Table S1 The Signal Values and Significant Differences of Five Volatile Components in VS-ADKs

Compound	FK	V0	V1	V2	V4	V6	V8	V10
Terpenes								
α-Pinene monomer	496.67±63.74 ^{c}	742.67±30.27 ^{a}	618.00±155.54 ^{abc}	601.00±34.60 ^{bc}	665.00±29.46 ^{ab}	645.00±40.85 ^{ab}	624.33±31.37 ^{abc}	559.67±53.21 ^{bc}
α-Pinene dimer	550.00±38.74 ^{c}	583.33±5.77 ^{b}	566.00±19.97 ^{bc}	634.00±12.29 ^{a}	656.67±9.02 ^{a}	662.67±4.51 ^{a}	665.67±7.77 ^{a}	653.33±7.51 ^{a}
α-Pinene polymer	760.33±13.32 ^{b}	678.00±37.69 ^{c}	736.00±79.90 ^{bc}	793.67±30.55 ^{ab}	765.33±38.59 ^{b}	789.67±21.73 ^{ab}	847.67±37.82 ^{a}	844.33±20.11 ^{a}
α-Pinene polymer	401.33±8.14 ^{cd}	343.67±14.74 ^{e}	387.00±52.51 ^{d}	430.67±15.18 ^{bcd}	417.67±21.50 ^{cd}	436.00±20.42 ^{bc}	466.00±21.93 ^{ab}	480.67±5.03 ^{a}
Limonene monomer	565.33±36.07 ^{b}	528.67±6.43 ^{b}	540.67±75.39 ^{b}	626.33±32.33 ^{a}	635.67±17.50 ^{a}	632.67±14.01 ^{a}	657.33±3.51 ^{a}	631.67±11.02 ^{a}
Limonene polymer	282.00±19.70 ^{ab}	315.00±21.93 ^{ab}	294.67±37.90 ^{ab}	295.00±69.28 ^{ab}	286.67±43.94 ^{ab}	286.67±43.82 ^{b}	330.00±27.62 ^{a}	291.67±39.93 ^{ab}
Limonene polymer	106.67±16.17 ^{d}	131.67±12.50 ^{c}	120.67±25.58 ^{cd}	142.67±8.14 ^{bc}	160.00±2.00 ^{ab}	155.67±6.66 ^{ab}	167.00±3.00 ^{a}	161.33±3.51 ^{ab}
Esters								
Ethyl acetate monomer	413.67±71.02 ^{c}	690.67±59.00 ^{a}	621.33±98.08 ^{ab}	575.00±68.94 ^{b}	566.67±44.77 ^{b}	611.33±38.14 ^{ab}	601.00±44.44 ^{ab}	506.67±20.65 ^{bc}
Ethyl acetate dimer	242.33±107.68 ^{d}	896.33±200.35 ^{bc}	846.67±369.44 ^{c}	753.00±161.69 ^{cd}	800.67±253.67 ^{c}	1080.00±269.51 ^{abc}	1417.67±323.62 ^{ab}	1607.33±494.55 ^{a}
Butyl acetate	19.67±1.53 ^{e}	77.33±4.93 ^{d}	79.33±4.51 ^{d}	86.00±4.00 ^{cd}	93.67±7.51 ^{bc}	114.33±6.81 ^{a}	116.67±8.33 ^{a}	100.33±6.81 ^{d}
3-Methylbutyl acetate monomer	59.33±29.30 ^{b}	150.33±57.06 ^{ab}	118.33±75.29 ^{ab}	212.67±6.43 ^{a}	162.00±66.70 ^{ab}	73.67±3.79 ^{ab}	136.33±59.68 ^{ab}	144.67±134.91 ^{ab}
3-Methylbutyl acetate dimer	15.00±2.00 ^{a}	26.00±12.00 ^{a}	24.00±14.93 ^{a}	23.33±2.08 ^{a}	25.67±4.51 ^{a}	15.33±1.15 ^{a}	19.00±8.54 ^{a}	25.33±3.21 ^{a}
Isoamyl hexanoate monomer	227.00±61.51 ^{ab}	179.67±35.22 ^{b}	262.67±50.50 ^{a}	280.00±60.63 ^{a}	232.33±30.44 ^{ab}	240.33±8.92 ^{ab}	249.33±48.95 ^{ab}	270.33±8.02 ^{a}
Isoamyl hexanoate dimer	31.33±15.63 ^{a}	21.00±7.81 ^{a}	40.33±17.67 ^{a}	46.00±26.00 ^{a}	32.00±5.29 ^{a}	32.67±4.04 ^{a}	35.00±14.80 ^{a}	39.00±3.61 ^{a}
Aldehydes								
Hexanal monomer	561.33±75.11 ^{bc}	656.00±15.10 ^{a}	633.67±47.61 ^{ab}	692.33±26.95 ^{a}	717.67±23.16 ^{a}	670.00±37.64 ^{a}	696.67±71.93 ^{a}	509.67±24.85 ^{c}
Hexanal dimer	476.00±201.17 ^{c}	786.00±99.51 ^{abc}	1062.67±46.80 ^{ab}	1213.67±276.33 ^{a}	1012.00±331.96 ^{ab}	657.33±188.62 ^{bc}	1217.33±379.75 ^{a}	440.33±88.49 ^{c}
Heptanal	127.33±34.53 ^{bc}	185.00±28.58 ^{ab}	202.00±26.96 ^{a}	187.67±14.64 ^{a}	162.33±28.22 ^{abc}	173.67±39.72 ^{ab}	178.33±45.83 ^{ab}	108.67±3.51 ^{c}
Pentanal monomer	37.67±15.31 ^{e}	447.33±10.97 ^{cd}	486.33±22.03 ^{abcd}	495.67±40.53 ^{abc}	534.33±28.22 ^{ab}	543.00±4.58 ^{a}	472.00±76.62 ^{bcd}	420.33±35.81 ^{d}
Pentanal dimer	13.33±2.52 ^{c}	1231.33±145.76 ^{a}	1025.67±200.89 ^{ab}	1018.67±108.86 ^{ab}	940.33±173.44 ^{ab}	869.00±224.46 ^{b}	911.67±168.52 ^{ab}	991.67±197.50 ^{ab}

Benzaldehyde monomer	50.00±8.66 [c]	99.33±20.21 [b]	116.00±8.72 [b]	104.67±14.01 [b]	99.33±7.51 [b]	234.67±32.33 [a]	223.67±29.02 [a]	206.00±26.00 [a]
Benzaldehyde dimer	11.67±1.53 [a]	13.00±2.00 [a]	14.67±1.53 [a]	13.33±0.58 [a]	11.00±2.65 [a]	11.00±2.64 [a]	13.67±3.79 [a]	13.33±1.15 [a]
n-Nonanal	76.00±19.67 [c]	104.33±16.77 [ab]	98.00±25.51 [ab]	119.33±7.09 [a]	75.67±10.41 [c]	89.67±15.63 [ab]	83.67±25.15 [ab]	80.00±21.93 [c]
Furfurol monomer	24.00±3.46 [d]	94.00±14.53 [c]	92.00±7.55 [c]	83.00±6.00 [c]	103.00±13.08 [c]	142.33±6.81 [b]	127.33±11.59 [b]	185.67±16.29 [a]
Furfurol dimer	12.67±1.53 [d]	18.00±1.73 [bc]	15.67±0.58 [cd]	13.67±3.06 [cd]	14.67±2.08 [cd]	20.33±3.21 [b]	17.67±0.58 [bc]	34.67±4.16 [a]
3-Methylbutanal dimer	36.33±8.02 [e]	63.67±17.62 [de]	79.33±2.31 [d]	91.33±9.71 [cd]	127.67±14.64 [bc]	145.00±14.53 [b]	194.33±52.73 [a]	157.67±18.88 [ab]
Ketones								
3-Pentanone monomer	687.33±25.42 [a]	47.67±9.02 [c]	57.67±16.56 [bc]	56.33±13.32 [bc]	79.00±16.00 [b]	51.00±12.53 [bc]	57.00±20.30 [bc]	40.67±2.89 [c]
3-Pentanone dimer	917.67±81.64 [a]	168.67±42.71 [bc]	260.00±25.24 [b]	266.00±69.16 [b]	210.00±103.18 [bc]	114.00±43.30 [c]	261.00±13.74 [b]	110.00±15.13 [c]
Dimethyl ketone	649.67±88.82 [f]	1390.33±108.65 [e]	1537.00±117.28 [e]	1871.67±162.81 [d]	2130.33±55.72 [c]	2337.00±53.25 [b]	2558.67±32.52 [a]	2675.33±38.48 [a]
2-Butanone dimer	20.67±4.51 [e]	63.67±4.73 [d]	65.00±18.08 [d]	77.67±13.20 [d]	111.00±5.29 [c]	130.67±2.89 [b]	185.67±8.08 [a]	176.67±15.14 [a]
Alcohols								
2-Hexen-1-ol monomer	342.33±82.56 [cd]	562.67±69.82 [a]	487.00±82.61 [abc]	504.33±9.50 [ab]	465.67±25.89 [abc]	367.67±30.92 [bcd]	225.67±44.00 [de]	188.00±39.23 [e]
2-Hexen-1-ol dimer	149.67±54.52 [ab]	272.33±84.76 [a]	224.33±95.14 [a]	266.33±56.90 [a]	197.00±19.00 [ab]	135.00±32.08 [ab]	45.33±19.09 [b]	42.67±10.02 [b]
Ethanol dimer	2283.67±79.00 [a]	1651.00±77.62 [b]	2265.67±102.91 [a]	2310.00±8.72 [a]	2057.00±256.73 [a]	2303.33±25.01 [a]	2025.33±286.64 [ab]	2261.67±19.60 [a]
α-Terpineol	17.00±3.00 [d]	48.67±13.61 [c]	71.67±11.24 [b]	78.00±9.54 [ab]	70.33±3.79 [b]	88.33±7.02 [a]	88.33±1.15 [a]	92.33±9.87 [a]
1-Pentanol	74.33±2.52 [a]	46.00±8.19 [c]	45.00±5.29 [c]	55.67±11.55 [abc]	58.67±12.90 [abc]	68.00±11.14 [ab]	51.67±7.37 [bc]	69.33±17.90 [ab]
Z-3-hexen-1-ol monomer	86.33±11.85 [a]	29.67±22.05 [b]	14.00±2.00 [b]	18.67±2.89 [b]	16.67±3.06 [b]	14.00±0.00 [b]	13.67±0.58 [b]	15.00±1.00 [b]
Z-3-hexen-1-ol dimer	112.33±37.58 [ab]	147.00±59.35 [ab]	110.00±58.13 [ab]	188.33±176.13 [a]	135.33±18.61 [ab]	98.67±30.99 [ab]	31.00±9.00 [b]	28.33±7.51 [b]
1-Hexanol	216.33±15.57 [a]	58.67±40.07 [b]	31.33±14.74 [bc]	29.67±6.43 [bc]	34.33±4.93 [bc]	35.33±4.16 [bc]	22.67±5.13 [c]	36.00±1.00 [bc]

Note: Different letters (a-e) indicate statistically significant differences between groups, $p < 0.05$.

Table S2 The Signal Values and Significant Differences of Five Volatile Components in AS-ADKs

Compound	FK	A0	A1	A2	A4	A6	A8	A10
Terpenes								
α-Pinene monomer	496.67±63.74 [b]	555.67±41.10 [ab]	599.33±62.00 [ab]	545.00±77.38 [ab]	573.33±35.80 [ab]	580.67±65.43 [ab]	659.00±14.73 [a]	500.67±115.34 [b]
α-Pinene dimer	550.00±38.74 [b]	649.00±6.00 [a]	640.00±2.65 [a]	629.33±39.12 [a]	648.67±6.66 [a]	649.00±8.00 [a]	658.00±2.00 [a]	639.67±16.62 [a]
α-Pinene polymer	760.33±13.32 [b]	810.33±26.39 [ab]	765.33±38.53 [b]	831.00±20.42 [a]	817.00±54.11 [ab]	846.00±8.89 [a]	781.00±54.44 [ab]	825.33±19.30 [ab]
α-Pinene polymer	401.33±8.14 [c]	446.00±18.03 [ab]	418.33±21.59 [bc]	467.67±4.93 [a]	459.67±34.31 [a]	468.33±10.97 [a]	429.67±30.89 [abc]	466.00±17.35 [a]
Limonene monomer	565.33±36.07 [b]	626.33±36.01 [a]	622.00±11.79 [a]	618.67±41.49 [a]	617.00±6.00 [a]	633.67±25.54 [a]	616.33±15.18 [a]	610.00±19.52 [ab]
Limonene polymer	282.00±19.70 [ab]	301.67±88.93 [ab]	280.33±24.58 [ab]	375.00±80.47 [a]	274.33±17.79 [ab]	292.33±93.36 [ab]	263.00±54.56 [ab]	251.00±59.73 [b]
Limonene polymer	106.67±16.17 [b]	157.00±7.81 [a]	152.67±4.93 [a]	157.00±14.93 [a]	161.00±3.00 [a]	160.00±10.15 [a]	162.67±7.02 [a]	159.00±2.00 [a]
Esters								
Ethyl acetate monomer	413.67±71.02 [c]	503.00±17.06 [bc]	464.33±62.01 [c]	679.00±66.05 [a]	611.33±70.51 [ab]	610.67±54.86 [ab]	528.00±150.12 [bc]	499.67±28.92 [bc]
Ethyl acetate dimer	242.33±107.68 [c]	383.33±9.61 [bc]	363.00±63.32 [bc]	1110.67±321.08 [ab]	858.67±142.68 [a]	978.00±291.36 [abc]	854.00±138.39 [abc]	770.67±206.78 [abc]
Butyl acetate	19.67±1.53 [d]	68.00±1.00 [c]	63.67±7.51 [c]	126.00±17.58 [a]	116.00±10.54 [ab]	118.00±1.00 [ab]	104.00±14.73 [b]	101.00±9.54 [b]
3-Methylbutyl acetatemonomer	59.33±29.30 [a]	144.67±134.91 [a]	129.33±57.74 [a]	101.67±68.06 [a]	79.00±35.37 [a]	153.00±75.62 [a]	141.00±79.27 [a]	215.67±24.03 [a]
3-Methylbutyl acetate dimer	15.00±2.00 [a]	34.33±4.04 [a]	20.67±11.59 [a]	20.33±14.57 [a]	14.67±3.06 [a]	28.00±15.72 [a]	21.67±0.58 [a]	80.33±8.08 [a]
Isoamyl hexanoate monomer	227.00±61.51 [a]	251.33±56.36 [a]	207.33±44.56 [a]	202.67±82.62 [a]	244.33±44.52 [a]	287.00±37.27 [a]	227.33±16.04 [a]	268.00±17.44 [a]
Isoamyl hexanoate dimer	31.33±15.63 [a]	36.33±15.53 [a]	26.00±8.54 [a]	27.33±17.04 [a]	36.00±15.72 [a]	45.67±16.20 [a]	28.67±6.81 [a]	41.33±6.43 [a]
Aldehydes								
Hexanal monomer	561.33±75.11 [a]	651.00±129.15 [a]	560.67±44.12 [a]	604.00±73.52 [a]	641.00±137.09 [a]	511.33±5.77 [a]	555.33±35.23 [a]	534.00±7.00 [a]
Hexanal dimer	476.00±201.17 [a]	511.00±403.17 [a]	259.00±61.94 [a]	320.33±75.04 [a]	471.33±342.94 [a]	229.67±18.15 [a]	279.33±27.15 [a]	285.00±31.76 [a]
Heptanal	127.33±34.53 [a]	127.00±22.11 [a]	110.67±8.50 [a]	122.00±9.17 [a]	136.00±6.93 [a]	130.00±6.56 [a]	129.33±17.90 [a]	118.67±6.66 [a]
Pentanal monomer	37.67±15.31 [c]	576.33±34.43 [ab]	584.33±17.79 [ab]	621.67±51.29 [a]	623.67±7.51 [a]	595.00±31.24 [ab]	609.33±33.50 [a]	547.67±23.76 [b]

Pentanal dimer	13.33±2.52 [d]	681.00±290.44 [c]	921.33±349.61 [bc]	1308±347.98 [ab]	1205±259.83 [ab]	1272±166.28 [ab]	1433.33±335.96 [a]	1494.33±162.86 [a]
Benzaldehyde monomer	50.00±8.66 [c]	180.67±95.52 [b]	99.67±9.29 [c]	716.33±51.81 [a]	709.67±3.06 [a]	740.00±18.52 [a]	703.67±26.50 [a]	673.67±27.30 [a]
Benzaldehyde dimer	11.67±1.53 [c]	15.00±6.24 [c]	11.67±3.06 [c]	330.67±65.31 [a]	299.33±1.53 [ab]	331.33±38.00 [a]	270.67±47.12 [ab]	257.00±41.58 [b]
n-Nonanal	76±19.67 [a]	61.67±26.50 [a]	76.00±17.35 [a]	72.00±58.97 [a]	58.33±18.61 [a]	77.33±39.11 [a]	77.67±18.45 [a]	65.00±20.07 [a]
Furfurol monomer	24.00±3.46 [e]	295.00±23.43 [c]	261.67±7.23 [d]	276.67±21.73 [cd]	283.00±12.49 [cd]	302.00±25.51 [c]	367.00±17.52 [b]	400.00±18.52 [a]
Furfurol dimer	12.67±1.53 [d]	78.33±14.84 [c]	64.33±14.98 [c]	57.00±8.89 [c]	64.67±7.23 [c]	73.67±11.85 [c]	104.00±8.89 [b]	145.33±17.01 [a]
3-Methylbutanal dimer	36.33±8.02 [d]	158.67±30.02 [bc]	144.33±26.03 [c]	163.00±12.17 [bc]	165.00±30.05 [bc]	173.33±8.96 [bc]	212.00±21.66 [a]	191.00±19.47 [ab]
Ketones								
3-Pentanone monomer	687.33±25.42 [a]	27.33±11.93 [b]	22.33±1.53 [b]	26.00±4.36 [b]	21.00±3.00 [b]	20.00±4.00 [b]	19.33±3.06 [b]	20.00±1.73 [b]
3-Pentanone dimer	917.67±81.64 [a]	95.33±61.78 [b]	88.67±13.58 [b]	82.33±3.79 [b]	70.67±24.42 [b]	72.33±5.03 [b]	75.67±18.82 [b]	68.67±10.50 [b]
Dimethyl ketone	649.67±88.82 [d]	2500.33±200.28 [bc]	2349.33±210.41 [c]	2602.67±106.10 [bc]	2577.00±123.84 [bc]	2900.67±143.39 [a]	2749.33±124.54 [ab]	2685.33±140.03 [ab]
2-Butanone dimer	20.67±4.51 [c]	116.67±12.01 [b]	144.67±37.54 [ab]	184.67±49.50 [a]	185.67±14.01 [a]	184.33±34.24 [a]	192.00±33.87 [a]	182.67±18.56 [a]
Alcohols								
2-Hexen-1-ol monomer	342.33±82.56 [a]	92.00±24.76 [b]	126.67±18.90 [b]	135.67±29.19 [b]	105.33±25.03 [b]	71.00±2.65 [b]	81.33±14.64 [b]	128.67±44.77 [b]
2-Hexen-1-ol dimer	149.67±54.52 [a]	13.33±3.21 [b]	17.33±1.53 [b]	21.00±8.19 [b]	16.67±4.62 [b]	13.33±2.52 [b]	15.00±3.61 [b]	22.00±7.94 [b]
Ethanol dimer	2283.67±79.00 [a]	596.67±126.46 [c]	1513.33±196.61 [abc]	1618.00±303.12 [abc]	1883.00±35.00 [ab]	942.67±43.00 [bc]	1729.33±142.58 [ab]	1636.33±177.71 [abc]
α-Terpineol	17.00±3.00 [c]	92.67±13.43 [b]	92.67±13.43 [b]	101.67±13.80 [ab]	105.33±5.13 [ab]	108.67±5.13 [ab]	91.67±3.06 [b]	120.00±19.00 [a]
1-Pentanol	74.33±2.52 [abc]	37.00±17.44 [c]	47.33±20.50 [bc]	84.67±37.75 [ab]	66.33±20.98 [abc]	74.33±8.96 [abc]	100.67±26.41 [a]	96.33±14.01 [a]
Z-3-hexen-1-ol monomer	86.33±11.85 [a]	12.67±0.58 [b]	14.33±2.08 [b]	15.00±2.65 [b]	13.67±2.52 [b]	14.33±2.31 [b]	13.00±1.00 [b]	15.33±2.52 [b]
Z-3-hexen-1-ol dimer	112.33±37.58 [a]	13.00±3.00 [b]	17.00±1.73 [b]	12.67±2.08 [b]	10.33±0.58 [b]	12.33±2.52 [b]	10.67±4.51 [b]	10.67±2.08 [b]
1-Hexanol	216.33±15.57 [a]	16.67±3.06 [b]	16.00±2.00 [b]	16.67±1.15 [b]	19.33±4.16 [b]	24.00±7.55 [b]	16.33±3.21 [b]	31.67±28.01 [b]

Note: Different letters (a-e) indicate statistically significant differences between groups, $p < 0.05$.