

Table S1: Volatile compounds in watermelon rind, flesh, and rind-flesh blends (peak area %).

V#	LRI	Compound	CAS	0% Rind	10% Rind	20% Rind	30% Rind	100% Rind	<i>p</i> -value
Aldehydes (32)									
V1	672	Acetaldehyde	75-07-0	4.41 a	3.87 a	4.29 a	4.35 a	16.95 b	<0.001
V2	794	Propanal	123-38-6	0.97 c	0.76 b	0.77 b	0.94 bc	0.11 a	<0.001
V3	850	Butanal	123-72-8	-	-	0.09 a	-	1.19 b	0.001
V4	882	2-Methylbutanal	96-17-3	0.39 c	0.28 a	0.32 b	0.31 ab	0.46 d	<0.001
V5	885	3-Methylbutanal	590-86-3	0.24 ab	0.21 a	0.27 b	0.24 ab	0.51 c	<0.001
V6	960	Pentanal	110-62-3	-	0.20 a	0.21 a	0.29 a	1.57 b	<0.001
V7	1031	(<i>E</i>)-2-Butenal	4170-30-3	0.11 b	0.06 a	0.13 b	-	2.56 c	<0.001
V8	1055	2-Ethyl-3-methylbutanal	26254-92-2	0.01 b	0.005 a	0.003 a	-	-	0.011
V9	1075	Hexanal	66-25-1	11.97 bc	7.05 a	6.86 a	9.93 b	14.16 c	<0.001
V10	1121	(<i>E</i>)-2-Pentenal	1576-87-0	0.06 a	-	-	-	0.13 b	0.005
V11	1130	(<i>E</i>)-3-Hexenal	69112-21-6	0.01 a	0.01 a	0.01 a	0.02 a	0.09 b	<0.001
V12	1135	(<i>Z</i>)-3-Hexenal	6789-80-6	0.02 a	-	0.02 a	0.02 a	1.36 b	0.005
V13	1176	Heptanal	111-71-7	0.22 b	0.16 ab	0.13 a	0.13 a	-	<0.001
V14	1210	(<i>E</i>)-2-Hexenal	6728-26-3	0.69 bc	0.27 a	0.41 ab	0.48 ab	2.17 c	<0.001
V15	1281	Octanal	124-13-0	0.31 b	0.26 ab	0.24 ab	0.18 a	-	<0.001
V16	1315	(<i>E</i>)-2-Heptenal	57266-86-1	0.42	-	-	-	-	-
V17	1388	Nonanal	124-19-6	3.57 c	3.66 c	3.53 c	3.00 b	1.84 a	<0.001
V18	1407	2-Methyl-3-methylene-cyclopentane carboxaldehyde	826337-64-8	-	-	-	-	0.27	-
V19	1422	(<i>E</i>)-2-Octenal	2548-87-0	0.80 c	0.66 b	0.44 a	0.49 a	0.51 a	<0.001
V20	1435	(<i>E</i>)-6-Nonenal	2277-20-5	0.16 ab	0.23 bc	0.25 bc	0.30 c	0.08 a	0.001
V21	1445	(<i>Z</i>)-6-Nonenal	2277-19-2	3.34 d	3.60 e	2.85 c	2.49 b	1.59 a	<0.001
V22	1493	Decanal	112-31-2	-	0.03 a	0.03 a	0.02 a	0.07 a	0.179
V23	1499	(<i>Z</i>)-2-Nonenal	60784-31-8	0.30 a	0.28 a	0.26 a	0.26 a	0.24 a	0.742
V24	1514	Benzaldehyde	100-52-7	-	0.09 a	0.09 a	0.05 a	0.52 b	<0.001
V25	1531	(<i>E</i>)-2-Nonenal	18829-56-6	10.09 c	8.87 ab	8.12 a	9.20 bc	10.59 d	<0.001
V26	1567	(<i>E,E</i>)-2,6-Nonadienal	17587-33-6	0.09 a	0.08 a	0.07 a	0.06 a	0.14 a	0.106
V27	1581	(<i>E,Z</i>)-2,6-Nonadienal	557-48-2	7.08 c	5.43 b	4.61 a	5.38 b	11.65 d	<0.001
V28	1636	Benzeneacetaldehyde	122-78-1	0.08 b	0.04 a	0.04 a	0.03 a	-	<0.001
V29	1637	(<i>E</i>)-2-Decenal	3913-81-3	-	0.03 ab	0.04 b	0.02 a	-	0.034
V30	1803	(<i>E,E</i>)-2,4-Decadienal	25152-84-5	0.03 a	0.03 a	0.01 a	0.01 a	-	0.282

V31	1824	4-Oxononanal	74327-29-0	0.49 c	0.27 b	0.12 a	0.21 ab	0.12 a	<0.001
V32	2005	(E)-Cinnamaldehyde	14371-10-9	0.01 a	0.01 a	0.01 a	0.01 a	-	0.027
Alcohols (32)									
V33	865	Methanol	67-56-1	0.45 a	0.61 b	0.65 b	0.85 c	-	<0.001
V34	894	Isopropyl alcohol	67-63-0	0.05 a	0.05 a	0.04 a	0.04 a	0.23 b	<0.001
V35	902	Ethanol	64-17-5	6.63 d	4.65 a	5.53 b	6.21 c	6.16 c	<0.001
V36	1136	Butanol	71-36-3	0.07 b	0.06 ab	0.08 b	0.04 a	-	0.006
V37	1149	2-Methyl-3-pentanol	623-37-0	0.01 a	0.01 a	-	-	-	0.372
V38	1152	1-Penten-3-ol	616-25-1	0.41 d	0.33 c	0.20 a	0.27 b	0.90 e	<0.001
V39	1199	2-Methylbutanol	137-32-6	0.27 ab	0.25 a	0.37 b	0.26 ab	2.04 c	<0.001
V40	1242	Pentanol	71-41-0	0.60 a	0.53 a	0.51 a	0.50 a	1.43 b	<0.001
V41	1314	(Z)-2-Penten-1-ol	1576-95-0	-	0.30 a	0.22 a	0.23 a	0.39 a	0.185
V42	1346	Hexanol	111-27-3	3.12 a	3.28 a	4.36 b	3.34 a	3.37 a	<0.001
V43	1356	(E)-3-Hexen-1-ol	928-97-2	0.01	0.02 b	0.02 b	0.01 a	-	<0.001
V44	1376	(Z)-3-Hexen-1-ol	928-96-1	0.29 a	0.45 b	0.79 d	0.57 c	0.48 bc	<0.001
V45	1399	(E)-2-Hexen-1-ol	928-95-0	-	-	0.07	-	-	-
V46	1449	Heptanol	111-70-6	0.04 a	0.04 a	0.23 b	0.20 b	0.25 b	0.026
V47	1458	6-Methylhept-5-en-2-ol	1569-60-4	1.34 b	0.87 a	1.41 b	1.25 ab	-	0.001
V48	1477	(Z)-3-Hepten-1-ol	2108-05-6	0.01 a	0.05 a	0.05 b	0.03 ab	-	0.011
V49	1485	2-Ethylhexanol	104-76-7	0.21 a	0.22 a	0.26 a	0.20 a	0.40 b	0.001
V50	1553	Octanol	111-87-5	0.38 a	0.45 a	0.44 a	0.29 a	0.77 b	0.004
V51	1611	(E)-2-Octen-1-ol	18409-17-1	0.40 b	0.15 a	0.32 b	0.10 a	-	0.023
V52	1650	2,6-Dimethyl-5-hepten-1-ol	4234-93-9	0.03 a	0.01 a	0.02 a	0.02	-	0.511
V53	1656	Nonanol	143-08-8	0.51 a	1.30 c	2.18 d	0.92 b	1.00 b	<0.001
V54	1680	(Z)-3-Nonen-1-ol	10340-23-5	11.22 b	17.04 c	19.58 d	18.84 d	3.16 a	<0.001
V55	1694	1-Butynyl-1-cyclopentanol	155879-96-2	0.59 c	0.26 a	0.48 b	0.26 a	0.67 c	<0.001
V56	1709	(Z)-6-Nonen-1-ol	35854-86-5	0.58 a	1.54 b	1.74 b	1.03 ab	0.20 a	0.001
V57	1712	(E)-2-Nonen-1-ol	31502-14-4	0.26 a	-	-	-	0.78 b	0.012
V58	1737	(E,Z)-3,6-Nonadien-1-ol	53046-97-2	0.03 a	0.10 ab	0.15 bc	0.07 a	0.18 c	<0.001
V59	1747	(Z,Z)-3,6-Nonadien-1-ol	56805-23-3	6.08 b	10.00 c	11.78 d	10.30 c	1.91 a	<0.001
V60	1758	Decanol	112-30-1	0.31 c	0.06 a	0.13 b	0.11 ab	0.33 c	<0.001
V61	1764	(E,Z)-2,6-Nonadien-1-ol	7786-44-9	0.47 ab	0.97 c	0.87 c	0.57 b	0.27 a	<0.001
V62	1859	3-Ethyl-3-undecanol	62101-31-9	0.47 a	0.53 a	0.50 a	0.55 a	-	0.560
V63	1864	Benzyl alcohol	100-51-6	0.26 c	0.19 b	0.18 b	0.19 b	0.04 a	<0.001
V64	1895	Phenylethyl alcohol	60-12-8	0.02 a	0.02 a	0.02 a	0.01 a	-	0.827
Ketones (18)									
V65	983	2-Methyl-3-pentanone	565-69-5	0.01 a	0.01 a	0.01 a	0.02 a	-	0.396
V66	1013	1-Penten-3-one	1629-58-9	0.17 c	0.10 b	0.10 b	0.12 b	0.07 a	<0.001

V67	1052	2,3-Pentanedione	600-14-6	0.01 b	0.005 a	-	-	-	0.015
V68	1123	4-Methyl-3-penten-2-one	141-79-7	0.08 b	0.05 a	0.13 c	0.13 c	-	0.009
V69	1143	3-Heptanone	106-35-4	0.02 a	0.01 a	-	-	-	0.570
V70	1246	3-Octanone	106-68-3	0.30 b	0.14 a	-	-	-	<0.001
V71	1276	2-Octanone	111-13-7	0.05 a	0.03 a	0.03 a	0.02 a	-	0.390
V72	1303	2,2,6-Trimethylcyclohexanone	2408-37-9	0.02 b	0.01 a	0.01 a	0.01 a	0.01 a	0.001
V73	1310	6-Methyl-6-hepten-2-one	10408-15-8	0.01 a	0.01 a	0.01 a	0.004 a	-	0.143
V74	1320	2,5-Octanedione	3214-41-3	0.08 ab	0.06 a	0.06 a	0.09 b	0.15 c	<0.001
V75	1324	(Z)-6-Octen-2-one	74810-53-0	0.03 a	0.03 a	0.05 a	0.04 a	0.15 b	<0.001
V76	1331	6-Methyl-5-hepten-2-one	110-93-0	12.40 d	11.72 d	7.30 b	8.57 c	2.24 a	<0.001
V77	1381	2-Nonanone	821-55-6	0.04 b	0.01 a	-	-	-	0.031
V78	1513	(E,Z)-3,5-Octadien-2-one	4173-41-5	0.25 c	0.11 b	0.05	0.05 a	-	<0.001
V79	1563	(E,E)-3,5-Octadien-2-one	30086-02-3	0.02 a	0.03 a	-	-	-	0.644
V80	1585	6-Methyl-3,5-heptadiene-2-one	1604-28-0	0.06 a	0.03 a	0.06 a	0.04 a	-	0.751
V81	1593	2-Undecanone	112-12-9	0.01 a	0.01 a	0.01 a	0.01 a	0.03 b	0.048
V82	1928	(Z)-Jasmone	488-10-8	0.02 a	0.01 a	0.01 a	0.01 a	-	0.168

Terpenes and terpenoids (20)

V83	1146	β -Myrcene	123-35-3	0.02 a	0.01 a	0.02 a	0.03 a	-	0.324
V84	1192	Eucalyptol	470-82-6	0.04 a	0.05 a	0.04 a	0.03 a	0.15 b	0.005
V85	1427	Tetrahydrolinalool	78-69-3	-	0.003 a	0.02 ab	0.01 a	0.07 b	0.012
V86	1464	Dihydromyrcenol	18479-58-8	0.04 a	0.10 a	0.07 a	0.05 a	0.11 a	0.098
V87	1474	Citronellal	106-23-0	0.004 a	0.03 b	-	0.01 a	-	0.049
V88	1545	Linalool	78-70-6	0.10 a	0.16 ab	0.19 ab	0.12 a	0.31 b	0.037
V89	1572	Isobornyl acetate	125-12-2	-	0.02 a	0.04 b	0.01 a	0.10 c	<0.001
V90	1633	Menthol	15356-70-4	0.02 a	0.02 a	0.01 a	0.03 a	0.05 b	0.001
V91	1674	cis-Citral	106-26-3	0.33 c	0.41 d	0.21 b	0.22 b	0.08 a	<0.001
V92	1725	trans-Citral	141-27-5	0.70 b	0.89 c	0.68 b	0.62 b	0.18 a	<0.001
V93	1795	cis-Geraniol	106-25-2	0.03 a	0.02 a	0.01 a	0.01 a	-	0.223
V94	1839	trans-Geraniol	106-24-1	0.08 a	0.08 a	0.07 a	0.09 a	-	0.133
V95	1846	trans-Geranylacetone	3796-70-1	1.44 d	1.24 c	0.99 b	0.97 b	0.31 a	<0.001
V96	1917	(E)- β -Ionone	79-77-6	0.07 a	0.08 a	0.06 a	0.06 a	0.07 a	0.731
V97	1938	6,10-Dimethyl-5,9-undecadien-2-ol	53837-34-6	0.01 a	0.01 a	0.01 a	0.01 a	-	0.393
V98	1964	β -Ionone-5,6-epoxide	23267-57-4	0.02 a	0.02 a	0.01 a	0.01 a	-	0.095
V99	2010	(E,Z)-Pseudoionone	13927-47-4	0.01 a	0.01 a	0.01 a	0.01 a	-	0.930
V100	2087	(E,E)-Pseudoionone	3548-78-5	0.02 b	0.02 b	0.01 a	0.01 a	-	0.002
V101	2241	Dihydroactinidiolide	15356-74-8	0.01 b	0.005 a	0.004 a	0.01 b	-	0.009
V102	2273	Farnesyl acetone	1117-52-8	0.01 a	0.01 a	0.01 a	0.01 a	-	0.484

Esters and lactones (9)

V103	858	Ethyl acetate	141-78-6	0.10 ab	-	0.04 a	-	0.18 b	<0.001
V104	1165	Pentyl acetate	628-63-7	0.01 a	0.01 a	0.01 a	0.01 a	-	0.194
V105	1265	Hexyl acetate	142-92-7	0.01 a	0.01 a	0.01 a	0.01 a	-	0.052
V106	1601	(Z)-3-Nonenyl acetate	13049-88-2	-	-	0.02 a	0.02 a	-	0.485
V107	2020	Methyl 9-oxo-nonanoate	1931-63-1	0.01 a	0.01 a	0.005 a	0.01 a	-	0.711
V108	2156	Methyl hexadecanoate	112-39-0	0.004 a	0.01 a	0.01 a	0.01 a	0.03 b	0.001
V109	2362	Methyl (Z,Z)-9,12-octadecadienoate	112-63-0	-	-	0.004 a	0.005 a	0.02 b	0.002
V110	1996	γ -Nonalactone	104-61-0	0.04 a	0.03 a	0.03 a	0.03 a	0.08 b	<0.001
V111	2103	cis-Jasmone lactone	70851-61-5	0.01 a	0.002 a	0.003 a	0.01 a	-	0.329
Acids (5)									
V112	1851	Hexanoic acid	142-62-1	0.13 a	0.10 a	0.14 a	0.15 a	-	0.449
V113	1942	2-Ethylhexanoic acid	149-57-5	0.01 a	0.01 a	0.02 a	0.01 a	-	0.732
V114	1947	Heptanoic acid	112-05-0	0.03 a	0.03 a	0.04 a	0.04 a	0.05 a	0.608
V115	2039	Octanoic acid	124-07-2	0.02 a	0.02 a	0.04 a	0.04 a	0.02 a	0.158
V116	2127	Nonanoic acid	112-05-0	0.01 a	0.01 a	0.02 ab	0.03 ab	0.04 b	0.044
Sulfides (3)									
V117	648	Methanethiol	74-93-1	0.50 a	0.46 a	0.39 a	0.53 a	0.18 a	0.157
V118	1061	Dimethyl disulfide	624-92-0	0.02 a	0.02 a	0.02 a	0.02 a	0.32 b	<0.001
V119	1367	Dimethyl trisulfide	3658-80-8	-	-	-	0.01 a	0.17 b	0.001
Others (7)									
V120	928	2-Ethylfuran	3208-16-0	0.02 a	0.02 b	0.01 a	0.03 b	0.01 a	<0.001
V121	1223	2-Pentylfuran	3777-69-3	1.07 bc	2.11 d	1.05 b	1.40 c	0.55 a	<0.001
V122	1294	(E)-2-pentenylfuran	70424-14-5	0.42 c	0.66 d	0.28 b	0.47 c	0.16 a	<0.001
V123	1413	3-(4-Methyl-3-pentenyl)-furan	539-52-6	0.09 bc	0.11 c	0.08 abc	0.06 ab	0.04 a	0.001
V124	1113	Ethylbenzene	100-41-4	0.02 a	0.02 ab	0.02 ab	0.01 a	0.03 b	0.017
V125	1170	o-Xylene	95-47-6	0.03 ab	0.02 a	0.05 b	0.03 ab	-	0.001
V126	1728	Naphthalene	91-20-3	-	-	-	-	0.22	-

Different letters within each row indicate significant differences of each volatile compound among five samples according to one-way ANOVA and Tukey's HSD test ($\alpha \leq 0.05$). LRI = linear retention index; "-" = not detected.