|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Drying methods** | **RD** | | **OD** | | **FD** | | **MD** | | **CD** | |
| **Parameters** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** |
| **DM (%)** | 1.60±0.04b | 1.33±0.03b | 1.77±0.06a | 1.73±0.04a | 1.93±0.06a | 2.00±0.02a | 1.33±±0.06b | 1.67±±0.06b | 1.03±0.04c | 1.17±0.03c |
| **TP (mg GAE/g** | 4.15±0.50b | 4.14±0.77b | 3.62±0.21bc | 3.75±0.61bc | 6.19±0.50a | 5.54±0.67a | 4.94±0.15ab | 4.20±0.16ab | 3.01±0.32c | 2.96±0.22c |
| **TF (mg QE/g)** | 0.45±0.03c | 0.51±0.02c | 0.18±0.02d | 0.19±0.02d | 2.35±0.07a | 2.12±0.09a | 0.88±0.05b | 0.99±0.05b | 0.09±0.01d | 0.08±0.02d |
| **CT (mg CE/g)** | 0.013  ±0.002bc | 0.013  0.001bc | 0.015  ±0.003bc | 0.017  ±0.002bc | 0.038  ±0.002a | 0.043  ±0.001a | 0.021  ±0.003b | 0.019  ±0.001b | 0.011  ±0.00c | 0.009  ±0.001c |
| **PC (mg BSAE/g)** | 84.53  ±10.41b | 99.84  ±9.84b | 29.85  ±1.16c | 28.99  ±3.60c | 263.05  ±18.67a | 261.23  ±16.38 a | 3.58  ±0.62d | 4.15  ±0.70d | 79.02  ±6.63b | 78.87  ±4.12b |
| **TAMF**  **(logUFC)** | 1.82±0.20 a | 1.77±0.30 a | 1.62±0.16 b | 1.63±0.10 b | 1.38±0.12c | 1.35±0.14 c | abs d | abs d | 1.60±0.22 b | 1.57±0.25 b |

**Table 1.** Physicochemical composition and microbiological properties of different dried flowers extracts from spontaneous and cultivated *O. nervosum ssp. platylepis*

RD: room drying, OD: oven drying; FD: freeze drying; MD: microwave drying; CD: convective drying; SF: spontaneous flowers; CF: cultivated flowers; DM: dry matter; TP: total phenols; TF: total flavonoids; CT; condensed tannins; PC: protein content, TAMF: total aerobic mesophilic flora

a,b: different letters indicate significant difference (P<0.05)

**Table 2.** Clotting milk and antioxidant activities of different dried flowers extracts from spontaneous and cultivated *O. nervosum ssp. platylepis*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Drying methods** | **RD** | | **OD** | | **FD** | | **MD** | | **CD** | |
| **Parameters** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** | **SF** | **CF** |
| **ClT (s)** | 180 | 180 | 490 | 480 | 120 | 120 | ND | ND | 180 | 190 |
| **CAU** | 0.556 b | 0.556 b | 0.204 c | 0.208 c | 0.833 a | 0.833 a | 0 d | 0 d | 0.556 b | 0.526 b |
| **EC50\_DPPH (mg/ml)** | 0.78±0.08b | 0.91±0.04b | 1.02±0.02a | 1.20±0.02a | 0.48±0.02c | 0.41±0.03c | 0.67±0.09b | 0.73±0.04b | 1.34±0.08a | 1.16±0.01a |
| **EC50\_ABTS (mg/ml)** | 0.20±0.02 b | 0.21±0.01 b | 0.39±0.03 a | 0.37±0.03 a | 0.16±0.04 b | 0.17±0.01 b | 0.14±0.01 b | 0.15±0.02 b | 0.51±0.01 a | 0.49±0.02 a |
| **EC50\_FRAP** | 2.50±0.03d | 2.76±0.12d | 3.42±0.06b | 3.38±0.09b | 1.52±0.19c | 1.65±0.06c | 1.70±0.07c | 1.90±0.05c | 3.45±0.03 a | 3.98±0.09a |

RD: room drying, OD: oven drying; FD: freeze drying; MD: microwave drying; CD: convective drying; SF: spontaneous flowers; CF: cultivated flowers; ND: not determined; ClT: clotting time; CAU: coagulant activity unit; EC: effective concentration

a,b: different letters indicate significant difference (P<0.05)

**Table 3.** Pearson correlation between chemical composition and antioxidant and clotting milk activities of spontaneous and cultivated *O. nervosum ssp. platylepis* flowers extracts

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **EC50\_DPPH** | **EC50\_ABTS** | **EC50\_FRAP** | **ClT** | **CAU** |
| ***TP*** | *Coefficient* | -0.894\*\* | -0.769\*\* | -0.864\*\* | -0.375 | 0.666\*\* |
| *Sig* | 0.000 | 0.000 | 0.000 | 0.071 | 0.000 |
| ***TF*** | *Coefficient* | -0.876\*\* | -0.750\*\* | -0.848\*\* | -0.560\*\* | 0.803\*\* |
| *Sig* | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 |
| ***CT*** | *Coefficient* | -0.780\*\* | -0.540\*\* | -0.689\*\* | -0.387 | 0.684\*\* |
| *Sig* | 0.000 | 0.002 | 0.000 | 0.062 | 0.000 |
| ***PC*** | *Coefficient* | -0.530\*\* | -0.275 | -0.432\* | -0.733\*\* | 0.921\*\* |
| *Sig* | 0.003 | 0.141 | 0.017 | 0.000 | 0.000 |

TP: total phenols; TF: total flavonoids; CT; condensed tannins; PC: protein content; ClT: clotting time; CAU: coagulant activity unit; EC: effective concentration

\*\*. Correlation is significant at the 0.01 level

\*. Correlation is significant at the 0.05 level