	NA	NA	4.63 FW [24], 12.2 mg/kg FW [34]
- Violaxanthin	NA	NA	<a href="#">13.0 mg/kg FW [34]</a>
Phenols (total)	NA	6.3–6.95	<a href="#">7849c mg/100 g DW [45]</a>
			<a href="#">7465e mg/100 g DW [44]</a>
			<a href="#">3760d mg/100 g DW [42]</a>
			<a href="#">4210d mg/100 g DW [39]</a>
			<a href="#">6902d mg/100 g FW [49]</a>
			<a href="#">2556d mg/100 g FW, wild [63]</a>
			<a href="#">2010d mg/100 g FW [47]</a>
Amygdalin	<a href="#">57.5 mg/kg [9]</a>	NA	<a href="#">201 mg/kg FW [1]</a>

\* If not otherwise stated. NA, not analyzed; ND, not detected; DW, dry weight; FW, fresh weight.

<sup>a</sup> Fresh pressed juice produced under laboratory conditions.

<sup>b</sup> Commercially produced *Aronia juice* (100%, pasteurised, not from concentrated juice).

<sup>c</sup> Sum of single compounds determined by HPLC/DAD.

<sup>d</sup> Folin-Ciocalteu method, concentration based upon gallic acid as standard.

<sup>e</sup> Folin-Ciocalteu method, concentration based upon catechin as standard.

Kilde:

<https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0028-1088306>

© Georg Thieme Verlag KG Stuttgart · New York

Chokeberry (*Aronia melanocarpa*) – A  
Review on the Characteristic  
Components and Potential Health  
Effects

Sabine E. Kulling<sup>1</sup>, Harshadai M. Rawel<sup>1</sup>

<sup>1</sup>Department of Food Chemistry,  
Institute of Nutritional Science,  
University of Potsdam, Nuthetal (OT  
Bergholz-Rehbrücke), Germany