

Additional Information

Table 1. Optimized SRM conditions for analyzing the studied and the generated fermentation compounds.

Compound	SRM ₁ (quantification)	Cone voltage (V)	Collision energy (eV)	SRM ₂ (confirmation)	Cone voltage (V)	Collision energy (eV)
[M-H] ⁻						
Phenylacetic acid	135 > 91	20	5	-	-	-
<i>p</i> -hydroxybenzoic acid	137 > 93	20	15	-	-	-
4-Hydroxyphenylacetic acid	151 > 107	20	10	-	-	-
3-Hydroxyphenylacetic acid	151 > 107	20	10	-	-	-
2-Hydroxyphenylacetic acid	151 > 107	20	10	-	-	-
Protocatechuic acid	153 > 109	45	15	-	-	-
3-(4-Hydroxyphenyl)propionic acid	165 > 121	20	10	165 > 149	20	15
3,4-Dihydroxyphenylacetic acid	167 > 123	20	10	167 > 95	20	15
Gallic acid	169 > 125	35	10	169 > 97	35	15
3-(2,4-Dihydroxyphenyl)propionic acid	181 > 137	20	10	181 > 93	20	15
Homovanillic acid	181 > 137	20	15	181 > 122	20	15
Catechin	289 > 245	45	15	289 > 205	45	15
Epicatechin	289 > 245	45	15	289 > 179	45	15
Dimer B2	577 > 289	45	20	577 > 425	45	15

Table 2. Concentration of metabolites in different tissues of rat control group and rat group after an acute intake of the nuts skin extract. Results are expressed as nmol/g tissue.

Compound	Control	Acute Intake	Compound	Control	Acute Intake
Thymus metabolites			Intestine metabolites		
Phenylacetic acid	34 ± 3.1 ^a	35 ± 2.4 ^a	Phenylacetic acid	28 ± 2.1 ^a	28 ± 1.5 ^a
<i>p</i> -Hydroxybenzoic acid	53 ± 4.7 ^a	52 ± 4.1 ^a	<i>p</i> -Hydroxybenzoic acid	39 ± 3.1 ^a	33 ± 1.2 ^a
<i>p</i> -Hydroxyphenylacetic acid	31 ± 2.7 ^a	32 ± 2.9 ^a	Protocatechuic acid	n.d. ^a	32 ± 1.8 ^c
<i>o</i> -Hydroxyphenylacetic acid	31 ± 1.8 ^a	31 ± 1.8 ^a	3-Hydroxyphenylpropionic acid	27 ± 2.4 ^a	32 ± 1.9 ^a
Protocatechuic acid	36 ± 2.7 ^a	36 ± 2.7 ^a	Vanillic acid	40 ± 4.0 ^a	26 ± 1.1 ^a
3-Hydroxyphenylpropionic acid	49 ± 3.4 ^a	48 ± 3.6 ^a	Gallic acid	n.d. ^a	24 ± 1.6 ^c
Vanillic acid	67 ± 6.0 ^a	76 ± 3.7 ^b	3-Hydroxyphenylvaleric acid	22 ± 2.0 ^a	21 ± 1.4 ^a
3-Hydroxyphenylvaleric acid	26 ± 1.7 ^a	28 ± 1.9 ^a	Trimethyluric acid	29 ± 1.8 ^a	27 ± 1.4 ^a
Trimethyluric acid	31 ± 2.0 ^a	33 ± 2.0 ^a	Ferulic sulphate acid	15 ± 1.0 ^a	16 ± 1.3 ^a
Catechin-methyl-glucuronide	n.d. ^a	2.7 ± 0.13 ^c	Protocatechuic sulphate acid	n.d. ^a	18 ± 1.7 ^c
Heart metabolites			Catechin glucuronide	n.d. ^a	42 ± 3.2 ^c
Phenylacetic acid	108 ± 9.9 ^a	106 ± 9.9 ^a	Catechin-methyl-glucuronide	n.d. ^a	218 ± 20 ^c
<i>p</i> -Hydroxyphenylacetic acid	107 ± 9.3 ^a	109 ± 4.5 ^a	Dimer	n.d. ^a	27 ± 1.9 ^c
Protocatechuic acid	n.d. ^a	110 ± 5.5 ^c	Trimer	n.d. ^a	7 ± 0.4 ^c
3-Hydroxyphenylpropionic acid	124 ± 11.2 ^a	149 ± 10 ^a	Kidney metabolites		
Vanillic acid	165 ± 15.5 ^a	203 ± 15 ^b	Phenylacetic acid	26 ± 2.4 ^a	23 ± 1.7 ^a
3-Hydroxyphenylvaleric acid	85 ± 8.1 ^a	98 ± 7.6 ^c	<i>p</i> -Hydroxybenzoic acid	31 ± 3.0 ^a	36 ± 2.3 ^b
5-Dihydroxyphenyl- γ -valerolactone	n.d. ^a	91 ± 9.0 ^c	<i>p</i> -Hydroxyphenylacetic acid	20 ± 1.9 ^a	29 ± 2.1 ^c
Trimethyluric acid	92 ± 9.2 ^a	124 ± 11 ^b	<i>m</i> -Hydroxyphenylacetic acid	19 ± 2.0 ^a	20 ± 2.0 ^a
Brain metabolites			Protocatechuic acid	18 ± 1.8 ^a	39 ± 4.0 ^c
Phenylacetic acid	23 ± 2.0 ^a	16 ± 0.9 ^a	3-Hydroxyphenylpropionic acid	17 ± 1.1 ^a	24 ± 2.6 ^b
<i>p</i> -Hydroxyphenylpropionic acid	n.d. ^a	15 ± 1.1 ^b	Vanillic acid	25 ± 2.4 ^a	27 ± 2.6 ^a
3-Hydroxyphenylpropionic acid	21 ± 1.9 ^a	18 ± 1.0 ^b	Methyl gallate	13 ± 1.1 ^a	16 ± 1.0 ^c
Vanillic acid	21 ± 2.1 ^a	18 ± 1.6 ^b	3-Hydroxyphenylvaleric acid	15 ± 0.92 ^a	15 ± 9.9 ^a
3-Hydroxyphenylvaleric acid	16 ± 0.9 ^a	12 ± 0.9 ^a	Trimethyluric acid	16 ± 1.5 ^a	18 ± 1.2 ^a
Trimethyluric acid	17 ± 1.2 ^a	13 ± 1.7 ^a	Ferulic sulphate acid	13 ± 1.0 ^a	11 ± 8.7 ^a
Spleen metabolites			Protocatechuic sulphate acid	12 ± 1.1 ^a	22 ± 6.8 ^c
Phenylacetic acid	17 ± 1.0 ^a	17 ± 1.8 ^a	Catechin-methyl-sulphate	n.d. ^a	1.8 ± 0.12 ^c
<i>p</i> -Hydroxybenzoic acid	23 ± 2.3 ^a	20 ± 2.0 ^a	Catechin-glucuronide	n.d. ^a	5.1 ± 0.45 ^c
Protocatechuic acid	n.d. ^a	17 ± 0.15 ^a	Catechin-methyl-glucuronide	4.0 ± 0.23 ^a	17 ± 1.4 ^c
3-Hydroxyphenylpropionic acid	23 ± 2.4 ^a	23 ± 2.1 ^a	Lung metabolites		
Vanillic acid	17 ± 0.9 ^a	20 ± 1.8 ^b	Phenylacetic acid	33 ± 3.1 ^a	33 ± 2.1 ^a
3-Hydroxyphenylvaleric acid	13 ± 0.8 ^a	13 ± 1.1 ^a	<i>p</i> -Hydroxybenzoic acid	46 ± 2.9 ^a	65 ± 7.0 ^b
Trimethyluric acid	16 ± 0.8 ^a	15 ± 1.0 ^a	<i>p</i> -Hydroxyphenylacetic acid	28 ± 1.8 ^a	29 ± 1.5 ^a
Catechin-methyl-glucuronide	n.d. ^a	1.5 ± 0.13 ^b	<i>o</i> -Hydroxyphenylacetic acid	29 ± 2.9 ^a	28 ± 1.7 ^a
Testicle metabolites			Protocatechuic acid	34 ± 3.1 ^a	34 ± 1.6 ^a
Phenylacetic acid	23 ± 2.1 ^a	22 ± 1.7 ^a	3-Hydroxyphenylpropionic	43 ± 4.1 ^a	42 ± 3.6 ^a
<i>p</i> -Hydroxybenzoic acid	30 ± 1.9 ^a	29 ± 2.9 ^a	Vanillic acid	64 ± 5.0 ^a	62 ± 3.7 ^a
<i>p</i> -Hydroxyphenylacetic acid	n.d.	19 ± 1.1 ^c	3-Hydroxyphenylvaleric acid	27 ± 2.0 ^a	26 ± 1.8 ^a
<i>o</i> -Hydroxyphenylacetic acid	n.d.	19 ± 1.2 ^c	Trimethyluric acid	32 ± 3.3 ^a	28 ± 1.7 ^a
Protocatechuic acid	21 ± 2.0 ^a	20 ± 2.1 ^a	Protocatechuic sulphate acid	n.d. ^a	18 ± 1.0 ^c
3-Hydroxyphenylpropionic acid	23 ± 2.2 ^a	25 ± 2.5 ^a	Epicatechin	n.d. ^a	59 ± 5.1 ^c
Vanillic acid	45 ± 3.7 ^a	46 ± 3.7 ^a	Catechin-glucuronide	n.d. ^a	19 ± 1.9 ^c
3-Hydroxyphenylvaleric acid	17 ± 1.6 ^a	18 ± 1.7 ^a	Catechin-methyl-glucuronide	n.d. ^a	23 ± 2.5 ^c
Trimethyluric acid	19 ± 1.0 ^a	20 ± 2.0 ^a	Liver metabolites		
Catechin-glucuronide	n.d.	2.2 ± 0.32 ^c	Protocatechuic acid	n.d. ^a	15 ± 1.3 ^b
Catechin-methyl-glucuronide	n.d.	2.3 ± 0.15 ^c			