

**Table S1:** Total phenolic content and antioxidant activity of carobs and carob-derived products.

Assays	Carob pulp		Carob Powder					Carob syrup		
	Unroasted		Roasted	Roasted			Unroasted	> 40 °C	< 40 °C	
	Cyprus	Greece		Italy	Cyprus	Greece		Cyprus	Greece	
TPC (mg GAE/ g product)	7.20 ± 0.51 <sup>i</sup>	7.69 ± 0.08 <sup>i</sup>	12.28 ± 0.21 <sup>f</sup>	23.18 ± 0.55 <sup>a</sup>	21.04 ± 0.21 <sup>c</sup>	21.82 ± 0.76 <sup>b</sup>	18.19 ± 0.26 <sup>d</sup>	11.29 ± 0.67 <sup>g</sup>	9.51 ± 0.72 <sup>h</sup>	14.79 ± 0.64 <sup>e</sup>
TPC (mg GAE/ g extract)	14.92 ± 0.58 <sup>fg</sup>	16.21 ± 0.39 <sup>f</sup>	26.41 ± 0.14 <sup>d</sup>	47.46 ± 0.74 <sup>b</sup>	51.10 ± 0.68 <sup>a</sup>	50.60 ± 0.71 <sup>a</sup>	38.89 ± 2.47 <sup>c</sup>	15.95 ± 0.72 <sup>f</sup>	14.25 ± 0.69 <sup>g</sup>	20.83 ± 0.60 <sup>e</sup>
DPPH (IC <sub>50</sub> mg extract/ mL)	488.47 ± 34.67 <sup>a</sup>	466.17 ± 18.13 <sup>b</sup>	361.00 ± 11.92 <sup>d</sup>	98.83 ± 3.20 <sup>g</sup>	132.69 ± 1.04 <sup>f</sup>	143.85 ± 1.97 <sup>f</sup>	401.66 ± 1.06 <sup>c</sup>	149.72 ± 9.40 <sup>f</sup>	388.05 ± 1.75 <sup>c</sup>	232.21 ± 19.58 <sup>e</sup>
FRAP (µmol TE/g product)	73.94 ± 3.84 <sup>de</sup>	71.49 ± 2.61 <sup>e</sup>	89.22 ± 4.71 <sup>c</sup>	144.32 ± 7.16 <sup>a</sup>	138.24 ± 12.92 <sup>a</sup>	140.84 ± 3.52 <sup>a</sup>	119.41 ± 6.54 <sup>b</sup>	48.58 ± 2.24 <sup>f</sup>	46.36 ± 6.48 <sup>f</sup>	82.23 ± 15.81 <sup>cd</sup>

Different lower-case letters within the same row indicate significant differences ( $p < 0.05$ ) according to Duncan's multiple range test.

**Table S2: Data Matrix**

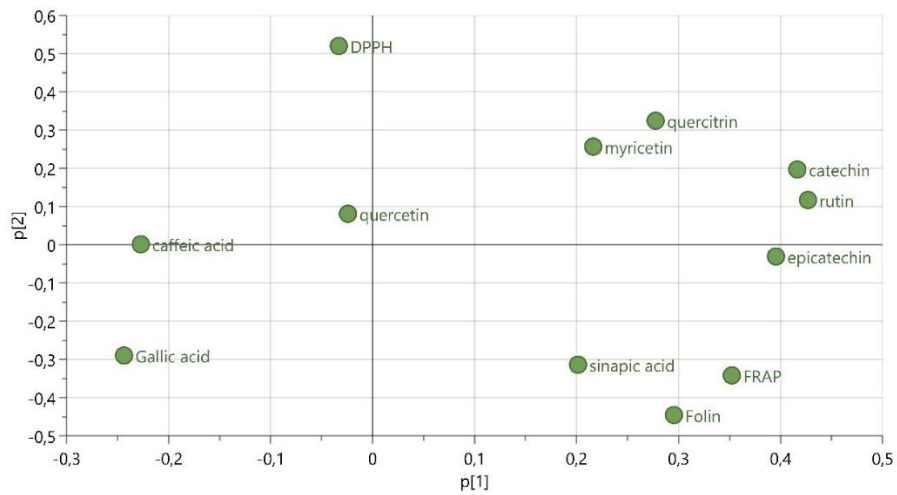
Sample	Sample Name	Matrix
S 1-3	Carob pulp – Cyprus	Pulp
S 4-6	Carob pulp – Greece	Pulp
S 7-9	Roasted carob pulp – Greece	Pulp
S 10-12	Roasted carob powder – Italy	Powder
S 13-15	Roasted carob powder – Cyprus	Powder
S 16-18	Roasted carob powder – Greece	Powder
S 19-21	Unroasted carob powder – Greece	Powder
S 22-24	Syrup thermally treated – Cyprus	Syrup
S 25-27	Syrup thermally treated – Greece	Syrup
S 28-30	Syrup non-thermally treated – Greece	Syrup

**Table S3:** Correlation matrix of original variables (phenolics, TPC, antioxidant activity).

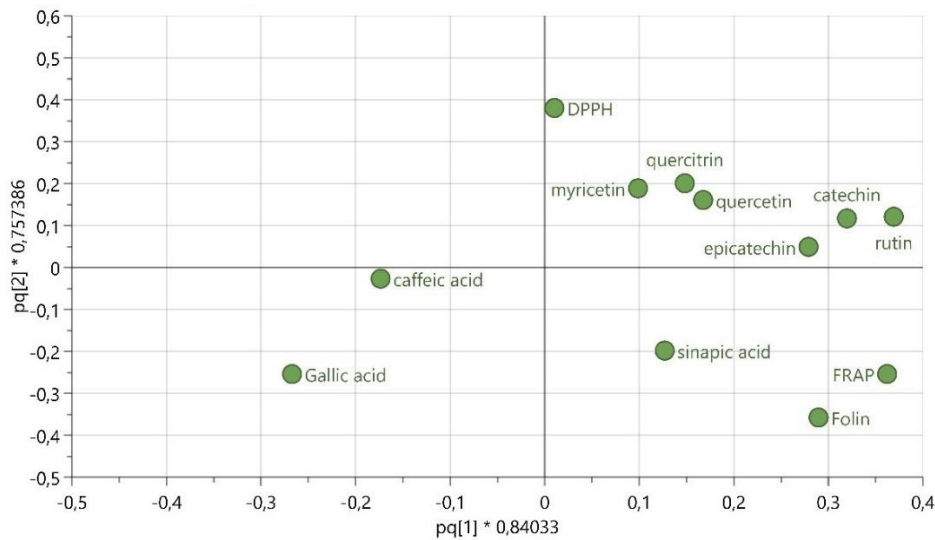
[illegible]

**Table S4:** Misclassification table of OPLS-DA.

	M2	Members	Correct	pulp	powder	syrup	No class (YPred <= 0)
pulp		9	100%	9	0	0	0
powder		12	100%	0	12	0	0
syrup		9	100%	0	0	9	0
No class		0		0	0	0	0
Total		30	100%	9	12	9	0
Fisher's prob.		4,8e-13					



**Figure S1:** Loading score plot of the PCA model.



**Figure S2:** Loading score plot of the OPLS-DA model.