*Biochelates from spent coffee grounds increases iron levels of Dutch cucumbers but affects their antioxidant capacity*

# SUPPLEMENTAL INFORMATION

**Supporting information description**

**Supplemental Table 1.** Fe content and total antioxidant capacity of different groups of cucumbers.

**Supplemental Table 2.** Short chain fatty acids content of different groups of cucumbers.

**Supplemental Table 1.** Fe content (mg/100g fresh weight) and total antioxidant capacity of different groups of cucumbers, expressed as mmol Trolox/Kg cucumber fresh weight for FRAP, DDPH and ABTS assays. For FC assay total antioxidant capacity is expressed as mg equivalent gallic acid/Kg cucumber.

| **SAMPLE** | | | | | |
|---|---|---|---|---|---|
| **PLOT 1** | **Fe content** | **FRAP assay** | **DPPH assay** | **ABTS assay** | **FC assay** |
| Control | 0.09 ± 0.00 | 4.24 ± 0.66 | 1.49 ± 0.92 | 57.3 ± 0.24 | 3524 ± 733 |
| Control-Fe | 0.09 ± 0.00 | 3.24 ± 1.13 | 1.65 ± 0.22 | 55.3 ± 0.89 | 2673 ± 115 |
| ASCG | 0.07 ± 0.00 | 2.60 ± 0.05 | 1.24 ± 0.03 | 62.7 ± 8.69 | 2806 ± 199 |
| ASCG-Fe | 0.10 ± 0.00 | 3.17 ± 0.44 | 1.96 ± 0.67 | 87.5 ± 0.26 | 4398 ± 131 |
| AH160 | 0.10 ± 0.00 | 2.66 ±0.03 | 1.27 ± 0.19 | 59.4 ± 0.42 | 3640 ± 109 |
| AH160-Fe | 0.12 ± 0.00 | 2.89 ± 0.11 | 1.37 ± 0.31 | 73.5 ± 11.0 | 3974 ± 69.0 |
| **PLOT 2** | **Fe content** | **FRAP assay** | **DPPH assay** | **ABTS assay** | **FC assay** |
| Control | 0.10 ± 0.00 | 4.17 ±1.66 | 1.88 ± 1.33 | 85.8 ± 1.29 | 2711 ± 100 |
| Control-Fe | 0.09 ± 0.00 | 2.69 ± 0.08 | 1.06 ± 0.04 | 56.6 ± 2.31 | 2338 ± 258 |
| ASCG | 0.10 ± 0.00 | 2.86 ± 0.35 | 1.30 ± 0.09 | 57.1 ± 0.39 | 4989 ± 29.1 |
| ASCG-Fe | 0.10 ± 0.00 | 4.54 ± 0.23 | 1.69 ± 0.11 | 71.2 ± 1.92 | 2890 ± 336 |
| AH160 | 0.07 ± 0.00 | 3.07 ± 0.01 | 1.51 ± 0.05 | 52.4 ± 1.10 | 5483 ± 415 |
| AH160-Fe | 0.11 ± 0.00 | 2.79 ± 0.02 | 1.23 ± 0.02 | 44.5 ± 10.8 | 3261 ± 95.8 |

**Supplemental Table 2.** Short chain fatty acids content (expressed in mM) of different groups of cucumbers.

| SAMPLE | | | | | | |
|---|---|---|---|---|---|---|
| **PLOT 1** | **Lactic acid** | **Acetic acid** | **Succinic acid** | **Propionic acid** | **Butiric acid** | **Total SCFAs** |
| Control | 29.4 ± 0.06 | 19.4 ± 0.00 | 7.06 ± 0.01 | 9.91 ± 0.02 | 0.63 ± 0.01 | 29.9 ± 0.01 |
| Control-Fe | 31.7 ± 0.08 | 18.8 ± 0.05 | 6.91 ± 0.03 | 9.78 ± 0.01 | 0.61 ± 0.01 | 29.2 ± 0.07 |
| ASCG | 28.4 ± 0.04 | 19.1 ± 0.15 | 6.74 ± 0.01 | 9.12 ± 0.01 | 0.70 ± 0.01 | 29.0 ± 0.13 |
| ASCG-Fe | 25.7 ± 0.00 | 21.1 ± 0.05 | 6.67 ± 0.03 | 8.63 ± 0.02 | 0.78 ± 0.00 | 30.7 ± 0.04 |
| AH160 | 25.7 ± 0.02 | 21.8 ± 0.12 | 6.11 ± 0.02 | 8.95 ± 0.02 | 0.77 ± 0.00 | 31.5 ± 0.14 |
| AH160-Fe | 25.8 ± 0.00 | 21.8 ± 0.03 | 6.80 ± 0.01 | 8.68 ± 0.06 | 0.78 ± 0.01 | 31.3 ±0.10 |
| **PLOT 2** | **Lactic acid** | **Acetic acid** | **Succinic acid** | **Propionic acid** | **Butiric acid** | **Total SCFAs** |
| Control | 21.2 ± 0.10 | 20.7 ± 0.11 | 6.42 ± 0.01 | 8.23 ± 0.02 | 0.84 ± 0.01 | 29.7 ± 0.13 |
| Control-Fe | 25.3 ± 0.01 | 19.9 ± 0.05 | 6.47 ± 0.00 | 8.01 ± 0.05 | 0.68 ± 0.01 | 28.6 ± 0.00 |
| ASCG | 25.3 ± 0.21 | 20.1 ± 0.03 | 6.49 ± 0.04 | 8.17 ± 0.03 | 0.75 ± 0.01 | 29.0 ± 0.04 |
| ASCG-Fe | 24.3 ± 0.06 | 21.6 ± 0.17 | 6.86 ± 0.01 | 7.91± 0.02 | 0.75 ± 0.01 | 30.2 ±0.18 |
| AH160 | 24.4 ± 0.05 | 20.2 ± 0.02 | 6.85 ± 0.00 | 8.00 ± 0.01 | 0.81 ± 0.00 | 29.0 ± 0.01 |
| AH160-Fe | 27.1 ± 0.13 | 19.1 ± 0.07 | 6.63 ± 0.00 | 7.94 ± 0.03 | 0.80 ± 0.00 | 27.9 ± 0.10 |