SUPPLEMENTARY MATERIAL for

Chemical composition, antioxidant potential, and nutritional evaluation of cultivated sorghum grains: Combined experimental, theoretical, and multivariate analysis

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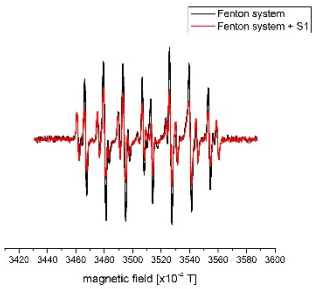
Table S1. The list of sixteen food grade sorghum genotypes within IFVCNS (Institute of Field and Vegetable Crops, Novi Sad, National Institute of the Republic of Serbia) collection.

Analyte	Sample number	Genotype	Original collection
S1	Re2	AK 3001	Gabonatermesztesi Kutato Intezet Szeged, HUN
S2	Re31	ROKY 78	Oklahoma State University Stillwater, USA
S3	Re45	NK R 310	Gabonatermesztesi Kutato Intezet Szeged, HUN
S4	Re161	ROKY 27	Oklahoma State University Stillwater, USA
S5	Re168	ROKY 78	Oklahoma State University Stillwater, USA
S6	Re169	ROKY 78	Oklahoma State University Stillwater, USA
S7	Re187	IA 14	Iowa State University Ames, USA
S8	Re192	IA 19	Iowa State University Ames, USA
S9	Re218	RTx 434	Texas A&M University College Station, USA
S10	Re230	RTx 2744	Texas Agric. Experiment Station Lubbock, USA
S11	Re248	32612 T	Unknown
S12	Re258	NK 115 978/90	Northrup King, USA
S13	Re261	NK 90 970/90	Northrup King, USA
S14	Re262	Pioneer 8910 968/90	Pioneer, USA
S15	Re279	Tx 2834	Texas A&M University College Station, USA
S16	Re284	Tx 2839	Texas A&M University College Station, USA

Table S2. Qualitative and quantitative composition of phenolic compounds present in tested Sorghum grains (μg g^{-1} ± SD).

Sample	Luteolinidin	Cyanidin derivative	Apigeninidin	5-methoxyluteolinidin	7-methoxyapigeninidin	Apigeninidin glucoside	Luteolidin derivative 1	Luteolidin derivative 2	Luteolidin glucoside
S1	2.44±0.00	0.65±0.13	5.24±0.12	1.94±0.10	4.12±0.11	-	-		-
S2	-	2.22±0.10	-	-	-	12.15±0.22	0.84±0.07	0.78±0.07	-
S3	3.28±0.00	-	3.28±0.00	3.36±0.65	3.85±0.02	6.28±0.57	-	-	-
S4	5.99±0.11	4.22±0.32	6.88±0.35	8.23±0.25	5.28±0.22	-	-	-	-
S5	-	3.26±0.31	-	-	-	12.06±0.62	0.92±0.06	0.84±0.08	0.87±0.08
S6	-	5.72±0.10	-	-	-	9.98±0.06	0.93±0.07	0.74±0.09	1.32+0.21
S7	5.52±0.42	3.20±0.24	7.13±0.02	5.47±0.38	5.02±0.10	2.64±0.07	-	-	2.03±0.03
S8	24.85±1.42	6.74±0.17	34.20±3.65	15.72±1.39	9.72±0.09	13.49±0.64	-	-	2.42±0.09
S9	2.31±0.08	-	-	2.30±0.08	-	2.77±0.22	-	-	-
S10	-	0.97±0.08	-	-	0.88±0.14	-	-	-	-
S11	18.47±0.23	3.51±0.20	12.90±0.29	6.27±0.05	3.84±0.08	-	-	-	-
S12	4.35±0.07	2.70±0.28	4.57±0.43	4.70±0.02	3.13±0.14	3.70±0.25	-	-	-
S13	4.24±0.38	1.91±0.07	5.50±0.33	3.60±0.33	2.81±0.47	2.28±0.21	-	-	0.62±0.02
S14	6.15±0.15	2.39±0.27	5.51±0.42	5.48±0.09	2.50±0.43	7.72±0.66	-	-	-
S15	2.72±0.20	-	2.20±0.13	3.76±0.22	2.31±0.06	7.12±0.02	-		0.65±0.02
S16	-	-	5.80±0.90	-	3.69±0.46	-	0.64±0.05	-	-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Fenton system + S1
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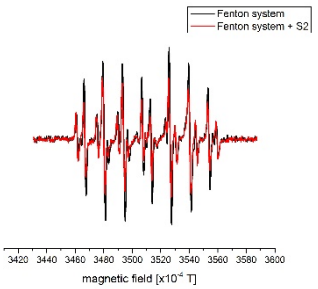
magnetic field [x10⁻⁴ T]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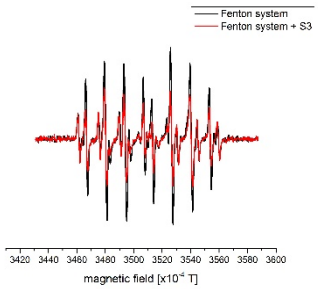
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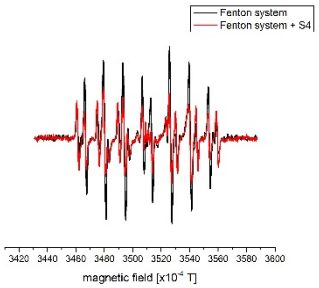
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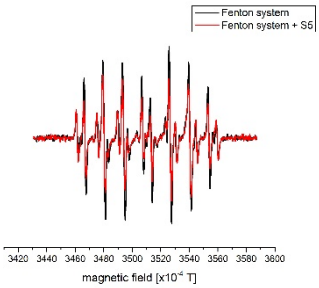
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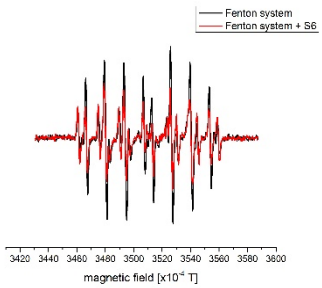
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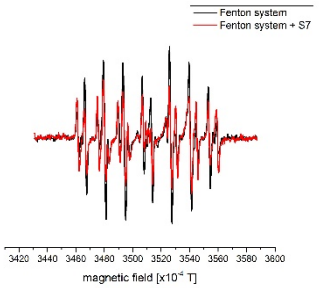
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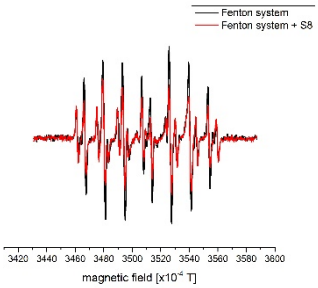
magnetic field [x10⁻⁴ T]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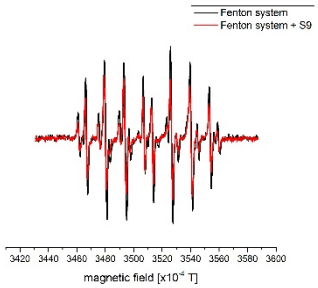
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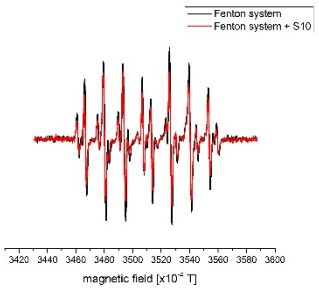
magnetic field [x10⁻⁴ T]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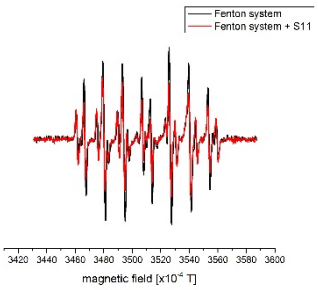
magnetic field [x10⁻⁴ T]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Fenton system + S11
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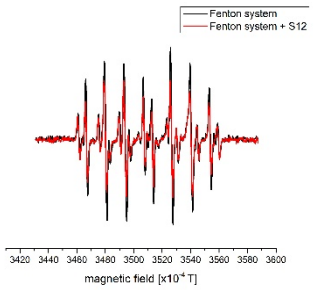
magnetic field [x10⁻⁴ T]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Fenton system + S12
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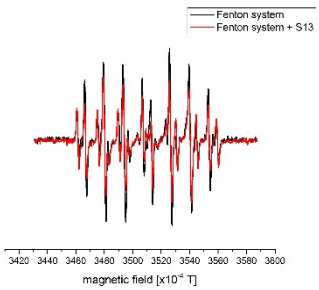
magnetic field [x10⁻⁴ T]


Fenton system
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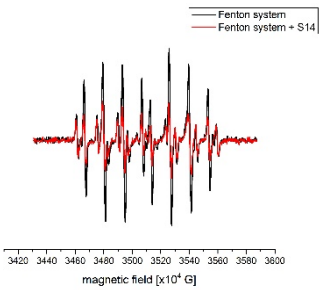
magnetic field [x10⁻⁴ T]


Fenton system
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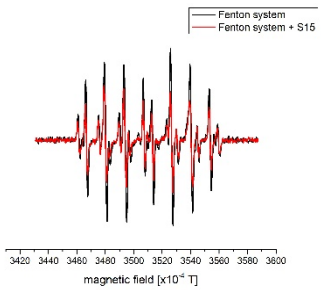
magnetic field [x10⁴ G]


Fenton system
Fenton system + S15
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magnetic field [x10⁻⁴ T]

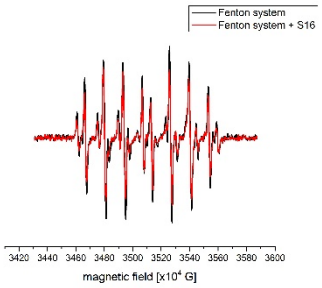
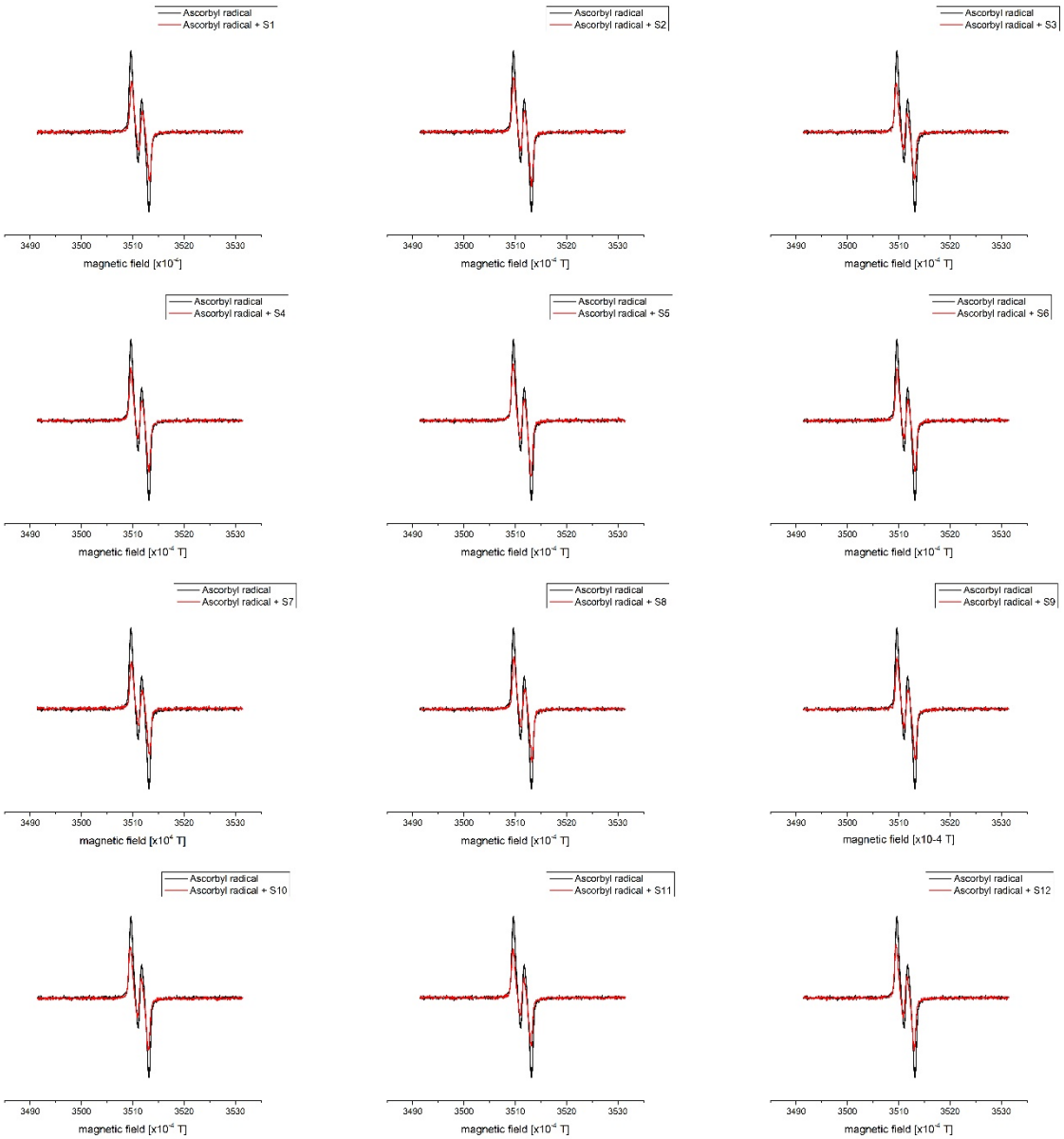


Figure S1. The EPR spectra of hydroxyl radical with samples **S1–S16**.



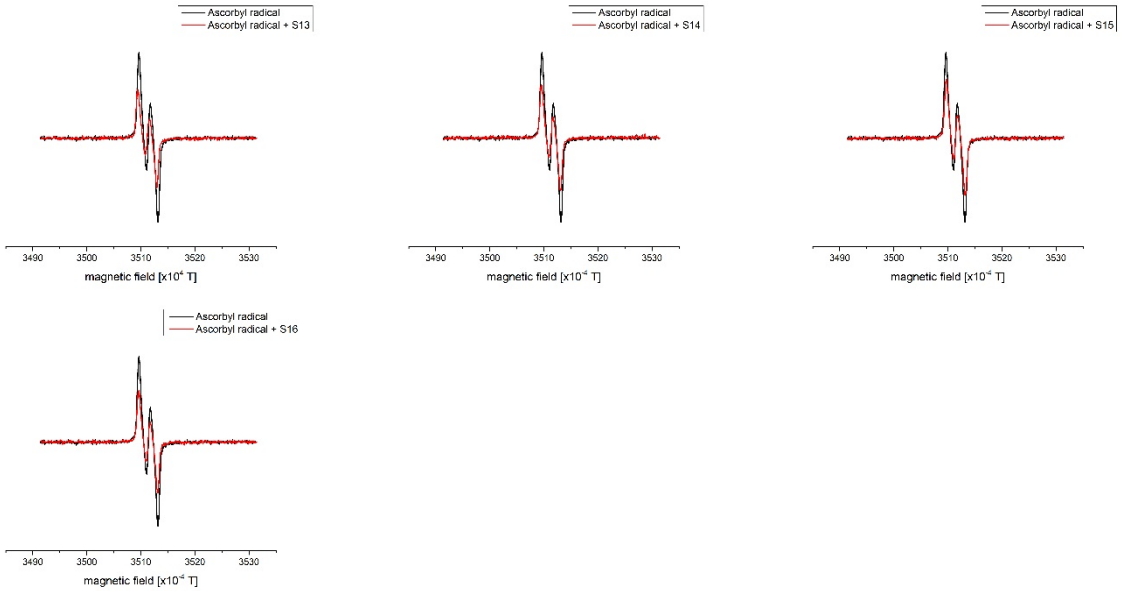


Figure S2. The EPR spectra of ascorbyl radical with samples **S1–S16**.