

Supplementary Materials

Table S1. Volatile flavor components and relative contents in neck meat of swine measured by GC-MS

Retention time	Compound name	Molecular formula	Cas #	Content (mg/100 g)	Percentage (%)
2.59	Hydroxyurea	CH ₄ N ₂ O ₂	127-07-1	0.01	0.22
4.35	Pentanal	C ₅ H ₁₀ O	110-62-3	0.10	2.16
5.51	1,3,5-Cycloheptatriene	C ₇ H ₈	544-25-2	0.02	0.43
6.46	Hexanal	C ₆ H ₁₂ O	66-25-1	1.79	38.74
6.62	Cyclopentanol, 2-methyl-, trans-	C ₆ H ₁₂ O	25144-04-1	0.10	2.16
8.77	Dodecane	C ₁₂ H ₂₆	112-40-3	0.03	0.65
8.93	Heptanal	C ₇ H ₁₄ O	111-71-7	0.24	5.19
10.03	Furan, 2-pentyl-	C ₉ H ₁₄ O	3777-69-3	0.06	1.3
10.26	ç-Terpinene	C ₁₀ H ₁₆	99-85-4	0.02	0.43
10.88	Styrene	C ₈ H ₈	13466-78-9	0.02	0.43
11.07	Benzene, 1-ethyl-2,4-dimethyl-	C ₁₀ H ₁₄	99-87-6	0.01	0.22
11.15	1-Pentanol	C ₅ H ₁₂ O	71-41-0	0.10	2.16
11.77	Octanal	C ₈ H ₁₆ O	124-13-0	0.17	3.68
12.17	Acetoin	C ₄ H ₈ O ₂	513-86-0	0.11	2.38
12.85	n-Caproic acid vinyl ester	C ₈ H ₁₄ O ₂	3050-69-9	0.35	7.58
13.19	5-Hepten-2-one, 6-methyl-	C ₈ H ₁₄ O	110-93-0	0.01	0.22
13.74	1-Hexanol	C ₆ H ₁₄ O	111-27-3	0.03	0.65
14.5	Octanoic acid, methyl ester	C ₉ H ₁₈ O ₂	111-11-5	0.05	1.08
14.58	Nonanal	C ₉ H ₁₈ O	124-19-6	0.50	10.82
16.19	1-Octen-3-ol	C ₈ H ₁₆ O	3391-86-4	0.33	7.14
16.32	1-Octene, 3,7-dimethyl-	C ₁₀ H ₂₀	4984-1-4	0.03	0.65
16.52	Acetic acid	C ₂ H ₄ O ₂	64-19-7	0.04	0.87
17.17	1-Hexanol, 2-ethyl-	C ₈ H ₁₈ O	104-76-7	0.07	1.52
17.95	Benzaldehyde	C ₇ H ₆ O	100-52-7	0.07	1.52
18.2	2-Nonenal	C ₉ H ₁₆ O	2463-53-8	0.01	0.22
18.82	1-Octanol	C ₈ H ₁₈ O	111-87-5	0.05	1.08
19.66	Decanoic acid, methyl ester	C ₁₁ H ₂₂ O ₂	110-42-9	0.01	0.22
20.19	2-Octen-1-ol, (E)-	C ₈ H ₁₆ O	18409-17-1	0.03	0.65
20.76	2-Decenal, (E)-	C ₁₀ H ₁₈ O	3913-81-3	0.02	0.43
22.1	2,4-Nonadienal, (E,E)-	C ₉ H ₁₄ O	5910-87-2	0.01	0.22
22.9	Azulene	C ₁₀ H ₈	275-51-4	0.01	0.22
23.2	2-Tridecenal, (E)-	C ₁₃ H ₂₄ O	7069-41-2	0.01	0.22
23.52	2,4-Decadienal	C ₁₀ H ₁₆ O	2363-88-4	0.02	0.43
24.48	2,4-Decadienal, (E,E)-	C ₁₀ H ₁₆ O	25152-84-5	0.03	0.65
25.36	Hexanoic acid	C ₆ H ₁₂ O ₂	142-62-1	0.04	0.87

Table S1. Volatile flavor components and relative contents in neck meat of swine measured by GC-MS (continued)

Retention time	Compound name	Molecular formula	Cas #	Content (mg/100 g)	Percentage (%)
26.64	Oxirane, tetradecyl-	C ₁₆ H ₃₂ O	7320-37-8	0.02	0.43
28.21	Tetradecanal	C ₁₄ H ₂₈ O	124-25-4	0.03	0.65
29.53	Hexadecanal	C ₁₆ H ₃₂ O	629-80-1	0.04	0.87
30.44	Hexadecanoic acid, methyl ester	C ₁₇ H ₃₄ O ₂	112-39-0	0.01	0.22
31.4	Phenol,2,4-bis(1,1-dimethylethyl)-	C ₁₄ H ₂₂ O	96-76-4	0.02	0.43

Table S2. Volatile flavor components and relative contents in neck meat of bovine measured by GC-MS

Retention time	Compound name	Molecular formula	Cas #	Content (mg/100 g)	Percentage (%)
6.46	Hexanal	C ₆ H ₁₂ O	66-25-1	1.69	28.89
8.88	Heptanal	C ₇ H ₁₄ O	111-71-7	0.35	5.98
9.87	Furan, 2-pentyl-	C ₉ H ₁₄ O	3777-69-3	0.1	1.71
10.25	1-Pentanol	C ₅ H ₁₂ O	71-41-0	0.05	0.85
10.78	1,3,5,7-Cyclooctatetraene	C ₈ H ₈	629-20-9	0.04	0.68
10.9	Benzene, 2-ethyl-1,3-dimethyl-	C ₁₀ H ₁₄	2870-4-4	0.02	0.34
11.67	Octanal	C ₈ H ₁₆ O	124-13-0	0.43	7.35
12.32	Acetoin	C ₄ H ₈ O ₂	513-86-0	0.2	3.42
12.77	n-Caproic acid vinyl ester	C ₈ H ₁₄ O ₂	3050-69-9	0.36	6.15
13.15	5-Hepten-2-one, 6-methyl-	C ₈ H ₁₄ O	110-93-0	0.01	0.17
13.79	1-Hexanol	C ₆ H ₁₄ O	111-27-3	0.14	2.39
14.41	Octanoic acid, methyl ester	C ₉ H ₁₈ O ₂	111-11-5	0.02	0.34
14.49	Nonanal	C ₉ H ₁₈ O	124-19-6	0.90	15.38
15.24	Benzene, 1,3-bis(1,1-dimethylethyl)-	C ₁₄ H ₂₂	1014-60-4	0.02	0.34
16.18	1-Octen-3-ol	C ₈ H ₁₆ O	3391-86-4	0.40	6.84
16.32	Formic acid, heptyl ester	C ₈ H ₁₆ O ₂	112-23-2	0.14	2.39
16.55	Acetic acid	C ₂ H ₄ O ₂	64-19-7	0.24	4.10
17.21	Decanal	C ₁₀ H ₂₀ O	112-31-2	0.10	1.71
17.93	Benzaldehyde	C ₇ H ₆ O	100-52-7	0.05	0.85
18.15	2-Nonenal, (E)-	C ₉ H ₁₆ O	18829-56-6	0.08	1.37
20.18	2-Octen-1-ol, (E)-	C ₈ H ₁₆ O	18409-17-1	0.09	1.54
20.72	2-Decenal, (E)-	C ₁₀ H ₁₈ O	3913-81-3	0.07	1.20
20.86	1-Nonen-4-ol	C ₉ H ₁₈ O	35192-73-5	0.03	0.51
20.93	Acetophenone	C ₈ H ₈ O	98-86-2	0.01	0.17
22.07	2,4-Nonadienal, (E,E)-	C ₉ H ₁₄ O	5910-87-2	0.02	0.34
22.2	Benzaldehyde, 3-ethyl-	C ₉ H ₁₀ O	34246-54-3	0.01	0.17
23.16	2-Undecenal	C ₁₁ H ₂₀ O	2463-77-6	0.04	0.68
24.45	2,4-Decadienal	C ₁₀ H ₁₆ O	2363-88-4	0.06	1.03
25.36	Hexanoic acid	C ₆ H ₁₂ O ₂	142-62-1	0.07	1.20
26.62	Pentadecanal-	C ₁₅ H ₃₀ O	2765-11-9	0.02	0.34
28.64	Octanoic acid	C ₈ H ₁₆ O ₂	124-07-2	0.04	0.68
29.53	Octadecanal	C ₁₈ H ₃₆ O	638-66-4	0.03	0.51
31.4	Phenol, 2,4-bis(1,1-dimethylethyl)-	C ₁₄ H ₂₂ O	96-76-4	0.02	0.34

Table S3. Volatile flavor components and relative contents in neck meat of sheep measured by GC-MS

Retention time	Compound name	Molecular formula	Cas #	Content (mg/100 g)	Percentage (%)
4.34	Pentanal	C ₅ H ₁₀ O	110-62-3	0.09	2.26
5.51	1,3,5-Cycloheptatriene	C ₇ H ₈	544-25-2	0.02	0.50
6.46	Hexanal	C ₆ H ₁₂ O	66-25-1	0.96	24.12
8.88	Heptanal	C ₇ H ₁₄ O	111-71-7	0.16	4.02
9.82	Furan, 2-pentyl-	C ₉ H ₁₄ O	3777-69-3	0.03	0.75
10.3	1-Butanol, 3-methyl-	C ₅ H ₁₂ O	123-51-3	0.02	0.50
10.75	1,3,5,7-Cyclooctatetraene	C ₈ H ₈	629-20-9	0.02	0.50
11.33	1-Pentanol	C ₅ H ₁₂ O	71-41-0	0.04	1.01
11.63	Octanal	C ₈ H ₁₆ O	124-13-0	0.21	5.28
12.51	Isopropyl alcohol	C ₃ H ₈ O	67-63-0	0.02	0.50
12.74	2,3-Octanedione	C ₈ H ₁₄ O ₂	585-25-1	0.26	6.53
13.81	1-Hexanol	C ₆ H ₁₄ O	111-27-3	0.04	1.01
14.27	Diethyl carbitol	C ₈ H ₁₈ O ₃	112-36-7	0.01	0.25
14.38	Octanoic acid, methyl ester	C ₉ H ₁₈ O ₂	111-11-5	0.13	3.27
14.46	Nonanal	C ₉ H ₁₈ O	124-19-6	0.70	17.59
16.18	1-Octen-3-ol	C ₈ H ₁₆ O	3391-86-4	0.11	2.76
16.33	Formic acid, heptyl ester	C ₈ H ₁₆ O ₂	112-23-2	0.03	0.75
16.58	Acetic acid	C ₂ H ₄ O ₂	64-19-7	0.08	2.01
17.05	Nonanoic acid, methyl ester	C ₁₀ H ₂₀ O ₂	1731-84-6	0.07	1.76
17.93	Benzaldehyde	C ₇ H ₆ O	100-52-7	0.16	4.02
18.14	2-Nonenal, (E)-	C ₉ H ₁₆ O	18829-56-6	0.04	1.01
18.81	1-Octanol	C ₈ H ₁₈ O	111-87-5	0.07	1.76
19.59	Decanoic acid, methyl ester	C ₁₁ H ₂₂ O ₂	110-42-9	0.21	5.28
20.18	2-Octen-1-ol, (E)-	C ₈ H ₁₆ O	18409-17-1	0.02	0.50
20.27	Benzoic acid, methyl ester	C ₈ H ₈ O ₂	93-58-3	0.01	0.25
20.71	2-Decenal, (E)-	C ₁₀ H ₁₈ O	3913-81-3	0.06	1.51
20.93	Acetophenone	C ₈ H ₈ O	98-86-2	0.01	0.25
22.06	2,4-Nonadienal	C ₉ H ₁₄ O	1771490	0.02	0.50
22.21	Benzaldehyde, 3-ethyl-	C ₉ H ₁₀ O	34246-54-3	0.03	0.75
22.86	Azulene	C ₁₀ H ₈	275-51-4	0.01	0.25
23.16	10-Undecenal	C ₁₁ H ₂₀ O	112-45-8	0.03	0.75
23.49	2,4-Decadienal	C ₁₀ H ₁₆ O	2363-88-4	0.03	0.75
25.37	Hexanoic acid	C ₆ H ₁₂ O ₂	142-62-1	0.05	1.26
26.61	Tetradecanal	C ₁₄ H ₂₈ O	124-25-4	0.02	0.50
28.2	Octadecanal	C ₁₈ H ₃₆ O	638-66-4	0.03	0.75
28.65	Octanoic acid	C ₈ H ₁₆ O ₂	124-07-2	0.03	0.75
28.95	p-Cresol	C ₇ H ₈ O	106-44-5	0.05	1.26
29.53	Hexadecanal	C ₁₆ H ₃₂ O	629-80-1	0.02	0.50
29.91	Nonanoic acid	C ₉ H ₁₈ O ₂	112-05-0	0.03	0.75
30.44	Hexadecanoic acid, methyl ester	C ₁₇ H ₃₄ O ₂	112-39-0	0.01	0.25
31.02	n-Decanoic acid	C ₁₀ H ₂₀ O ₂	334-48-5	0.03	0.75
31.4	Phenol, 2,4-bis(1,1-dimethylethyl)-	C ₁₄ H ₂₂ O	96-76-4	0.01	0.25