antioxidants

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Article

Comprehensive analysis of antioxidant compounds from *Lippia citriodora* and *Hibiscus sabdariffa* Green extracts attained by Response Surface Methodology.

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Supplementary

Table S1. MAE factorial design 2^3 experimental values of tested independent variables.

RUN	TEMPERATURE (°C)	TIME (MIN)	SOLVENT (% ETHANOL)
1	50	20	75
2	50	5	75
3	50	20	15
4	150	20	75
5	100	12.5	45
6	100	12.5	45
7	100	12.5	6
8	150	5	75
9	100	22	45
10	150	20	15
11	164	12.5	45
12	150	5	15
13	50	5	15
14	100	12.5	84
15	100	3	45
16	36	12.5	45

Table S2. PLE factorial design 2^3 experimental values of tested independent variables.

RUN	TEMPERATURE (°C)	TIME (MIN)	SOLVENT (% ETHANOL)
1	40	20	15
2	40	5	85
3	110	12.5	5
4	110	22	50
5	40	5	15
6	20	12.5	50
7	110	3	50
8	110	12.5	50
9	180	5	15
10	110	12.5	50
11	40	20	85
12	180	5	85
13	180	20	85
14	110	12.5	95
15	200	12.5	50
16	180	20	15

Equation S1. Regression model equations of *H. sabdariffa.*

$$\text{Total Polar Compounds} = 27.156 - 1.207X_1 + 2.308X_2 + 7.817X_3 + 0.007X_1X_1 + 0.002X_1X_2 - 0.003X_1X_3 - 0.025X_2X_2 + 0.016X_2X_3 - 0.311X_3X_3$$

$$\text{Folin-Ciocalteu} = 55.084 - 0.252X_1 - 0.075X_2 - 0.605X_3 + 0.0004X_1X_1 + 0.006X_1X_2 + 0.0001X_1X_3 + 0.00002X_2X_2 - 0.002X_2X_3 + 0.003X_3X_3$$

$$\text{FRAP} = 0.275 + 0.004X_1 + 0.014X_2 + 0.020X_3 - 0.00002X_1X_1 - 0.000007X_1X_2 - 0.00003X_1X_3 - 0.0001X_2X_2 - 0.00006X_2X_3 - 0.0006X_3X_3$$

$$\text{TEAC} = 0.139 + 0.0002X_1 + 0.003X_2 + 0.005X_3 - 0.000003X_1X_1 + 0.000007X_1X_2 - 0.000003X_1X_3 - 0.00003X_2X_2 + 0.00002X_2X_3 - 0.0002X_3X_3$$

Equation S2. Regression model equations of *L. citriodora*.

Total Polar Compounds = $150.657 + 0.473X_1 + 1.295X_2 + 8.413X_3 – 0.004X_1X_1 – 0.003X_1X_2 – 0.043X_1X_3 + 0.011X_2X_2 – 0.081X_2X_3 – 0.014X_3X_3$

Folin-Ciocalteu = $115.366 – 0.008X_1 + 2.205X_2 + 7.278X_3 – 0.002X_1X_1 – 0.001X_1X_2 + 0.019X_1X_3 – 0.009X_2X_2 – 0.037X_2X_3 – 0.301X_3X_3$

FRAP = $1.598 + 0.010X_1 – 0.005X_2 – 0.011X_3 – 0.00005X_1X_1 – 0.00004X_1X_2 + 0.00005X_1X_3 + 0.0001X_2X_2 + 0.00006X_2X_3 + 0.00009X_3X_3$

TEAC = $0.649 – 0.00006X_1 – 0.005X_2 + 0.013X_3 – 0.000004X_1X_1 + 8{,}962E^{-7}X_1X_2 + 0.00002X_1X_3 + 0.00004X_2X_2 + 0.00003X_2X_3 - 0.0006X_3X_3$