

SUPPLEMENTARY MATERIAL

S1: Calculated *p*-values for Tables 2, 3, 4

***p*-values for Table 2**

| Phytochemicals | L01 | L02 | L03 | L04 | L05 | L06 | L07 | L08 |
|---------------------------------------|-------|-------|--------|-------|-------|--------|--------|--------|
| TPC ¹ | 0.001 | 0.02 | 0.0002 | 0.004 | 0.004 | 0.01 | 0.003 | 0.02 |
| TTC ² | 0.001 | | 0.003 | | 0.001 | 0.0007 | 0.0008 | 0.0008 |
| Procyanidin B1 ³ | | | | | | | | |
| Chlorogenic Acid ³ | 0.004 | | 0.006 | | | | | 0.003 |
| Procyanidin B2 ³ | | | 0.001 | | | | | |
| Epicatechin ³ | | | 0.01 | | | | | |
| Epigallocatechin Gallate ³ | | | 0.001 | | | | | |
| Hesperidin ³ | | | | | | | | |
| Isoquercetin ³ | 0.01 | 0.001 | 0.002 | 0.02 | 0.006 | 0.01 | 0.008 | 0.03 |
| Rutin ³ | 0.05 | 0.006 | 0.006 | | | | | 0.002 |
| Quercetin ³ | 0.04 | | 0.04 | 0.04 | 0.03 | | | 0.04 |
| Apigenin ³ | | | 0.03 | 0.05 | 0.03 | 0.007 | 0.05 | 0.05 |
| Kaempferol ³ | | | | | | | 0.05 | |

***p*-values for Table 3**

| Carotenoids | L01 | L02 | L03 | L04 | L05 | L06 | L07 | L08 |
|-------------------------------------|----------|----------|----------|----------|-----------|-------------|---------|----------|
| TCC Hex ¹ | 6.00E-06 | 0.00001 | 6.00E-06 | 0.000005 | 0.0000009 | 0.0000007 | 0.00002 | 0.000004 |
| TCC DCM ¹ | 0.000004 | 3.00E-07 | 3.00E-07 | 0.000006 | 0.00001 | 0.000345901 | 0.0002 | 0.000009 |
| Lutein ² | 0.01 | 0.0006 | | 0.0003 | | 0.00008 | | |
| β -cryptoxanthin ² | | | 0.00009 | | | | | 0.0001 |
| α -carotene ² | 0.0001 | | 0.0001 | 0.0001 | | | | 0.0001 |
| β -carotene ² | 0.005 | | | 0.003 | | 0.05 | 0.02 | 0.0008 |

p-values for Table 4

| Sample | FRAP (mmol Fe(II)/g extract) | | | DPPH (mg TE/g extract) | | |
|--------|------------------------------|--------|----------|------------------------|--------|-------|
| | Hex | DCM | MeOH | Hex | DCM | MeOH |
| L01 | 0.02 | 0.008 | 0.05 | | 0.01 | 0.008 |
| L02 | 0.008 | 0.004 | 0.003 | 0.006 | 0.05 | 0.02 |
| L03 | 0.004 | 0.02 | 0.05 | 0.003 | 0.01 | 0.02 |
| L04 | 0.002 | 0.003 | 0.0008 | 0.01 | 0.0005 | 0.01 |
| L05 | 0.03 | 0.005 | 0.004 | 0.006 | 0.02 | 0.02 |
| L06 | 0.03 | 0.001 | 0.004 | 0.001 | 0.04 | 0.02 |
| L07 | 0.008 | 0.0006 | 0.000003 | | 0.005 | |
| L08 | 0.004 | 0.001 | 0.007 | 0.01 | 0.02 | 0.01 |

S2: Results of Bonferroni tests

Total Phenolic Content

Comparison of var2 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

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| | | | | | | | |
|-----|--------|--------|-------|--------|--------|--------|-------|
| L02 | 0.000 | | | | | | |
| L03 | 0.000 | 0.000 | | | | | |
| L04 | 0.000 | 0.673* | 0.000 | | | | |
| L05 | 0.000 | 0.031 | 0.000 | 1.000* | | | |
| L06 | 0.000 | 0.001 | 0.000 | 0.175* | 1.000* | | |
| L07 | 1.000* | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 | |
| L08 | 0.000 | 0.000 | 0.000 | 0.002 | 0.048 | 1.000* | 0.000 |

* Insignificant (L01-L07, L02-L04, L04-L05, L04-L06, L05-L06, L06-L08)

Total Tannin Content

Comparison of var2 by var1 (Bonferroni)

Total Carotenoid Content (Dichloromethane)

Comparison of var3 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

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| | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|
| L02 | 0.000 | | | | | | |
| L03 | 0.000 | 0.000 | | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| L06 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| L07 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| L08 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

DPPH (Hex)

Comparison of var3 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

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| | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|
| L02 | 1.000* | | | | | | |
| L03 | 0.947* | 1.000* | | | | | |
| L04 | 0.009 | 0.186* | 0.250* | | | | |
| L05 | 0.197* | 1.000* | 1.000* | 1.000* | | | |
| L06 | 0.000 | 0.001 | 0.002 | 0.070* | 0.004 | | |
| L07 | 1.000* | 1.000* | 1.000* | 0.047 | 1.000* | 0.001 | |
| L08 | 0.010 | 0.199* | 0.268* | 1.000* | 1.000* | 0.066* | 0.050* |

* Insignificant (L01-L02, L01-L03, L01-L05, L01-L07, L02-L03, L02-L04, L02-L05, L02-L07, L02-L08, L03-L04, L03-L05, L03-L07, L03-L04, L03-L08, L04-L05, L04-L06, L04-L08, L05-L07, L05-L08, L07-L08)

DPPH (DCM)

Comparison of var4 by var1 (Bonferroni)

| Row Mean- | | | | | | | |
|-------------|--------|-------|--------|--------|-------|-------|-------|
| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | 1.000* | | | | | | |
| L03 | 0.001 | 0.000 | | | | | |
| L04 | 0.004 | 0.001 | 1.000* | | | | |
| L05 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| L06 | | 0.005 | 0.067* | 0.000 | 0.000 | 0.000 | |
| L07 | 0.049 | 0.004 | 0.065* | 1.000* | 0.000 | 0.000 | |
| L08 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 |

* Insignificant (L01-L02, L02-L06, L03-L04, L03-L07, L04-L07)

DPPH (MeOH)

Comparison of var2 by var1 (Bonferroni)

| Row Mean- | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | 0.000 | | | | | | |
| L03 | 0.000 | 0.000 | | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| L06 | 0.000 | 0.017 | 0.000 | 0.000 | 0.000 | | |
| L07 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| L08 | | 0.261 | 0.010 | 0.000 | 0.000 | 0.000 | 0.000 |

FRAP (Hex)

Comparison of var3 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

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| | | | | | | | |
|-----|--------|--------|--------|--------|---------|-------|-------|
| L02 | 0.004 | | | | | | |
| L03 | 0.518* | 0.124* | | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| L06 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| L07 | | 0.311* | 0.202* | 1.000* | 0.000 | 0.000 | 0.000 |
| L08 | 0.000 | 0.000 | 0.000 | 0.000 | 0.080 * | 0.000 | 0.000 |

* Insignificant (L01-L03, L01-L07, L02-L03, L02-L07, L03-L07, L05-L08)

FRAP (DCM)

Comparison of var4 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

-----+-----

| | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|
| L02 | | 0.000 | | | | | |
| L03 | 0.000 | 0.000 | | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| L06 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| L07 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | |
| L08 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FRAP (MeOH)

Comparison of var2 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | |
|-----|---------|---------|---------|-------|-------|-------|-------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| L02 | 1.000 | | | | | | |
| L03 | 0.004** | 0.006** | | | | | |
| L04 | 1.000 | 1.000 | 0.058 | | | | |
| L05 | 1.000 | 1.000 | 0.037** | 1.000 | | | |
| L06 | 1.000 | 1.000 | 0.013** | 1.000 | 1.000 | | |
| L07 | 1.000 | 1.000 | 0.003** | 0.810 | 1.000 | 1.000 | |
| L08 | 1.000 | 1.000 | 0.011** | 1.000 | 1.000 | 1.000 | 1.000 |

** Significant (L01-L03, L02-L03, L03-L05, L03-L06, L03-L07, L03-L08)

Antioxidants

Procyanidin B1

Comparison of var2 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| L02 | 1.000 | | | | | | |
| L03 | 1.000 | 1.000 | | | | | |
| L04 | 1.000 | 1.000 | 1.000 | | | | |
| L05 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| L06 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| L07 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| L08 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

All Insignificant

Chlorogenic Acid

Comparison of var3 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

-----+-----

| | | | | | | | |
|-----|--|---------|---------|---------|-------|-------|-------|
| L02 | | 1.000 | | | | | |
| L03 | | 0.000** | 0.000** | | | | |
| L04 | | 1.000 | 1.000 | 0.000** | | | |
| L05 | | 1.000 | 1.000 | 0.000** | 1.000 | | |
| L06 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | |
| L07 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 |
| L08 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 |

** Significant (L01-L03, L02-L03, L03-L04, L03-L05, L03-L06, L03-L07, L03-L08)

Procyanidin B2

Comparison of var4 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

-----+-----

| | | | | | | | |
|-----|--|---------|---------|---------|-------|-------|-------|
| L02 | | 1.000 | | | | | |
| L03 | | 0.000** | 0.000** | | | | |
| L04 | | 1.000 | 1.000 | 0.000** | | | |
| L05 | | 1.000 | 1.000 | 0.000** | 1.000 | | |
| L06 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | |
| L07 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 |
| L08 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 |

** Significant (L01-L03, L02-L03, L03-L04, L03-L05, L03-L06, L03-L07, L03-L08)

Epicatechin

Comparison of var5 by var1 (Bonferroni)

Row Mean-|

| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
|-------------|---------|---------|---------|---------|-------|-------|-------|
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | | 1.000 | | | | | |
| L03 | 0.035** | 0.036** | | | | | |
| L04 | 1.000 | 1.000 | 0.035** | | | | |
| L05 | | 1.000 | 1.000 | 0.036** | 1.000 | | |
| L06 | 1.000 | 1.000 | 0.035** | 1.000 | 1.000 | | |
| L07 | 1.000 | 1.000 | 0.036** | 1.000 | 1.000 | 1.000 | |
| L08 | | 1.000 | 1.000 | 0.036** | 1.000 | 1.000 | 1.000 |

** Significant (L01-L03, L02-L03, L03-L04, L03-L05, L03-L06, L03-L07, L03-L08)

Epigallocatechin Gallate

Comparison of var6 by var1 (Bonferroni)

Row Mean-|

| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | 0.339 | | | | | | |
| L03 | 0.339 | 1.000 | | | | | |
| L04 | 1.000 | 1.000 | 1.000 | | | | |
| L05 | 0.339 | 1.000 | 1.000 | 1.000 | | | |
| L06 | 0.339 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| L07 | 0.339 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| L08 | 0.339 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

All Insignificant

Rutin

Comparison of var7 by var1 (Bonferroni)

Row Mean-|

| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
|-------------|---------|---------|---------|-------|-------|-------|-------|
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | 0.001** | | | | | | |
| L03 | 0.000** | 0.000** | | | | | |
| L04 | 0.000** | 1.000 | 0.000** | | | | |
| L05 | 0.000** | 1.000 | 0.000** | 1.000 | | | |
| L06 | 0.000** | 1.000 | 0.000** | 1.000 | 1.000 | | |
| L07 | 0.000** | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 | |
| L08 | 0.001** | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 | 1.000 |

** Significant (L01-All the other samples, L02-L03, L03-L04, L03-L05, L03-L06, L03-L07, L03-L08)

Isoquercetin

Comparison of var8 by var1 (Bonferroni)

| Row Mean- | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |
| -----+----- | | | | | | | |
| ----- | | | | | | | |
| L02 | 1.000 | | | | | | |
| L03 | 1.000 | 1.000 | | | | | |
| L04 | | 1.000 | 1.000 | 1.000 | | | |
| L05 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| L06 | 1.000 | 1.000 | 0.620 | 0.620 | 0.620 | | |
| L07 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| L08 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.620 | 1.000 |

All Insignificant

Herperidin

Comparison of var9 by var1 (Bonferroni)

| Row Mean- | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|
| Col Mean | L01 | L02 | L03 | L04 | L05 | L06 | L07 |

| | | | | | | | |
|-----|---------|-------|-------|-------|-------|-------|-------|
| | | | | | | | |
| | | | | | | | |
| L02 | 0.000** | | | | | | |
| L03 | 0.000** | 1.000 | | | | | |
| L04 | 0.000** | 1.000 | 1.000 | | | | |
| L05 | 0.000** | 1.000 | 1.000 | 1.000 | | | |
| L06 | 0.000** | 1.000 | 1.000 | 1.000 | 1.000 | | |
| L07 | 0.000** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| L08 | 0.000** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

**Significant (L01-All the other samples)

Quercetin

Comparison of var10 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | |
| | | | | | | | |
| L02 | 1.000 | | | | | | |
| L03 | 1.000 | 1.000 | | | | | |
| L04 | 1.000 | 1.000 | 1.000 | | | | |
| L05 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| L06 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| L07 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| L08 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

All Insignificant

Apigenin

Comparison of var11 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | |
| | | | | | | | |
| L02 | 1.000 | | | | | | |
| L03 | 1.000 | 1.000 | | | | | |
| L04 | 1.000 | 1.000 | 1.000 | | | | |
| L05 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| L06 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| L07 | 0.088 | 0.080 | 0.098 | 0.553 | 0.088 | 0.201 | |
| L08 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.148 |

All Insignificant

Lutein

Comparison of var2 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | |
|-----|-------|-------|--------|--------|--------|-------|--------|
| | | | | | | | |
| | | | | | | | |
| L02 | 0.000 | | | | | | |
| L03 | 0.000 | 0.000 | | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | | 0.000 | 0.000 | 1.000* | 0.000 | | |
| L06 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| L07 | 0.000 | 0.000 | 1.000* | 0.000 | 1.000* | 0.000 | |
| L08 | 0.000 | 0.000 | 1.000* | 0.000 | 1.000* | 0.000 | 1.000* |

* Insignificant (L03-L05, L03-L07, L03-L08, L05-L07, L05-L08, L07-L08)

β-Cryptoxanthin

Comparison of var3 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | | |
|-----|-------|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | | | |
| | | | | | | | | |
| L02 | 1.000 | | | | | | | |
| L03 | | 0.000** | 0.000** | | | | | |
| L04 | | 1.000 | 1.000 | 0.000** | | | | |
| L05 | | 1.000 | 1.000 | 0.000** | 1.000 | | | |
| L06 | | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | | |
| L07 | 1.000 | 1.000 | 0.000** | 1.000 | 1.000 | 1.000 | | |
| L08 | | 0.000** | 0.000** | 0.884 | 0.000** | 0.000** | 0.000** | 0.000** |

** Significant (L01-L03, L01-L08, L02-L03, L02-L08, L03-L04, L03-L05, L03-L06, L03-L07, L05-L08, L06-L08, L07-L08)

a-Carotene

Comparison of var4 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

| | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|-------|--|
| | | | | | | | | |
| | | | | | | | | |
| L02 | 0.000 | | | | | | | |
| L03 | 0.003 | 0.000 | | | | | | |
| L04 | 0.678* | 0.000 | 0.478* | | | | | |
| L05 | 0.000 | 1.000* | 0.000 | 0.000 | | | | |
| L06 | 0.000 | 1.000* | 0.000 | 0.000 | 1.000* | | | |
| L07 | 0.000 | 1.000* | 0.000 | 0.000 | 1.000* | 1.000* | | |
| L08 | 0.005 | 0.000 | 1.000* | 0.840* | 0.000 | 0.000 | 0.000 | |

* Insignificant (L01-L04, L02-L05, L02-L06, L02-L07, L03-L04, L03-L08, L04-L08, L05-L06, L05-L07, L06-L07)

β-Carotene

Comparison of var5 by var1 (Bonferroni)

Row Mean-|

Col Mean | L01 L02 L03 L04 L05 L06 L07

-----+-----

| | | | | | | | |
|-----|-------|--------|--------|--------|-------|-------|-------|
| L02 | | 0.000 | | | | | |
| L03 | | 0.000 | 1.000* | | | | |
| L04 | 0.000 | 0.000 | 0.000 | | | | |
| L05 | 0.000 | 1.000* | 1.000* | 0.000 | | | |
| L06 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| L07 | 0.000 | 0.000 | 0.000 | 1.000* | 0.000 | 0.000 | |
| L08 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

* Insignificant (L02-L03, L02-L05, L03-L05, L04-L07)