

Table S1 GC-MS analysis results of aroma compounds in different Hurood samples

RI			Compound	Concentration (µg/kg)									
Cal	Ref	RT		(U1)	(U2)	(U3)	(X4)	(B1)	(B2)	(B3)	(X1)	(X2)	(X3)
Acids													
1438	1435	21.71	Acetic acid	1295.00	17997.00	16443.00	14812.00	861.00	175.00	1981.00	175.00	945.00	1036.00
1618	1630	28.83	Butanoic acid	397.70	356.70	1090.60	1504.70	549.40	451.00	369.00	561.70	90.20	254.20
1661	-	29.14	3-methyl-Butanoic acid	-	-	-	-	-	-	-	-	14.36	38.00
1729	-	32.89	Pentanoic acid	-	-	-	-	-	-	-	641.60	157.853	233.49
1836	1833	36.83	Hexanoic acid	2567.25	3116.25	4873.50	6948.00	1296.00	1064.25	2202.75	4005.00	1030.50	1642.50
1950	1943	39.96	Heptanoic acid	72.11	139.16	71.62	261.40	71.62	27.04	13.57	98.48	44.76	85.94
2054	2055	42.00	Octanoic acid	5382.50	3610.00	8280.00	10835.00	2387.50	2647.50	2552.50	-	4057.50	2235.00
2415	2417	46.99	Benzoic acid	132.88	308.29	330.31	1103.93	-	3352.66	-	1695.57	249.90	188.10
2160	2157	43.53	Nonanoic acid	126.45	-	38.12	523.86	38.12	-	864.80	114.36	60.99	1263.94
2269	2268	44.84	n-Decanoic acid	7062.00	3190.00	2464.00	5412.00	1298.00	12298.00	8998.00	5610.00	4334.00	2442.00
2330	2328	44.81	Decenoic acid	-	641.59	-	233.5	-	-	-	-	157.85	134.90
2488	2482	47.04	Dodecanoic acid	741.97	865.76	-	989.29	-	3228.94	180.33	2289.33	264.04	555.35
Total content				40567.87	23110.31	34268.44	10825.61	35728.54	22761.24	7464.57	20969.38	11266.8	6210.89
Alcohols													
946	947	5.33	Ethanol	44.32	64.48	83.68	96.64	201.92	34.32	39.12	60.24	108.56	63.2
1102	1093	10.02	2-Methylpropanol	-	0.55	-	-	-	1.61	-	2.85	0.46	2.48
1211	1206	17.86	3-methyl butanol	-	2.61	-	-	-	24.1	-	47.03	35.42	161.2
1253	1252	18.79	Pentanol	2.514.00	5.96	28.64	29.34	200.59	3.75	8.17	-	-	-
1322	1318	17.46	2-Heptanol	2.98	-	6.18	-	-	-	0.12	-	-	0.12
1354	1353	15.77	Hexanol	7.02	1.10	-	18.53	51.35	0.16	-	-	-	69.44
1486	1473	23.57	2-ethyl-n-hexanol	-	-	-	-	48.22	40.92	21.06	-	-	-

1518	-	24.79	2-Nonanol	5.64	-	-	-	7.88	-	39.44	-	-	13.52
1556	1554	26.34	1-Octanol	10.31	0.27	16.15	18.26	16.15	1.18	44.85	135.66	259.58	14.88
1572	1578	39.32	2,3-Butanediol	-	0.41	14.86	-	14.86	9.31	-	423.51	-	24.8
1652	1659	28.56	Furfural alcohol	-	-	3.58	-	5.09	-	-	-	139.16	17.36
1862	1872	34.15	Benzenemethanol	17.70	8.70	21.90	17.70	95.40	24.15	3.90	3.60	5.85	4.35
1896	1903	38.89	Benzenethanol	17.69	3.58	68.76	4.32	68.76	3.93	95.45	17.73	5.91	45.21
1347	-	19.02	3-Dimethyltridecanol	-	-	-	-	-	-	-	-	26.73	-
1054	1045	9.56	1-Propanol	-	0.27	-	-	-	-	-	-	-	-
1658	1653	30.305	1-Nonanol	18.75	1.00	3.98	-	-	-	407.41	1.43	-	-
1450	1457	27.025	1-Heptanol	17.92	-	6.18	19.6	19.80	-	26.51	3.99	-	-
1760	-	33.76	1-Decanethiol	-	-	-	1.4	-	-	-	-	-	-
1445	1445	21.52	1-Octen-3-ol	-	-	-	10.64	-	-	-	-	-	-
Total content				206.84	70.3	238.35	176.67	608.81	109.79	1020.3193	709.59	647.1	649.79
Ketones													
1000	-	10.49	2,3-Butanedione	15.6	-	-	-	44.7	31.2	33.3	-	-	-
1180	1180	12.537	2-Heptanone	51.58	36.29	36.29	-	98.71	26.60	472.40	9.43	55.56	272.69
1276	1286	18.53	3-Hydroxy-2-butanone	624.40	12.74	37.80	-	-	214.62	187.32	68.74	-	0.28
1384	1386	19.55	2-Nonanone	-	193.20	-	159.60	571.20	-	159.60	-	46.20	-
1590	1596	27.72	2-Undecanone	3.28	9.02	19.68	18.86	177.12	43.46	4.10	9.02	20.50	7.38
1800	1808	34.23	2-Tridecone	-	27.84	-	3.11	-	-	-	5.125	11.07	-
2011	2015	40.23	2-Pentadecanone	-	42.49	-	-	-	-	-	1.44	2.05	42.24
901	900	9.72	2-Butanone	3.276	-	-	-	-	-	-	-	6.36	-
998	978	10.34	2-Pentanone	-	-	-	-	-	-	83.24	-	1.64	-
814	792	8.31	Acetone	-	-	-	21.28	-	-	-	-	9.43	-
1284	-	18.75	Nonanone	159.3	-	195.07		-	-	569.11	-	48.18	-
2012	-	40.42	2-Decanone	-	-	-	3.36	-	-	-	-	-	-

			Total content	388.82	231.18	355.92	44.98	155.89	267.51	1301.54	691.4	154.71	1731.57
			Aldehydes										
678	692	3.54	Acetaldehyde	-	14.42	-	-	-	0.80	-	312.16	-	637.23
1086	1081	9.27	Hexanal	51	3.5	-	-	-	93.00	1.00	0.50	46.50	110.00
1284	1287	16.19	Octanal	6.795	-	44.28	-	-	5.67	-	-	-	-
1388	1392	19.66	Nonanal	-	36.54	44.52	45.36	407.40	9.24	8.82	2.52	-	128.52
1448	1447	22.13	Furfural	7.59	3.58	-	-	-	8.79	2.38	2.38	9.91	6.64
1506	1513	24.46	Benzaldehyde	50.94	43.98	40.14	68.25	60.69	34.05	17.52	5.19	32.07	57.00
1524	1532	24.99	2-Nonenal	7.59	-	-	-	-	11.93	-	-	-	-
917	914	5.01	3-Methylbutyraldehyde	-	-	-	6.91	-	8.49	-	8.67	7.5	-
1524	-	25.24	Decenal	-	0.640	0.64	-	-	1.59	-	-	-	-
			Total content	123.29	25.34	152.57	372.37	139.3	40.37	468.11	437.89	95.96	2394.56
			Esters										
886	885	6.22	Ethyl acetate	57.38	618.26	493.62	752.4	31133.78	947.34	1423.86	318.82	82.08	839.04
1234	1232	16.01	Ethyl caproate	200.46	111.6	11.16	14.13	240.65	25.32	245.18	2.17	2.36	18.69
1430	1429	21.31	Ethyl octanoate	800.05	1538.88	91.61	-	588.48	-	883.56	8.17	23.41	43.50
1535	-	22.91	2-Hydroxy-propionic acid butyl ester	-	-	-	-	-	-	-	-	-	4.4
1633	1631	41.72	Ethyl decanoate	5.40	36.00	221.40	-	388.80	5.40	14.40	498.60	5.40	-
2046	-	40.99	Ethyl myristate	-	52.08	-	0.59	-	1.47	-	0.19	0.27	4.40
1007	978	9.16	Methyl butyrate	-	-	-	-	-	3.83	-	-	0.49	-
1048	1028	13.44	Ethyl butyrate	0.82	-	-	-	-	-	15.83	13.42	2.07	-
1187	1187	15.26	Methyl caproate	-	1.58	-	3.53	-	6.77	-	-	1.76	-
1125	1124	14.89	3-Methyl-1-butanol acetate	-	-	-	-	-	-	-	0.43	-	-
			Total content	1018.31	2224.47	144.76	37.68	1096.89	100.82	2238.92	18.89	38.21	234.83
			Sulfur compounds	-	-	-	-	-	-	-	-	-	-
1074	-	14.32	Dimethyl disulfide	0.04	-	-	-	-	0.05	0.04	-	0.02	-

1367	-	35.26	Dimethyl trisulfide	-	-	-	-	-	0.1	-	-	-	-
1876	1880	36.23	Dimethyl sulfone	-	-	-	-	-	0.02	-	-	-	0.04
690	-	4.23	Methyl mercaptan	-	-	-	-	-	-	-	-	7.65	-
Total content				-	-	-	0.15	-	0.06	-	0.04	7.10	0.19
Olefins													
1106	-	14.67	β-Pine terpene	-	-	-	-	-	0.03	-	-	-	0.02
1194	1192	15.43	Limonene	-	0.69	-	36.25	-	0.16	-	0.06	0.30	0.12
1250	1265	15.01	Styrene	-	-	4.22	-	58.87	3.17	-	1.85	-	26.93
Total content				-	2.53	-	63.22	42.43	0.19	58.88	0.06	0.30	0.28
Aromatic													
1046	1049	7.847	Toluene	-	1.38	445.61	181.62	409.29	520.2	525.20	178.37	180.60	516.20
1992	1996	39.24	Phenol	-	-	-	181.60	-	49.06	-	49.55	17.59	14.00
2071	2079	41.43	4-Methylphenol	-	-	-	102.15	-	-	-	79.28	17.57	19.00
Total content				-	1.38	445.61	465.37	409.29	569.26	525.2	307.2	215.76	549.2
Heterocycles													
1230	1231	14.78	Furan,2-pentyl-	-	0.23	-	0.97	-	-	-	-	-	0.26
Total content				-	0.23	-	0.97	-	-	-	-	-	0.26

Table S2 Correlation coefficient r.

Label	<i>Lactobacillus delbrueckii</i>	<i>Lactobacillus psittaci</i>	<i>Lactococcus lactis</i>	<i>Leuconostoc mesenteroides</i>	<i>Lactobacillus helveticus</i>	<i>Lactobacillus crispatus</i>	<i>Lactobacillus paracasei</i>	<i>Lactobacillus amylovorus</i>	<i>Leuconostoc pseudomesenteroides</i>	<i>Leuconostoc citreum</i>
hexanal	0.19754	-0.15802	-0.46014	-0.16304	0.45742	-0.41569	0.0286	-0.04341	-0.08079	0.54541
octanal	0.25109	-0.3892	-0.49905	0.50816	-0.5385	-0.25674	-0.25674	-0.53695	0.17815	0.44493
nonanal	-0.10543	0.36649	0.44623	-0.08521	0.04494	-0.22275	-0.24876	0.18309	0.57247	0.17415
furfural	-0.20899	-0.38095	-0.75695	-0.05352	0.3517	-0.38453	0.5274	-0.45467	-0.35069	0.5068
benzaldehyde	0.1733	-0.26507	0.43951	-0.12982	-0.00943	-0.71127	-0.294	-0.33471	0.87523	0.68555
2-nonenal	0.11389	-0.33394	-0.65046	0.29058	-0.43538	-0.2497	-0.2497	-0.33846	-0.05927	0.40077
ethyl acetate	-0.23372	0.39289	0.31975	0.05712	-0.11728	-0.13735	-0.18868	0.10271	0.49659	0.10681
methyl hexanoate	0.34999	0.70299	0.18119	0.1977	0.36446	0.85541	0.00627	0.73702	-0.42862	-0.79028
ethyl butyrate	0.24025	0.64837	0.096	0.42986	-0.05768	0.99132	-0.0458	0.58686	-0.46195	-0.92507
ethyl hexanoate	-0.21571	0.41904	0.32191	0.05595	-0.12265	-0.1002	-0.21584	0.14916	0.47128	0.06886
ethyl octanoate	-0.27522	0.30324	0.35122	0.00342	-0.1421	-0.19391	-0.16138	0.03632	0.51768	0.13598
ethyl decanoate	-0.25438	0.33413	0.35108	0.02892	-0.15558	-0.15593	-0.18363	0.06542	0.50706	0.10436
dimethyl disulfide	0.11645	0.09639	-0.67622	0.59855	-0.35093	0.37342	-0.02872	-0.07803	-0.41591	-0.16314
dimethyl trisulfide	-0.14037	-0.14885	-0.70828	-0.14422	-0.14386	-0.16667	-0.16667	0.07925	-0.4257	0.21442
methyl mercaptan	-0.7718	0.03625	-0.50434	-0.16183	0.59921	-0.16667	1	-0.31745	-0.4257	0.18244
styrene	-0.04388	0.40718	0.40345	-0.08671	0.15611	-0.24775	-0.24775	0.2219	0.56954	0.22957
acetic acid	0.00445	-0.64164	0.48895	-0.533	-0.33617	-0.10214	-0.1732	-0.09393	0.00672	-0.18273
butanoic acid	0.30289	0.07812	0.25492	0.27696	-0.72549	0.04927	-0.7883	0.12374	0.43919	-0.04623
hexanoic acid	0.54131	-0.47689	0.6363	0.09882	-0.59662	0.19579	-0.44692	-0.15641	0.29117	-0.31483
octanoic acid	-0.04555	-0.56909	-0.16748	0.41866	-0.36491	-0.27389	0.30262	-0.88995	0.25674	0.35374
capric acid	0.1333	0.03286	-0.65985	0.35944	-0.33446	0.37103	-0.14743	0.09866	-0.54845	-0.22647

decanoic acid	-0.05137	0.12288	-0.03862	-0.37653	0.9221	-0.2517	0.45899	0.11744	-0.08558	0.27677
ethanol	-0.51497	0.30077	0.23909	-0.12018	0.17286	-0.29871	0.21603	-0.06609	0.4053	0.23643
phenylethanol	-0.24605	0.26562	0.17759	0.10842	-0.24012	-0.25442	-0.22826	-0.03842	0.52304	0.24885
pentanol	-0.23912	0.37603	0.32361	0.06753	-0.14201	-0.13835	-0.18663	0.08057	0.50376	0.1057
2-ethyl-n-hexanol	-0.19863	0.45219	-0.18809	0.09846	-0.24485	0.11041	-0.32675	0.35653	-0.02871	-0.08052
2-butanone	-0.53291	-0.13251	-0.48385	0.20275	0.31611	-0.24149	0.87404	-0.65119	-0.12747	0.34736
2,3-butanedione	0.02857	0.56957	-0.05826	0.46446	-0.43254	0.36477	-0.42035	0.32373	0.08803	-0.26689
3-hydroxy-2-butanone	0.47411	-0.21577	-0.19464	0.80639	-0.62581	0.07453	-0.28491	-0.49801	0.3014	0.14189
2-nonanone	-0.24583	0.33946	0.48704	-0.0357	-0.21817	0.04477	-0.19697	0.18845	0.3772	-0.16019
2-undecanone	-0.36204	0.33711	0.12592	-0.01359	-0.09074	-0.2361	-0.12133	0.06025	0.39186	0.20982
