

Article

Oxygen Availability During Growth Modulates the Phytochemical Profile and the Chemoprotective Properties of Spinach Juice

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Supplementary materials

Table S1. Monitoring of changes in O₂ levels in the nutrient solution.

Changes in O₂ levels in the nutrient solution used for hydroponic spinach growth after during normoxia, induction of hypoxia and subsequent reoxygenation. Values refer to tanks with 10 L of nutrient solution and 44 plants per tank.

Day	time	air saturation (%)	O ₂ (mg/l)	water temperature (°C)
NORMOXIC TREATMENT				
day 1	9:30	81	7.1	21.5
	10:30	83	7.2	22.0
	11:30	84	7.2	22.9
	12:30	80	6.8	22.8
	13:30	79	6.6	23.3
	15:30	80	6.7	23.9
	17:30	81	6.7	24.5
	19:30	84	6.8	24.9
	21:30	83	6.8	24.8
day 2	11:30	86	7.1	23.5
	13:00	86	7.0	24.8
HYPOXIC TREATMENT				
day 1	9:30	87	7.4	21.9
	10:30	83	7.2	21.6
	11:30	84	7.3	22.0
	12:30	80	6.8	22.4
	13:30	68	5.8	23.1
	15:30	56	4.7	23.6
	17:30	46	3.8	24.3
	19:30	39	3.2	24.8
	21:30	34	2.8	24.6
day 2	11:30	12	1.0	23.8
	13:00	6	0.5	24.7
REOXYGENATION				
day 2	9:30	32	2.7	21.5
	10:00	63	5.5	22.0
	11:00	70	6.0	22.5
	13:00	74	6.2	23.0

Figure S1. LC-MS profile of the extract

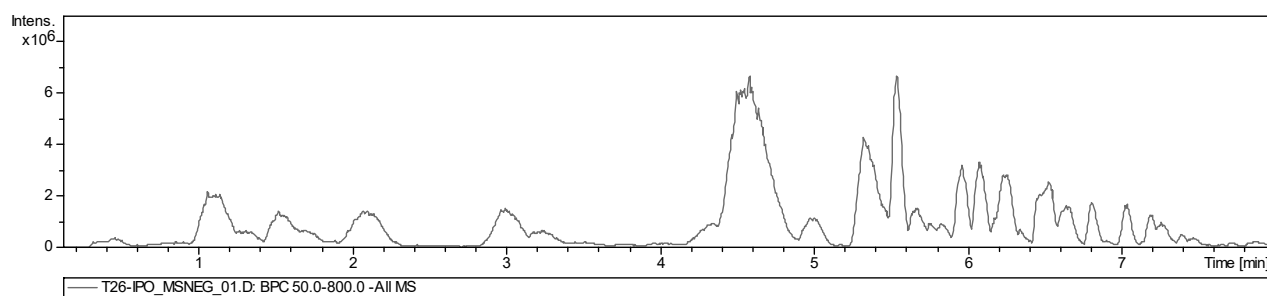
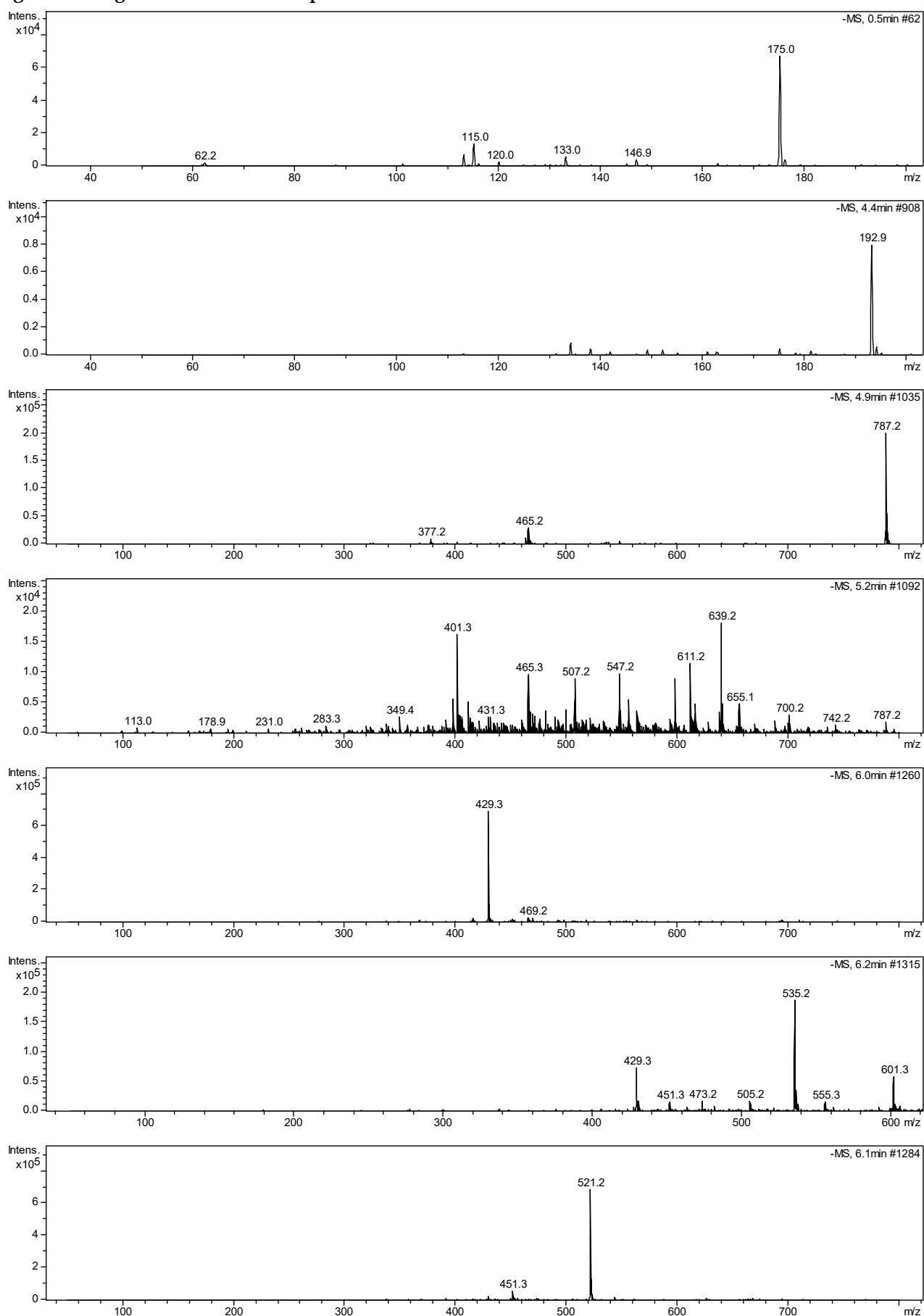


Figure S2. Negative mode ESI-MS spectra



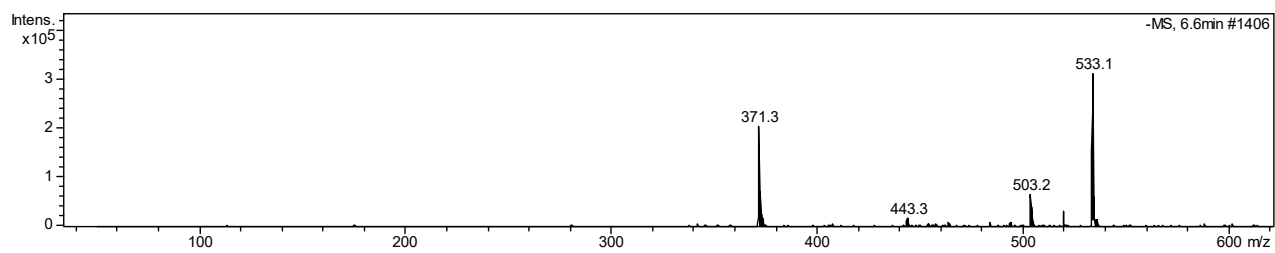


Figure S3. Comet Assay

Images of HT-29 nuclei of cells treated with: A – untreated cells; B- H₂O₂ (100 μM, 5 min); C - normoxic juice (5%, 24h)+ H₂O₂ (100 μM, 5 min); D - hypoxic juice (5%, 24h) + H₂O₂ (100 μM, 5 min); E reoxygenated juice (5%, 24h hypoxia + 2h reoxygenation) + H₂O₂ (100 μM, 5 min).

