

Table S1. The minimum bactericidal concentrations of VOCs acting on *A. tumefaciens* C58 cells at biofilms formation

VOC	MBC		R ²	Equation
	g/m ³	μmol		
2-nonanone	28.63	20	—	exp
2-octanone	42.69	33.08	1	cal, $y = -7 \cdot 10^{-5} \cdot x^3 + 2,3 \cdot 10^{-3} \cdot x^2 - 29,4 \cdot 10^{-3} \cdot x + 1$
2-heptanone	114.92	100	—	exp
2-pentanone	873.27	1007.43	0.9922	cal, $y = -10^{-9} \cdot x^3 + 3 \cdot 10^{-6} \cdot x^2 - 2,7 \cdot 10^{-3} + 1$
2-butanone	n/c > 580.6	n/c > 800	n/c	n/c
2-undecanone	n/c > 685.6	n/c > 400	n/c	n/c
β-ionone	n/c > 1548.3	n/c > 800	n/c	n/c
isoamyl alcohol	177.43	200	0.9997	cal, $y = -10^{-5} \cdot x^2 - 2 \cdot 10^{-3} \cdot x + 1$
2-phenylethanol	491.78	400	—	exp
DMDS	142.19	150	—	exp
(+)-α-pinene	≥1535.85*	≥1120.20*	0.5761	cal, $y = -3 \cdot 10^{-9} \cdot x^3 + 4 \cdot 10^{-6} \cdot x^2 - 1,6 \cdot 10^{-3} \cdot x + 1$
(-)-limonene	n/a > 822.69	n/a > 600	—	—

n/c - Experimental data set about the change of CFUs depending on the concentration of VOC in the studied range of doses is not enough to build a reliable model equation for calculating predicted minimum bactericidal concentration (MBC).

exp – the value of MBC is determined experimentally

cal – the value of MBC is calculated using a model equation that is based on an experimental data set

R² - the coefficient of determination measures how well a statistical model (equation) based on experimental data set predicts an outcome.

* the predicted value of MBC may not be reliable enough because R² = 0.5761 suggests that only 57.6 % of the dependent variable (y - CFU) is predicted by the independent variable (x - concentration of VOC).

n/a – VOC does not affect bacterial survival over the dose range studied in this work, so a model equation for calculating the predicted MBC cannot be built.

Table S2. The minimum bactericidal concentrations of VOCs acting on *A. tumefaciens* Chry5 cells at biofilms formation

VOC	MBC		R ²	Equation
	g/m ³	μmol		
2-nonanone	35.79	25	0,963	cal, $-4,36x + 100$
2-octanone	43.23	33.50	0.9584	cal, $y = -5 \cdot 10^{-4} x^2 - 3 \cdot 10^{-3} x + 1$
2-heptanone	114.92	100	—	exp
2-pentanone	327.33	377.50	1	cal, $y = 10^{-6} x^2 - 3 \cdot 10^{-3} x + 1$
2-butanone	772.7	995.82	0.9395	cal, $y = -10^{-9} x^3 + 6 \cdot 10^{-7} x^2 - 6 \cdot 10^{-4} x + 1$
2-undecanone	n/c > 514.2	n/c > 300	n/c	n/c
β-ionone	1990.91	1028.71	0.9802	cal, $y = -6 \cdot 10^{-9} x^3 + 10^{-5} x^2 - 4,9 \cdot 10^{-3} x + 1$
isoamyl alcohol	174.48	196.68	0.948	cal, $y = -2 \cdot 10^{-5} x^2 - 1,1 \cdot 10^{-3} x + 1$
2-phenylethanol	n/c > 491.78	n/c > 400	n/c	n/c
DMDS	189.59	200	—	exp
(+)-α-pinene	≥ 1332.43*	≥ 971.83*	0.8591	cal, $y = -4 \cdot 10^{-9} x^3 + 5 \cdot 10^{-6} x^2 - 2,9 \cdot 10^{-3} x + 1$
(-)-limonene	1395.53	1017.78	0.9929	cal, $y = -5 \cdot 10^{-9} x^3 + 6 \cdot 10^{-6} x^2 - 1,9 \cdot 10^{-3} x + 1$

n/c - Experimental data set about the change of CFUs depending on the concentration of VOC in the studied range of dose is not enough to build a reliable model equation for calculating predicted minimum bactericidal concentration (MBC).

exp – the value of MBC is determined experimentally

cal – the value of MBC is calculated using a model equation that is based on an experimental data set

R² - the coefficient of determination measures how well a statistical model (equation) based on experimental data set predicts an outcome.

* the predicted value of MBC may not be reliable enough because R² = 0.8591 suggests that only 85.9 % of the dependent variable (CFU) is predicted by the independent variable (concentration of VOC).

Table S3. The minimum bactericidal concentrations of VOCs acting on *A. tumefaciens* C58 cells in mature biofilms

VOC	MBC		R ²	Equation
	g/m ³	μmol		
2-nonanone	71.58	50	—	exp
2-heptanone	344.76	300	—	exp
2-octanone	865.69	670.85	1	cal, $y = -3 \cdot 10^{-8} \cdot x^3 + 3 \cdot 10^{-5} \cdot x^2 - 8,1 \cdot 10^{-3} \cdot x + 1$
2-butanone	944.87	1301.96	0.943	cal, $y = -2 \cdot 10^{-7} \cdot x^2 - 5 \cdot 10^{-4} \cdot x + 1$
2-pentanone	1730.18	1995.98	0.9999	cal, $y = 10^{-9} \cdot x^3 + 3 \cdot 10^{-6} \cdot x^2 - 2,5 \cdot 10^{-3} + 1$
2-undecanone	n/c > 1028.4	n/c > 600	n/c	n/c
β-ionone	n/c > 1548.3	n/c > 800	n/c	n/c
isoamyl alcohol	n/c > 354.86	n/c > 400	n/c	n/c
2-phenylethanol	886.38	720.96	0.9843	cal, $y = -5 \cdot 10^{-9} \cdot x^3 + 6 \cdot 10^{-6} \cdot x^2 - 3,1 \cdot 10^{-3} + 1$
DMDS	379.18	400	—	exp
(–)-limonene	1046.71	763.38	0.999	cal, $y = -5 \cdot 10^{-9} \cdot x^3 + 5 \cdot 10^{-6} \cdot x^2 - 2,2 \cdot 10^{-3} + 1$
(+)-α-pinene	≥ 2213.4*	≥ 1614.38*	0.6386	cal, $y = -3 \cdot 10^{-10} \cdot x^3 + 6 \cdot 10^{-7} \cdot x^2 - 8 \cdot 10^{-4} + 1$

n/c - Experimental data set about the change of CFUs depending on the concentration of VOC in the studied range of dose is not enough to build a reliable model equation for calculating predicted minimum bactericidal concentration (MBC).

exp – the value of MBC is determined experimentally

cal – the value of MBC is calculated using a model equation that is based on an experimental data set

R² - the coefficient of determination measures how well a statistical model (equation) based on experimental data set predicts an outcome.

* the predicted value of MBC may not be reliable enough because R² = 0.6386 suggests that only 63.86 % of the dependent variable (CFU) is predicted by the independent variable (concentration of VOC).

Table S4. The minimum bactericidal concentrations of VOCs acting on *A. tumefaciens* Chry5 cells in mature biofilms

VOC	MBC		R ²	Equation
	g/m ³	μmol		
2-nonanone	≥ 58.95*	≥ 41.18*	0.8041	cal, $y = -3,0091x + 100$
2-heptanone	459.69	400	—	exp
2-octanone	549.49	425.82	1	cal, $y = -10^{-7}x^3 + 7 \cdot 10^{-5}x^2 - 1,4 \cdot 10^{-2} + 1$
2-pentanone	989.78	1141.84	0.9954	cal, $y = 3 \cdot 10^{-10}x^3 + 10^{-6}x^2 - 2,4 \cdot 10^{-3} + 1$
2-undecanone	1578.95	921.24	0.9964	cal, $y = -5 \cdot 10^{-10}x^3 + 0,0008x^2 - 0,4212x + 100$
β-ionone	2099.39	1084.76	0.9674	cal, $y = -6 \cdot 10^{-9}x^3 + 10^{-5}x^2 - 4,7 \cdot 10^{-3} + 1$
2-butanone	n/a > 580.6	n/a > 800	—	—
isoamyl alcohol	205.14	231.24	0.9176	cal, $y = 7 \cdot 10^{-6}x^2 - 5,9 \cdot 10^{-3}x + 1$
2-phenylethanol	1478.58	1202.64	1	cal, $y = -3 \cdot 10^{-9}x^3 + 6 \cdot 10^{-6}x^2 - 3,7 \cdot 10^{-3} + 1$
DMS	568.77	600	—	exp
(+)-α-pinene	1308.64	954.48	0.9909	cal, $y = -5 \cdot 10^{-9}x^3 + 4 \cdot 10^{-6}x^2 - 3 \cdot 10^{-4} + 1$
(-)-limonene	≥ 1262.6**	≥ 920.83**	0.844	cal, $y = -8 \cdot 10^{-9}x^3 + 10^{-5}x^2 - 3,5 \cdot 10^{-3} + 1$

n/c - Experimental data set about the change of CFUs depending on the concentration of VOC in the studied range of dose is not enough to build a reliable model equation for calculating predicted minimum bactericidal concentration (MBC).

exp – the value of MBC is determined experimentally

cal – the value of MBC is calculated using a model equation that is based on an experimental data set

R² - the coefficient of determination measures how well a statistical model (equation) based on experimental data set predicts an outcome.

* the predicted value of MBC may not be reliable enough because R² = 0.8041 suggests that only 80.41 % of the dependent variable (CFU) is predicted by the independent variable (concentration of VOC).

** the predicted value of MBC may not be reliable enough because R² = 0.844 suggests that only 84.4 % of the dependent variable (CFU) is predicted by the independent variable (concentration of VOC).

n/a – VOC does not affect bacterial survival over the dose range studied in this work, so a model equation for calculating the predicted MBC cannot be built.