

Supplementary Table 1. Aroma compounds of Golden queen 3 and Chucheong.

Chemical group	IUPAC name	CAS number	Relative amount				Formula	MW ^a	RI	Odor description
			White rice		Brown rice					
			Golden queen 3	Chucheong	Golden queen 3	Chucheong				
alcohols	2-phenylethanol	60-12-8	263	276	290	169	C8H10O	122.16	1,114	fruit, honey, rose, sweet apple, wine
	heptan-1-ol	111-70-6	604	942	1,512	3,671	C7H16O	116.20	969	chemical, green, putrid, unpleasant, wood
	hexan-1-ol	111-27-3	3,018	5,454	3,539	6,391	C6H14O	102.17	869	flower, fruit, green, herb, wood
	nonan-1-ol	143-08-8	554	1,020	2,167	2,937	C9H20O	144.25	1,171	detergent, dust, fat, floral, green, oil, soap
	oct-1-en-3-ol	3391-86-4	ND	ND	341	847	C8H16O	128.21	980	earth, fat, floral, mold, mushroom
	octan-1-ol	111-87-5	2,036	2,049	5,818	9,452	C8H18O	130.23	1,071	detergent, fat, jasmine, lemon, metal, soap
aldehydes	(E)-dec-2-enal	3913-81-3	54	121	2,746	6,812	C10H18O	154.25	1,262	fat, fish, hay, paint, tallow
	(E)-non-2-enal	18829-56-6	339	301	637	1,837	C9H16O	140.22	1,160	cucumber, cut grass, fat, paper
	(E)-oct-2-enal	2548-87-0	ND	ND	1,040	3,690	C8H14O	126.20	1,059	fat, fish oil, green, nut, sweet
	2-phenylacetaldehyde	122-78-1	245	51	599	255	C8H8O	120.15	1,046	berry, geranium, honey, nut, pungent
	benzaldehyde	100-52-7	1,032	840	1,796	3,575	C7H6O	106.12	961	bitter almond, burnt sugar, cherry, malt
	decanal	112-31-2	922	661	3,285	4,293	C10H20O	156.26	1,205	floral, fried, orange peel, penetrating
	heptanal	111-71-7	650	353	1,150	1,999	C7H14O	114.19	903	citrus, dry fish, fat, green, nut
	hexanal	66-25-1	1,493	1,744	2,003	6,770	C6H12O	100.16	801	fresh, fruit, grass, green, oil
	nonanal	124-19-6	7,119	3,449	21,042	18,722	C9H18O	142.24	1,104	citrus, fat, green, paint, pungent
	octanal	124-13-0	1,026	809	4,558	6,926	C8H16O	128.21	1,003	citrus, fat, green, nut, pungent
bases	2-acetyl-1-pyrroline	85213-22-5	3,419	ND	1,778	ND	C6H9NO	111.14	922	nut, oil, popcorn, roast
esters	(3-hydroxy-2,2,4-trimethylpentyl) 2-methylpropanoate	77-68-9	6,467	4,173	10,668	8,106	C12H24O3	216.32	1,370	N/A
	[2,2,4-trimethyl-3-(2-methylpropanoyloxy)pentyl] 2-methylpropanoate	6846-50-0	552	452	806	799	C16H30O4	286.41	1,588	N/A
	2-(2-ethoxyethoxy)ethanol	111-90-0	264	323	158	354	C6H14O3	134.17	997	N/A
furans	2-pentylfuran	3777-69-3	655	1,251	1,867	4,386	C9H14O	138.21	992	butter, floral, fruit, green bean
hydrocarbons	(4R)-1-methyl-4-prop-1-en-2-ylcyclohexene	5989-27-5	ND	16,125	ND	19,388	C10H16	136.23	1,030	citrus, mint
	(4Z,8Z)-tricyclo[10.2.1.0]pentadeca-4,8-diene	74708-73-9	400	2,620	871	6,040	C15H22	202.33	1,567	N/A
	2,2,5-trimethyldecane	62237-96-1	ND	72	ND	325	C13H28	184.22	1,326	N/A
	2,6,10-trimethyltridecane	3891-99-4	268	220	195	199	C16H34	226.44	1,457	N/A
	dodecane	112-40-3	1,495	1,102	958	975	C12H26	170.33	1,200	alkane, undesirable
	hexadecane	544-76-3	425	160	263	384	C16H34	226.44	1,600	alkane, root
	pentadecane	629-62-10	756	76	908	174	C15H32	212.41	1,500	alkane
	styrene	100-42-5	ND	1,135	ND	348	C8H8	104.15	893	balsamic, gasoline, plastic, rubber, solvent
	tridecane	629-50-5	941	634	686	332	C13H28	184.36	1,300	alkane
ketones	(5E)-6,10-dimethylundeca-5,9-dien-2-one	3796-70-1	1,071	921	2,668	1,800	C13H22O	194.31	1,450	green, hay, magnolia
	(E)-5-isopropyl-3-hepten-2-one	57283-79-1	540	661	2,518	1,916	C10H18O	154.25	1,152	citrus
	6,10,14-trimethylpentadecan-2-one	502-69-2	190	167	959	719	C18H36O	268.50	1,845	fat
	6-methylhept-5-en-2-one	110-93-0	1,355	2,341	1,156	2,417	C8H14O	126.20	985	citrus, mushroom, pepper, rubber
	6-methylheptan-2-one	928-68-7	ND	97	ND	124	C8H16O	128.21	956	camphor
Phenols	3,5-dimethylphenol	108-68-9	147	316	373	408	C8H10O	122.16	931	cresol, phenol

^aMW: molecular weight (g/mole), RI: retention indices experimentally determined based upon n-alkane (C8 - C20), ND: not detected, N/A: not applicable