

Table S1. Tentative identification of compounds with odor-active aroma descriptors in cocoa-beverages replaced with chocolate made from natural jackfruit seed flour.

Number	ID	Description	LRI_calc	LRI_lit	Compound name (Tentative_identification LRI)	Compound name (Tentative_identification NIST08.LIB)	Similarity (%)
1	Z1	Fresh	out of Range	nf			
2	Z3	Moist	out of Range	nf			
3	Z2	Fresh	out of Range	611 /613	Acetic acid / Ethyl acetate	Acetic acid, methyl ester	93
4	B3	Earth / Chocolate	out of Range	628	3-Methylbutanal (isovaleraldehyde)	3-Methylbutanal (isovaleraldehyde)	95
5	A4	Malty cocoa	650	642	2 or 3-Methyl butanal	2 or 3-Methyl butanal	95
6	Z4	Fetid / Acid / Cheese	757	nf			
7	Z5	Citric	763	nf			
8	B4	Cream/ Butter/ Fruit	800	795	2,3 - Butanediol	2,3-Butanediol	96
9	Z6	Fesh / Green / Mushroom	804	nf			
10	Z7	Moist / Earth	807	804	3(2H)-Furanone, dihydro-2-methyl	3(2H)-Furanone, dihydro-2-methyl	93
11	Z8	Chocolate / Sweet	808	nf			
12	Z9	Chocolate	823	819	Methyl pyrazine	Pyrazine, methyl	89
13	Z10	Sweet / Peanuts / Butter	828	nf			
14	Z11	Fresh / Acid / Floral	833	nf			
15	Z12	Sweet/ Strawberry / Fresh / Floral / Honey	861	856	(2-furyl)-methanol, 2-furanmethanol)	2-Furanmethanol	93
16	Z13	Woody / Mushroom / Mold	885	890	2-Heptanone	2-Heptanone	89
17	A6	Green	905	903	Heptanal		
18	A7	Orange/ Green / Acid	906	nf		3-Heptanol, 2,4-dimethyl-	82
19	Z14	Burnt/ Cocoa/ Coffee	907	908	Pyrazine, 2,5-dimethyl	Pyrazine, 2,6-dimethyl	85
20	B7	Aldeide/ Burnt /Sulfur	912	911	2-methyl-1-pentanol	3-Ethyl-2-pentanol	86
21	Z15	Fresh / Mint	914	nf			
22	A8	Cocoa, hazelnut, peanut butter, and roasted	929	930	2,3-dimethylpyrazine		
23	Z16	Acid	932	nf			
24	Z17	Fruity / Citric / Lemon	942	nf			
25	Z18	Chocolate/ Pyrazine/ Mushroom / Butter	970	961	Benzaldehyde	Benzaldehyde	94
26	Z19	Green	977	nf			
27	Z20	Fresh / Orange / Green	995	1005	Nonanal	2-Octen-1-ol, (E)-	84
28	A11	Peanuts	998	997	Trimethylpyrazine	Pyrazine, trimethyl	90
29	A10	Floral / Fruity	1008	998	2-Ethyl-6-methylpyrazine		
30	B10	Mushuroom /Soup	1015	nf	Hexanoic acid, ethyl ester		
31	C10	Roast	1018	nf			
32	Z21	Pyrazine / Earthy	1037	1035	Ethyl-methylpyrazine	Pyrazine, 3-ethyl-2,5-dimethyl-	93
33	A10	Rose	1047	1045	Phenylacetaldehyde		
34	Z22	Woody / Cedro	1047	nf			
35	B11	Fresh / Mint / Green	1053	1032	Eucalyptol		
36	Z23	Sweet / Caramel	1062	nf			
37	Z24	Chocolate/Sweet	1069	1069	3-Methylbenzaldehyde		
38	Z25	Fresh / Sweet / Citric	1072	nf			
39	A12	Pyrazines / Cocoa	1079	1080	2,3-Dimethyl-5-ethylpyrazine	Pyrazine, 3-ethyl-2,5-dimethyl-	93
40	Z26	Pyrazines / Cocoa	1088	1085	Tetramethylpyrazine	Pyrazine, tetramethyl	88
41	B13	Acid / Cheese / Soup	1115	nf			
42	Z28	Carbolic soap or jackfruit seeds	1137	1138	a methyl-2-methylpropylpyrazine		

43	A13	Carbolic soap or jackfruit seeds	1137	1140	a methyl-2-methylpropylpyrazine		
44	A15	Carbolic soap or jackfruit seeds	1137	1149	a methyl-2-methylpropylpyrazine		
45	A14	Cool / Mint / Sweet	1140	1132	Eucalyptol		
46	Z27	Pyrazine / Chocolate / Sweet	1150	nf		Pyrazine, 3,5-diethyl-2-methyl	86
47	B15	Chocolate / Earth / Roast	1159	1156	2,3-Diethyl-5-methylpyrazine	Pyrazine, 3,5-diethyl-2-methyl	86
48	B14	Cappuccino/ Chocolate	1162	1171	3,5-Diethyl-2-methylpyrazine	Pyrazine, 3,5-diethyl-2-methyl-	84
49	A16	Camphoraceous / Earth	1194	1182	4-Terpineol		
50	Z29	Fresh	1203	nf			
51	Z30	Green / Pyrazine	1226	nf			
52	Z31	Sweet / Chocolate	1235	nf			
53	Z32	Pyrazines / Cocoa	1245	1240	an Ethyl-2-methylpropylpyrazine	Pyrazine, 2,5-dimethyl-3-(2-methylpropyl)-	90
54	A17	Pyrazines / Hot dry / Cocoa	1254	1258	a (3-Methylbutyl)-methylpyrazine	Pyrazine, 2,5-dimethyl-3-(2-methylpropyl)-	
55	Z33	Chocolate	1258	nf		2-Butyl-3-methylpyrazine	89
56	B8	Jam scum	1262	1244	2-Phenylethyl ester	Acetic acid, 2-phenylethyl ester	92
57	Z34	Chocolate	1266	nf	2-Methyl-ethylester-butanoic acid		
58	Z35	Sweet / Fresh	1272	1276	(E)-Cinnamaldehyde	Cinnamaldehyde	96
59	A18	Sweet / Pyrazine / Earthy	1277	nf			
60	B18	Chocolate / Milk chocolate	1288-1293	nf			
61	Z37	Green / Roast/ Sweet	1320	nf	an ethyl-3-(2-methylbutyl)pyrazine	Pyrazine, 2,5-dimethyl-3-(3-methylbutyl)-	83
62	Z36	Carbolic soap or jackfruit seeds	1329	nf	an ethyl (3-methylbutyl) pyrazine	Pyrazine, 2,5-dimethyl-3-(3-methylbutyl)	92
63	A19	Pirazine	1325-1338	nf		1,2,3-Propanetriol, triacetate	96
64	Z38	Rose/ Floral/ Sweet/ Fresh	1340	1347	Ethyl phenylacetate	Phenol, 2-methoxy-4-(2-propenyl)-, acetate	81
65	B19	Chocolate	1343/1351	nf			
66	Z39	Rose/ Floral/ Fresh	1355	nf			
67	B20	Chocolate / Pyrazine / Bakery	1370	nf			
68	Z40	Woody	1390	1376	Copaene	Copaene	93
69	A20	Cocoa category	1392	1387	2,3,5-Trimethyl-6-isopentylpyrazine		
70	Z41	Chocolate	1399	nf			
71	Z42	Cedarwood / Fresh / Sweet	1413	1409	Cedrene		

nf = not found

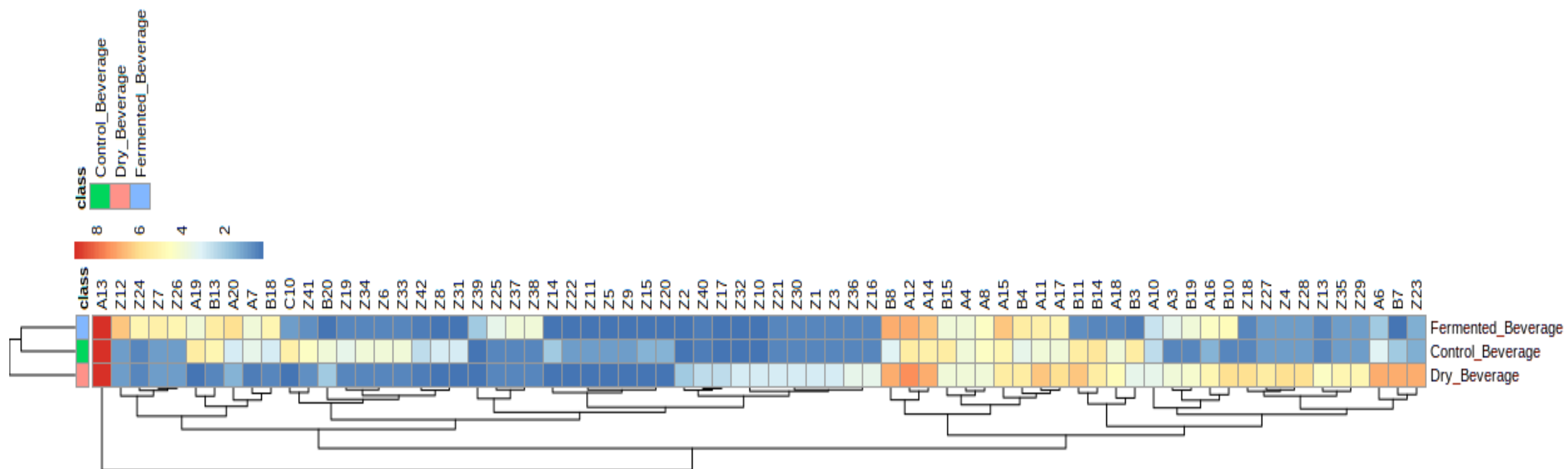


Figure S1_ Heatmaps for odor-active aroma descriptors in cocoa-beverages replaced with chocolate made from natural jackfruit seed flour.