

Table S1. Collected information about the analysed beetroot samples.

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Form	Code	Water content (%)	Date of purchase	Certificate of organic cultivation	Place of purchase	Origin country
Conventionally cultivated	1Bp	85.9				
	1Bs	83.2	11/05/2019	no data	large-retail store, Gdańsk (PL)	Poland (PL)
	1Bu	85.1				
	3Bp	85.2				
	3Bs	84.2	11/14/2019	no data	small-retail store, Kolbudy (PL)	PL
	3Bu	84.2				
	4Bp	81.8				
	4Bs	78.4	11/14/2019	no data	large-retail store, Gdańsk (PL)	PL
	4Bu	80.5				
	5Bp	88.1				
Organically cultivated	5Bs	86.8	11/28/2019	no data	large-retail store, Gdańsk (PL)	PL
	5Bu	87.8				
	2Bp	83.2	11/05/2019	P 095 18; Greater Poland (PL)	large-retail store, Gdańsk (PL)	PL
	2Bu	81.2				
	6Bp	85.2				
	6Bs	80.9	12/02/2019	PL-EKO-07-07904 Wilkowa Wieś (PL)	greengrocer's (online), Gdańsk (PL)	PL
	6Bu	83.1				
	7Bp	83.4				
	7Bs	80.0	12/02/2019	PL-EKO-07-07904 Wilkowa Wieś (PL)	greengrocer's (online), Gdańsk (PL)	PL
	7Bu	82.9				

Bp – peeled beetroot; Bs – beetroot skins, Bu – unpeeled beetroot

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Table S2. Collected information about the analysed beetroot-based DSs.

Code	The content of beetroot extract or preserves/dosage unit	Declared weight of the dosage unit (g) <sup>1</sup>	Recommended daily dose	Origin country
C1	beetroot extract (400 mg) containing 40 mg of nitrates; E464; inulin (70 mg)	NI / 0.3931	1x1 capsule	Poland (PL)
C2	red beetroot extract (200 mg); young barley extract (200 mg); capsule (glazing agent: E464); vitamin B <sub>3</sub> (60 mg); vitamin B <sub>5</sub> (18 mg); E460; vitamin B <sub>2</sub> (4.2 mg); vitamin B <sub>6</sub> (4.2 mg); vitamin B <sub>1</sub> (3.3 mg); vitamin B <sub>9</sub> (600 µg); vitamin B <sub>12</sub> (7.5 µg)	NI / 0.5151	1x1 capsule	PL
C3	beetroot extract (550 mg); E1204	NI / 0.5781	2x1 capsule	PL
C4	extract of beetroot 10:1 (300 mg); capsule of vegetable cellulose	0.39 / 0.4011	2x1 capsule	PL
C5A	beetroot concentrate (268 mg); ascorbic acid (20 mg); iron gluconate (12 mg); E1400; E470b; E551	0.376 / 0.3121	1x3 capsule	PL
C5B		0.376 / 0.3031		
C5C		0.376 / 0.301		
C6	powdered red beetroot (400 mg); ascorbic acid (40 mg); iron (10 mg)	NI / 0.9961	1x2 capsule	PL
C7A	Beta vulgaris extract 4:1 (550 mg); pullulan capsule	0.69 / 0.601	1x2 capsule	PL
C7B		0.69 / 0.6141		
C8A	dried juice concentrate (438.5 mg); ascorbic acid (38 mg); iron (2.8 mg); gelatine capsule	0.596 / 0.5131	2x1 capsule with a meal	PL
C8B				
C9	freeze-dried juice from organic pickled beetroot (300 mg); micronized apple fibre; cellulose capsule	0.3 / 0.2861	2x1 capsule before a meal	PL
C10	400 mg of root extract; 40 mg of nitrates	0.5 / 0.3971	1x1 capsule	PL
C11	400 mg of root extract; 40 mg of nitrates	0.5 / 0.4031	1x1 capsule	PL
C12	beetroot (500 mg); E572; gelatine capsule	NI / 1.0141	3x2 caps	United States of America (USA)
C13	organic beetroot extract with E1400 (700 mg) corresponding to 4620 mg of dried beetroot; HPMC capsule	NI / 1.4281	1x2 capsule with a meal	United Kingdom (UK)
C14	beetroot (500 mg); E460; E551; E572; HPMC capsule	NI / 1.0781	3x2 capsule with a meal	USA
C15	beetroot extract (500 mg); E460; E551; vegetable fatty; vegetable mineral salts	NI / 1.6251	3x1 capsule with a meal	USA

Code	The content of beetroot extract or preserves/dosage unit	Declared weight of the dosage unit (g) <sup>1</sup>	Recommended daily dose	Origin country
C16	beetroot extract (450 mg); E460; E464 capsule	NI / 1.1681	2x1 capsule	USA
C17	beetroot extract 5:1 (500 mg) (5:1); E1400, E460; vegetable capsule shell: E464; anti-caking agents: E551, vegetable E572	NI / 0.6281	1x1 capsule	USA
T1A	beetroot extract 20:1 (350 mg); E341; E470b	0.35	1x2 tablet with a meal	UK
T1B				
T2A	beetroot concentrate (488 mg); ascorbic acid (20 mg); iron gluconate (12 mg); E1400; E470b; E551	0.65	1x3 tablet	PL
T2B				
T2C				
T3A	dried juice (500 mg) equals 3.5 g of raw vegetable; E470b; E551	0.925	1-2x3 tablet with a meal	PL
T3B				
T4	dried juice concentrate (500 mg) equals 2.75 g of raw vegetable; B <sub>6</sub> (1 mg); B <sub>12</sub> (1.25 µg); E460; E470b, E551	0.55	1-2x3 tablet	PL
T5	beetroot root powder (100 mg); L-arginine alpha-ketoglutarate (125 mg); L-citrulline (125 mg); Beta-alanine (100 mg); E421; E967; E960; E460; E466; HPMC capsule; E330; natural flavours (cherry and vanilla); E464; E470a; E551	1.42	1x1-2 tablet 20-30 min before a workout	USA
T6	beetroot extract (80 mg); E341; E460; vegetable E572 (2.25 mg)	0.35	2 tablet	UK
T7	fresh beetroot 7:1 (500 mg); E1400; L-ascorbic acid (40 mg); 7 mg iron (II) fumarate (7 mg); E420; E470b; E551	0.63	1-2x1 tablet	PL
T8	beetroot concentrate (500 mg); ascorbic acid (20 mg); iron (II) gluconate (12 mg); E1400; E470b; E551	0.65	3x1 tablet	PL
T9	dried red beetroot concentrate (500 mg); vitamin B <sub>6</sub> (1 mg); vitamin B <sub>12</sub> (1.25 mg); E470b; E551	0.5	3x1-2 tablet	PL
T10	beetroot extract (1000 mg; trimethylglycine); E460, vegetable fatty acids, E466, E470b; E464; E460ii	1.46	1-3x1 tablet	USA
T11	of beetroot extract 10:1 (160 mg) including 1600 mg of nitrates; E341; E460; E470b	0.35	1x1-2 tablet with a meal	UK
T12	beetroot extract 5:1 (315 mg); E341, E460; E570; E551; E572; E464; E422 ; E463	NI / 0.821	1 tablet	UK
P1	beetroot powder	9.5	1x1 spoon	USA
P2	100% beetroot tuber extract	4.0	3x1 teaspoon	Czech Republic (CZ)
P3	powdered red beetroot	3.0	1x1 teaspoon	Egypt (EG)

Code	The content of beetroot extract or preserves/dosage unit	Declared weight of the dosage unit (g) <sup>1</sup>	Recommended daily dose	Origin country
P4	100% powdered red beetroot	15	1 teaspoon	Croatia (HR)
P5	powdered BIO red beetroot	15.0	1x3 teaspoons	Germany (DE)
P6	powdered beetroot 4:1 ( <i>Beta vulgaris</i> extract)	1.0	1x half of a teaspoon	PL
P7	powdered organic beetroot	3.0	2-3 flat teaspoons	China (CN)
P8	powdered red beetroot	10	1 spoon	USA
P9	beetroot crystals made of concentrated beetroot juice, 4 g/100 g of nitrates	5.5	2-3 teaspoons, 1-3 hours before a workout or just after a workout	Ireland (IE)
P10	100% powdered red beetroot, whole ground, not peeled	15	Mix 1 tablespoon of the product with food	PL
P11	powdered beetroot 600 mg; L-ascorbic acid (80 mg); iron fumarate (42 mg)	0.72	1 measure (0.72 g)	NI
P12	100% powdered BIO red beetroot	3.0	Mix 1 teaspoon (3 g) of the product with 200 ml of food. The suggested daily dose is 1-2 teaspoons.	Italy (IT)
P13	100% powdered red beetroot	10.0	Add 1-2 teaspoons of beetroot powder (5-10 g) to food.	PL

NI – lack of information; <sup>1</sup>for products where the manufacturer did not specify the weight of the unit and all products in capsules, it was determined empirically according to USP 43-NF 38 guidelines; <2091> chapter "Weight variation of dietary supplements". This value was used for calculations. Products with a lack of "dietary supplement" marking on the package were marked in orange in the Table.

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Table S3. Optimisation of extraction of beetroot products on the example of a selected lyophilizate.

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Variant	Extraction technique Solvent (v/v)	MAE		UAE 1 (20°C)		UAE 2 (20°C)	
		$\bar{x}$ [mg GAE/g]	RSD [%]	$\bar{x}$ [mg GAE/g]	RSD [%]	$\bar{x}$ [mg GAE/g]	RSD [%]
A	MiliQ+0.1%FA	6.51	3.55	1.92	4.43	6.00	4.63
B	25%MeOH+0.1%FA	7.23	3.20	2.39	6.75	7.15	5.78
C	50%MeOH+0.1%FA	7.05	3.77	3.33	14.05	7.26	6.85
D	75%MeOH+0.1%FA	5.75	3.89	6.37	5.00	5.82	1.38
E	25%EtOH+0.1%FA	6.96	5.21	7.00	5.06	6.72	6.18
F	50%EtOH+0.1%FA	6.65	5.10	7.04	7.06	6.95	0.021
G	75%EtOH+0.1%FA	5.69	5.02	5.02	5.03	5.99	4.98

Table S4. Optimisation of the FC method because of model and incubation time.

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Model	1		2		3		4	
Time of incubation [min]	$\bar{x}$ [Abs]	RSD [%]						
30	0.071	0.001	0.065	0.297	0.060	0.001	0.053	0.44
60	0.064	0.299	0.073	2.6	0.060	0.96	0.054	0.62
120	0.088	7.6	0.14	13	0.064	0.001	0.053	0.36

Table S5. Optimisation of the FC method because of incubation time for lyophilizate and supplement in tablets according to method 1.

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16 17	Time of incubation [min]	$\bar{x}$ [Abs]		RSD [%]
		lyophilizate	supplement	
lyophilizate	30	0.324	0.247	2.7
	60	0.315	0.258	5.1
	120	0.312	0.262	4.2
supplement	30	0.324	0.247	5.6
	60	0.315	0.258	2.1
	120	0.312	0.262	13.6

Table S6. Full characteristics of the analysed beetroot-based dietary supplements because of TAC, nitrate, and nitrite content.

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Product	Daily dose [g]	FC		CUPRAC		DPPH		Nitrites			Nitrates		
		mg GAE/g	SD	µmol TE/g	SD	Activity	SD	µg/g	SD	ADI <sup>1</sup>	mg/kg	SD	ADI <sup>2</sup>
T1A	0.7	2.27	0.12	34	2.8	14%	1.2	1.142	0.079	0.0057	3008	47	0.602
T1B	0.7	2.31	0.14	21	1.8	9.6%	0.83	0.293	0.026	0.0015	3008	68	0.602
T2A	2.0	19.2	2.7	170	3.5	80%	5.7	1.34	0.14	0.019	2569	65	1.4
T2B	2.0	16.25	0.34	175	7.6	88%	1.5	2.00	0.29	0.028	1933	158	1.1
T2C	2.0	14.65	0.48	134	10	81%	4.9	1.40	0.12	0.0195	2483	126	1.4
T3A	5.6	4.29	0.18	49	3.0	18%	0.79	2.484	0.082	0.098	1624	117	2.6
T3B	5.6	4.10	0.46	49	1.2	16%	1.0	2.24	0.26	0.089	1702	55	2.7
T4	3.3	4.22	0.14	47	1.9	18%	0.19	2.251	0.073	0.053	1979	159	1.9
T5	2.8	1.30	0.15	38	5.5	8.9%	0.98	0.877	0.079	0.018	504	60	0.41
T6	0.7	2.11	0.64	21	0.15	18%	0.34	<LOQ	-	-	3112	134	0.62
T7	1.3	32.5	1.8	278	0.41	90%	1.4	1.11	0.14	0.010	1050	75	0.38
T8	2.0	13.0	1.5	134	12	81%	8.8	<LOQ	-	-	2481	316	1.4
T9	9.8	2.72	0.13	20	2.2	8.9%	0.61	0.549	0.060	0.039	1142	140	3.2
T10	4.4	0.681	0.085	1	0.52	4.9%	0.57	0.537	0.082	0.017	<LOQ	-	-
T11	0.7	2.415	0.056	34	4.1	11%	0.89	1.20	0.16	0.0060	3746	91	0.75
T12	2.5	2.40	0.20	18	2.4	13%	1.1	0.721	0.023	0.013	1142	113	0.80
C1	0.39	6.2	0.71	62	5.2	22%	1.4	1.9	0.18	0.0053	4305	49	0.48
C2	0.52	2.7	0.064	19	6.2	7.2%	0.896	0.95	0.095	0.0035	383	13	0.056
C3	1.2	3.7	0.22	46	3.9	15%	0.52	3.2	0.25	0.026	1037.0	9.8	0.34
C4	0.80	12	1.5	142	3.6	46%	1.2	8.9	0.54	0.051	<LOQ	-	-
C5A	0.94	34	0.99	274	37	71%	2.5	2.0	0.27	0.043	1959	49	3.5
C5B	0.91	35	2.0	254	4.8	90%	0.97	0.88	0.084	0.0057	1926	36	0.50
C5C	0.90	31	2.8	278	13	90%	1.6	1.2	0.13	0.0076	1907	128	0.49
C6	1.0	37	3.4	285	27	82%	7.2	2.8	0.26	0.020	<LOQ	-	-
C7A	1.2	3.6	0.25	44	1.1	14%	0.38	<LOQ	-	-	5205	183	1.8
C7B	1.2	3.4	0.42	31	4.2	14%	0.91	2.0	0.094	0.018	11924	576	4.2
C8A	1.0	41	3.2	268	26	74%	1.5	1.8	0.078	0.013	3814	203	1.1
C8B	1.0	40	3.3	312	28	90%	0.087	1.0	0.00302	0.0076	784	112	0.23
C9	0.57	14	0.42	210	7.3	43%	5.1	3.8	0.55	0.015	4739	125	0.77
C10	0.40	1.96	0.10	13	1.8	11%	1.5	0.93	0.0053	0.0026	<LOQ	-	-

Product	Daily dose [g]	mg GAE/g	SD	μmol TE/g	SD	Activity	SD	μg/g	SD	ADI <sup>1</sup>	mg/kg	SD	ADI <sup>2</sup>
C11	0.40	1.8	0.039	16	1.1	10%	0.49	0.81	0.1002	0.0023	<LOQ	-	-
C12	3.0	3.2	0.16	33	3.0	12%	1.0	0.99	0.082	0.022	1284	132	1.1
C13	1.4	5.1	0.21	49	2.4	18%	1.2	1.1	0.15	0.012	8461	256	3.5
C14	3.2	8.7	1.02	112	1.9	33%	0.82	7.4	0.81	0.170	4460	256	4.1
C15	1.9	4.5	0.28	55	4.8	17%	0.52	1.1	0.079	0.015	2373	218	1.3
C16	1.2	8.9	0.11	100	6.4	41%	0.50	1.2	0.081	0.010	15186	454	5.1
C17	1.9	4.3	0.11	52	2.2	17%	0.59	<LOQ	-	-	2170	50	1.2
P1	9.5	9.9	0.21	127	9.8	37%	1.5	2.2	0.18	0.15	1590	125	4.3
P2	12	4.99	0.089	76	4.02	22%	1.4	3.3	0.14	0.28	1774	1.2	6.1
P3	3	10	0.19	105	12	40%	1.6	2.5	0.37	0.053	299	41	0.26
P4	15	11	0.55	119	2.5	34%	2.2	0.95	0.078	0.10	1603	170	6.9
P5	15	13	1.03	163	17	44%	3.5	3.9	0.0088	0.42	1457	125	6.2
P6	1	4.1	0.204	48	3.8	16%	0.91	1.7	0.25	0.012	2757	316	0.79
P7	9	6.8	0.66	80	1.6	24%	1.2	<LOQ	-	-	<LOQ	-	-
P8	10	9.2	0.48	106	4.99	31%	0.22	1.2	0.17	0.089	91.4	1.6	0.26
P9	17	15	2.1	213	15	48%	1.6	1.7	0.12	0.21	10224	200	48
P10	15	11	0.89	145	16	40%	3.3	5.2	0.78	0.55	6597	495	28
P11	0.72	61	2.0	467	12	90%	1.1	2.8	0.034	0.014	5127	505	1.1
P12	6	2.5	0.07995	27	1.2	12%	0.29	2.3	0.29	0.099	5300	478	9.1
P13	10	11	1.3	127	14	42%	4.6	6.4	0.71	0.45	13110	755	37

<sup>1</sup> ADI calculated for 70 kg person (14 mg of nitrite ions/70 kg/day); <sup>2</sup> ADI calculated for 70 kg person (350 mg of nitrate ions/70 kg/day) SD—standard

Table S7. Full characteristics of the analysed beetroots samples because of TAC, nitrate, and nitrite content.

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Product	Daily dose [g f.w.]	FC				CUPRAC				DPPH		Nitrites				Nitrates							
		mg GAE/g d.w.	SD	mg GAE/dose	SD	µmol TE/g d.w.	SD	µmol TE/do se	SD	Ac-tivity	SD	µg/g d.w.	SD	µg/do se	SD	ADI <sup>1</sup>	mg/k g d.w.	SD	mg/d ose	SD	ADI <sup>2</sup>		
Conventional	1C	100	11	0.95	187	17	146	3.9	2561	68	39%	3.5	2.0	0.011	34	0.19	0.25	5645	388	99	6.8	28	
	1Sk	100	22	2.4	450	49	199	6.0	4012	122	63%	6.2	3.2	0.26	66	5.3	0.47	7562	319	153	6.4	44	
	1O	100	7.2	0.15	117	2.5	93	2.7	1522	44	30%	2.9	1.6	0.19	26	3.1	0.19	7307	129	120	2.1	34	
	3C	100	14	0.27	259	5.0	168	14	3144	256	41%	0.27	1.4	0.001	7	26	0.032	0.19	2908	230	55	4.3	16
	3Sk	100	26	1.7	482	33	365	43	6876	815	60%	1.3	2.5	0.002	6	47	0.049	0.33	2535	115	48	2.2	14
	3O	100	12	0.46	202	8.1	151	9.1	2624	159	42%	0.27	0.702	0.055	12	0.96	0.087	2570	142	45	2.5	13	
	4C	100	12	0.23	291	5.5	150	3.7	3623	89	40%	2.1	1.7	0.14	42	3.4	0.30	4178	243	101	5.9	29	
	4Sk	100	22	1.8	595	51	289	25	7988	684	56%	2.7	7.1	0.91	196	25	1.4	2101	166	58	4.6	17	
	4O	100	8.0	1.3	179	28	110	11	2445	241	32%	3.1	2.0	0.12	45	2.7	0.32	6692	141	149	3.1	43	
	5C	100	11	1.3	147	17	145	9.4	2008	131	37%	3.0	1.6	0.23	22	3.2	0.16	8801	287	122	4.0	35	
	5Sk	100	15	0.94	235	14	260	18	3945	274	52%	3.2	3.4	0.023	51	0.35	0.37	3456	13	52	0.19	15	
	5O	100	6.8	0.32	91	4.3	98	3.7	1320	50	28%	2.3	1.4	0.17	19	2.3	0.13	6003	352	82	5.9	23	
	2C	100	12	0.49	284	11	160	5.4	3712	126	39%	1.1	3.8	0.55	89	13	0.64	3511	255	134	3.3	23	
	2O	100	9.7	0.64	196	13	123	13	2490	265	36%	2.5	3.6	0.53	73	11	0.52	6606	162	57	0.38	38	
	6C	100	13	1.1	275	23	208	11	4244	216	46%	0.57	2.0	0.14	41	2.9	0.30	2817	19	11	0.28	16	
Organic	6Sk	100	34	0.91	794	22	413	15	9779	366	63%	3.3	2.8	0.087	66	2.1	0.47	461	12	39	0.48	3.1	
	6O	100	9.8	0.68	170	12	151	6.9	2613	121	37%	0.82	2.0	0.29	34	5.0	0.24	2235	28	58	2.4	11	
	7C	100	15	0.93	310	19	198	4.3	4097	89	44%	1.3	4.8	0.44	100	9.1	0.72	2782	116	11	0.30	16	
	7Sk	100	24	1.8	600	45	358	28	8933	698	64%	5.5	7.0	1.0	175	26	1.3	423	12	41	1.5	3.02	
	7O	100	9.9	0.72	198	14	124	16	2464	309	31%	2.6	15	0.59	293	12	2.1	2065	75	82	5.9	12	

<sup>1</sup> ADI calculated for 70 kg person (14 mg of nitrite ions/70 kg/day); <sup>2</sup>ADI calculated for 70 kg person (350 mg of nitrate ions/70 kg/day); d.w. – dry weight

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Table S8. The results of the Mann-Whitney U test check the existence of differences between the individual groups of the analysed products (values  $p < 0.05$  are marked in red).  
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			Tablets	Capsules	Powders	Lyophilizate
F-C assay	Expressed as mg GAE/d.d.	Tablets	-	0.987924	$9.9 \times 10^{-5}$	$3 \times 10^{-10}$
		Capsules	0.987924	-	$4.4 \times 10^{-5}$	$5 \times 10^{-8}$
		Powders	$9.9 \times 10^{-5}$	$4.4 \times 10^{-5}$	-	$3.8 \times 10^{-5}$
		Lyophilizate	$3 \times 10^{-10}$	$5 \times 10^{-8}$	$3.8 \times 10^{-5}$	-
CUPRAC	Expressed as mg GAE/g	Tablets	-	0.072627	0.07546	$4.866 \times 10^{-3}$
		Capsules	0.072627	-	0.483821	0.146878
		Powders	0.07546	0.483821	-	0.093978
		Lyophilizate	$0.004866$	0.146878	0.093978	-
	Expressed as mg TE/d.d.	Tablets	-	0.617087	$1.59 \times 10^{-4}$	$3 \times 10^{-10}$
		Capsules	0.617087	-	$2.3 \times 10^{-5}$	$5 \times 10^{-8}$
		Powders	$1.59 \times 10^{-4}$	$2.3 \times 10^{-5}$	-	$7 \times 10^{-6}$
		Lyophilizate	$3 \times 10^{-10}$	$5 \times 10^{-8}$	$7 \times 10^{-5}$	-
	Expressed as mg TE/g	Tablets	-	0.138403	0.055535	$2.53 \times 10^{-4}$
		Capsules	0.138403	-	0.440962	0.034565
		Powders	0.055535	0.440962	-	0.024274
		Lyophilizate	$2.53 \times 10^{-3}$	$0.034565$	$0.024274$	-

d. d. – daily dose recommended by the manufacturer

Table S9. The results of the correlation between the TAC and TPC results obtained by different methods of beetroot and beetroot-based products (Spearman's rank correlation coefficient). Values which were statistically significant ( $p < 0.05$ ) are marked in red.

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		FC [mg GAE/g]	CUPRAC [ $\mu\text{mol TE/g}$ ]	DPPH [%]
Beetroot	FC [mg GAE/g]	x	<b>0.960787 b</b>	<b>0.957410 b</b>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	<b>0.960787 b</b>	x	<b>0.940955 b</b>
	DPPH [%]	<b>0.957410 b</b>	<b>0.940955 b</b>	x
Capsules	FC [mg GAE/g]	x	<b>0.971429 b</b>	<b>0.968831 b</b>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	<b>0.971429 b</b>	x	<b>0.971429 b</b>
	DPPH [%]	<b>0.968831 b</b>	<b>0.971429 b</b>	x
Tablets	FC [mg GAE/g]	x	<b>0.858824 b</b>	<b>0.850000 b</b>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	<b>0.858824 b</b>	x	<b>0.852941 b</b>
	DPPH [%]	<b>0.850000 b</b>	<b>0.852941 b</b>	x
Powders	FC [mg GAE/g]	x	<b>0.923077 b</b>	<b>0.939560 b</b>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	<b>0.923077 b</b>	x	<b>0.917582 b</b>
	DPPH [%]	<b>0.939560 b</b>	<b>0.917582 b</b>	x

<sup>a</sup>  $p > 0.05$ ; <sup>b</sup>  $p < 0.05$

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Table S10. Results of U Mann Whitney test for all analysed samples because of nitrites and nitrates content [mg/kg] (values p &lt; 0.05 are marked in red).

	Beetroot	Capsules	Tablets	Powders
Nitrites	beetroot	x	<b>0.014038</b>	<b>2.95×10<sup>-4</sup></b>
	capsules	<b>0.014038</b>	x	0.262612
	tablets	<b>2.95×10<sup>-4</sup></b>	0.262612	x
	powders	0.671316	0.118561	<b>7.429×10<sup>-3</sup></b>
Nitrates	beetroot	x	0.262612	<b>0.262612</b>
	capsules	0.262612	x	0.724077
	tablets	<b>0.262612</b>	0.724077	x
	powders	0.262612	0.722644	0.59859

Table S11. The results of the correlation between the antioxidant potential and the content of nitrites and nitrate in beetroot and beetroot-based products (Spearman's rank correlation coefficient). Values which were statistically significant ( $p < 0.05$ ) are marked in red.

		Nitrites [ $\mu\text{g/g}$ ]	Nitrates [mg/kg]
beetroot	FC [mg GAE/g]	0.398041 <sup>a</sup>	-0.536753 <sup>b</sup>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	0.409929 <sup>a</sup>	-0.628808 <sup>b</sup>
capsules	FC [mg GAE/g]	0.423514 <sup>a</sup>	0.085994 <sup>a</sup>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	0.426762 <sup>a</sup>	8.469×10 <sup>-3</sup> <sup>a</sup>
tablets	FC [mg GAE/g]	0.484180 <sup>a</sup>	0.038235 <sup>a</sup>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	0.482708 <sup>a</sup>	0.067647 <sup>a</sup>
powders	FC [mg GAE/g]	0.202797 <sup>a</sup>	0.195804 <sup>a</sup>
	CUPRAC [ $\mu\text{mol TE/g}$ ]	0.272727 <sup>a</sup>	0.209790 <sup>a</sup>

<sup>a</sup>  $p > 0.05$ ; <sup>b</sup>  $p < 0.05$