

Supplementary Materials: Static Hot Air and Infrared Rays Roasting are Efficient Methods for Aflatoxin Decontamination on Hazelnuts

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Table S1. Fatty acid composition (%) of Tonga Gentile Trilobata (TGT) hazelnut raw and roasted with static hot air at two temperatures (120 °C and 170 °C) at the two different exposure times (20 and 40 min).

Fatty acid	Raw	120°C/20 min	120°C/40 min	170°C/20 min	170°C/40 min	Significance
Myristic (C14:0)	0.03 ± 0.00 c	0.03 ± 0.00 ab	0.03 ± 0.00 c	0.03 ± 0.00 ab	0.03 ± 0.00 b	***
Palmitic (C16:0)	7.04 ± 0.00 c	6.20 ± 0.01 a	6.33 ± 0.01 c	6.51 ± 0.26 ab	6.67 ± 0.29 b	***
Palmitoleic (C16:1)	0.34 ± 0.00 c	0.26 ± 0.00 a	0.26 ± 0.00 c	0.29 ± 0.03 ab	0.31 ± 0.03 bc	***
Margaric (C17:0)	0.05 ± 0.00	0.05 ± 0.00	0.04 ± 0.00	0.05 ± 0.00	0.04 ± 0.00	ns
Heptadecenoic (C17:1)	0.07 ± 0.00 b	0.07 ± 0.00 b	0.06 ± 0.00 b	0.07 ± 0.00 c	0.07 ± 0.00 bc	***
Stearic (C18:0)	2.48 ± 0.00	2.51 ± 0.01	2.63 ± 0.00	2.49 ± 0.13	2.44 ± 0.13	ns
Elaidic (C18:1 ω9t)	0.02 ± 0.00	0.02 ± 0.00	0.02 ± 0.00	0.02 ± 0.00	0.02 ± 0.00	ns
Oleic (C18:1 ω9c)	83.16 ± 0.00 a	84.38 ± 0.01 b	83.74 ± 0.00 a	83.72 ± 0.04 ab	83.71 ± 0.02 a	***
Linoleic (C18:2 ω6c)	6.44 ± 0.00 b	6.08 ± 0.01 a	6.50 ± 0.00 b	6.43 ± 0.16 b	6.32 ± 0.17 b	***
Arachidic (C20:0)	0.12 ± 0.00 a	0.14 ± 0.00 c	0.13 ± 0.00 a	0.13 ± 0.00 bc	0.12 ± 0.01 bc	***
Eicosenoic (C20:1)	0.12 ± 0.00 a	0.14 ± 0.00 d	0.13 ± 0.00 a	0.13 ± 0.00 c	0.13 ± 0.00 bc	***
α-Linolenic (C18:3 ω3)	0.06 ± 0.00 a	0.07 ± 0.00 c	0.07 ± 0.00 a	0.07 ± 0.00 b	0.06 ± 0.00 b	***
Docosanoic (C22:0)	0.02 ± 0.00 a	0.02 ± 0.00 c	0.02 ± 0.00 a	0.02 ± 0.00 c	0.02 ± 0.00 bc	***
Arachidonic (C20:4 ω6)	0.03 ± 0.00 a	0.04 ± 0.00 bc	0.04 ± 0.00 a	0.04 ± 0.00 cd	0.04 ± 0.00 d	***
Σ SFA	9.75 ± 0.00 c	8.95 ± 0.01 a	9.18 ± 0.00 c	9.23 ± 0.14 b	9.33 ± 0.15 b	***
Σ MUFA	83.70 ± 0.00 a	84.87 ± 0.01 c	84.21 ± 0.00 a	84.24 ± 0.05 b	84.24 ± 0.02 b	***
Σ PUFA	6.53 ± 0.00 b	6.19 ± 0.02 b	6.61 ± 0.00 b	6.53 ± 0.16 b	6.43 ± 0.17 b	***
UFA/SFA	9.26 ± 0.00 a	10.18 ± 0.01 c	9.89 ± 0.00 a	9.84 ± 0.16 b	9.72 ± 0.17 b	***
Oleic/Linoleic (O/L)	12.91 ± 0.00 a	13.87 ± 0.03 b	12.88 ± 0.01 a	13.03 ± 0.34 ab	13.24 ± 0.34 a	***
Iodine value (I/V)	87.24 ± 0.00 a	87.57 ± 0.01 b	87.76 ± 0.01 a	87.66 ± 0.25 b	87.49 ± 0.26 ab	*

Values are expressed as mean ± standard deviation ($n=3$). Means followed by different letters were significantly different at $p < 0.05$. Where letters in columns were not reported, no statistical differences were observed. Significance: * $p < 0.05$; *** $p < 0.001$; ns = not significant. SFA: saturated fatty acid; MUFA: monounsaturated fatty acid; PUFA: polyunsaturated fatty acid.

Table S2. Fatty acid composition (%) of Turkish hazelnut raw and roasted with static hot air at two temperatures (120 °C and 170 °C) at the two different exposure times (20 and 40 min).

Fatty acid	Raw	120°C/20 min	120°C/40 min	170°C/20 min	170°C/40 min	Significance
Myristic (C14:0)	0.02 ± 0.00 ^a	0.03 ± 0.00 ^b	0.03 ± 0.00 ^b	0.03 ± 0.00 ^c	0.03 ± 0.00 ^b	***
Palmitic (C16:0)	4.62 ± 0.00	5.01 ± 0.38	5.00 ± 0.38	5.21 ± 0.00	5.22 ± 0.02	ns
Palmitoleic (C16:1)	0.13 ± 0.00	0.14 ± 0.02	0.14 ± 0.02	0.14 ± 0.00	0.14 ± 0.00	ns
Margaric (C17:0)	0.05 ± 0.00 ^a	0.05 ± 0.00 ^a	0.05 ± 0.00 ^a	0.05 ± 0.00 ^b	0.05 ± 0.00 ^b	**
Heptadecenoic (C17:1)	0.07 ± 0.00	0.07 ± 0.00	0.07 ± 0.00	0.07 ± 0.00	0.07 ± 0.00	ns
Stearic (C18:0)	2.34 ± 0.02 ^a	2.35 ± 0.04 ^a	2.35 ± 0.04 ^a	2.39 ± 0.02 ^a	2.50 ± 0.02 ^b	***
Elaidic (C18:1 ω9t)	0.02 ± 0.00 ^a	0.02 ± 0.00 ^a	0.02 ± 0.00 ^a	0.02 ± 0.00 ^a	0.03 ± 0.00 ^b	***
Oleic (C18:1 ω9c)	85.35 ± 0.02 ^b	83.96 ± 0.88 ^a	83.97 ± 0.88 ^a	84.31 ± 0.02 ^a	83.88 ± 0.03 ^a	*
Linoleic (C18:2 ω6c)	7.03 ± 0.01	8.01 ± 1.23	8.01 ± 1.24	7.39 ± 0.01	7.72 ± 0.02	ns
Arachidic (C20:0)	0.11 ± 0.00 ^a	0.11 ± 0.00 ^{bc}	0.11 ± 0.00 ^{de}	0.12 ± 0.00 ^e	0.11 ± 0.00 ^{cd}	***
Eicosenoic (C20:1)	0.14 ± 0.00	0.14 ± 0.01	0.14 ± 0.01	0.14 ± 0.00	0.13 ± 0.00	ns
α-Linolenic (C18:3 ω3)	0.08 ± 0.00 ^a	0.08 ± 0.00 ^a	0.08 ± 0.00 ^a	0.09 ± 0.00 ^c	0.09 ± 0.00 ^b	***
Docosanoic (C22:0)	0.02 ± 0.00 ^a	0.02 ± 0.00 ^a	0.02 ± 0.00 ^{ab}	0.02 ± 0.00 ^b	0.02 ± 0.00 ^a	*
Arachidonic (C20:4 ω6)	0.02 ± 0.00 ^b	0.02 ± 0.00 ^{ab}	0.01 ± 0.00 ^a	0.02 ± 0.00 ^b	0.02 ± 0.00 ^b	***
Σ SFA	7.16 ± 0.03 ^a	7.56 ± 0.34 ^{ab}	7.56 ± 0.34 ^{ab}	7.82 ± 0.02 ^b	7.93 ± 0.02 ^b	**
Σ MUFA	85.71 ± 0.02 ^b	84.32 ± 0.89 ^a	84.33 ± 0.89 ^a	84.68 ± 0.02 ^a	84.25 ± 0.03 ^a	*
Σ PUFA	7.13 ± 0.01	8.11 ± 1.23	8.11 ± 1.23	7.50 ± 0.01	7.82 ± 0.02	ns
UFA/SFA	12.97 ± 0.05 ^b	12.24 ± 0.58 ^a	12.24 ± 0.58 ^a	11.79 ± 0.03 ^a	11.61 ± 0.04 ^a	***
Oleic/Linoleic (O/L)	12.13 ± 0.01	10.68 ± 1.93	10.68 ± 1.93	11.40 ± 0.01	10.87 ± 0.03	ns
Iodine value (IV)	89.96 ± 0.03 ^a	90.51 ± 1.41 ^b	90.51 ± 1.42 ^b	89.73 ± 0.01 ^c	89.90 ± 0.03 ^b	ns

Values are expressed as mean ± standard deviation ($n=3$). Means followed by different letters were significantly different at $p < 0.05$. Where letters in columns were not reported, no statistical differences were observed. Significance: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ns = not significant.