

Supplementary Materials

Optimization of MAE for the Separation of Nicotine and Phenolics from Tobacco Waste by Using the Response Surface Methodology Approach

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Table S1. Spearman's Rank order correlations between yield per every sample and particular components in tobacco leaves and waste extracts

Yield	Nicotine	CA	NCA	CCA	Nicotiflorin	Rutin	DPPH	TPC
Leaves	-0.275	-0.100	0.120	0.419	0.520*	0.265	-0.032	0.568*
Scrap	-0.358	-0.434	0.064	0.070	0.028	-0.530*	0.147	0.067
Dust	-0.566*	-0.066	-0.096	-0.265	-0.718*	-0.539*	-0.471	-0.272
Midrib	-0.574*	-0.370	0.164	-0.180	-0.524*	-0.157	0.199	0.152
CA- chlorogenic acid, NCA-neochlorogenic acid, CCA- cryptochlorogenic acid, TPC- total phenol content, DPPH- antiradical activity								

*statistically significant at $p < 0.05$ **Table S2.** Comparison in yield, particular content of compounds, antiradical activity (DPPH) and total phenolic content (TPC) in tobacco leaves and waste extracts

	Leaves	Dust	<i>p</i>	Scrap	<i>p</i>	Midrib	<i>p</i>
Yield	49.3 ± 10.7	40.68 (38.32 - 47.96)	0.017*	47.08 (43.20 - 50.12)	0.344	40.68 (38.32 - 47.96)	0.017*
Nicotine	4.78 (4.25 - 5.11)	3.349 (3.196 - 3.505)	0.003*	2.980 ± 0.533	<0.001*	1.415 ± 0.208	<0.001*
CA	0.894 (0.822-0.979)	0.737 (0.473 - 0.945)	0.286	0.365 ± 0.095	<0.001*	0.193 (0.185 - 0.211)	<0.001*
NCA	0.229 ± 0.087	0.232 (0.203 - 0.245)	0.836	0.162 (0.138 - 0.188)	0.003*	0.077 (0.070 - 0.090)	0.005*
CCA	0.185 (0.161 - 0.229)	0.066 (0.038 - 0.116)	0.002*	0.050 (0.041 - 0.064)	<0.001*	102.000 (0.444 - 102.000)	0.002*
Nicotiflorin	0.003 (0.002 - 0.006)	0.074 (0.050 - 0.088)	<0.001*	0.052 (0.043 - 0.057)	<0.001*	102.000 (102.000 - 102.000)	<0.001*
Rutin	0.354 ± 0.134	0.485 (0.313 - 0.514)	0.168	0.265 (0.251 - 0.326)	0.129	0.104 (0.099 - 0.119)	<0.001*
DPPH	76.414 (72.675 - 81.304)	23.578 ± 8.058	<0.001*	52.415 ± 10.705	<0.001*	40.938 ± 10.527	<0.001*
TPC	3.933 (3.644 - 4.144)	2.071 ± 0.503	<0.001*	3.937 ± 0.572	0.605	1,393 (1.280 - 1.713)	<0.001*
CA- chlorogenic acid, NCA-neochlorogenic acid, CCA- cryptochlorogenic acid, TPC- total phenol content, DPPH- antiradical activity							

Mann-Whitney U test; *significant at $p < 0.05$

