Supplementary Information

Mate as Dietary Supplement for Broiler Chickens: Effect on the Metabolic Profile and Redox Chemistry of Meat

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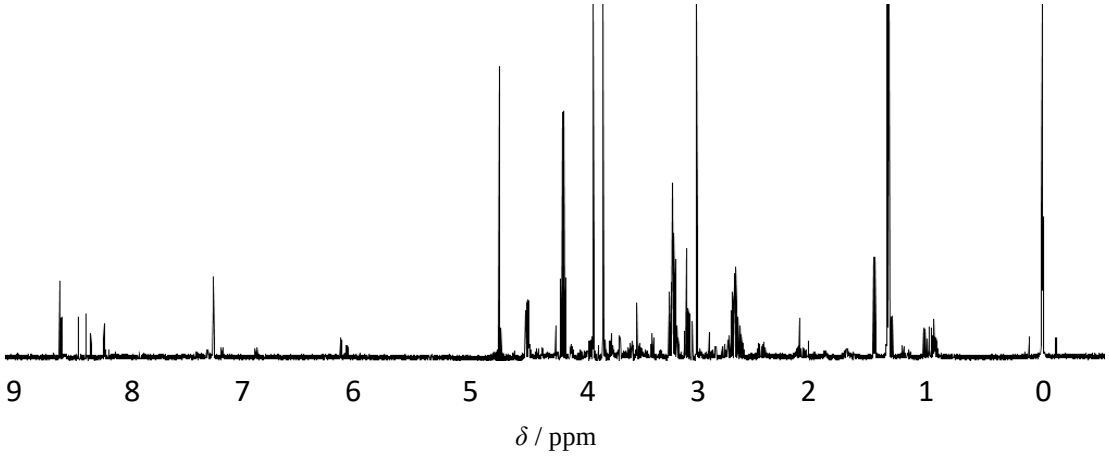
Table 1. Mean concentration for polar metabolites (n = 3 *per* feeding treatment) as obtained by quantitative ^{1}H NMR of the methanol/water extract of chicken meat from animals fed with different levels of mate extract and vitamin E

Mean concentration for polar metabolites / (μmol g^{-1} meat)	Dietary mate levels				
	T1 (0 mg *per* kg mate extract)	T2 (125 mg *per* kg vitamin E)	T3 (250 mg *per* kg mate extract)	T4 (750 mg *per* kg mate extract)	T5 (1000 mg *per* kg mate extract)
Leucine	0.45 ± 0.06	0.45 ± 0.10	0.45 ± 0.10	0.39 ± 0.07	0.43 ± 0.13
Isoleucine	0.25 ± 0.04	0.26 ± 0.07	0.25 ± 0.04	0.25 ± 0.03	0.26 ± 0.11
Valine	0.35 ± 0.05	0.35 ± 0.09	0.32 ± 0.03	0.34 ± 0.06	0.38 ± 0.15
Lactate	18.42 ± 2.32	25.25 ± 5.00	24.44 ± 9.51	20.03 ± 0.14	18.33 ± 1.65
β-Alanine	0.35 ± 0.04	0.47 ± 0.11	0.70 ± 0.29	0.44 ± 0.06	0.37 ± 0.06
Alanine	1.35 ± 0.18	1.26 ± 0.34	1.26 ± 0.16	1.13 ± 0.18	1.37 ± 0.47
Acetate	0.08 ± 0.02	0.08 ± 0.03	0.09 ± 0.01	0.11 ± 0.04	0.07 ± 0.02
Methionine	0.21 ± 0.03	0.21 ± 0.05	0.20 ± 0.04	0.18 ± 0.03	0.20 ± 0.07
Glutamate	0.87 ± 0.14	0.81 ± 0.30	0.77 ± 0.08	0.78 ± 0.23	0.95 ± 0.35
Creatine	6.42 ± 0.56	7.35 ± 0.89	7.73 ± 2.23	7.12 ± 0.89	6.56 ± 0.54
Creatinine	0.32 ± 0.04	0.28 ± 0.07	0.41 ± 0.27	0.30 ± 0.05	0.32 ± 0.08
Glycine	0.43 ± 0.06	0.44 ± 0.10	0.40 ± 0.09	0.40 ± 0.08	0.47 ± 0.14
Threonine	0.47 ± 0.10	0.38 ± 0.12	0.34 ± 0.04	1.07 ± 0.89	0.45 ± 0.15
Carnosine	2.74 ± 0.27	4.43 ± 1.28	4.70 ± 1.05	4.59 ± 1.84	2.70 ± 0.29
Inosine	0.52 ± 0.03	0.47 ± 0.17	0.69 ± 0.26	0.51 ± 0.10	0.48 ± 0.05
Betaine	0.14 ± 0.03	0.27 ± 0.08	0.24 ± 0.10	0.21 ± 0.03	0.18 ± 0.02
Anserine	5.13 ± 0.49	5.62 ± 0.96	7.58 ± 3.13	6.00 ± 0.56	5.93 ± 1.14
ATP/ADP/AMP	1.03 ± 0.22	1.44 ± 0.27	1.74 ± 0.74	1.49 ± 0.14	1.03 ± 0.18
Formate	0.79 ± 0.08	1.08 ± 0.11	1.00 ± 0.18	0.96 ± 0.09	0.75 ± 0.03
Taurine	0.52 ± 0.13	0.36 ± 0.01	0.51 ± 0.10	0.40 ± 0.05	0.71 ± 0.22

T1-T5: treatment 1-5; ATP: adenosine triphosphate; ADP: adenosine diphosphate; AMP: adenosine monophosphate.

(a)



(b)

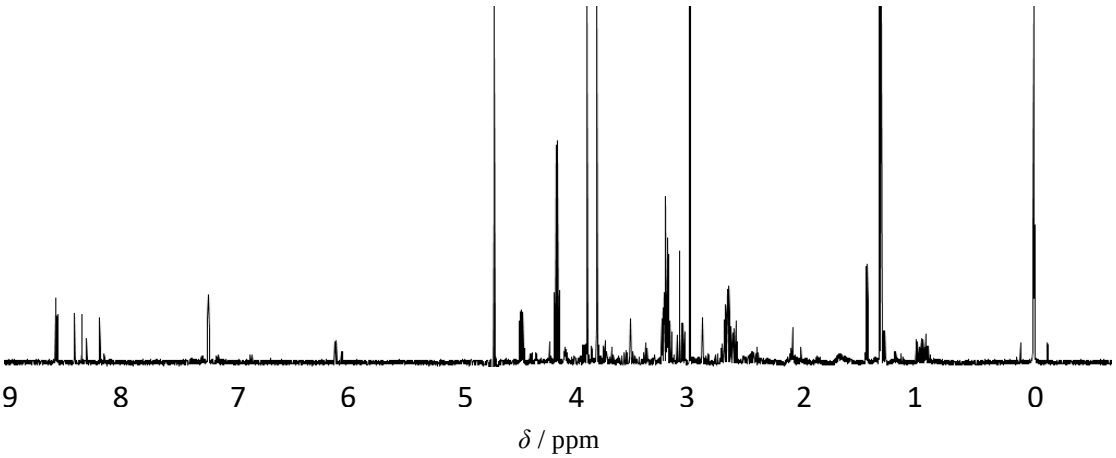
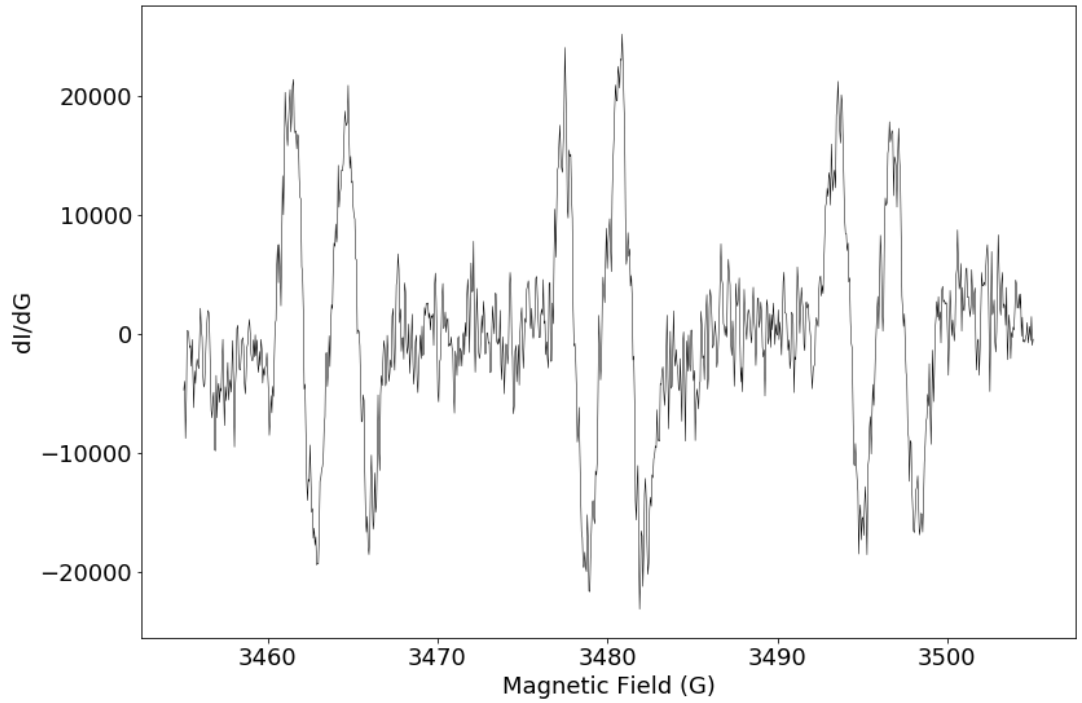


Figure S1. Typical ^{1}H NMR spectrum (500 MHz, deuterated formate buffer pD 4.1) of meat extract from chicken fed with (a) T1 (0 mg *per* kg of mate extract) and (b) T3 (250 mg *per* kg of mate extract).

(a)



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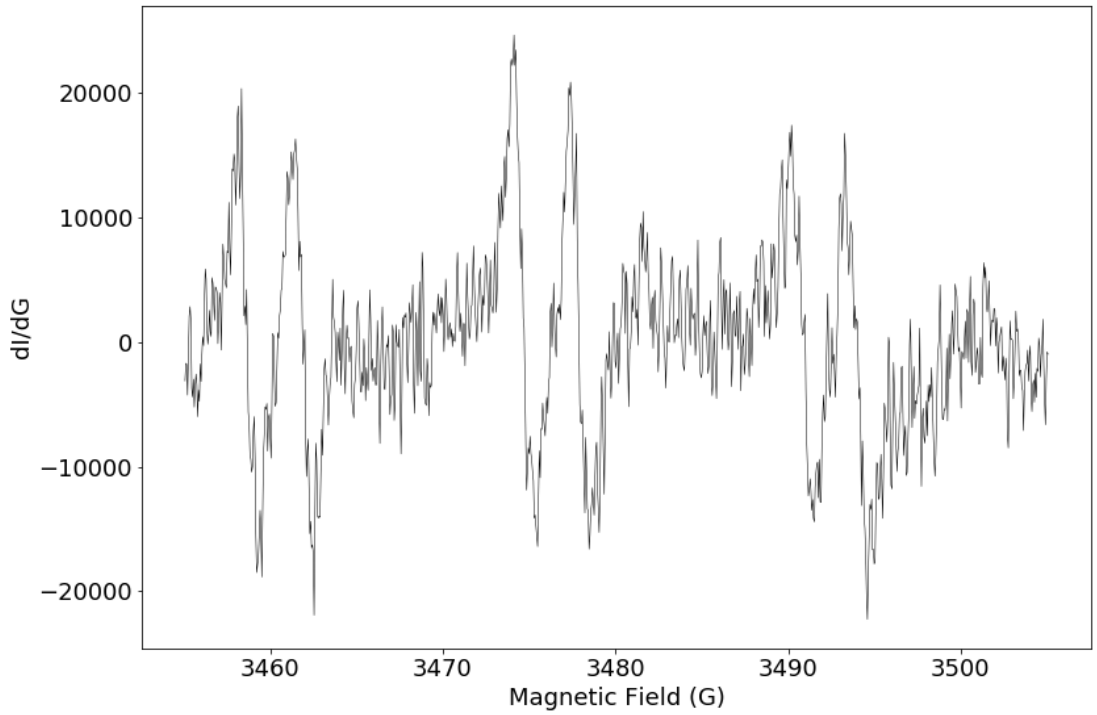

Figure S2. Typical EPR spectrum of meat extract from chicken fed with (a) T1 (0 mg *per* kg of mate extract) and (b) T3 (250 mg *per* kg of mate extract).