

Supplementary information: Tables S1 and S2.

Table S1: Relative release amounts of glycerol and various flavor components at 14%, 20%, and 26% glycerol addition (calculated based on the release at 14% glycerol addition).

Components	14% Glycerol	20% Glycerol	26% Glycerol
Glycerol	1	1.203038	1.396641
2-Methoxyfuran	1	1.789895	2.257583
3-Furfural	1	1.087538	1.259358
Furfural	1	2.137335	4.639558
Furfuryl Alcohol	1	1.787554	2.25417
2-Acetylfuran	1	3.286804	7.56234
5-Methylfurfural	1	2.037543	3.424561
5-Methyl-2-furfuryl Alcohol	1	1.790373	2.556107
2,3-Dihydro-2-methylbenzofuran	1	1.790787	2.937493
1-(2-Furyl)-2-hydroxyethanone	1	1.438637	1.551065
5-Hydroxymethylfurfural	1	1.1874	1.146514
Ligustilide	1	1.665784	2.729533
Furanone	1	1.564885	2.010794
Methyl Maltol	1	1.566961	2.171875
6-Ethyl-5,6-dihydro-2H-pyran-2-one	1	1.168343	1.108265
2,3-Dihydro-3,5-dihydroxy-6-methyl-4H-pyran	1	1.117035	1.056299
3,5-Dihydroxy-2-methyl-4H-pyran-4-one	1	1.161186	1.113142
3-Methylcyclopentane-1,2-dione	1	1.645164	2.086904
1,2-Cyclohexanedione	1	1.59533	2.121519
1,2-Cyclopentanedione	1	1.65058	2.289205
2-Cyclopentenone	1	2.12767	3.330263
3-Methyl-2-cyclopenten-1-one	1	2.351794	3.410914
1-Acetoxy-2-butanone	1	1.764543	2.213031
2,3-Dimethyl-2-cyclopenten-1-one	1	2.527299	4.274653
4-Cyclopenten-1,3-dione	1	0.979821	1.650907
Methyl Cyclopentenolone	1	2.279356	4.061241
Acetic Acid	1	1.158749	1.196068
Propionic Acid	1	1.263621	1.289025
Isobutyric Acid	1	1.252239	1.320786
n-Valeric Acid	1	1.33104	1.330972
3-Methylpentanoic Acid	1	1.290544	1.506848
n-Hexanoic Acid	1	1.178836	1.230273
Crotonic Acid	1	1.405669	1.637863
Octanoic Acid	1	1.33062	1.499344
Nonanoic Acid	1	0.961357	1.091356
Myristic Acid	1	1.105748	0.97262

Methyl Lactate	1	1.041191	1.354448
Methyl Glycolate	1	1.360337	1.307143
2-Hydroxypropyl Acetate	1	1.215121	1.18603
γ -Butyrolactone	1	1.619807	1.771525
Triacetin (Glycerol Triacetate)	1	1.200418	1.374369
Phenol	1	1.800699	2.454097
2-Ethylphenol	1	1.844539	2.862334
Guaiacol	1	1.835423	2.941263
4-Vinyl-2-methoxyphenol	1	2.191502	4.151947
Vanillin	1	1.224485	1.250296
Epichlorohydrin	1	1.410918	1.840844
Phytol	1	1.122879	1.072592
Toluene	1	1.032194	1.049848
Styrene	1	0.948222	0.771533
Benzaldehyde	1	1.165182	1.014474
p-Hydroxy Styrene	1	1.550252	2.046479
1-Methylphenyl Ethanone	1	1.298438	3.144154
Benzoic Acid	1	1.237607	1.046997
Phenylacetic Acid	1	1.385083	1.385767
Solanone	1	1.981549	3.557124
Ambrettolide	1	2.066426	3.326573
3-Hydroxy- β -damascenone	1	1.197596	1.192236
Neophytadiene	1	1.326507	1.658768
Hydroxyacetone	1	1.625319	1.867825
3-Hydroxy-2-butanone	1	1.638949	1.67914
1-Hydroxy-2-butanone	1	1.725916	1.82738
Acetoxypropyl Peroxide	1	1.798824	2.220211
2-Hydroxy-2-butanone	1	1.112976	1.415006
3-Vinylpyridine	1	1.711385	2.92498
3-Hydroxypyridine	1	1.373271	1.451927
N-Methylpyrrolidone (NMP)	1	1.454175	1.96615
2-Pyrrolicarboxaldehyde	1	2.285282	3.691461
2-Acetylpyrrole	1	2.470645	3.739099
1-(2-Furylmethyl)-1H-pyrrole	1	1.876518	4.188932
2-Methylpyrazine	1	3.014739	7.796344
2,6-Dimethylpyrazine	1	2.483548	5.004185
2,5-Dimethylpyrazine	1	2.51955	5.22292
2-Ethylpyrazine	1	1.254473	1.614543
Indole	1	1.377135	1.579297
Nicotine	1	1.124328	1.243004

Table S2: Relative release amounts of various flavor components at 370°C, 385°C, and 400°C (calculated based on the release at 370°C).

Components	370°C	385°C	400°C
Glycerol	1	0.909758	0.991116
2-Methoxyfuran	1	1.028318	1.164119
3-Furfural	1	1.253393	1.0588
Furfural	1	0.893258	0.105308
Furfuryl Alcohol	1	0.967213	1.16578
2-Acetylfuran	1	0.945132	0.129911
5-Methylfurfural	1	0.869889	0.160448
5-Methyl-2-furfuryl Alcohol	1	1.083668	0.840914
2,3-Dihydro-2-methylbenzofuran	1	0.997071	0.419251
1-(2-Furyl)-2-hydroxyethanone	1	0.845967	1.425562
5-Hydroxymethylfurfural (HMF)	1	0.938375	0.995157
Furanone	1	0.928704	1.192666
Methyl Maltol	1	0.948189	1.300048
6-Ethyl-5,6-dihydro-2H-pyran-2-one	1	1.00563	1.167924
2,3-Dihydro-3,5-dihydroxy-6-methyl-4H-pyran	1	0.795586	0.634887
3,5-Dihydroxy-2-methyl-4H-pyran-4-one	1	0.962278	1.04265
3-Methylcyclopentane-1,2-dione	1	1.213119	1.990094
1,2-Cyclopentanedione	1	1.094762	1.21169
2-Cyclopentenone	1	1.240094	1.015448
3-Methyl-2-cyclopenten-1-one	1	1.487386	1.709178
1-Acetoxy-2-butanone	1	3.550903	1.997636
2,3-Dimethyl-2-cyclopenten-1-one	1	1.433721	0.795897
4-Cyclopenten-1,3-dione	1	0.74699	0.158993
Methyl Cyclopentenolone	1	1.234206	0.323288
Acetic Acid	1	1.150205	1.467757
Propionic Acid	1	1.367352	1.773953
Isobutyric Acid	1	1.843387	1.850022
3-Methylpentanoic Acid	1	1.166199	1.394693
Hexanoic Acid	1	1.103499	1.232736
Octanoic Acid	1	0.615454	1.238909
Nonanoic Acid	1	0.487457	1.240584
Methyl Glycolate	1	1.102197	1.507737
Gamma-Butyrolactone (GBL)	1	1.240601	1.589937
Triacetin (Glycerol Triacetate)	1	0.817055	1.051947
Phenol	1	1.166305	1.707534
2-Ethylphenol	1	1.394447	1.727936
Guaiacol	1	1.054136	0.525262
4-Vinyl-2-methoxyphenol	1	0.899715	0.54833
Vanillin	1	1.493231	1.359086
Phytol	1	1.528236	1.712696
Benzaldehyde	1	2.454968	1.687974
p-Hydroxy Styrene	1	1.09373	1.488304

1-Methylphenyl Ethanone	1	0.995888	0.109113
Benzoic Acid	1	0.239348	1.617406
Phenylacetic Acid	1	1.097147	1.001693
Solanone	1	1.05457	0.155987
Ambrettolide	1	1.01773	0.573918
3-Hydroxy- β -damascenone	1	1.052525	1.030152
Neophytadiene	1	0.912334	0.781817
Hydroxyacetone	1	1.216023	1.844084
3-Hydroxy-2-butanone	1	1.248159	1.957468
1-Hydroxy-2-butanone	1	1.990475	2.303969
Acetoxypropyl Peroxide	1	1.217412	1.304465
2-Hydroxy-2-butanone	1	0.931074	2.020793
3-Vinylpyridine	1	0.990225	0.248654
3-Hydroxypyridine	1	1.031139	1.325941
N-Methylpyrrolidone (NMP)	1	0.880219	1.097304
2-Pyrrolicarboxaldehyde	1	0.976041	1.167719
2-Acetylpyrrole	1	1.192657	1.560644
1-(2-Furylmethyl)-1H-pyrrole	1	0.692869	5.589657
2-Methylpyrazine	1	1.086038	0.27924
2,6-Dimethylpyrazine	1	1.0193	0.335714
2,5-Dimethylpyrazine	1	0.169755	0.345357
Nicotine	1	0.981384	1.249065