

Electronic Supplemental Information

**Application of chemical vapor generation systems to deliver constant gas concentrations
for *in vitro* exposure to volatile organic compounds**

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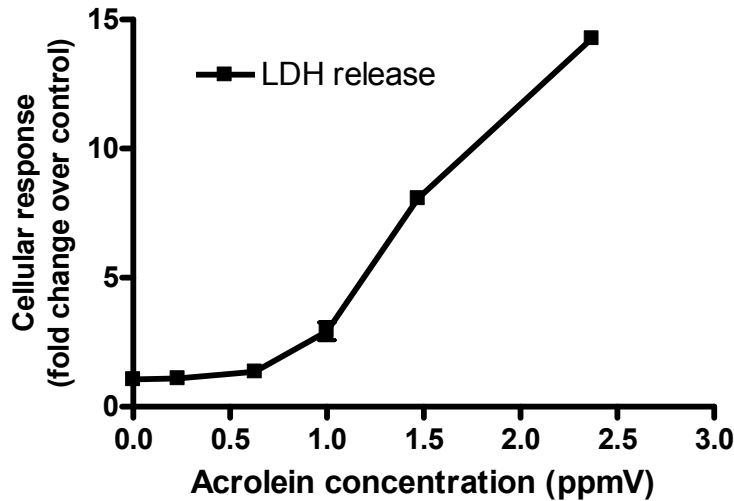
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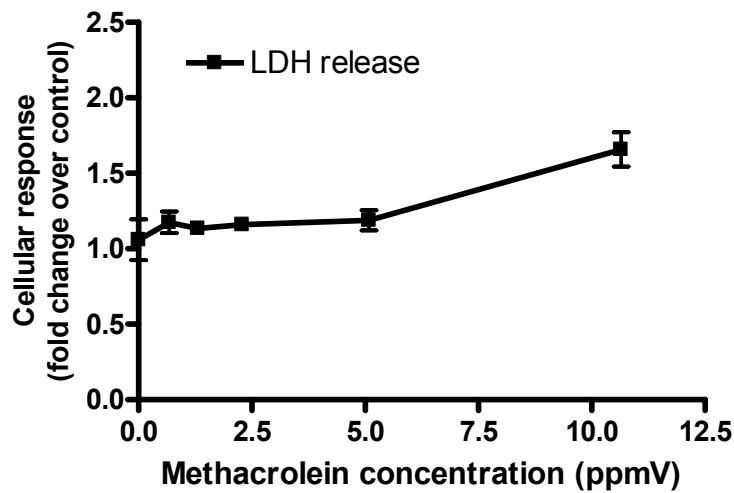
This supporting information contains 4 tables

Table S1. Statistical results for effects of acrolein concentrations on LDH release of A549 human alveolar epithelial lung cells



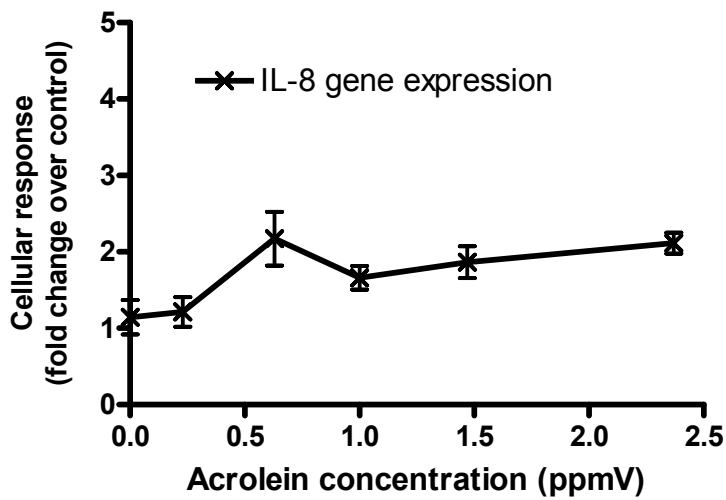
Parameter	Value	Data Set-B	Data Set-C	Data Set-D
Tukey's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
0 vs 0.23	-0.04540	0.1879	P > 0.05	-1.102 to 1.011
0 vs 0.63	-0.3314	1.372	P > 0.05	-1.388 to 0.7251
0 vs 1	-2.038	8.436	P < 0.001	-3.095 to -0.9816
0 vs 1.47	-7.015	29.04	P < 0.001	-8.072 to -5.959
0 vs 2.37	-13.07	54.08	P < 0.001	-14.12 to -12.01
0.23 vs 0.63	-0.2860	1.184	P > 0.05	-1.343 to 0.7705
0.23 vs 1	-1.993	8.248	P < 0.001	-3.049 to -0.9362
0.23 vs 1.47	-6.970	28.85	P < 0.001	-8.027 to -5.913
0.23 vs 2.37	-13.02	53.89	P < 0.001	-14.08 to -11.96
0.63 vs 1	-1.707	7.064	P < 0.001	-2.763 to -0.6502
0.63 vs 1.47	-6.684	27.67	P < 0.001	-7.741 to -5.627
0.63 vs 2.37	-12.73	52.71	P < 0.001	-13.79 to -11.68
1 vs 1.47	-4.977	20.60	P < 0.001	-6.034 to -3.921
1 vs 2.37	-11.03	45.64	P < 0.001	-12.08 to -9.971
1.47 vs 2.37	-6.050	25.04	P < 0.001	-7.107 to -4.994

Table S2. Statistical results for effects of methacrolein concentrations on LDH release of A549 human alveolar epithelial lung cells



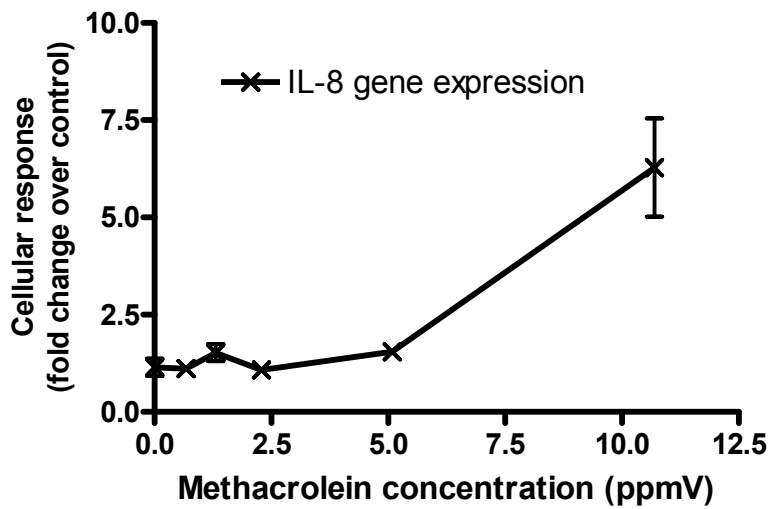
Parameter	Value	Data Set-B	Data Set-C	Data Set-D
Tukey's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
0 vs 0.68	-0.1321	1.463	P > 0.05	-0.5215 to 0.2574
0 vs 1.31	-0.09259	1.026	P > 0.05	-0.4820 to 0.2969
0 vs 2.29	-0.1164	1.290	P > 0.05	-0.5059 to 0.2730
0 vs 5.09	-0.1462	1.619	P > 0.05	-0.5356 to 0.2433
0 vs 10.7	-0.6154	6.816	P < 0.001	-1.005 to -0.2259
0.68 vs 1.31	0.03947	0.4585	P > 0.05	-0.3319 to 0.4108
0.68 vs 2.29	0.01563	0.1816	P > 0.05	-0.3557 to 0.3870
0.68 vs 5.09	-0.01409	0.1637	P > 0.05	-0.3854 to 0.3572
0.68 vs 10.7	-0.4833	5.615	P < 0.01	-0.8546 to -0.1120
1.31 vs 2.29	-0.02383	0.2769	P > 0.05	-0.3952 to 0.3475
1.31 vs 5.09	-0.05356	0.6222	P > 0.05	-0.4249 to 0.3178
1.31 vs 10.7	-0.5228	6.073	P < 0.01	-0.8941 to -0.1514
2.29 vs 5.09	-0.02973	0.3453	P > 0.05	-0.4010 to 0.3416
2.29 vs 10.7	-0.4989	5.796	P < 0.01	-0.8703 to -0.1276
5.09 vs 10.7	-0.4692	5.451	P < 0.01	-0.8405 to -0.09789

Table S3. Statistical results for effects of acrolein concentrations on IL-8 gene expression of A549 human alveolar epithelial lung cells



Parameter	Value	Data Set-B	Data Set-C	Data Set-D
Tukey's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
0 vs 0.23	-0.07084	0.3067	P > 0.05	-1.070 to 0.9282
0 vs 0.63	-1.029	4.675	P < 0.05	-1.982 to -0.07688
0 vs 1.00	-0.5171	2.348	P > 0.05	-1.470 to 0.4354
0 vs 1.47	-0.7198	3.116	P > 0.05	-1.719 to 0.2793
0 vs 2.37	-0.9712	4.410	P < 0.05	-1.924 to -0.01858
0.23 vs 0.63	-0.9586	4.150	P > 0.05	-1.958 to 0.04046
0.23 vs 1.00	-0.4463	1.932	P > 0.05	-1.445 to 0.5528
0.23 vs 1.47	-0.6489	2.690	P > 0.05	-1.692 to 0.3946
0.23 vs 2.37	-0.9003	3.898	P > 0.05	-1.899 to 0.09875
0.63 vs 1.00	0.5123	2.327	P > 0.05	-0.4402 to 1.465
0.63 vs 1.47	0.3097	1.341	P > 0.05	-0.6894 to 1.309
0.63 vs 2.37	0.05830	0.2647	P > 0.05	-0.8943 to 1.011
1.00 vs 1.47	-0.2026	0.8774	P > 0.05	-1.202 to 0.7964
1.00 vs 2.37	-0.4540	2.062	P > 0.05	-1.407 to 0.4985
1.47 vs 2.37	-0.2514	1.088	P > 0.05	-1.250 to 0.7477

Table S4. Statistical results for effects of methacrolein concentrations on IL-8 gene expression of A549 human alveolar epithelial lung cells



Parameter	Value	Data Set-B	Data Set-C	Data Set-D
Tukey's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
0 vs 0.68	-0.3673	0.5378	P > 0.05	-3.437 to 2.703
0 vs 1.31	-0.8467	1.240	P > 0.05	-3.917 to 2.223
0 vs 2.29	-0.2171	0.3178	P > 0.05	-3.287 to 2.853
0 vs 5.09	-0.7102	1.040	P > 0.05	-3.780 to 2.360
0 vs 10.7	-5.571	8.157	P < 0.001	-8.641 to -2.501
0.68 vs 1.31	-0.4794	0.7019	P > 0.05	-3.550 to 2.591
0.68 vs 2.29	0.1502	0.2200	P > 0.05	-2.920 to 3.220
0.68 vs 5.09	-0.3429	0.5020	P > 0.05	-3.413 to 2.727
0.68 vs 10.7	-5.204	7.619	P < 0.001	-8.274 to -2.134
1.31 vs 2.29	0.6296	0.9218	P > 0.05	-2.440 to 3.700
1.31 vs 5.09	0.1365	0.1999	P > 0.05	-2.934 to 3.207
1.31 vs 10.7	-4.724	6.917	P < 0.01	-7.794 to -1.654
2.29 vs 5.09	-0.4931	0.7220	P > 0.05	-3.563 to 2.577
2.29 vs 10.7	-5.354	7.839	P < 0.001	-8.424 to -2.284
5.09 vs 10.7	-4.861	7.117	P < 0.01	-7.931 to -1.791