

Support materials

The chemical composition characteristics and health risk assessment of cooking fume condensates from residential kitchens in different regions of China

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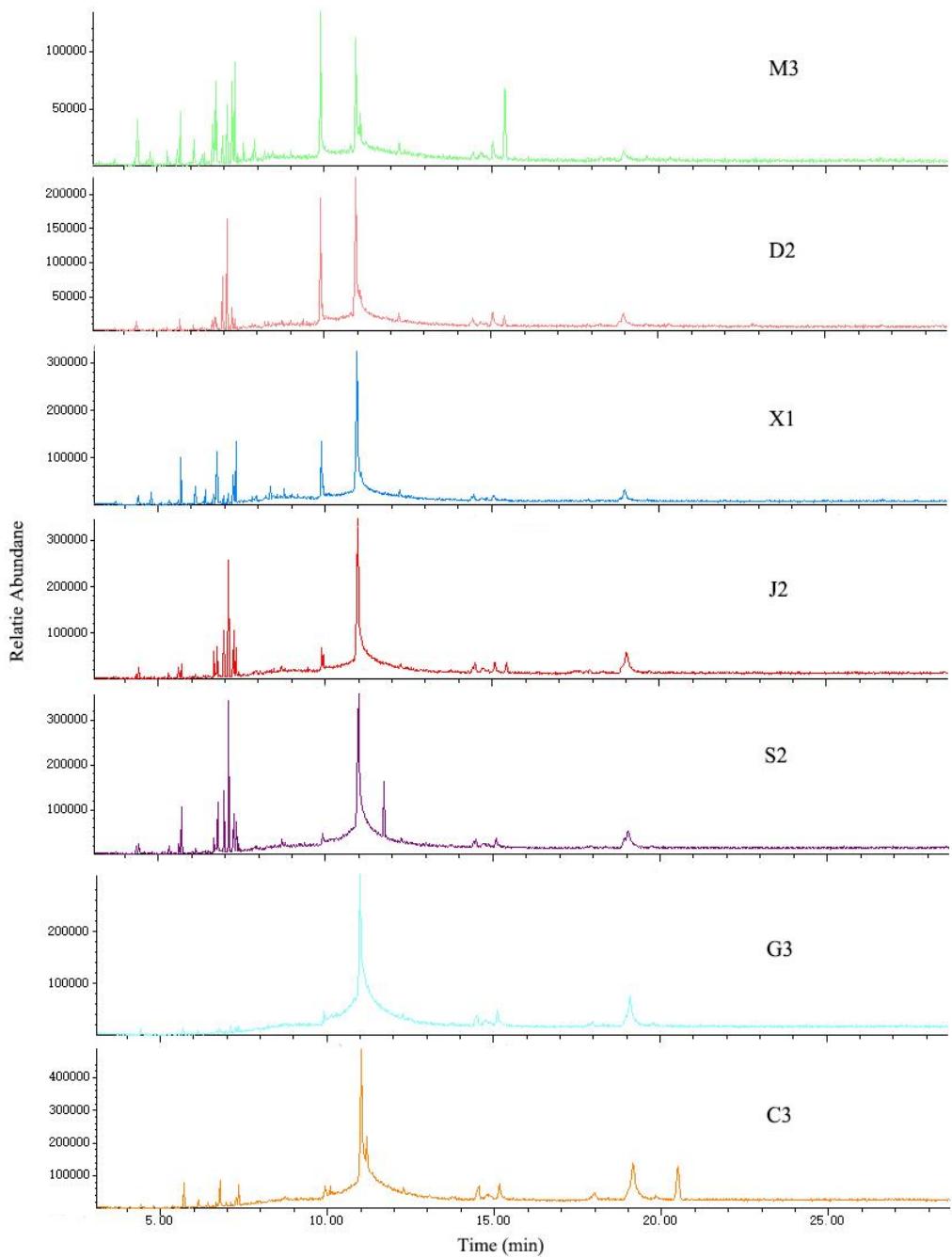


Figure S1. TIC spectra of the representing samples from seven regions. The sampling site is M-region, representative city is Fuzhou (M3); the sampling site is D-region, representative city is Changchun (D2); the sampling site is X-region, representative city is Lanzhou (X1); the sampling site is J-region, representative city is Tianjin (J2); the sampling site is S-region, representative city is Shanghai (S2); the sampling site is G-region, representative city is Guiyang (G3); the sampling site is C-region, representative city is Chengdu (C3).

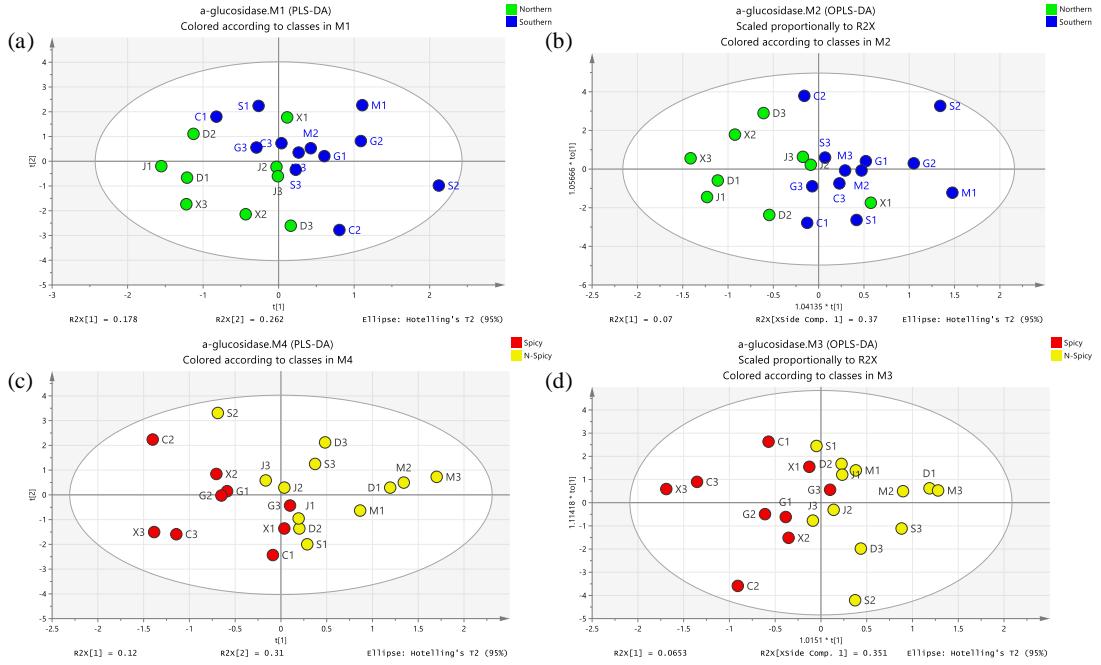


Figure S2. Statistical analysis of the influence of COF condensates in different regions on α -glucosidase activity. PLS-DA analysis of northern and southern (a), OPLS-DA analysis of northern and southern (b), PLS-DA analysis of spicy regions and non-spicy regions (c) and OPLS-DA analysis of spicy regions and non-spicy regions (d).

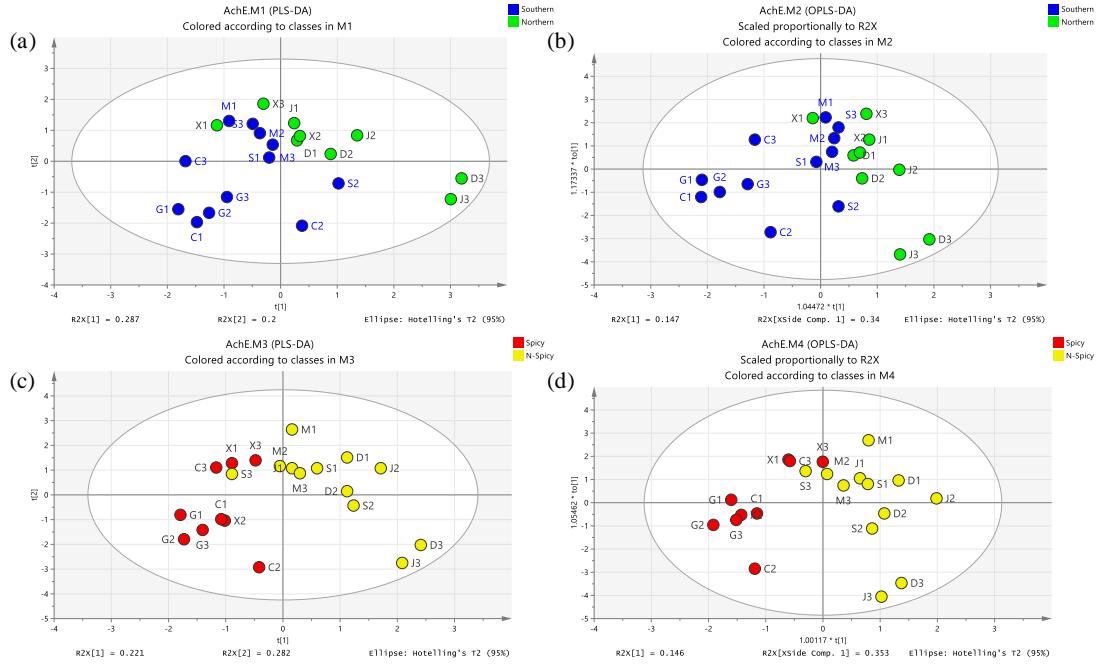


Figure S3. Statistical analysis of the influence of COF condensates in different regions on AchE activity. PLS-DA analysis of northern and southern (a), OPLS-DA analysis of northern and southern (b), PLS-DA analysis of spicy regions and non-spicy regions (c) and OPLS-DA analysis of spicy regions and non-spicy regions (d).

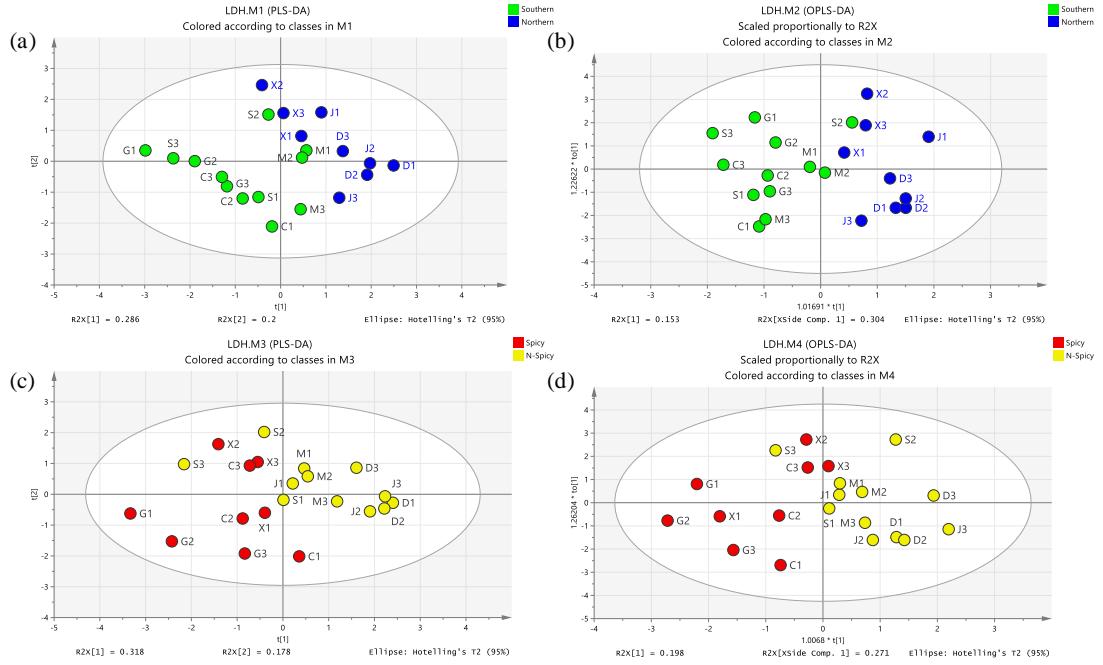


Figure S4. Statistical analysis of the influence of COF condensates in different regions on LDH activity. PLS-DA analysis of northern and southern (a), OPLS-DA analysis of northern and southern (b), PLS-DA analysis of spicy regions and non-spicy regions (c) and OPLS-DA analysis of spicy regions and non-spicy regions (d).

Table S1 Saturated VOCs detected from oil fume condensates in seven regions.

SCA	SALK	SE
Tridecanoic acid	Oxirane, hexyl-	Tributyl acetylcitrate
Tetradecanoic acid	Oxirane, 2-butyl-3-methyl-, cis-	Oxiraneundecanoic acid, 3-pentyl-, methyl ester, trans-
Pentanoic acid, 3-methyl-	Hexacosyl nonyl ether	Octadecanoic acid, 2,3-dihydroxypropyl ester
Pentadecanoic acid	Docosane, 7-butyl-	Hexadecanoic acid, ethyl ester
Octanoic acid	Cycloicosane	Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester
Octadecanoic acid	Cyclodecane	Heptadecanoic acid, heptadecyl ester
Nonanoic acid	Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-, [1R-(1.alpha.,2.alpha.,5.alpha.)]-	Glycidyl palmitate
n-Hexadecanoic acid		Butyric acid, 2-pentadecyl ester
Hexanoic acid	13-Oxabicyclo[10.1.0]tridecane	SALC
Heptanoic acid	1,2-15,16-Diepoxyhexadecane	Decanal
Heptadecanoic acid	SA	Cyclohexanol, 3-methyl-
Dodecanal	Octanal	1,15-Pentadecanediol
Azelaic acid	Nonanal	Ethanol, 2-(2-butoxyethoxy)-
15-Hydroxypentadecanoic acid	D-erythro-Pentose, 2-deoxy-	Behenic alcohol
12-Hydroxydodecanoic acid	Octadecanal	

Table S2 Unsaturated VOCs detected from oil fume condensates in seven regions.

USA	USCA	USE
Oxalic acid, allyl dodecyl ester	Z-8-Methyl-9-tetradecenoic acid	Z-(13,14-Epoxy)tetradec-11-en-1-ol acetate
cis-9-Hexadecenal	Z-7-Tetradecenoic acid	Undec-10-ynoic acid, undecyl ester
cis-11-Hexadecenal	Undecylenic acid	Undec-10-ynoic acid, tetradecyl ester
cis,cis-7,10,-Hexadecadienal	trans-Traumatic acid	Undec-10-ynoic acid, dodecyl ester
9-Tetradecenal, (Z)-	trans-13-Octadecenoic acid	trans-9-Octadecenoic acid, pentyl ester
9-Octadecenal, (Z)-	Palmitoleic acid	Pentanoic acid, 10-undecenyl ester
9-Octadecenal	Oleic Acid	Oxalic acid, cyclobutyl hexadecyl ester
9,17-Octadecadienal, (Z)-	Linoelaidic acid	n-Propyl 11-octadecenoate
9,12-Octadecadienal	E-9-Tetradecenoic acid	Methyl 7,8-octadecadienoate
9(E),11(E)-Conjugated linoleic acid	E,E-10,12-Hexadecadien-1-ol acetate	Glycidyl palmitoleate
8-Hexadecenal, 14-methyl-, (Z)-	Cyclopentaneundecanoic acid	Glycidyl (Z)-9-Heptadecenoate
7-Hexadecenal, (Z)-	cis-Vaccenic acid	Glycerol 1-palmitate
2-Undecenal, E-	cis-7-Hexadecenoic acid	Glutaric acid, tridec-2-yn-1-yl dec-4-enyl ester
2-Undecenal	cis-13-Octadecenoic acid	Decanoic acid, silver(1+) salt
2-Tridecenal, (E)-	9-Oxononanoic acid	Carbonic acid, decyl vinyl ester
2-Octenal, (E)-	9-Octadecenoic acid	9-Octadecenoic acid (Z)-, methyl ester
2-Nonenal, (E)-	9-Hexadecenoic acid	9-Octadecenoic acid (Z)-, 2-hydroxyethyl ester
2-Heptenal, (Z)-	9-Eicosenoic acid, (Z)-	9-Octadecenoic acid (Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester
2-Dodecenal, (E)-	9,12-Octadecadienoic acid (Z,Z)-	9-Octadecenoic acid (Z)-, 2,3-dihydroxypropyl ester
2-Dodecenal	2-Octenoic acid	9,12-Octadecadienoic acid (Z,Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester
2-Decenal, (Z)-	2-Nonynoic acid	1-cis-Vaccenoylglycerol
2-Decenal, (E)-	2-Dodecenoic acid	1,1-Dodecanediol, diacetate
2,4-Nonadienal, (E,E)-	17-Octadecynoic acid	USALC
2,4-Dodecadienal, (E,E)-	OF	Z,Z-3,13-Octadecadien-1-ol
2,4-Decadienal, (E,Z)-	E,Z-1,3,12-Nonadecatriene	Z,E-3,13-Octadecadien-1-ol
2,4-Decadienal, (E,E)-	Cyclodecene	E-2-Octadecadecen-1-ol
2,4-Decadienal	8-Heptadecene	9,12-Octadecadien-1-ol, (Z,Z)-

13-Tetradecenal	7-Tetradecenal, (Z)-	6,9,12-Octadecatrien-1-ol
13-Octadecenal, (Z)-		2-Methyl-Z,Z-3,13-octadecadienol
		12-Methyl-E,E-2,13-octadecadien-1-ol

Table S3 Heterocyclic compounds, halides, and benzene series detected from oil fume condensates in seven regions.

HCC	HGC	BS
Stevioside	Trichloroacetic acid, undec-2-enyl ester	Phthalic acid, isobutyl octadecyl ester
Oxalic acid, cyclohexylmethyl octyl ester	Trichloroacetic acid, undec-10-enyl ester	Phthalic acid, ethyl tetradecyl ester
Oxacyclohexadecan-2-one	Oleyl alcohol, trifluoroacetate	Phthalic acid, butyl undecyl ester
Furan, 2-pentyl-	Oleyl alcohol, chlorodifluoroacetate	Phthalic acid, 5-methylhex-2-yl heptadecyl ester
D-chiro-Inositol,*	Octanoic acid, silver(1+) salt	Estra-1,3,5(10)-trien-17.beta.-ol
Cyclododecanone, 2-methylene-	Carbonic acid, 2,2,2-trichloroethyl undec-10-enyl ester	Bis(2-ethylhexyl) phthalate
cis-Dihydrocarvone	Acetic acid, trifluoro-, dodecyl ester	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
9-Oxabicyclo[6.1.0]nonane, cis-	9,12-Octadecadienoyl chloride, (Z,Z)-	1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
9-Methylbicyclo[3.3.1]nonane	7-Heptadecene, 1-chloro-	1,2-Benzenedicarboxylic acid, monononyl ester
9-Borabicyclo[3.3.1]nonane, 9-hydroxy-	6-Methyl-2-heptanol, trifluoroacetate	
8-Oxabicyclo[5.1.0]octane	4-Chloro-3-n-hexyltetrahydropyran	
4-Cyclononen-1-one	2- Chloropropionic acid, hexadecyl ester	
2H-Pyran, 3,4-dihydro-	(Z)-Tetradec-11-en-1-yl 2,2,2-trifluoroacetate	
2,5,6-Trimethyl-1,3-oxathiane	(E)-Tetradec-11-en-1-yl 2,2,3,3,4,4,4-heptafluorobutanoate	
2(1H)-Naphthalenone, octahydro-, trans-	(E)-tetradec-11-en-1-yl 2,2,3,3,3-pentafluoropropionate	

1,6-Cyclodecadiene		
.alpha.-D-Mannopyranoside, methyl 3,6-anhydro-		

Table S4 Same compounds in the Northern and Southern.

Species (numbers)	Chemical	Molecular weight	Chemical formula
SALC	Decanal	156	C ₁₀ H ₂₀ O
SA	Octanal	128	C ₈ H ₁₆ O
SA	Nonanal	142	C ₉ H ₁₈ O
SCA	Hexanoic acid	116	C ₆ H ₁₂ O ₂
SCA	Octanoic acid	144	C ₈ H ₁₆ O ₂
SCA	Nonanoic acid	158	C ₉ H ₁₈ O ₂
SCA	n-Hexadecanoic acid	256	C ₁₆ H ₃₂ O ₂
SCA	15-Hydroxypentadecanoic acid	258	C ₁₅ H ₃₀ O ₃
SCA	Octadecanoic acid	284	C ₁₈ H ₃₆ O ₂
SCA	Azelaic acid	188	C ₉ H ₁₆ O ₄
SCA	Tetradecanoic acid	228	C ₁₄ H ₂₈ O ₂
SCA	12-Hydroxydodecanoic acid	216	C ₁₂ H ₂₄ O ₃
SALK	Cycloelcosane	280	C ₂₀ H ₄₀
SE	Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	330	C ₁₉ H ₃₈ O ₄
BS	Bis(2-ethylhexyl) phthalate	390	C ₂₄ H ₃₈ O ₄
USALC	2-Methyl-Z,Z-3,13-octadecadienol	280	C ₁₉ H ₃₆ O
USALC	12-Methyl-E,E-2,13-octadecadien-1-ol	280	C ₁₉ H ₃₆ O
USA	9,12-Octadecadienal	264	C ₁₈ H ₃₂ O
USA	2-Heptenal, (Z)-	112	C ₇ H ₁₂ O
USA	2-Decenal, (E)-	154	C ₁₀ H ₁₈ O
USA	2,4-Decadienal, (E,Z)-	152	C ₁₀ H ₁₆ O
USA	2,4-Decadienal, (E,E)-	152	C ₁₀ H ₁₆ O
USA	9-Octadecenal	266	C ₁₈ H ₃₄ O
USA	13-Tetradecenal	210	C ₁₄ H ₂₆ O
USA	9,17-Octadecadienal, (Z)-	264	C ₁₈ H ₃₂ O
USA	2-Decenal, (Z)-	154	C ₁₀ H ₁₈ O
USA	13-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O
USA	7-Hexadecenal, (Z)-	238	C ₁₆ H ₃₀ O
USA	cis-9-Hexadecenal	238	C ₁₆ H ₃₀ O
USA	9-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O
USA	2-Undecenal	168	C ₁₁ H ₂₀ O
USA	8-Hexadecenal, 14-methyl-, (Z)-	252	C ₁₇ H ₃₂ O
USA	2-Dodecenal	182	C ₁₂ H ₂₂ O
USA	cis-11-Hexadecenal	238	C ₁₆ H ₃₀ O
USCA	Oleic Acid	282	C ₁₈ H ₃₄ O ₂

USCA	9,12-Octadecadienoic acid (Z,Z)-	280	C ₁₈ H ₃₂ O ₂
USCA	Cyclopropaneoctanal, 2-octyl-	280	C ₁₉ H ₃₆ O
USCA	cis-Vaccenic acid	282	C ₁₈ H ₃₄ O ₂
USCA	Palmitoleic acid	254	C ₁₆ H ₃₀ O ₂
USCA	9-Eicosenoic acid, (Z)-	310	C ₂₀ H ₃₈ O ₂
USCA	9-Octadecenoic acid (Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	356	C ₂₁ H ₄₀ O ₄
USCA	trans-13-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂
USCA	E-9-Tetradecenoic acid	226	C ₁₄ H ₂₆ O ₂
USCA	Undecylenic acid	184	C ₁₁ H ₂₀ O ₂
USCA	9-Oxononanoic acid	172	C ₉ H ₁₆ O ₃
USCA	cis-7-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂
USCA	9-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂
USE	Glycidyl (Z)-9-Heptadecenoate	324	C ₂₀ H ₃₆ O ₃
USE	9,12-Octadecadienoic acid (Z,Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	354	C ₂₁ H ₃₈ O ₄
USE	9-Octadecenoic acid (Z)-, 2-hydroxyethyl ester	326	C ₂₀ H ₃₈ O ₃
USE	1-cis-Vaccenoylglycerol	356	C ₂₁ H ₄₀ O ₄
USE	Undec-10-ynoic acid, undecyl ester	336	C ₂₂ H ₄₀ O ₂
USE	9-Octadecenoic acid (Z)-, 2,3-dihydroxypropyl ester	356	C ₂₁ H ₄₀ O ₄
USE	9-Octadecenoic acid (Z)-, methyl ester	296	C ₁₉ H ₃₆ O ₂
USE	Glycerol 1-palmitate	330	C ₁₉ H ₃₈ O ₄
HGC	9,12-Octadecadienoyl chloride, (Z,Z)-	298	C ₁₈ H ₃₁ ClO
HGC	Oleyl alcohol, chlorodifluoroacetate	380	C ₂₀ H ₃₅ ClF ₂ O ₂
HCC	9-Oxabicyclo[6.1.0]nonane	126	C ₈ H ₁₄ O
HCC	9-Oxabicyclo[6.1.0]nonane, cis-	126	C ₈ H ₁₄ O

Table S5 Different compounds in Northern (N) and Southern (S).

Species	Chemical	Molecular weight	Chemical formula	Region
SALC	Cyclohexanol, 3-methyl-	114	C ₇ H ₁₄ O	N
SALC	1,15-Pentadecanediol	244	C ₁₅ H ₃₂ O ₂	N
SALC	Ethanol, 2-(2-butoxyethoxy)-	162	C ₈ H ₁₈ O ₃	N
SALC	Behenic alcohol	326	C ₂₂ H ₄₆ O	S
SA	D-erythro-Pentose, 2-deoxy-	134	C ₅ H ₁₀ O ₄	N
SA	Octadecanal	268	C ₁₈ H ₃₆ O	S
SCA	Pentanoic acid, 3-methyl-	116	C ₆ H ₁₂ O ₂	S
SCA	Heptanoic acid	130	C ₇ H ₁₄ O ₂	S
SCA	Heptadecanoic acid	270	C ₁₇ H ₃₄ O ₂	S
SCA	Tridecanoic acid	214	C ₁₃ H ₂₆ O ₂	S
SCA	Pentadecanoic acid	242	C ₁₅ H ₃₀ O ₂	N
SCA	Dodecanal	184	C ₁₂ H ₂₄ O	N
SALK	Oxirane, hexyl-	128	C ₈ H ₁₆ O	S
SALK	13-Oxabicyclo[10.1.0]tridecane	182	C ₁₂ H ₂₂ O	S
SALK	Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-, [1R-(1.alpha.,2.alpha.,5.alpha.)]-	138	C ₁₀ H ₁₈	S
SALK	Cyclodecane	140	C ₁₀ H ₂₀	N
SALK	Hexacosyl nonyl ether	509	C ₃₅ H ₇₂ O	N
SALK	Oxirane, 2-butyl-3-methyl-, cis-	114	C ₇ H ₁₄ O	N
SALK	Docosane, 7-butyl-	366	C ₂₆ H ₅₄	N
SALK	1,2-15,16-Diepoxyhexadecane	254	C ₁₆ H ₃₀ O ₂	N
SE	Tributyl acetylcitrate	402	C ₂₀ H ₃₄ O ₈	S
SE	Glycidyl palmitate	312	C ₁₉ H ₃₆ O ₃	S
SE	Octadecanoic acid, 2,3-dihydroxypropyl ester	358	C ₂₁ H ₄₂ O ₄	S
SE	Hexadecanoic acid, ethyl ester	284	C ₁₈ H ₃₆ O ₂	S
SE	Oxiraneundecanoic acid, 3-pentyl-, methyl ester, trans-	312	C ₁₉ H ₃₆ O ₃	S
SE	Heptadecanoic acid, heptadecyl ester	509	C ₃₄ H ₆₈ O ₂	N
SE	Butyric acid, 2-pentadecyl ester	298	C ₁₉ H ₃₈ O ₂	N
BS	Estra-1,3,5(10)-trien-17.beta.-ol	256	C ₁₈ H ₂₄ O	S
BS	1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	390	C ₂₄ H ₃₈ O ₄	S
BS	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	390	C ₂₄ H ₃₈ O ₄	S
BS	1,2-Benzenedicarboxylic acid, monononyl ester	292	C ₁₇ H ₂₄ O ₄	N
BS	1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	278	C ₁₆ H ₂₂ O ₄	N
BS	Phthalic acid, butyl undecyl ester	376	C ₂₃ H ₃₆ O ₄	N
BS	Phthalic acid, 5-methylhex-2-yl heptadecyl ester	502	C ₃₂ H ₅₄ O ₄	N
BS	Phthalic acid, ethyl tetradecyl ester	390	C ₂₄ H ₃₈ O ₄	N
BS	Phthalic acid, isobutyl octadecyl ester	474	C ₃₀ H ₅₀ O ₄	N

USALC	E-2-Octadecadecen-1-ol	268	C ₁₈ H ₃₆ O	S
USALC	9,12-Octadecadien-1-ol, (Z,Z)-	266	C ₁₈ H ₃₄ O	S
USALC	Z,Z-3,13-Octadecadien-1-ol	266	C ₁₈ H ₃₄ O	S
USALC	Z,E-3,13-Octadecadien-1-ol	266	C ₁₈ H ₃₄ O	S
USALC	6,9,12-Octadecatrien-1-ol	264	C ₁₈ H ₃₂ O	N
USALC	9(E),11(E)-Conjugated linoleic acid	280	C ₁₈ H ₃₂ O ₂	S
USALC	2,4-Nonadienal, (E,E)-	138	C ₉ H ₁₄ O	S
USALC	2-Tridecenal, (E)-	196	C ₁₃ H ₂₄ O	S
USALC	cis,cis-7,10,-Hexadecadienal	236	C ₁₆ H ₂₈ O	S
USALC	2-Nonenal, (E)-	140	C ₉ H ₁₆ O	S
USALC	2,4-Decadienal	152	C ₁₀ H ₁₆ O	S
USALC	2-Octenal, (E)-	126	C ₈ H ₁₄ O	S
USALC	2,4-Dodecadienal, (E,E)-	180	C ₁₂ H ₂₀ O	S
USALC	9-Tetradecenal, (Z)-	210	C ₁₄ H ₂₆ O	S
USALC	2-Dodecenal, (E)-	182	C ₁₂ H ₂₂ O	N
USALC	2-Undecenal, E-	168	C ₁₁ H ₂₀ O	N
USALC	Oxalic acid, allyl dodecyl ester	298	C ₁₇ H ₃₀ O ₄	N
USCA	Linoelaidic acid	280	C ₁₈ H ₃₂ O ₂	S
USCA	17-Octadecynoic acid	280	C ₁₈ H ₃₂ O ₂	S
USCA	Cyclopentaneundecanoic acid	254	C ₁₆ H ₃₀ O ₂	S
USCA	2-Octenoic acid	142	C ₈ H ₁₄ O ₂	S
USCA	E,E-10,12-Hexadecadien-1-ol acetate	280	C ₁₈ H ₃₂ O ₂	S
USCA	2-Dodecenoic acid	198	C ₁₂ H ₂₂ O ₂	S
USCA	9-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂	S
USCA	trans-Traumatic acid	228	C ₁₂ H ₂₀ O ₄	S
USCA	Z-7-Tetradecenoic acid	226	C ₁₄ H ₂₆ O ₂	S
USCA	Z-8-Methyl-9-tetradecenoic acid	240	C ₁₅ H ₂₈ O ₂	S
USCA	cis-13-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂	S
USCA	2-Nonynoic acid	154	C ₉ H ₁₄ O ₂	N
USE	Undec-10-ynoic acid, dodecyl ester	350	C ₂₃ H ₄₂ O ₂	S
USE	Glutaric acid, tridec-2-yn-1-yl dec-4-enyl ester	448	C ₂₈ H ₄₈ O ₄	S
USE	Decanoic acid, silver(1+) salt	278	C ₁₀ H ₁₉ AgO ₂	S
USA	Pentanoic acid, 10-undecenyl ester	254	C ₁₆ H ₃₀ O ₂	S
USA	Oxalic acid, cyclobutyl hexadecyl ester	368	C ₂₂ H ₄₀ O ₄	S
USA	1,1-Dodecanediol, diacetate	286	C ₁₆ H ₃₀ O ₄	N
USA	Glycidyl palmitoleate	310	C ₁₉ H ₃₄ O ₃	N
USA	n-Propyl 11-octadecenoate	324	C ₂₁ H ₄₀ O ₂	N
USA	Carbonic acid, decyl vinyl ester	228	C ₁₃ H ₂₄ O ₃	N
USA	Undec-10-ynoic acid, tetradecyl ester	378	C ₂₅ H ₄₆ O ₂	N
USA	Z-(13,14-Epoxy)tetradec-11-en-1-ol acetate	268	C ₁₆ H ₂₈ O ₃	N
USA	trans-9-Octadecenoic acid, pentyl ester	352	C ₂₃ H ₄₄ O ₂	N

USA	Methyl 7,8-octadecadienoate	294	C ₁₉ H ₃₄ O ₂	N
HGC	Oleyl alcohol, trifluoroacetate	364	C ₂₀ H ₃₅ F ₃ O ₂	S
HGC	Trichloroacetic acid, undec-2-enyl ester	314	C ₁₃ H ₂₁ Cl ₃ O ₂	S
HGC	Trichloroacetic acid, undec-10-enyl ester	314	C ₁₃ H ₂₁ Cl ₃ O ₂	S
HGC	Carbonic acid, 2,2,2-trichloroethyl undec-10-enyl ester	344	C ₁₄ H ₂₃ Cl ₃ O ₃	S
HGC	(Z)-Tetradec-11-en-1-yl 2,2,2-trifluoroacetate	308	C ₁₆ H ₂₇ F ₃ O ₂	S
HGC	Acetic acid, trifluoro-, dodecyl ester	282	C ₁₄ H ₂₅ F ₃ O ₂	S
HGC	(E)-tetradec-11-en-1-yl 2,2,3,3,3-pentafluoropropionate	358	C ₁₇ H ₂₇ F ₅ O ₂	S
HGC	6-Methyl-2-heptanol, trifluoroacetate	226	C ₁₀ H ₁₇ F ₃ O ₂	N
HGC	Octanoic acid, silver(1+) salt	250	C ₈ H ₁₅ AgO ₂	N
HGC	4-Chloro-3-n-hexyltetrahydropyran	204	C ₁₁ H ₂₁ ClO	N
HGC	(E)-Tetradec-11-en-1-yl 2,2,3,3,4,4,4-heptafluorobutanoate	408	C ₁₈ H ₂₇ F ₇ O ₂	N
HGC	2- Chloropropionic acid, hexadecyl ester	332	C ₁₉ H ₃₇ ClO ₂	N
HGC	7-Heptadecene, 1-chloro-	272	C ₁₇ H ₃₃ Cl	N
OF	8-Heptadecene	238	C ₁₇ H ₃₄	S
OF	Cyclodecene	138	C ₁₀ H ₁₈	S
OF	1-Hexene, 4,5-dimethyl-	112	C ₈ H ₁₆	S
OF	7-Tetradecenal, (Z)-	210	C ₁₄ H ₂₆ O	S
OF	1-Heptadecene	238	C ₁₇ H ₃₄	S
OF	1-Eicosene	280	C ₂₀ H ₄₀	S
OF	E,Z-1,3,12-Nonadecatriene	262	C ₁₉ H ₃₄	N
OF	4-Tetradecene, (Z)-	196	C ₁₄ H ₂₈	N
HCC	.alpha.-D-Mannopyranoside, methyl 3,6-anhydro-	176	C ₇ H ₁₂ O ₅	S
HCC	2(1H)-Naphthalenone, octahydro-, trans-	152	C ₁₀ H ₁₆ O	S
HCC	Oxalic acid, cyclohexylmethyl octyl ester	298	C ₁₇ H ₃₀ O ₄	S
HCC	Stevioside	804	C ₃₈ H ₆₀ O ₁₈	S
HCC	2,5,6-Trimethyl-1,3-oxathiane	146	C ₇ H ₁₄ OS	S
HCC	2H-Pyran, 3,4-dihydro-	84	C ₅ H ₈ O	S
HCC	4-Cyclononen-1-one	138	C ₉ H ₁₄ O	S
HCC	9-Methylbicyclo[3.3.1]nonane	138	C ₁₀ H ₁₈	S
HCC	Furan, 2-pentyl-	138	C ₉ H ₁₄ O	S
HCC	8-Oxabicyclo[5.1.0]octane	112	C ₇ H ₁₂ O	S
HCC	Cyclododecanone, 2-methylene-	194	C ₁₃ H ₂₂ O	S
HCC	cis-Dihydrocarvone	152	C ₁₀ H ₁₆ O	S
HCC	D-chiro-Inositol, 3-O-(2-amino-4-((carboxyiminomethyl)amino)-2,3,4,6-tetraideoxy-.alpha.-D-arabino-hexopyranosyl)-	379	C ₁₄ H ₂₅ N ₃ O ₉	N
HCC	9-Borabicyclo[3.3.1]nonane, 9-hydroxy-	138	C ₈ H ₁₅ BO	N
HCC	Oxacyclohexadecan-2-one	240	C ₁₅ H ₂₈ O ₂	N

HCC	1,6-Cyclodecadiene	136	C ₁₀ H ₁₆	N
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Table S6 Relative Content of Compounds in Northern and Southern Regions.

Region	site	SCA	SA	SE	USCA	USA	USE	USALC	BS	SALK	HGC	HCC	OF	SALC
Northeast	D1	7.05%	0.00%	5.04%	34.50%	8.94%	5.34%	0.00%	3.19%	0.74%	0.00%	0.00%	0.00%	0.58%
Northeast	D2	17.09%	0.00%	0.00%	32.42%	17.69%	0.07%	0.00%	3.31%	0.00%	0.00%	1.02%	0.00%	0.00%
Northeast	D3	7.09%	0.00%	0.00%	4.60%	2.28%	12.75%	34.28%	3.77%	0.25%	0.00%	0.00%	0.00%	0.00%
Northwest	X1	10.51%	5.92%	0.05%	39.04%	13.79%	2.62%	0.14%	1.52%	0.79%	2.36%	0.00%	0.00%	0.00%
Northwest	X2	18.64%	1.18%	2.52%	57.89%	1.08%	8.89%	0.00%	0.00%	0.04%	1.24%	0.00%	0.00%	0.00%
Northwest	X3	20.74%	1.26%	0.00%	45.05%	6.55%	5.16%	0.08%	0.00%	1.20%	0.13%	0.04%	0.00%	0.02%
North China	J1	4.37%	0.00%	0.00%	1.37%	8.49%	6.98%	46.47%	0.00%	0.00%	0.04%	0.32%	0.14%	1.09%
North China	J2	4.01%	0.38%	2.79%	39.21%	17.47%	12.34%	0.06%	1.08%	0.00%	0.41%	1.02%	0.24%	0.00%
North China	J3	3.73%	0.00%	0.00%	0.20%	74.31%	13.36%	0.06%	0.00%	0.06%	0.09%	1.10%	0.00%	0.00%
Southeast	M1	35.04%	0.14%	11.50%	28.89%	0.00%	9.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Southeast	M2	47.27%	0.69%	0.00%	19.85%	1.38%	0.00%	0.00%	1.39%	0.00%	0.00%	0.63%	0.00%	0.00%
Southeast	M3	17.36%	3.01%	2.72%	16.86%	9.89%	0.00%	0.00%	9.73%	0.00%	0.00%	0.14%	0.00%	0.00%
Southeast	S1	18.86%	0.24%	0.00%	60.75%	0.16%	2.89%	0.00%	0.00%	0.00%	0.23%	0.66%	0.00%	0.00%
Southeast	S2	1.73%	3.84%	8.99%	39.96%	23.10%	0.66%	2.66%	0.00%	0.17%	0.31%	0.48%	0.94%	0.00%
Southeast	S3	7.22%	3.03%	0.00%	2.84%	54.29%	0.20%	0.12%	0.00%	0.00%	0.00%	1.57%	5.83%	0.37%
Southwest	G1	14.73%	0.22%	0.00%	82.85%	0.25%	0.12%	1.49%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
Southwest	G2	5.13%	0.15%	6.90%	59.92%	12.71%	0.00%	0.20%	0.00%	0.00%	4.26%	0.94%	0.00%	0.00%
Southwest	G3	9.18%	0.09%	0.00%	54.03%	15.18%	0.16%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.55%
Southwest	C1	9.21%	3.97%	0.00%	42.10%	12.65%	0.63%	0.12%	5.01%	0.98%	0.69%	0.15%	0.00%	0.00%
Southwest	C2	5.71%	0.04%	0.04%	66.92%	2.16%	11.03%	0.19%	0.00%	0.19%	0.05%	0.33%	0.14%	0.00%
Southwest	C3	4.73%	2.32%	5.63%	43.85%	16.38%	0.39%	0.08%	11.70%	0.00%	0.00%	4.04%	0.06%	0.00%

Table S7 The same compounds in southeast (M-region+S-region) and southwest (C-region + G-region).

Species	Chemical	Molecular weight	Chemical formula
SA	Octanal	128	C ₈ H ₁₆ O
SA	Nonanal	142	C ₉ H ₁₈ O
SCA	Hexanoic acid	116	C ₆ H ₁₂ O ₂
SCA	Octanoic acid	144	C ₈ H ₁₆ O ₂
SCA	Nonanoic acid	158	C ₉ H ₁₈ O ₂
SCA	n-Hexadecanoic acid	256	C ₁₆ H ₃₂ O ₂
SCA	Heptanoic acid	130	C ₇ H ₁₄ O ₂
SCA	Azelaic acid	188	C ₉ H ₁₆ O ₄
SCA	Tetradecanoic acid	228	C ₁₄ H ₂₈ O ₂
SE	Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	330	C ₁₉ H ₃₈ O ₄
BS	Bis(2-ethylhexyl) phthalate	390	C ₂₄ H ₃₈ O ₄
USALC	E-2-Octadecadien-1-ol	268	C ₁₈ H ₃₆ O
USALC	2-Methyl-Z,Z-3,13-octadecadienol	280	C ₁₉ H ₃₆ O
USA	9,12-Octadecadienal	264	C ₁₈ H ₃₂ O
USA	9(E),11(E)-Conjugated linoleic acid	280	C ₁₈ H ₃₂ O ₂
USA	2,4-Decadienal, (E,Z)-	152	C ₁₀ H ₁₆ O
USA	2,4-Decadienal, (E,E)-	152	C ₁₀ H ₁₆ O
USA	2-Tridecenal, (E)-	196	C ₁₃ H ₂₄ O
USA	9-Octadecenal	266	C ₁₈ H ₃₄ O
USA	9,17-Octadecadienal, (Z)-	264	C ₁₈ H ₃₂ O
USA	13-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O
USA	cis-9-Hexadecenal	238	C ₁₆ H ₃₀ O
USA	9-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O
USCA	Oleic Acid	282	C ₁₈ H ₃₄ O ₂
USCA	9,12-Octadecadienoic acid (Z,Z)-	280	C ₁₈ H ₃₂ O ₂
USCA	Linoelaidic acid	280	C ₁₈ H ₃₂ O ₂
USCA	Cyclopropaneoctanal, 2-octyl-	280	C ₁₉ H ₃₆ O
USCA	17-Octadecynoic acid	280	C ₁₈ H ₃₂ O ₂
USCA	cis-Vaccenic acid	282	C ₁₈ H ₃₄ O ₂
USCA	Palmitoleic acid	254	C ₁₆ H ₃₀ O ₂
USCA	Cyclopentaneundecanoic acid	254	C ₁₆ H ₃₀ O ₂
USCA	9-Eicosenoic acid, (Z)-	310	C ₂₀ H ₃₈ O ₂

USCA	9-Octadecenoic acid (Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	356	C ₂₁ H ₄₀ O ₄
USCA	trans-13-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂
USE	Glycidyl (Z)-9-Heptadecenoate	324	C ₂₀ H ₃₆ O ₃
USE	9-Octadecenoic acid (Z)-, 2-hydroxyethyl ester	326	C ₂₀ H ₃₈ O ₃
USE	Undec-10-ynoic acid, undecyl ester	336	C ₂₂ H ₄₀ O ₂
USE	Undec-10-ynoic acid, dodecyl ester	350	C ₂₃ H ₄₂ O ₂
HGC	9,12-Octadecadienoyl chloride, (Z,Z)-	298	C ₁₈ H ₃₁ ClO
HGC	Oleyl alcohol, chlorodifluoroacetate	380	C ₂₀ H ₃₅ ClF ₂ O ₂
HGC	Trichloroacetic acid, undec-10-enyl ester	314	C ₁₃ H ₂₁ Cl ₃ O ₂
HCC	.alpha.-D-Mannopyranoside, methyl 3,6-anhydro-	176	C ₇ H ₁₂ O ₅
HCC	9-Oxabicyclo[6.1.0]nonane	126	C ₈ H ₁₄ O
HCC	9-Oxabicyclo[6.1.0]nonane, cis-	126	C ₈ H ₁₄ O
HCC	Stevioside	804	C ₃₈ H ₆₀ O ₁₈

Table S8 The different compounds in southeast (M-region+S-region) and southwest (C-region + G-region).

Species	Chemical	Molecular weight	Chemical formula	Region
SALC	Decanal	156	C ₁₀ H ₂₀ O	sE
SALC	Behenic alcohol	326	C ₂₂ H ₄₆ O	sW
SA	D-erythro-Pentose, 2-deoxy-	134	C ₅ H ₁₀ O ₄	sE
SA	Octadecanal	268	C ₁₈ H ₃₆ O	sW
SCA	Pentanoic acid, 3-methyl-	116	C ₆ H ₁₂ O ₂	sE
SCA	15-Hydroxypentadecanoic acid	258	C ₁₅ H ₃₀ O ₃	sE
SCA	Octadecanoic acid	284	C ₁₈ H ₃₆ O ₂	sE
SCA	Heptadecanoic acid	270	C ₁₇ H ₃₄ O ₂	sE
SCA	12-Hydroxydodecanoic acid	216	C ₁₂ H ₂₄ O ₃	sW
SCA	Tridecanoic acid	214	C ₁₃ H ₂₆ O ₂	sW
SALK	Oxirane, hexyl-	128	C ₈ H ₁₆ O	sE
SALK	13-Oxabicyclo[10.1.0]tridecane	182	C ₁₂ H ₂₂ O	sE
SALK	Cycloelicosane	280	C ₂₀ H ₄₀	sW
SALK	Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-, [1R-(1.alpha.,2.alpha.,5.alpha.)]-	138	C ₁₀ H ₁₈	sW
SE	Tributyl acetylcitrate	402	C ₂₀ H ₃₄ O ₈	sE
SE	Glycidyl palmitate	312	C ₁₉ H ₃₆ O ₃	sE
SE	Octadecanoic acid, 2,3-dihydroxypropyl ester	358	C ₂₁ H ₄₂ O ₄	sE
SE	Hexadecanoic acid, ethyl ester	284	C ₁₈ H ₃₆ O ₂	sW
SE	Oxiraneundecanoic acid, 3-pentyl-, methyl ester, trans-	312	C ₁₉ H ₃₆ O ₃	sW
BS	Estra-1,3,5(10)-trien-17.beta.-ol	256	C ₁₈ H ₂₄ O	sE
BS	1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	390	C ₂₄ H ₃₈ O ₄	sE
BS	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	390	C ₂₄ H ₃₈ O ₄	sW
USALC	9,12-Octadecadien-1-ol, (Z,Z)-	266	C ₁₈ H ₃₄ O	sE
USALC	12-Methyl-E,E-2,13-octadecadien-1-ol	280	C ₁₉ H ₃₆ O	sW
USALC	Z,Z-3,13-Octadecadien-1-ol	266	C ₁₈ H ₃₄ O	sW
USALC	Z,E-3,13-Octadecadien-1-ol	266	C ₁₈ H ₃₄ O	sW
USA	2-Heptenal, (Z)-	112	C ₇ H ₁₂ O	sE
USA	2,4-Nonadienal, (E,E)-	138	C ₉ H ₁₄ O	sE
USA	2-Decenal, (E)-	154	C ₁₀ H ₁₈ O	sE
USA	13-Tetradecenal	210	C ₁₄ H ₂₆ O	sE
USA	cis,cis-7,10,-Hexadecadienal	236	C ₁₆ H ₂₈ O	sE
USA	2-Decenal, (Z)-	154	C ₁₀ H ₁₈ O	sE

USA	7-Hexadecenal, (Z)-	238	C ₁₆ H ₃₀ O	sE
USA	2-Nonenal, (E)-	140	C ₉ H ₁₆ O	sE
USA	2,4-Decadienal	152	C ₁₀ H ₁₆ O	sE
USA	2-Undecenal	168	C ₁₁ H ₂₀ O	sE
USA	8-Hexadecenal, 14-methyl-, (Z)-	252	C ₁₇ H ₃₂ O	sW
USA	2-Dodecenal	182	C ₁₂ H ₂₂ O	sW
USA	cis-11-Hexadecenal	238	C ₁₆ H ₃₀ O	sW
USA	2-Octenal, (E)-	126	C ₈ H ₁₄ O	sW
USA	2,4-Dodecadienal, (E,E)-	180	C ₁₂ H ₂₀ O	sW
USA	9-Tetradecenal, (Z)-	210	C ₁₄ H ₂₆ O	sW
USCA	2-Octenoic acid	142	C ₈ H ₁₄ O ₂	sE
USCA	E,E-10,12-Hexadecadien-1-ol acetate	280	C ₁₈ H ₃₂ O ₂	sE
USCA	2-Dodecanoic acid	198	C ₁₂ H ₂₂ O ₂	sE
USCA	E-9-Tetradecenoic acid	226	C ₁₄ H ₂₆ O ₂	sW
USCA	Undecylenic acid	184	C ₁₁ H ₂₀ O ₂	sW
USCA	9-Oxononanoic acid	172	C ₉ H ₁₆ O ₃	sW
USCA	cis-7-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂	sW
USCA	9-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂	sW
USCA	9-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂	sW
USCA	trans-Traumatic acid	228	C ₁₂ H ₂₀ O ₄	sW
USCA	Z-7-Tetradecenoic acid	226	C ₁₄ H ₂₆ O ₂	sW
USCA	Z-8-Methyl-9-tetradecenoic acid	240	C ₁₅ H ₂₈ O ₂	sW
USCA	cis-13-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂	sW
USE	9,12-Octadecadienoic acid (Z,Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	354	C ₂₁ H ₃₈ O ₄	sE
USE	1-cis-Vaccenoylglycerol	356	C ₂₁ H ₄₀ O ₄	sE
USE	Glutaric acid, tridec-2-yn-1-yl dec-4-enyl ester	448	C ₂₈ H ₄₈ O ₄	sE
USE	9-Octadecenoic acid (Z)-, 2,3-dihydroxypropyl ester	356	C ₂₁ H ₄₀ O ₄	sW
USE	9-Octadecenoic acid (Z)-, methyl ester	296	C ₁₉ H ₃₆ O ₂	sW
USE	Glycerol 1-palmitate	330	C ₁₉ H ₃₈ O ₄	sW
USE	Decanoic acid, silver(1+) salt	278	C ₁₀ H ₁₉ AgO ₂	sW
USE	Pentanoic acid, 10-undecenyl ester	254	C ₁₆ H ₃₀ O ₂	sW
USE	Oxalic acid, cyclobutyl hexadecyl ester	368	C ₂₂ H ₄₀ O ₄	sW
HGC	Oleyl alcohol, trifluoroacetate	364	C ₂₀ H ₃₅ F ₃ O ₂	sE
HGC	Trichloroacetic acid, undec-2-enyl ester	314	C ₁₃ H ₂₁ Cl ₃ O ₂	sE
HGC	Carbonic acid, 2,2,2-trichloroethyl undec-10-enyl ester	344	C ₁₄ H ₂₃ Cl ₃ O ₃	sE
HGC	(Z)-Tetradec-11-en-1-yl 2,2,2-trifluoroacetate	308	C ₁₆ H ₂₇ F ₃ O ₂	sE

HGC	Acetic acid, trifluoro-, dodecyl ester	282	C ₁₄ H ₂₅ F ₃ O ₂	sW
HGC	(E)-tetradec-11-en-1-yl 2,2,3,3,3-pentafluoropropionate	358	C ₁₇ H ₂₇ F ₅ O ₂	sW
OF	8-Heptadecene	238	C ₁₇ H ₃₄	sE
OF	Cyclodecene	138	C ₁₀ H ₁₈	sE
OF	1-Hexene, 4,5-dimethyl-	112	C ₈ H ₁₆	sE
OF	7-Tetradecenal, (Z)-	210	C ₁₄ H ₂₆ O	sE
OF	1-Heptadecene	238	C ₁₇ H ₃₄	sW
OF	1-Eicosene	280	C ₂₀ H ₄₀	sW
HCC	2(1H)-Naphthalenone, octahydro-, trans-	152	C ₁₀ H ₁₆ O	sE
HCC	Oxalic acid, cyclohexylmethyl octyl ester	298	C ₁₇ H ₃₀ O ₄	sE
HCC	2,5,6-Trimethyl-1,3-oxathiane	146	C ₇ H ₁₄ OS	sE
HCC	2H-Pyran, 3,4-dihydro-	84	C ₅ H ₈ O	sE
HCC	4-Cyclononen-1-one	138	C ₉ H ₁₄ O	sE
HCC	9-Methylbicyclo[3.3.1]nonane	138	C ₁₀ H ₁₈	sE
HCC	Furan, 2-pentyl-	138	C ₉ H ₁₄ O	sE
HCC	8-Oxabicyclo[5.1.0]octane	112	C ₇ H ₁₂ O	sW
HCC	Cyclododecanone, 2-methylene-	194	C ₁₃ H ₂₂ O	sW
HCC	cis-Dihydrocarvone	152	C ₁₀ H ₁₆ O	sW

"sW ", Southwest; "sE ", Southeast.

Table S9 Compounds in Northern.

	Species	Chemical	Molecular weight	D	X	J
SAL C	Decanal	156	C ₁₀ H ₂₀ O		✓	
SAL C	Cyclohexanol, 3-methyl-	114	C ₇ H ₁₄ O	✓		
SAL C	1,15-Pentadecanediol	244	C ₁₅ H ₃₂ O ₂		✓	
SAL C	Ethanol, 2-(2-butoxyethoxy)-	162	C ₈ H ₁₈ O ₃			✓
SA	Octanal	128	C ₈ H ₁₆ O		✓	
SA	Nonanal	142	C ₉ H ₁₈ O		✓	
SA	D-erythro-Pentose, 2-deoxy-	134	C ₅ H ₁₀ O ₄			✓
SCA	Hexanoic acid	116	C ₆ H ₁₂ O ₂	✓	✓	✓
SCA	Octanoic acid	144	C ₈ H ₁₆ O ₂	✓	✓	
SCA	Nonanoic acid	158	C ₉ H ₁₈ O ₂		✓	
SCA	n-Hexadecanoic acid	256	C ₁₆ H ₃₂ O ₂	✓	✓	✓
SCA	15-Hydroxypentadecanoic acid	258	C ₁₅ H ₃₀ O ₃	✓	✓	
SCA	Octadecanoic acid	284	C ₁₈ H ₃₆ O ₂	✓	✓	
SCA	Azelaic acid	188	C ₉ H ₁₆ O ₄		✓	
SCA	Tetradecanoic acid	228	C ₁₄ H ₂₈ O ₂		✓	
SCA	12-Hydroxydodecanoic acid	216	C ₁₂ H ₂₄ O ₃	✓	✓	
SCA	Pentadecanoic acid	242	C ₁₅ H ₃₀ O ₂		✓	

SCA	Dodecanal	184	C ₁₂ H ₂₄ O		✓	
SAL K	Cyclodecane	140	C ₁₀ H ₂₀	✓		
SAL K	Hexacosyl nonyl ether	509	C ₃₅ H ₇₂ O	✓		
SAL K	Oxirane, 2-butyl-3-methyl-, cis-	114	C ₇ H ₁₄ O		✓	
SAL K	Docosane, 7-butyl-	366	C ₂₆ H ₅₄		✓	
SAL K	Cycloelicosane	280	C ₂₀ H ₄₀		✓	
SAL K	1,2-15,16-Diepoxyhexadecane	254	C ₁₆ H ₃₀ O ₂			✓
SE	Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	330	C ₁₉ H ₃₈ O ₄	✓	✓	✓
SE	Heptadecanoic acid, heptadecyl ester	509	C ₃₄ H ₆₈ O ₂		✓	
SE	Butyric acid, 2-pentadecyl ester	298	C ₁₉ H ₃₈ O ₂			✓
BS	Bis(2-ethylhexyl) phthalate	390	C ₂₄ H ₃₈ O ₄	✓		
BS	1,2-Benzenedicarboxylic acid, monononyl ester	292	C ₁₇ H ₂₄ O ₄	✓		
BS	1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	278	C ₁₆ H ₂₂ O ₄	✓		
BS	Phthalic acid, butyl undecyl ester	376	C ₂₃ H ₃₆ O ₄	✓		
BS	Phthalic acid, 5-methylhex-2-yl heptadecyl ester	502	C ₃₂ H ₅₄ O ₄	✓		
BS	Phthalic acid, ethyl tetradecyl ester	390	C ₂₄ H ₃₈ O ₄		✓	
BS	Phthalic acid, isobutyl octadecyl ester	474	C ₃₀ H ₅₀ O ₄			✓
USA	2-Methyl-Z,Z-3,13-octadecadienol	280	C ₁₉ H ₃₆ O	✓	✓	✓

LC						
USA LC	12-Methyl-E,E-2,13-octadecadien-1-ol	280	C ₁₉ H ₃₆ O		✓	
USA LC	6,9,12-Octadecatrien-1-ol	264	C ₁₈ H ₃₂ O			✓
USA	9,12-Octadecadienal	264	C ₁₈ H ₃₂ O	✓	✓	✓
USA	2-Heptenal, (Z)-	112	C ₇ H ₁₂ O	✓		
USA	2-Decenal, (E)-	154	C ₁₀ H ₁₈ O		✓	✓
USA	2,4-Decadienal, (E,Z)-	152	C ₁₀ H ₁₆ O	✓	✓	✓
USA	2,4-Decadienal, (E,E)-	152	C ₁₀ H ₁₆ O	✓	✓	✓
USA	9-Octadecenal	266	C ₁₈ H ₃₄ O		✓	
USA	13-Tetradecenal	210	C ₁₄ H ₂₆ O			✓
USA	9,17-Octadecadienal, (Z)-	264	C ₁₈ H ₃₂ O		✓	✓
USA	2-Decenal, (Z)-	154	C ₁₀ H ₁₈ O	✓	✓	
USA	13-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O	✓		✓
USA	7-Hexadecenal, (Z)-	238	C ₁₆ H ₃₀ O		✓	
USA	cis-9-Hexadecenal	238	C ₁₆ H ₃₀ O			✓
USA	9-Octadecenal, (Z)-	266	C ₁₈ H ₃₄ O		✓	✓
USA	2-Undecenal	168	C ₁₁ H ₂₀ O		✓	
USA	8-Hexadecenal, 14-methyl-, (Z)-	252	C ₁₇ H ₃₂ O	✓		
USA	2-Dodecenal, (E)-	182	C ₁₂ H ₂₂ O		✓	
USA	2-Dodecenal	182	C ₁₂ H ₂₂ O		✓	
USA	2-Undecenal, E-	168	C ₁₁ H ₂₀ O			✓
USA	Oxalic acid, allyl dodecyl ester	298	C ₁₇ H ₃₀ O ₄			✓

USA	cis-11-Hexadecenal	238	C ₁₆ H ₃₀ O			✓
USC A	Oleic Acid	282	C ₁₈ H ₃₄ O ₂	✓	✓	✓
USC A	9,12-Octadecadienoic acid (Z,Z)-	280	C ₁₈ H ₃₂ O ₂		✓	✓
USC A	Cyclopropaneoctanal, 2-octyl-	280	C ₁₉ H ₃₆ O			✓
USC A	cis-Vaccenic acid	282	C ₁₈ H ₃₄ O ₂		✓	
USC A	Palmitoleic acid	254	C ₁₆ H ₃₀ O ₂		✓	✓
USC A	9-Eicosenoic acid, (Z)-	310	C ₂₀ H ₃₈ O ₂		✓	✓
USC A	9-Octadecenoic acid (Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	356	C ₂₁ H ₄₀ O ₄	✓	✓	✓
USC A	trans-13-Octadecenoic acid	282	C ₁₈ H ₃₄ O ₂		✓	
USC A	E-9-Tetradecenoic acid	226	C ₁₄ H ₂₆ O ₂	✓		
USC A	Undecylenic acid	184	C ₁₁ H ₂₀ O ₂		✓	
USC A	9-Oxononanoic acid	172	C ₉ H ₁₆ O ₃		✓	
USC A	2-Nonynoic acid	154	C ₉ H ₁₄ O ₂		✓	

USC A	cis-7-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂			✓
USC A	9-Hexadecenoic acid	254	C ₁₆ H ₃₀ O ₂			✓
USE	Glycidyl (Z)-9-Heptadecenoate	324	C ₂₀ H ₃₆ O ₃		✓	✓
USE	9,12-Octadecadienoic acid (Z,Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	354	C ₂₁ H ₃₈ O ₄			✓
USE	9-Octadecenoic acid (Z)-, 2-hydroxyethyl ester	326	C ₂₀ H ₃₈ O ₃		✓	
USE	1-cis-Vaccenoylglycerol	356	C ₂₁ H ₄₀ O ₄		✓	✓
USE	Undec-10-ynoic acid, undecyl ester	336	C ₂₂ H ₄₀ O ₂		✓	✓
USE	9-Octadecenoic acid (Z)-, 2,3-dihydroxypropyl ester	356	C ₂₁ H ₄₀ O ₄	✓		✓
USE	1,1-Dodecanediol, diacetate	286	C ₁₆ H ₃₀ O ₄	✓		
USE	Glycidyl palmitoleate	310	C ₁₉ H ₃₄ O ₃	✓		✓
USE	n-Propyl 11-octadecenoate	324	C ₂₁ H ₄₀ O ₂	✓		
USE	Carbonic acid, decyl vinyl ester	228	C ₁₃ H ₂₄ O ₃	✓		
USE	Undec-10-ynoic acid, tetradecyl ester	378	C ₂₅ H ₄₆ O ₂	✓		
USE	9-Octadecenoic acid (Z)-, methyl ester	296	C ₁₉ H ₃₆ O ₂	✓		
USE	Z-(13,14-Epoxy)tetradec-11-en-1-ol acetate	268	C ₁₆ H ₂₈ O ₃	✓		✓
USE	Glycerol 1-palmitate	330	C ₁₉ H ₃₈ O ₄	✓		
USE	trans-9-Octadecenoic acid, pentyl ester	352	C ₂₃ H ₄₄ O ₂			✓
USE	Methyl 7,8-octadecadienoate	294	C ₁₉ H ₃₄ O ₂			✓
HGC	6-Methyl-2-heptanol, trifluoroacetate	226	C ₁₀ H ₁₇ F ₃ O ₂	✓		
HGC	9,12-Octadecadienoyl chloride, (Z,Z)-	298	C ₁₈ H ₃₁ ClO			✓
HGC	Oleyl alcohol, chlorodifluoroacetate	380	C ₂₀ H ₃₅ ClF ₂ O ₂			✓

HGC	Octanoic acid, silver(1+) salt	250	C ₈ H ₁₅ AgO ₂	✓	
HGC	4-Chloro-3-n-hexyltetrahydropyran	204	C ₁₁ H ₂₁ ClO	✓	
HGC	(E)-Tetradec-11-en-1-yl 2,2,3,3,4,4,4-heptafluorobutanoate	408	C ₁₈ H ₂₇ F ₇ O ₂	✓	
HGC	2- Chloropropionic acid, hexadecyl ester	332	C ₁₉ H ₃₇ ClO ₂		✓
HGC	7-Heptadecene, 1-chloro-	272	C ₁₇ H ₃₃ Cl		✓
OF	E,Z-1,3,12-Nonadecatriene	262	C ₁₉ H ₃₄		✓
OF	4-Tetradecene, (Z)-	196	C ₁₄ H ₂₈		✓
HCC	9-Oxabicyclo[6.1.0]nonane	126	C ₈ H ₁₄ O	✓	✓
HCC	9-Oxabicyclo[6.1.0]nonane, cis-	126	C ₈ H ₁₄ O		✓
HCC	D-chiro-Inositol, 3-O-(2-amino-4-((carboxyiminomethyl)amino)-2,3,4,6-tetraeoxy-.al pha.-D-arabino-hexopyranosyl)-	379	C ₁₄ H ₂₅ N ₃ O ₉	✓	
HCC	9-Borabicyclo[3.3.1]nonane, 9-hydroxy-	138	C ₈ H ₁₅ BO	✓	
HCC	Oxacyclohexadecan-2-one	240	C ₁₅ H ₂₈ O ₂		✓
HCC	1,6-Cyclodecadiene	136	C ₁₀ H ₁₆		✓

"D", D-region; "X", X-region; "J", J-region; "✓", Compound contained in COF of certain region.