

Supplementary Table S1. Main VOCs released by *K. marxianus* strains grown under different conditions

Molecule	M135 MATS	M135 PLANK	M135 BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	0.13 ± 0.01	0.07 ± 0.01	N.d.	Sweet, fruity, banana, tropical, juicy
2-methylbutyl propanoate	0.10 ± 0.02	N.d.	N.d.	
3-methylbutan-2-yl acetate	0.89 ± 0.01	N.d.	N.d.	
3-methylbutyl acetate	1.49 ± 0.04	0.77 ± 0.02	N.d.	Sweet, fruity, banana
3-methylbutyl propionate	0.10 ± 0.01	0.05 ± 0.01	N.d.	Sweet, pineapple, tropical fruit, apple, banana, fresh green, melon
Acetic acid, isobutyl ester	N.d.	0.03 ± 0.01	N.d.	Sweet, fruity, banana, tropical, apple
Ethyl acetate	0.37 ± 0.01	1.42 ± 0.05	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
Ethyl propionate	N.d.	0.02 ± 0.01	N.d.	Sweet, fruity, juicy, grape, pineapple, fermented, winey, bubble gum, apple
Phenethyl propionate	0.01 ± 0.01	0.01 ± 0.01	0.11 ± 0.02	Floral, rose, fruity, honey, balsamic, sweet, rose, tropical
2-phenylethyl acetate	1.72 ± 0.03	10.58 ± 0.06	1.67 ± 0.05	Floral, rose, sweet, honey, fruity, tropical, rose, green
Total Esters	4.84	12.97	1.78	
Alcohols				
Trans-farnesol	N.d.	N.d.	0.69 ± 0.02	Muguet, floral, sweet, lily
(Z,E)-farnesol	N.d.	0.01 ± 0.01	N.d.	Delicate floral
2-methylbutan-1-ol	1.86 ± 0.05	0.96 ± 0.02	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	1.45 ± 0.06	0.16 ± 0.02	6.47 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	1.74 ± 0.05	0.90 ± 0.01	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented,
6-methylpiperidin-3-ol	N.d.	N.d.	0.58 ± 0.02	
Isobutanol	0.66 ± 0.02	N.d.	N.d.	Ethereal, winey, fusel, whiskey
Pentan-1-ol	9.21 ± 0.06	4.74 ± 0.06	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
Total Alcohols	14.93	6.78	7.75	
Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.31 ± 0.02	Fruity, sweet, cheesy, herbal, coconut, fresh, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	1.13 ± 0.01	
Total Ketons	N.d.	N.d.	1.45	
Organic acids				
N-decanoic acid	N.d.	0.01 ± 0.01	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
Total Organic acids	N.d.	0.01	0	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	1.56 ± 0.02	
Total Phenols	N.d.	N.d.	1.56	
Terpenes				
α-springene	0.04 ± 0.01	N.d.	N.d.	
α-farnesene	N.d.	0.02 ± 0.01	N.d.	
Total Terpenes	0.04	0.02	N.d.	
Molecule	6M2 MATS	6M2 PLANK	6M2 BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	0.10 ± 0.01	0.16 ± 0.02	N.d.	Sweet, fruity, banana, tropical, juicy
3-methylbutyl acetate	1.09 ± 0.02	1.84 ± 0.02	N.d.	Sweet, fruity, banana
Cinnamic acid, p-(trimethylsiloxy)-, methyl ester	N.d.	0.02 ± 0.01	N.d.	
Ethyl acetate	0.49 ± 0.02	2.22 ± 0.02	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
Ethyl decanoate	3.09 ± 0.06	5.21 ± 0.07	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	0.18 ± 0.02	0.31 ± 0.01	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Nerolidyl acetate	0.03 ± 0.01	N.d.	N.d.	Fresh, sweet, citrus, freesia, woody

Pentan-2-yl decanoate	0.04 ± 0.01	N.d.	N.d.	
Phenethyl propionate	0.01 ± 0.01	N.d.	N.d.	Floral, rose, fruity, honey, balsamic, sweet, rose, tropical
2-phenylethyl acetate	4.99 ± 0.06	4.78 ± 0.07	0.62 ± 0.04	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	10.04	14.58	0.628	
Alcohols				
(±)-2,3-dihydrofarnesol	0.07 ± 0.01	N.d.	N.d.	Floral, green, fruity
(2R)-2-aminopropan-1-ol	0.06 ± 0.02	0.01 ± 0.01	N.d.	
2-methylbutan-1-ol	1.36 ± 0.05	2.29 ± 0.03	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	0.28 ± 0.04	0.53 ± 0.01	11.28 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	1.27 ± 0.05	2.15 ± 0.05	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
4-aminopentan-1-ol	N.d.	0.04 ± 0.01	N.d.	
4-butoxybutan-1-ol	N.d.	N.d.	0.29 ± 0.02	
Pentan-1-ol	6.74 ± 0.07	N.d.	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
Trans-farnesol	N.d.	N.d.	0.21 ± 0.01	Muguet, floral, sweet, lily
Total Alcohols	9.80	5.02	11.78	
Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.23 ± 0.02	Fruity, sweet, cheesy, herbal, coconut, fresh, dairy, buttery
Total Ketons	N.d.	N.d.	0.23 ± 0.01	
Organic acids				
N-decanoic acid	0.02 ± 0.01	N.d.	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
Total Organic acids	0.02	N.d.	N.d.	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.79 ± 0.02	
Total Phenols	N.d.	N.d.	0.79	
Terpenes				
α-farnesene	0.06 ± 0.01	N.d.	N.d.	
Total Terpenes	0.06	N.d.	N.d.	
Molecule	VG4 MATS	VG4 PLANK	VG4 BIOFILM-DETACHED	Odor and Flavor
Esters				
3-methylbutyl acetate	1.25 ± 0.02	0.60 ± 0.01	N.d.	Sweet, fruity, banana
Ethyl acetate	0.54 ± 0.02	0.69 ± 0.02	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
Ethyl decanoate	3.34 ± 0.07	1.69 ± 0.03	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl dodecanoate	0.15 ± 0.02	N.d.	N.d.	Sweet, waxy, floral, soapy, clean, creamy, dairy, fruity
Ethyl octanoate	0.20 ± 0.01	0.10 ± 0.01	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Nerolidyl acetate	0.06 ± 0.01	N.d.	N.d.	Fresh, sweet, citrus, freesia, woody
Pentyl acetate	N.d.	8.22 ± 0.09	N.d.	Fruity, banana, pear, apple, sweet
Phenethyl pivalate	0.03 ± 0.01	N.d.	0.37 ± 0.01	Rose, spicy, geranium, blueberry, balsamic, grassy
2-phenylethyl acetate	3.69 ± 0.06	3.15 ± 0.04	6.24 ± 0.06	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	9.29	14.46	6.62	
Alcohols				
(2R)-2-aminopropan-1-ol	0.01 ± 0.01	N.d.	N.d.	
(Z,E)-farnesol	N.d.	N.d.	0.18 ± 0.02	Delicate floral
2-methylbutan-1-ol	1.47 ± 0.04	0.74 ± 0.02	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	0.28 ± 0.01	0.27 ± 0.01	6.12 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	1.38 ± 0.03	0.70 ± 0.01	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented,
Pentan-1-ol	7.28 ± 0.09	3.69 ± 0.06	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
Trans-farnesol	N.d.	0.02 ± 0.01	N.d.	Muguet, floral, sweet, lily
Total Alcohols	10.43	5.43	6.30	

Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.19 ± 0.02	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	0,92 ± 0.02	
Total Ketons	N.d.	N.d.	1,11	
Organic acids				
N-decanoic acid	0,04 ± 0.01	0.01 ± 0.01	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
Total Organic acids	0.04	0.01	N.d.	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.97 ± 0.02	
Total Phenols	N.d.	N.d.	0.97	
Terpenes				
α-springene	0,06 ± 0.01	N.d.	N.d.	
Total Terpenes	0.06	N.d.	N.d.	
Molecule	CBS834 ^T MATS	CBS834 ^T PLANK	CBS834 ^T BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	0.26 ± 0.01	N.d.	N.d.	Sweet, fruity, banana, tropical, juicy
3-methylbutyl acetate	2.85 ± 0.05	N.d.	N.d.	Sweet, fruity, banana
Ethyl acetate	3.88 ± 0.06	4.50 ± 0.09	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
Ethyl decanoate	N.d.	4.70 ± 0.08	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	N.d.	0.28 ± 0.04	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Ethyl propionate	0.08 ± 0.02		N.d.	Sweet, fruity, juicy, grape, pineapple, fermented, winey, bubble gum, apple
Isopentyl acetate	N.d.	2.45 ± 0.06	N.d.	Sweet, fruity, banana, solvent, ripe, estery, green
Phenethyl isobutyrate	N.d.	N.d.	2.25 ± 0.06	Floral, fruity, rose, tea, peach, yeasty, balsamic, honey
Phenethyl pivalate	N.d.	0.04 ± 0.01	0.19 ± 0.01	Rose, spicy, geranium, blueberry, balsamic, grassy
2-phenylethyl acetate	3.88 ± 0.09	1.91 ± 0.05	0.16 ± 0.03	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	10.97	14.06	2.62	
Alcohols				
2-methylbutan-1-ol	3.55 ± 0.02	2.07 ± 0.06	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	1.48 ± 0.01	0.78 ± 0.04	11.45 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	3.32 ± 0.03	1.94 ± 0.06	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
4-aminopentan-1-ol	N.d.	0.05 ± 0.01	N.d.	Ethereal, winey, fusel, whiskey
Isobutanol	N.d.	0.73 ± 0.02	N.d.	
Total Alcohols	8.36	5.58	11.45	
Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.10 ±0.01	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	0.55 ± 0.02	
Total Ketons	N.d.	N.d.	0.66	
Organic acids				
N-decanoic acid	N.d.	0,08 ± 0.01	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
Total Organic acids	N.d.	0,08	N.d.	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.44 ± 0.02	
Total Phenols	N.d.	N.d.	0.44	
	FM09 MATS	FM09 PLANK	FM09 BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	0.06 ± 0.02		N.d.	Sweet, fruity, banana, tropical, juicy
3-methylbutyl acetate	0.67 ± 0.01	0.58 ± 0.02	N.d.	Sweet, fruity, banana
Ethyl acetate	0.17 ± 0.01	0.92 ± 0.03	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance

Ethyl decanoate	N.d.	1.66 ± 0.05	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	N.d.	0.10 ± 0.01	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Pentyl acetate	9.27 ± 0.05	8.05 ± 0.06	N.d.	Fruity, banana, pear, apple, sweet
Pentyl propionate	0.09 ± 0.02	N.d.	N.d.	Sweet, fruity, apricot, pineapple, apple, banana
Phenethyl propionate	0.01 ± 0.01	0.01 ± 0.01	0.06 ± 0.01	Floral, rose, fruity, honey, balsamic, green, sweet, tropical
2-phenylethyl acetate	3.55 ± 0.03	3.08 ± 0.03	0.45 ± 0.02	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	13.85	14.42	0.52	

Alcohols				
(2R)-2-aminopropan-1-ol	0.02 ± 0.01	N.d.	N.d.	
(Z,E)-farnesol	N.d.	0.02 ± 0.01	N.d.	Delicate floral
2-methylbutan-1-ol	0.84 ± 0.02	0.73 ± 0.02	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	0.24 ± 0.01	0.17 ± 0.03	7.36 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	0.78 ± 0.02	0.68 ± 0.01	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
4-aminopentan-1-ol	0.02 ± 0.01		N.d.	
Pentan-1-ol	4.16 ± 0.03	3.61 ± 0.06	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
Trans-farnesol	0.01 ± 0.01	N.d.	N.d.	Muguet, floral, sweet, lily
Total Alcohols	6.09	5.21	7.36	

Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.19 ± 0.02	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	1.15 ± 0.02	
Total Ketons	N.d.	N.d.	1.35	

Organic acids				
N-decanoic acid	N.d.	0.02 ± 0.01	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
Total Organic acids	N.d.	0.02	N.d.	

Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.33 ± 0.01	
Total Phenols	N.d.	N.d.	0.33	

Molecule	ISC4 MATS	ISC4 PLANK	ISC4 BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	0.14 ± 0.01	0.09 ± 0.01	N.d.	Sweet, fruity, banana, tropical, juicy
3-methylbutyl acetate	1.34 ± 0.02	1.07 ± 0.02	N.d.	Sweet, fruity, banana
3-methylbutyl propionate	N.d.	0.07 ± 0.03	N.d.	Sweet, pineapple, tropical fruit, apple, banana, fresh green, melon
Ethyl 9-decenoate	N.d.	0.01 ± 0.01	N.d.	Fruity fatty
Ethyl acetate	1.31 ± 0.03	2.00 ± 0.03	N.d.	Fruity, sweet, weedy, green with a grape and cherry nuance
Ethyl decanoate	4.45 ± 0.05	3.03 ± 0.05	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	0.27 ± 0.05	0.18 ± 0.02	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Phenethyl pivalate	N.d.	N.d.	0.63 ± 0.02	Rose, spicy, geranium, blueberry, balsamic, grassy
Phenethyl propionate	0.01 ± 0.01	0.01 ± 0.01	N.d.	Floral, rose, fruity, honey, balsamic, green, sweet, tropical
2-phenylethyl acetate	7.92 ± 0.03	10.59 ± 0.09	0.41 ± 0.01	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	15.46	17.09	1.05	

Alcohols				
Trans-farnesol		0.01 ± 0.01	N.d.	Muguet, floral, sweet, lily
2-methylbutan-1-ol	1.96 ± 0.03	1.33 ± 0.03	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	0.51 ± 0.01	0.17 ± 0.02	7.40 ± 0.09	Floral, rose, sweet, bready
3-methylbutan-1-ol	1.83 ± 0.03	1.25 ± 0.06	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
4-aminopentan-1-ol	0.08 ± 0.01	N.d.	N.d.	
Total Alcohols	4.38	2.78	7.40	
Ketons				

Methyl heptyl ketone	N.d.	N.d.	0.32 ± 0.01	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	0.01 ± 0.01	
Total Ketons	N.d.	N.d.	0.33	
Organic acids				
Acetic acid	N.d.	0.07 ± 0.01	N.d.	Acidic, sharp, pungent, sour, vinegar, fruit overripe, fruit acetic
Total Organic acids	N.d.	0.07 ± 0.02	N.d.	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	1.17 ± 0.03	
Total Phenols	N.d.	N.d.	1.17	
Terpenes				
α-springene	0.03 ± 0.01	N.d.	N.d.	
Total Terpenes	0.03	N.d.	N.d.	
Molecule	LM142 MATS	LM142 PLANK	LM142 BIOFILM-DETACHED	Odor and Flavor
Esters				
2-methylbutyl acetate	N.d.	0.05 ± 0.01	N.d.	Sweet, fruity, banana, tropical, juicy
2-phenethyl butanoate	N.d.	N.d.	7.25 ± 0.09	
3-methylbutyl acetate	0.67 ± 0.01	0.64 ± 0.02	N.d.	Sweet, fruity, banana
Ethyl acetate	0.29 ± 0.01	0.88 ± 0.02	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
Ethyl decanoate	N.d.	1.81 ± 0.03	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	0.11 ± 0.01	0.11 ± 0.01	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy
Nerolidyl acetate	0.01 ± 0.01	N.d.	N.d.	Fresh, sweet, citrus, freesia, woody
Pentyl acetate	9.22 ± 0.06	8.81 ± 0.09	N.d.	Fruity, banana, pear, apple, sweet
Phenethyl hexanoate	0.13 ± 0.01	N.d.	N.d.	Sweet, honey, floral, woody, green, banana, pineapple
Phenethyl pivalate	N.d.	0.02 ± 0.01	0.33 ± 0.01	Rose, spicy, geranium, blueberry, balsamic, grassy
Phenethyl propionate	0.01 ± 0.01	N.d.	N.d.	Floral, rose, fruity, honey, balsamic, green, sweet, tropical
2-phenylethyl acetate	3.53 ± 0.06	2.00 ± 0.03	0.34 ± 0.03	Floral, rose, sweet, honey, fruity, tropical, green
Total Esters	14.00	14.35	7.93	
Alcohols				
2-methylbutan-1-ol	0.83 ± 0.02	0.80 ± 0.02	N.d.	Roasted, winey, fruity, alcoholic
2-phenylethanol	0.19 ± 0.01	0.18 ± 0.01	3.98 ± 0.06	Floral, rose, sweet, bready
3-(2-methyl-1,3-dioxan-2-yl)propan-1-ol	N.d.	N.d.	0.17 ± 0.02	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
3-methylbutan-1-ol	0.67 ± 0.02	0.64 ± 0.02	N.d.	
4-aminopentan-1-ol	0.01 ± 0.01	N.d.	N.d.	
4-butoxybutan-1-ol	N.d.	N.d.	0.11 ± 0.01	
8-methylnonane-1,8-diol	N.d.	N.d.	0.32 ± 0.01	
Pentan-1-ol	4.14 ± 0.06	3.95 ± 0.03	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
Piperidin-3-ol	N.d.	0.02 ± 0.01	N.d.	Muguet, floral, sweet, lily
Trans-farnesol	0.01 ± 0.01	N.d.	N.d.	
Total Alcohols	5.88	5.60	4.60	
Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.17 ± 0.01	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	0.33 ± 0.01	
Total Ketons	N.d.	N.d.	0.51	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.65 ± 0.02	
Total Phenols	N.d.	N.d.	0.65	
Terpenes				
β-springene	0.02 ± 0.01	N.d.	0.55 ± 0.01	

Total Terpenes	0.02	N.d.	0.55 ±	
Molecule	M83 MATS	M83 PLANK	M83 BIOFILM-DETACHED	Odor and Flavor
Esters				
Ethyl acetate	1.71 ± 0.01	0.67 ± 0.01	N.d.	Fruity, sweet, weedy, green, with a grape and cherry nuance
2-phenylethyl acetate	9.76 ± 0.03	3.64 ± 0.06	5.46 ± 0.06	Floral, rose, sweet, honey, fruity, tropical, green
3-methylbutyl acetate	0.27 ± 0.01	0.11 ± 0.01	N.d.	Sweet, fruity, banana
Pentyl acetate	3.57 ± 0.06	9.49 ± 0.06	N.d.	Fruity, banana, pear, apple, sweet
Ethyl pyruvate	0.10 ± 0.01	N.d.	N.d.	Fruity, sweet, sharp, vegetable, caramelly, ethereal
Ethyl decanoate	0.73 ± 0.03	1.95 ± 0.01	N.d.	Sweet, waxy, fruity, apple, grape, oily, brandy
Ethyl octanoate	0.04 ± 0.01	N.d.	N.d.	Fruity, sweet, apricot, banana, pear, musty, pineapple, dairy, creamy, fatty
Nerolidyl acetate	0.08 ± 0.01	N.d.	N.d.	Fresh, sweet, citrus, freesia, woody
Isopropyl hexadecanoate	0.11 ± 0.01	N.d.	N.d.	Oily
Phenethyl pivalate	N.d.	0.02 ± 0.01	0.42 ± 0.01	Rose, spicy, geranium, blueberry, balsamic, grassy
Total Esters	16.41	15.90	5.88	
Alcohols				
(2R)-2-aminopropan-1-ol	0.06 ± 0.01	0.02 ± 0.01	N.d.	
3-methylbutan-1-ol	0.26 ± 0.02	0.69 ± 0.02	N.d.	Alcoholic, pungent, cognac, fruity, banana, molasses, fermented
2-methylbutan-1-ol	0.32 ± 0.03	0.30 ± 0.01	N.d.	Roasted, winey, fruity, alcoholic
Pentan-1-ol	1.60 ± 0.01	4.26 ± 0.03	N.d.	Fusel, oily, sweet, balsamic, pungent, fermented, bready, cereal, fruity
2-phenylethanol	0.50 ± 0.01	0.14 ± 0.01	7.70 ± 0.09	Floral, rose, sweet, bready
1-aminopropan-2-ol	N.d.	0.03 ± 0.01	N.d.	Fishy, ammonia like
4-aminopentan-1-ol	N.d.	0.02 ± 0.01	N.d.	
4-butoxybutan-1-ol	N.d.	N.d.	0.18 ± 0.01	
Total Alcohols	2.76	5.48	7.88	
Ketons				
Methyl heptyl ketone	N.d.	N.d.	0.22 ± 0.01	Fruity, sweet, cheesy, herbal, coconut, fresh, green, dairy, buttery
8-hydroxyoctan-2-one	N.d.	N.d.	0.38 ± 0.02	
Total Ketons	N.d.	N.d.	0.60	
Lactones				
D-galactonic acid, γ -lactone	0.04 ± 0.01	N.d.	N.d.	
Total Lactones	0.04	N.d.	N.d.	
Organic acids				
Acetic acid	N.d.	0.12 ± 0.01	N.d.	Acidic, sharp, pungent, sour, vinegar, fruit overripe, fruit acetic
N-decanoic acid	N.d.	0.02 ± 0.01	N.d.	Rancid, sour, fatty, citrus, creamy, buttery, fruity, dairy
TOT Organic acids	N.d.	0.14	N.d.	
Phenols				
2,5-ditert-butylphenol	N.d.	N.d.	0.36 ± 0.01	
Total Phenols	N.d.	N.d.	0.36	