Supplementary Material

Fermentation of cocoa pulp (*Theobroma cacao* L.) by *Laetiporus persicinus* yields novel beverages with tropical aroma

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Table S1. Concentrations, stock solution and dilution levels of standard addition.

compound	stock [µg/L]	concentration [µg/L]				
		S0	S1	S2	S3	S4
2-nonanone	257.4	0	0.31	0.67	1.29	1.96
(*R*)-linalool	21,850.0	0	48.07	96.14	144.21	192.28
(*E*)-nerolidol	1000.0	0	5.00	10.00	20.00	30.00
methyl benzoate	66.0	0	0.13	0.26	0.39	0.52
1-phenylethyl acetate	98.0	0	0.19	0.39	0.58	0.77
2-phenylethanol	7380.0	0	14.47	28.94	43.41	57.88
5-butyl-2(5*H*)-furanone	100,800.0	0	197.65	395.29	592.94	790.59

Table S2. Odor impressions in the plate screening for cocoa pulp agar (CPA) and malt extract agar (MEA) on the most responsive day, as well as the overall rating R and the intensity of the odor I (-- very weak/ very bad; - weak/ bad; 0 medium/ neutral; + intensive/ good; ++ very intensive/ very good)

fungal species	day	odor impression CP agar plate	R	I	odor impression ME agar plate	R	I
Pleurotus sapidus	8	bitter almond, sweetish, mushroom	++	0	bitter almond, mushroom	0	0
Wolfiporia cocos	2	fruity, flowery, wild strawberry, berry	++	++	malt extract / reference	0	0
Lentinula edodes	10	sweetish, flowery	+	0	mushroom, spicy	0	--
Laetiporus sulfureus	4	tropical-fruity, sweetish, acidic	++	+	spicy, malty	0	0
Pleurotus eryngii	16	sweetish, fruity, fresh	+	+	neutral	0	--
Irpex consors	6	mushroom, sweet	0	0	mushroom, woody, earthy	--	0
Pholiota nameko	8	fresh, fruity	0	0	mouldy, sweet	--	0
Pleurotus citrinopileatus	18	sweetish, fruity, fresh	+	0	humid, mouldy, pungent	--	++
Fomitopsis pinicola	4	fruity, mushroom	+	0	earthy, mushroom	0	0
Flammulina velutipes	18	flowery, sweetish, ethereal, herbaceous	+	0	pungent, herbaceous, earthy, mouldy	--	++
Pleurotus salmoneo-stramineus	8	fresh, sweetish	+	-	bitter almond	++	--
Antrodia xantha	4	fruity, acidic, sweetish	++	++	malt extract / reference	0	0
Piptoporus betulinus	4	fruity, fresh, sweetish	++	++	malt extract / reference	0	0
Psathyrella piluliformis	12	apple, sweetish, acidic, fruity	++	+	sweetish, acidic, alcoholic	++	++
Psathyrella candolleana	18	sweetish, fruity	++	++	stable, nauseous	--	++
Pleurotus ostreatus	4	sweetish, fruity, flowery	++	++	malt extract / reference	0	0
Stropharia rugosoannulata	14	sweetish, fruity, synthetic	++	++	sweetish, synthetic, apple, acidic, pungent	++	++
Laetiporus portentosus	16	tropical-fruity, coconut, sweetish, peach	++	++	spicy, meaty	0	++
Laetiporus persicinus	4	tropical-fruity, peach, sweetish, passionfruit, coconut	++	++	malt extract / reference	0	0
Laetiporus montanus	4	tropical-fruity, peach, sweetish, passionfruit	++	++	malt extract / reference	0	0

Table S3. Regression curves and regression coefficient R^2 of standard additions (n=2).

compound	regression curve	R^2
2-nonanone (**8**)	y_a = 2,175,936x + 3,372,866	0.9760
	y_b = 2,096,828x + 3,122,653	0.9735
(*R*)-linalool (**13**)	y_a = 465,456x + 77,391,310	0.9049
	y_b = 430,021x + 70,375,071	0.9299
methyl benzoate (**14**)	y_a = 8,880,587x + 3,192,385	0.9367
	y_b = 7,991,627x + 3,744,818	0.9779
1-phenylethyl acetate (**15**)	y_a = 3,703,927x + 2,839,751	0.9700
	y_b = 4,329,011x + 2,521,606	0.9505
2-phenylethanol (**22**)	y_a = 161,268x + 30,968,045	0.9583
	y_b = 148,911x + 28,838,160	0.9414
5-butyl-2(5H)-furanone (**24**)	y_a = 1,906x + 618,208	0.9827
	y_b = 1,718x + 637,004	0.9739
(*E*)-nerolidol (**27**)	y_a = 1,166,129x + 43,599,755	0.9757
	y_b = 862,180x + 40,851,867	0.9419

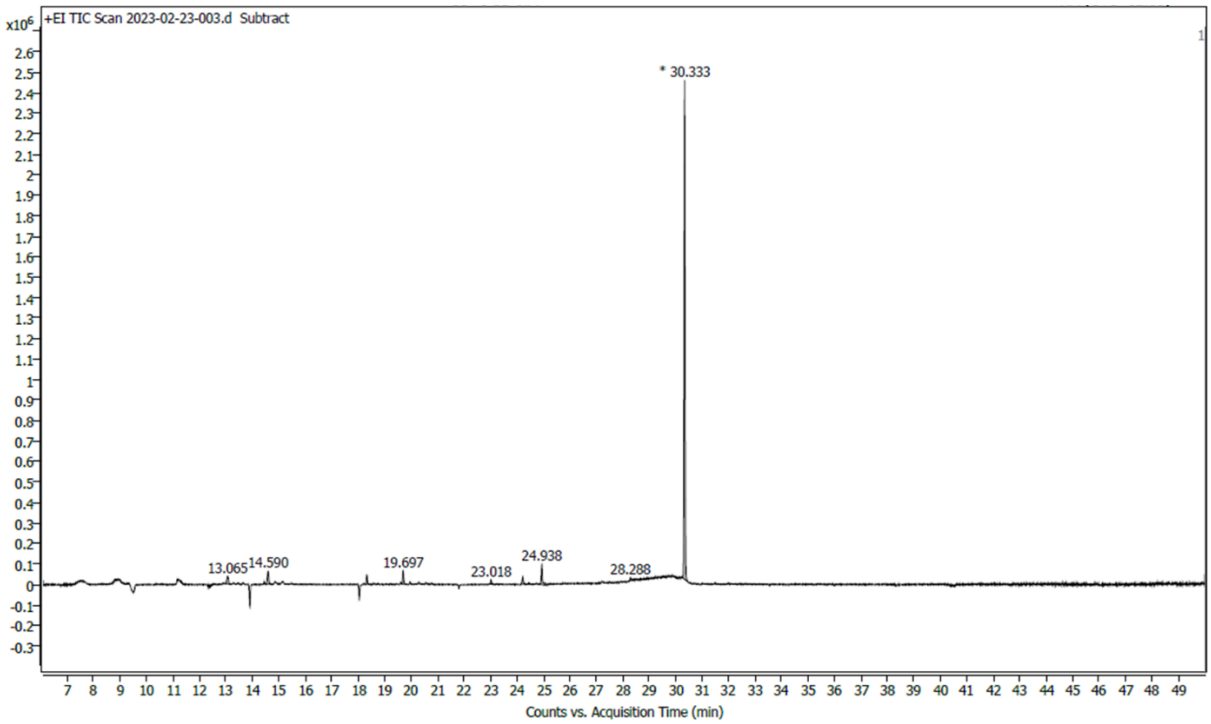

Figure S1. Chromatogram for determination of the chromatographic purity of 5-butyl-2(*5H*)-furanone (30.333 min), minus blank measurement of the solvent. Purity = 76%.

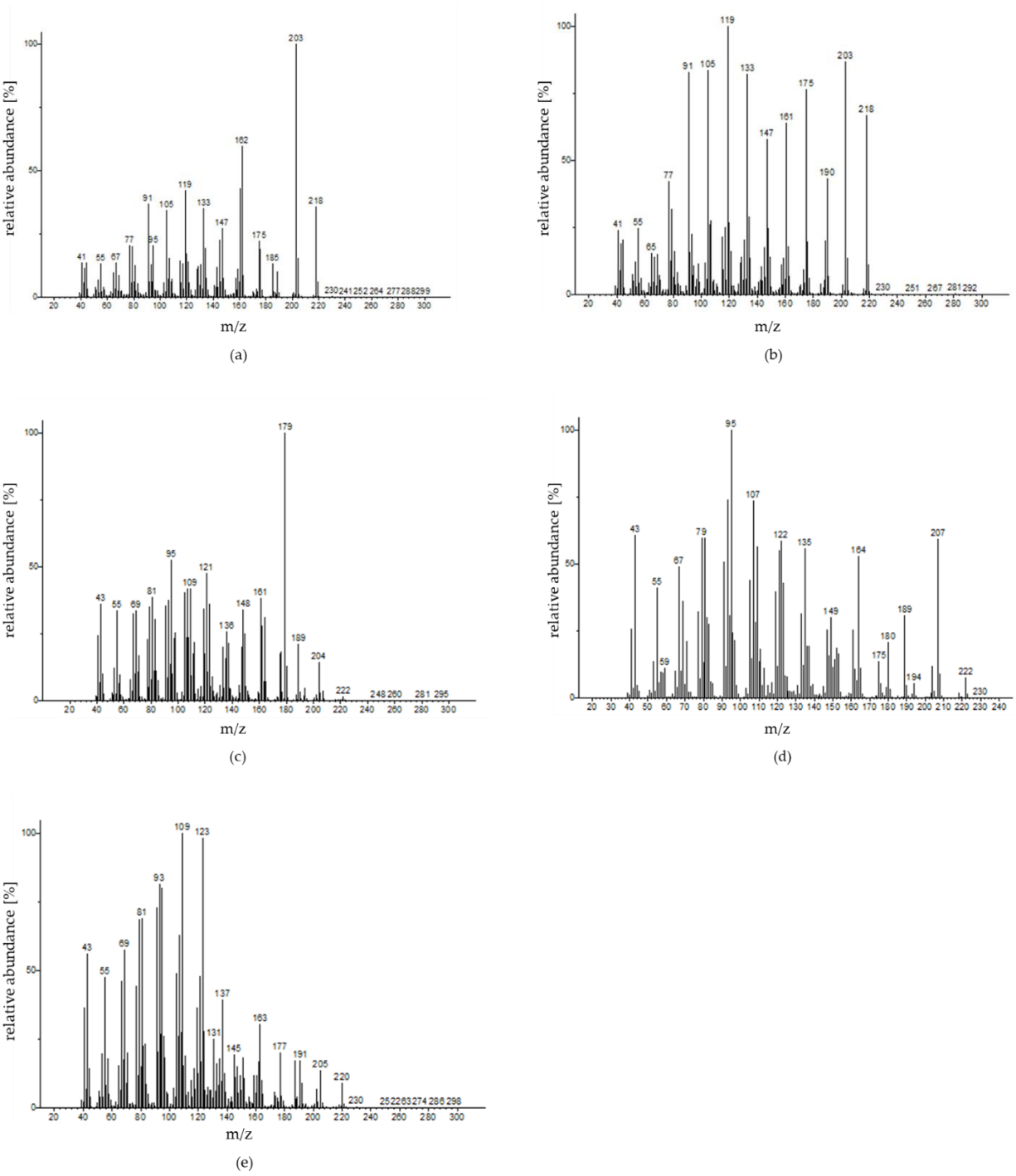

Figure S2. Mass spectra of **18** (a), **21** (b), **23** (c), **25** (d) and **26** (e).