Discriminant Analysis of the Geographical Origin of Asian Red Pepper Powders Using Second-Derivative FT-IR Spectroscopy

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Supplementary Materials: The following are available online at www.mdpi.com/2304-8158/10/5/1034/s1, Figure S1: Expanded (fructose hydrogen regions, normalized to the integral sum of all signals) ^{1}H NMR spectra of Asian red pepper powders at 600MHz NMR, Table S1: Test of homogeneity of variance between the groups of Korean, Chinese, and Vietnamese red pepper powders using second derivative values of FT-IR spectra, Table S2: Pearson's Correlation Matrix.
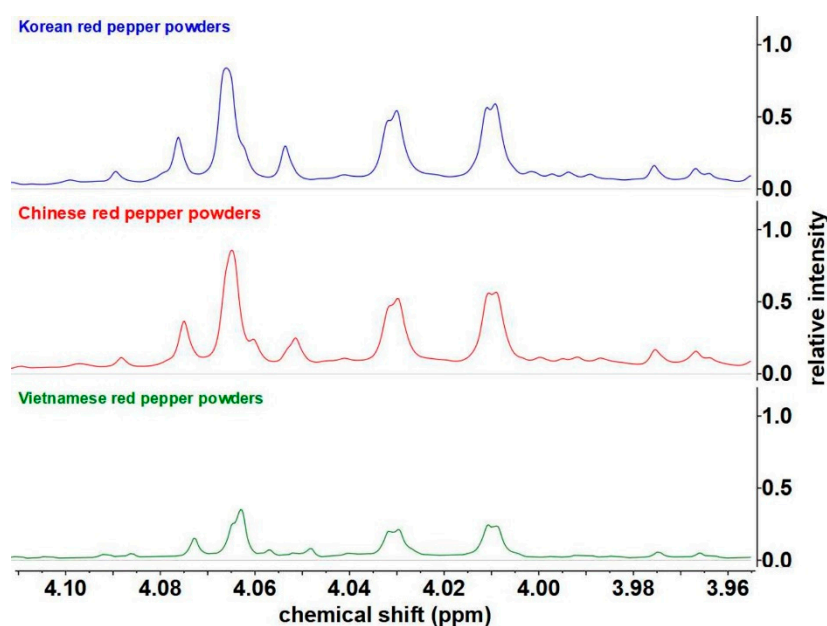

Figure S1: Expanded (fructose hydrogen regions, normalized to the integral sum of all signals) ^{1}H NMR spectra of Asian red pepper powders at 600MHz NMR. [1,2]

Table S1: Test of homogeneity of variance between the groups of Korean, Chinese, and Vietnamese red pepper powders using second derivative values of FT-IR spectra.

Peak No.	Levene statistic	df_1	df_2	Significance level[1]
P1	4.320	2	83	0.016
P2	7.860	2	83	0.001
P3	11.557	2	83	0.000
P4	9.219	2	83	0.000
P5	1.167	2	83	0.316
P6	11.136	2	83	0.000
P7	0.556	2	83	0.576
P8	1.003	2	83	0.371
P9	6.640	2	83	0.002
P10	0.417	2	83	0.660
P11	4.830	2	83	0.010
P12	1.287	2	83	0.281
P13	6.084	2	83	0.003
P14	1.011	2	83	0.368
P15	5.750	2	83	0.005
P16	1.630	2	83	0.202
P17	0.441	2	83	0.645
P18	8.456	2	83	0.000

[1] All results based on mean.

Table S2. Pearson's Correlation Matrix

Pearson Correlation	P17	P16	P14	P12	P10	P8	P7	P5
P17	1	0.182	0.069	0.111	0.242*	0.155	0.051	0.051
P16	0.182	1	0.911**	0.801**	0.764**	0.782**	0.361**	0.794**
P14	0.069	0.911**	1	0.935**	0.841**	0.898**	0.531**	0.886**
P12	0.111	0.801**	0.935**	1	0.888**	0.957**	0.595**	0.916**
P10	0.242*	0.764**	0.841**	0.888**	1	0.954**	0.683**	0.792**
P8	0.155	0.782**	0.898**	0.957**	0.954**	1	0.726**	0.847**
P7	0.051	0.361**	0.531**	0.595**	0.683**	0.726**	1	0.420**
P5	0.051	0.794**	0.886**	0.916**	0.792**	0.847**	0.420**	1

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

References

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