

Table S1. Mean values for volatile compounds (ng g^{-1}) detected in 42 peach cultivars grown in Georgia, United States of America in 2016.

Cultivar	ID ^a	A1 ^b	A2	A3	A4	A5	A7	B1	B2	B3	B4
August Lady	AL	2.7c-e ^c	tr	2.4d-g	3.1f	tr	tr	10.5f	tr	tr	tr
Augustprince	AP	4.5b-e	43.0d-h	4.3b-e	4.2ef	1.8b-d	4.6a	15.3ef	138.5b	tr	tr
Blazeprince	BP	6.1b-e	tr	tr	9.5b-f	tr	tr	tr	33.5cd	552.5a	tr
Caroking	CK	1.5de	7.9ij	tr	3.7ef	0.9de	tr	tr	5.2cd	49.3d-g	tr
Carored	CR	tr	tr	tr	24.4a	2.5b-d	4.5a	30.0d-f	tr	tr	2.1a
Early August Prince	EAP	2.6c-e	38.1d-i	6.9a-c	3.9ef	1.8b-d	tr	8.6f	121.1b	tr	tr
Early Big Red	EBR	4.0b-e	53.5c-e	4.5b-e	9.2b-f	5.3a	tr	16.7ef	195.3a	tr	tr
Early Elberta	EEB	tr	49.9d-f	2.2e-g	5.4d-f	1.0c-e	tr	72.6b-f	8.7cd	tr	tr
Encore	EN	tr	39.5d-i	3.1d-g	7.7c-f	1.3b-e	tr	36.5d-f	3.9cd	14.1fg	tr
Fairtime	FT	3.9b-e	tr	7.6ab	12.2b-d	7.0a	tr	18.4d-f	tr	tr	tr
Fat Lady	FL	3.6b-e	68.9b-d	3.8c-f	6.1d-f	1.0c-e	tr	191.0bc	14.1cd	tr	tr
Fiesta Gem	FG	33.4a	tr	7.5ab	15.3b	tr	tr	925.6a	121.5b	tr	tr
Fireprince	FP	tr	38.6d-i	tr	9.5b-f	3.1b	tr	13.0ef	5.0cd	tr	tr
Flameprince27	FP27	1.5de	17.5f-j	0.8fg	3.9ef	tr	tr	4.7f	31.9cd	tr	tr
Flameprince29	FP29	7.3b-d	47.3d-g	2.0e-g	7.8c-f	1.7b-e	tr	23.2d-f	228.3a	tr	tr
Flavorich	FR	tr	tr	tr	10.0b-f	tr	tr	103.4b-f	4.2cd	tr	tr
Gala	GA	tr	tr	tr	7.3c-f	1.9b-d	tr	tr	3.6cd	36.2e-g	tr
Goldprince	GP	tr	tr	tr	4.4ef	1.2c-e	tr	47.6c-f	4.4cd	tr	tr
Harvester	HA	tr	25.4e-j	5.9a-d	9.0b-f	tr	tr	162.8b-e	11.8cd	tr	tr
Julyprince	JUL	tr	14.4g-j	tr	5.1d-f	1.4b-e	tr	4.3f	tr	tr	tr
Junefire	JF	0.9de	12.6h-j	tr	6.0d-f	1.7b-e	tr	52.7c-f	tr	tr	0.4c
Juneprince	JP	tr	tr	0.7fg	7.4c-f	1.8b-d	tr	13.2ef	tr	tr	tr
Majestic	MJ	tr	87.1ab	tr	5.8d-f	3.1b	tr	tr	12.4cd	58.7d-g	tr
O'Henry	OH	3.8b-e	31.7e-j	tr	4.4ef	0.9de	tr	27.6d-f	tr	122.0c-f	0.8b
Elberta	EB	tr	29.6e-j	tr	7.5c-f	tr	tr	tr	tr	48.2d-g	tr
Elberta #2	EB2	0.9de	36.1d-i	1.7e-g	3.6f	0.8de	tr	33.5d-f	4.6cd	tr	tr
Red Globe	RG	tr	88.6ab	1.7e-g	4.5ef	1.8b-d	tr	6.1f	tr	tr	tr
Rich Lady	RL	1.5de	tr	tr	4.0ef	tr	tr	tr	7.9cd	133.1c-e	tr
Rich Pride	RP	tr	tr	tr	4.8d-f	1.0c-e	tr	95.8b-f	12.3cd	tr	tr
Rubyprince	RUB	tr	tr	tr	5.5d-f	1.0c-e	tr	203.5b	13.0cd	173.3c	tr

Ruston Red	RR	1.8c-e	104.9a	4.0c-f	3.9ef	1.3c-e	tr	72.7b-f	6.1cd	tr	tr
Scarletprince	SP	2.6c-e	11.6h-j	tr	5.4d-f	1.7b-d	tr	11.5f	tr	84.7c-g	tr
Sierra Rich	SR	6.7b-e	tr	tr	2.9f	2.7bc	tr	21.8d-f	tr	326.4b	tr
Southern Pearl	SOU	tr	85.4a-c	2.5d-g	8.5b-f	tr	tr	96.5b-f	17.4cd	tr	tr
Springflame	SF	5.4b-e	tr	tr	14.2bc	2.0b-d	tr	tr	20.4cd	160.1cd	tr
Springprince	SPR	8.5bc	tr	tr	30.9a	2.7bc	tr	168.5b-d	36.4cd	tr	tr
Summerflame	SUM	9.6b	tr	8.9a	5.2d-f	2.4b-d	tr	63.8b-f	37.4c	160.4cd	tr
Summerflame1	SUM1	5.2b-e	tr	1.1e-g	2.9f	0.8de	tr	34.1d-f	13.5cd	tr	tr
Sureprince	SUR	tr	tr	tr	6.5d-f	2.2b-d	tr	24.4d-f	2.7cd	tr	tr
White Lady	WL	tr	37.9d-i	2.3e-g	4.7ef	1.7b-e	tr	51.1c-f	8.9cd	tr	0.8b
Zee Diamond	ZD	1.5de	tr	tr	11.1b-e	1.4b-e	tr	86.7b-f	4.2cd	tr	tr
Zee Pride	ZP	tr	tr	tr	7.8c-f	2.0b-d	tr	20.7d-f	2.0cd	tr	tr

^a ID represents abbreviation of cultivar names.

^b The letter plus the number represents compound corresponding to the code in Table 1.

^c Different letters within a column indicate significant difference between genotypes using LSD test at $P < 0.05$.

^{tr} Traces: minimum quantitative value of < 0.4 ng.g⁻¹.

Table S1. Continued.

Cultivar	ID ^a	B5 ^b	B6	E1	E2	E3	E4	E5	E6	E7	E8
August Lady	AL	tr	2.3bc	1.5b-e	100.9d-i	243.9e-j	120.0e-i	tr	1.4g-i	tr	tr
Augustprince	AP	2.0g-m ^c	6.3bc	1.3c-e	100.3d-i	297.8e-i	155.2e-i	tr	3.3e-i	tr	1.4c-f
Blazeprince	BP	4.1c-i	27.6bc	tr	193.9c	1023.7ab	408.0cd	tr	tr	tr	tr
Caroking	CK	1.5i-m	tr	0.9e	33.6ij	86.8h-j	42.1hi	tr	2.5e-i	1.1c	tr
Carored	CR	8.3a	111.5a	tr	28.6ij	275.2e-j	232.8d-h	tr	2.2f-i	tr	tr
Early August Prince	EAP	2.6f-m	16.3bc	2.1bc	85.3f-i	354.6e-h	171.4e-i	tr	5.5d-g	tr	2.3bc
Early Big Red	EBR	4.2c-h	21.4bc	tr	162.8c-f	399.9d-g	245.2d-h	tr	tr	tr	1.8cd
Early Elberta	EEB	2.5f-m	5.1bc	1.9b-d	72.8g-j	271.8e-j	215.4d-i	2.5b-e	2.6e-i	tr	1.6c-e
Encore	EN	5.4b-e	3.8bc	3.6a	64.0ij	244.2e-j	115.5e-i	1.9c-g	22.8a	5.3c	0.4fg
Fairtime	FT	6.0a-d	14.0bc	tr	410.8a	819.8bc	685.5b	tr	2.5e-i	tr	3.2b
Fat Lady	FL	3.5d-l	12.5bc	tr	153.7c-h	684.7cd	432.1cd	0.9f-h	3.3e-i	tr	2.4bc
Fiesta Gem	FG	4.1c-i	tr	tr	101.2d-i	1129.8a	921.9a	tr	tr	tr	tr
Fireprince	FP	4.4c-h	1.4bc	tr	77.4g-j	116.7g-j	69.1hi	2.3c-e	9.1cd	tr	tr
Flameprince 27	FP27	1.3j-m	1.8bc	tr	21.5ij	40.5ij	37.8hi	tr	1.0hi	tr	tr
Flameprince 29	FP29	2.8e-l	6.0bc	tr	154.7c-g	419.3d-f	183.7e-i	tr	3.5e-i	tr	5.1a
Flavorich	FR	3.5d-l	24.3bc	tr	31.7ij	453.1de	322.7c-e	2.1c-f	5.1d-h	tr	tr
Gala	GA	2.5f-m	4.3bc	tr	22.4ij	100.3h-j	46.0hi	tr	1.6g-i	tr	0.6e-g
Goldprince	GP	1.9g-m	8.0bc	tr	21.9ij	125.1f-j	92.4f-i	tr	2.6e-i	tr	tr
Harvester	HA	3.7d-k	3.9bc	tr	96.2d-i	771.2bc	504.7bc	tr	tr	tr	tr
Julyprince	JUL	1.9g-m	7.1bc	tr	65.6ij	107.7g-j	63.5hi	tr	2.8e-i	tr	tr
Junefire	JF	3.2e-l	1.6bc	tr	90.7e-i	240.0e-j	136.8e-i	tr	2.2f-i	tr	tr
Juneprince	JP	4.5c-g	0.8bc	tr	28.4ij	31.2ij	41.0hi	2.7b-d	6.5c-e	1.8c	0.4fg
Majestic	MJ	4.9b-f	15.4bc	tr	87.9e-i	90.5h-j	42.4hi	2.5b-e	8.9cd	5.6c	tr
O'Henry	OH	2.7f-m	2.1bc	1.1de	152.1c-h	141.6f-j	55.8hi	0.9f-h	1.4g-i	tr	0.9d-g
Elberta	EB	3.7d-k	4.5bc	2.3b	49.4ij	224.3e-j	110.9e-i	2.8bc	10.0c	tr	tr
Elberta #2	EB2	tr	tr	0.8e	28.6ij	61.4h-j	54.6hi	1.4d-g	1.6g-i	tr	tr
Red Globe	RG	2.6f-m	4.8bc	tr	71.8g-j	50.6ij	38.5hi	0.7gh	tr	tr	tr
Rich Lady	RL	1.8h-m	tr	tr	69.9h-j	160.9e-j	79.0f-i	tr	2.5e-i	tr	1.0d-g
Rich Pride	RP	2.0g-m	tr	tr	63.1ij	138.4f-j	67.9hi	tr	2.0f-i	tr	tr
Rubyprince	RUB	1.7h-m	tr	tr	tr	415.7d-f	tr	tr	1.9g-i	tr	1.5c-e

Ruston Red	RR	2.0g-m	4.2bc	1.8b-d	52.7ij	190.1e-j	113.7e-i	1.7c-g	2.5e-i	tr	tr
Scarletprince	SP	2.1g-m	7.4bc	1.5c-e	99.5d-i	162.6e-j	55.4hi	tr	1.8g-i	1.5c	0.6e-g
Sierra Rich	SR	2.6f-m	10.7bc	tr	180.2cd	172.8e-j	183.8e-i	tr	0.7i	tr	1.6c-e
Southern Pearl	SOU	6.4a-c	8.8bc	tr	170.5c-e	752.7bc	725.8ab	6.5a	14.4b	tr	tr
Springflame	SF	3.9c-j	6.1bc	tr	37.2ij	139.3f-j	101.5e-i	tr	1.3hi	tr	1.4c-f
Springprince	SPR	7.5ab	2.2bc	tr	51.1ij	293.4e-j	302.7c-f	2.1c-f	1.3hi	tr	tr
Summerflame	SUM	1.0lm	10.3bc	tr	307.1b	tr	297.6c-g	tr	1.7g-i	tr	3.1b
Summerflame1	SUM1	1.0k-m	2.1bc	0.7ef	91.8e-i	171.1e-j	75.5g-i	0.9f-h	0.9i	tr	tr
Sureprince	SUR	3.6d-l	2.2bc	tr	36.5ij	108.6g-j	63.7hi	tr	6.1c-f	58.7a	tr
White Lady	WL	3.4d-l	2.6bc	1.1de	43.9ij	91.1h-j	70.0hi	3.7b	3.8e-i	tr	1.8cd
Zee Diamond	ZD	2.9e-l	37.5b	tr	26.4ij	203.5e-j	216.4d-i	1.4e-g	2.3f-i	tr	tr
Zee Pride	ZP	4.1c-i	1.0bc	tr	46.2ij	86.7h-j	120.2e-i	1.9c-g	6.1c-f	26.5b	tr

^a ID represents abbreviation of cultivar names.

^b The letter plus the number represents compound corresponding to the code in Table 1.

^c Different letters within a column indicate significant difference between genotypes using LSD test at $P < 0.05$.

^{tr} Traces: minimum quantitative value of $< 0.4 \text{ ng.g}^{-1}$.

Table S1. Continued.

Cultivar	ID ^a	E9 ^b	E10	L1	L2	L3	L4	L5	L6	L7	L8
August Lady	AL	4.0b-e ^c	3.4b-d	2.1i-l	tr	tr	tr	77.7bc	160.5f-m	78.4b-f	13.4f-k
Augustprince	AP	4.4b-e	2.5b-e	4.3d-l	tr	1.0d	tr	52.3b-i	123.5h-m	61.6c-f	12.0g-k
Blazeprince	BP	tr	tr	10.4bc	tr	tr	tr	46.2b-j	184.4f-l	48.3c-f	23.8d-k
Caroking	CK	1.8de	tr	5.4c-l	2.6cd	tr	tr	20.2f-j	158.6f-m	38.5c-f	16.1f-k
Carored	CR	15.3a	tr	10.5bc	tr	tr	tr	54.1b-i	153.8f-m	51.5c-f	14.3f-k
Early August Prince	EAP	6.0b-d	2.2b-e	3.9f-l	tr	tr	tr	38.6c-j	90.2i-m	41.1c-f	6.4i-k
Early Big Red	EBR	tr	tr	6.7b-k	tr	tr	tr	29.3d-j	139.3g-m	62.9c-f	7.5h-k
Elberta	EEB	4.2b-e	3.0b-e	6.1b-k	tr	tr	0.8cd	33.9d-j	328.1c-e	72.0b-f	44.3b-d
Encore	EN	9.1b	6.8a	8.2b-h	8.3b	tr	0.6cd	57.1b-g	292.7c-f	102.5b-d	32.6b-g
Fairtime	FT	tr	1.9de	9.7b-d	tr	tr	tr	134.1a	394.2a-c	189.3a	31.1c-h
Fat Lady	FL	8.5bc	5.0a-c	6.8b-k	tr	tr	tr	66.7b-d	181.9f-l	39.6c-f	14.0f-k
Fiesta Gem	FG	tr	tr	tr	tr	tr	tr	19.7f-j	112.7h-m	52.7c-f	54.4bc
Fireprince	FP	5.8b-d	2.9b-e	5.9b-k	7.8b	1.2cd	tr	49.9b-i	327.5c-e	84.8b-e	22.3d-k
Flameprince 27	FP27	1.9de	tr	1.5kl	tr	tr	tr	15.2h-j	27.1m	12.6f	tr
Flameprince 29	FP29	5.8b-d	5.1ab	1.8j-l	tr	tr	tr	30.1d-j	64.3j-m	36.6c-f	2.5jk
Flavorich	FR	4.7b-e	3.4b-d	4.1e-l	tr	tr	tr	29.0d-j	161.9f-m	72.0b-f	30.9c-h
Gala	GA	1.8de	1.6de	4.3e-l	2.3cd	tr	0.8cd	54.6b-h	131.9h-m	43.5c-f	17.7e-k
Goldprince	GP	1.8de	tr	tr	tr	tr	tr	16.9f-j	63.8j-m	14.2ef	10.3g-k
Harvester	HA	tr	tr	9.4b-e	tr	tr	tr	39.2c-j	160.7f-m	72.8b-f	13.8f-k
Julyprince	JUL	4.5b-e	2.9b-e	5.6b-k	2.6cd	tr	tr	22.6e-j	142.1g-m	54.4c-f	3.6i-k
Junefire	JF	1.9de	2.0c-e	9.0b-f	3.5cd	tr	0.4cd	62.6b-e	197.3e-j	79.1b-f	16.3f-k
Juneprince	JP	3.7b-e	2.7b-e	9.1b-f	4.0c	1.7c	2.0a	84.1b	213.8e-i	48.1c-f	27.4d-i
Majestic	MJ	tr	tr	7.0b-j	12.6a	2.4b	2.0a	67.1b-d	502.9a	135.2ab	55.9b
O'Henry	OH	tr	2.1b-e	3.4g-l	tr	tr	1.2bc	68.0b-d	184.8f-l	84.1b-f	15.7f-k
Elberta	EB	5.8b-d	3.2b-d	8.7b-g	8.9b	tr	1.1bc	57.5b-f	383.7a-d	104.6bc	56.6b
Elberta #2	EB2	1.4de	tr	2.6i-l	tr	tr	tr	6.4j	51.9lm	14.1ef	5.5i-k
Red Globe	RG	2.9c-e	2.1b-e	4.4d-l	4.1c	tr	tr	23.3e-j	139.6g-m	68.0b-f	5.7i-k
Rich Lady	RL	2.6de	1.2de	2.6i-l	1.5de	tr	tr	40.9c-j	114.6h-m	35.0c-f	9.7g-k
Rich Pride	RP	2.6de	1.2de	2.3i-l	1.6de	tr	tr	51.3b-i	108.9h-m	32.2d-f	9.4g-k
Rubyprince	RUB	2.8c-e	1.9de	5.5b-k	tr	tr	tr	13.9h-j	69.0j-m	30.3ef	6.0i-k

Ruston Red	RR	2.0de	1.6de	4.4d-l	tr	tr	1.7ab	29.3d-j	225.1e-i	66.6b-f	43.8b-d
Scarletprince	SP	tr	tr	2.5i-l	tr	tr	6.1j	56.6j-m	20.1ef	4.1i-k	
Sierra Rich	SR	1.6de	tr	3.1h-l	4.1c	tr	tr	76.4bc	243.3d-h	63.5b-f	21.9d-k
Southern Pearl	SOU	5.8b-d	3.1b-d	18.4a	7.2b	tr	tr	46.0b-j	442.9ab	190.9a	84.1a
Springflame	SF	1.7de	tr	3.8f-l	tr	tr	tr	16.2g-j	54.1k-m	22.4ef	2.2jk
Springprince	SPR	2.1de	tr	10.9b	tr	tr	tr	83.7b	280.4c-g	81.3b-f	37.5b-f
Summerflame	SUM	tr	tr	1.6kl	tr	tr	tr	29.7d-j	89.4i-m	48.4c-f	10.4g-k
Summerflame1	SUM1	1.3de	tr	2.5i-l	tr	tr	tr	33.7d-j	90.1i-m	23.7ef	8.2h-k
Sureprince	SUR	1.8de	1.2de	7.3b-i	3.2cd	tr	0.9c	36.6c-j	193.8e-k	54.9c-f	26.1d-j
White Lady	WL	2.4de	2.5b-e	6.1b-k	2.8cd	1.7cd	tr	36.7c-j	220.3e-i	77.8b-f	21.2d-k
Zee Diamond	ZD	tr	tr	4.7d-l	tr	tr	tr	13.0ij	69.3j-m	27.8ef	7.7h-k
Zee Pride	ZP	tr	tr	8.5b-g	4.0c	3.3a	1.1bc	61.5b-e	241.2e-h	78.0b-f	41.1b-e

^a ID represents abbreviation of cultivar names.

^b The letter plus the number represents compound corresponding to the code in Table 1.

^c Different letters within a column indicate significant difference between genotypes using LSD test at $P < 0.05$.

^{tr} Traces: minimum quantitative value of $< 0.4 \text{ ng.g}^{-1}$.

Table S1. Continued.

Cultivar	ID ^a	T1 ^b	T2	T3	T4	BA	K1
August Lady	AL	tr	tr	tr	tr	2.2g-j	tr
Augustprince	AP	tr	tr	tr	6.3a	3.7e-h	2bc
Blazeprince	BP	tr	tr	18.4c-e	tr	tr	2.4bc
Caroking	CK	tr	tr	tr	tr	tr	tr
Carored	CR	3.1a-c ^c	3.4a-c	34.7ab	tr	3.4e-h	2.2bc
Early August Prince	EAP	tr	tr	tr	tr	4.7d-f	tr
Early Big Red	EBR	tr	tr	13.7d-f	tr	7.7c	tr
Elberta	EEB	tr	tr	tr	tr	3.4e-h	1.7bc
Encore	EN	tr	tr	tr	tr	tr	1.3bc
Fairtime	FT	tr	tr	20.6c-e	tr	12.9a	tr
Fat Lady	FL	tr	tr	5.4fg	tr	6.4cd	tr
Fiesta Gem	FG	tr	tr	18.0c-e	5.3ab	tr	8.4b
Fireprince	FP	4.6a	4.8a	26.9bc	tr	tr	2.9bc
Flameprince 27	FP27	tr	tr	tr	tr	1.9h-j	tr
Flameprince 29	FP29	tr	tr	tr	3.8bc	3.6e-h	2.5bc
Flavorich	FR	tr	tr	tr	tr	1.9h-k	3.8bc
Gala	GA	2.7b-d	2.7b-d	26.1bc	1.8d	0.8jk	tr
Goldprince	GP	tr	tr	tr	tr	0.9jk	tr
Harvester	HA	tr	3.4a-c	25.7b-d	tr	tr	tr
Julyprince	JUL	3.7ab	4.2ab	21.4cd	tr	tr	tr
Junefire	JF	tr	tr	tr	tr	tr	tr
Juneprince	JP	tr	tr	tr	tr	1.4i-k	tr
Majestic	MJ	tr	tr	tr	tr	tr	tr
O'Henry	OH	tr	tr	tr	tr	1.3i-k	tr
Elberta	EB	tr	tr	tr	tr	tr	2.4bc
Elberta #2	EB2	tr	tr	tr	tr	2.3g-j	tr
Red Globe	RG	4.3a	4.8a	26.1bc	1.9d	tr	tr
Rich Lady	RL	tr	tr	tr	tr	tr	1.8bc
Rich Pride	RP	tr	2.3c-e	8.9e-g	tr	tr	1.7bc
Rubyprince	RUB	tr	tr	tr	3.2cd	tr	2.2bc

Ruston Red	RR	tr	tr	tr	tr	tr	5.3de	tr
Scarletprince	SP	tr	tr	tr	tr	tr	tr	tr
Sierra Rich	SR	tr	tr	tr	tr	tr	tr	4.1bc
Southern Pearl	SOU	tr	tr	tr	tr	tr	tr	67.9a
Springflame	SF	1.8cd	2.2c-e	21.5cd	tr	2.9f-i	1.5bc	
Springprince	SPR	3.9ab	tr	40.8a	tr	tr	3.8bc	
Summerflame	SUM	tr	tr	tr	tr	tr	9.9b	tr
Summerflame1	SUM1	tr	tr	tr	tr	3.9e-g	0.8bc	
Sureprince	SUR	tr	tr	tr	tr	1.4i-k	tr	
White Lady	WL	tr	tr	tr	tr	tr	2.9bc	
Zee Diamond	ZD	1.4de	1.3ef	17.0c-f	6.3a	1.3i-k	2.2bc	
Zee Pride	ZP	tr	1.7de	tr	tr	tr	tr	

^a ID represents abbreviation of cultivar names.

^b The letter plus the number represents compound corresponding to the code in Table 1.

^c Different letters within a column indicate significant difference between genotypes using LSD test at $P < 0.05$.

^{tr} Traces: minimum quantitative value of < 0.4 ng.g⁻¹.