

Supplementary Tables 1A-1E. Effects of ENDS product characteristics on cell viability and metabolic activity (55 puffs; 55-ml puff volume; 3-sec puff duration; 30-sec puff intervals). Results from post-hoc analysis (p-values).

Table 1A. Effect of product type on cell viability, cell metabolic activity, and cytokine production.

	Effect of Product Type on Cell Viability					
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		> 0.9999	0.1244	0.2212	0.8802	> 0.9999
Rechargeable			0.1951	0.3471	> 0.9999	> 0.9999
eGo				> 0.9999	> 0.9999	0.0177
Vaporizer					> 0.9999	0.0222
ePipe						0.1279
Tobacco Cigarette	0.0009	0.0008	> 0.9999	0.5413	0.1824	< 0.0001
Air	> 0.9999	0.6017	0.0036	0.0006	0.0035	> 0.9999
	Effect of Product Type on Cell Metabolic Activity					
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		> 0.9999	0.0327	0.9958	0.0602	> 0.9999
Rechargeable			0.6935	> 0.9999	> 0.9999	0.1610
eGo				> 0.9999	> 0.9999	0.0023
Vaporizer					> 0.9999	0.1001
ePipe						0.0026
Tobacco Cigarette	0.0003	0.0109	> 0.9999	0.0709	0.6267	< 0.0001
Air (Control)	0.3115	0.0002	0.0002	0.0006	< 0.0001	> 0.9999
	Effect of Product Type on IL-1 β					
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		0.3975	> 0.9999	> 0.9999	> 0.9999	> 0.9999
Rechargeable			> 0.9999	> 0.9999	> 0.9999	0.0832
eGo				> 0.9999	> 0.9999	> 0.9999
Vaporizer					> 0.9999	> 0.9999
ePipe						0.3975
Tobacco Cigarette	> 0.9999	0.0247	0.9090	0.3350	0.1010	> 0.9999
Air	> 0.9999	0.0277	0.7267	0.2878	0.0969	> 0.9999
	Effect of Product Type on IL-6					
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		0.5527	> 0.9999	> 0.9999	> 0.9999	> 0.9999
Rechargeable			0.0561	0.2615	> 0.9999	0.6361
eGo				> 0.9999	> 0.9999	> 0.9999
Vaporizer					> 0.9999	> 0.9999
ePipe						> 0.9999
Tobacco Cigarette	0.1765	0.0011	0.7013	0.3000	0.0295	0.1580
Air (Control)	0.0167	< 0.0001	0.0876	0.0210	0.0027	0.0167

	Effect of Product Type on IL-10					
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		> 0.9999	> 0.9999	0.3839	0.2883	> 0.9999
Rechargeable			> 0.9999	> 0.9999	> 0.9999	> 0.9999
eGo				> 0.9999	> 0.9999	> 0.9999
Vaporizer					> 0.9999	0.5501
ePipe						0.4407
Tobacco Cigarette	> 0.9999	0.3003	0.4347	0.0374	0.0291	> 0.9999
Air	> 0.9999	> 0.9999	> 0.9999	0.0479	0.0369	> 0.9999
Effect of Product Type on CXCL1						
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		0.0970	> 0.9999	> 0.9999	0.1835	> 0.9999
Rechargeable			0.1835	> 0.9999	> 0.9999	0.0374
eGo				> 0.9999	0.3326	> 0.9999
Vaporizer					> 0.9999	0.4921
ePipe						0.0664
Tobacco Cigarette	> 0.9999	0.0115	> 0.9999	0.1333	0.0197	> 0.9999
Air (Control)	> 0.9999	0.0026	> 0.9999	0.0479	0.0049	> 0.9999
Effect of Product Type on CXCL2						
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		0.9599	> 0.9999	0.7968	0.2301	> 0.9999
Rechargeable			> 0.9999	> 0.9999	> 0.9999	0.2446
eGo				> 0.9999	0.5394	> 0.9999
Vaporizer					> 0.9999	0.2034
ePipe						0.0618
Tobacco Cigarette	> 0.9999	0.0680	0.9896	0.0570	0.0184	> 0.9999
Air	> 0.9999	0.0807	> 0.9999	0.0269	0.0074	> 0.9999
Effect of Product Type on CXCL10						
	Disposable	Rechargeable	eGo	Vaporizer	ePipe	eCigar
Disposable		> 0.9999	> 0.9999	0.5043	0.5043	> 0.9999
Rechargeable			> 0.9999	> 0.9999	> 0.9999	> 0.9999
eGo				> 0.9999	> 0.9999	> 0.9999
Vaporizer					> 0.9999	> 0.9999
ePipe						> 0.9999
Tobacco Cigarette	> 0.9999	> 0.9999	> 0.9999	0.2021	0.2021	> 0.9999
Air (Control)	> 0.9999	> 0.9999	> 0.9999	0.3341	0.3341	> 0.9999

Table 1B. Effect of solvent on cell viability, cell metabolic activity, and cytokine production.

	Effect of Solvent on Cell Viability		
	PG-only	PG:PV (50/50)	VG-only
PG-only		> 0.9999	> 0.9999
PG:PV (50/50)			> 0.9999
VG-only			
Tobacco Cigarette	0.0128	0.0058	0.0128
Air (Control)	0.0119	0.0219	0.0104
	Effect of Solvent on Cell Metabolic Activity		
	PG-only	PG:PV (50/50)	VG-only
PG-only		0.0394	0.0055
PG:PV (50/50)			> 0.9999
Tobacco Cigarette	0.0006	0.2988	0.6487
Air (Control)	0.0624	< 0.0001	< 0.0001
	Effect of Solvent on IL-1 β		
	PG-only	PG:PV (50/50)	VG-only
PG-only		> 0.9999	0.1730
PG:PV (50/50)			0.5255
VG-only			
Tobacco Cigarette	0.0717	0.1937	> 0.9999
Air (Control)	0.0387	0.1061	0.7534
	Effect of Solvent on IL-6		
	PG-pure	PG:PV (50/50)%	VG-pure
PG-only (100%)		0.5115	0.0659
PG:PV (50%/50%)			> 0.9999
Tobacco Cigarette	0.0035	0.0882	0.2936
Air (Control)	0.0002	0.0405	0.0651
	Effect of Solvent on IL-10		
	PG-only	PG:PV (50/50)	VG-only
PG-only		> 0.9999	> 0.9999
PG:PV (50/50)			> 0.9999
VG-only			
Tobacco Cigarette	0.1600	0.1600	0.1600
Air (Control)	0.0270	0.0270	0.0270
	Effect of Solvent on CXCL1		
	PG-only	PG:PV (50/50)	VG-only
PG-only		> 0.9999	> 0.9999
PG:PV (50/50)			> 0.9999
Tobacco Cigarette	0.1584	0.1584	0.1584
Air (Control)	0.1260	0.1770	0.1497

	Effect of Solvent on CXCL2		
	PG-only	PG:PV (50/50)	VG-only
PG-only		0.9753	0.5049
PG:PV (50/50)			> 0.9999
VG-only			
Tobacco Cigarette	0.0384	0.2165	0.3844
Air (Control)	0.0058	0.0530	0.1584
	Effect of Solvent on CXCL10		
	PG-only	PG:PV (50/50)	VG-only
PG-only		> 0.9999	> 0.9999
PG:PV (50/50)			> 0.9999
Tobacco Cigarette	0.1584	0.1584	0.1584
Air (Control)	0.2440	0.2440	0.2440

Table 1C. Effect of nicotine concentration on cell viability, cell metabolic activity, and cytokine production.

	Effect of Nicotine Concentration on Cell Viability				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	> 0.9999	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	> 0.9999
18 mg/ml					> 0.9999
Tobacco Cigarette	0.0123	0.0108	0.0003	0.0041	0.0109
Air (Control)	> 0.9999	> 0.9999	0.3096	> 0.9999	> 0.9999
	Effect of Nicotine Concentration on Cell Metabolic Activity				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	> 0.9999	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	> 0.9999
18 mg/ml					> 0.9999
Tobacco Cigarette	0.0006	0.0540	0.0006	0.0026	0.0074
Air (Control)	0.6338	0.0669	0.2231	> 0.9999	> 0.9999
	Effect of Nicotine Concentration on IL-1β				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	0.4684	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	0.4684
18 mg/ml					0.0804
Tobacco Cigarette	> 0.9999	0.4776	0.1312	0.0273	> 0.9999
Air (Control)	0.8354	0.2654	0.0644	0.0118	> 0.9999
	Effect of Nicotine Concentration on IL-6				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	> 0.9999	0.2265
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	> 0.9999
18 mg/ml					0.5716
Tobacco Cigarette	0.2783	0.3858	0.0488	0.1412	0.0015
Air (Control)	0.4489	0.8633	0.1175	0.3428	0.0008

	Effect of Nicotine Concentration on IL-10				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	> 0.9999	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	> 0.9999
18 mg/ml					> 0.9999
Tobacco Cigarette	0.2043	0.2796	0.1834	0.2272	0.4148
Air (Control)	0.2935	0.6873	0.6873	0.9119	0.6873
	Effect of Nicotine Concentration on CXCL1				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		0.8297	> 0.9999	0.1547	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	> 0.9999
18 mg/ml					0.6384
Tobacco Cigarette	> 0.9999	0.4345	0.7113	0.1309	> 0.9999
Air (Control)	> 0.9999	0.1320	0.2931	0.0184	> 0.9999
	Effect of Nicotine Concentration on CXCL2				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		0.3640	> 0.9999	0.0853	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	0.1679
12 mg/ml				> 0.9999	0.6384
18 mg/ml					0.0340
Tobacco Cigarette	> 0.9999	0.1167	0.3091	0.0381	> 0.9999
Air (Control)	> 0.9999	0.0140	0.0654	0.0029	> 0.9999
	Effect of Nicotine Concentration on CXCL10				
	0 mg/ml	6 mg/ml	12 mg/ml	18 mg/ml	24 mg/ml
0 mg/ml		> 0.9999	> 0.9999	> 0.9999	> 0.9999
6 mg/ml			> 0.9999	> 0.9999	> 0.9999
12 mg/ml				> 0.9999	0.8805
18 mg/ml					0.9978
Tobacco Cigarette	0.5456	0.2510	0.0596	0.0675	> 0.9999
Air (Control)	0.8831	0.3949	0.0842	0.0966	> 0.9999

Table 1D. Effect of battery output voltage on cell viability, cell metabolic activity, and cytokine production.

	Effect of Battery Output Voltage on Cell Viability		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		> 0.9999	0.0024
4.0 Volts			0.0386
Tobacco Cigarette	0.0004	0.0050	0.8655
Air (Control)	0.7438	0.0853	< 0.0001
	Effect of Battery Output Voltage on Cell Metabolic Activity		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.0359	0.0013
4.0 Volts			> 0.9999
Tobacco Cigarette	< 0.0001	0.0515	0.1974
Air (Control)	0.0966	0.0002	< 0.0001
	Effect of Battery Output Voltage on IL-1 β		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.8342	0.0902
4.0 Volts			0.8342
Tobacco Cigarette	> 0.9999	0.3013	0.0412
Air (Control)	0.7534	0.1673	0.0222
	Effect of Battery Output Voltage on IL-6		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.1540	0.1540
4.0 Volts			0.0003
Tobacco Cigarette	0.0499	0.9142	0.0005
Air (Control)	0.0246	> 0.9999	< 0.0001
	Effect of Battery Output Voltage on IL-10		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.7155	0.0096
4.0 Volts			0.2311
Tobacco Cigarette	> 0.9999	0.2174	0.0071
Air (Control)	0.7972	0.0688	0.0010
	Effect of Battery Output Voltage on CXCL1		
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.3481	0.0050
4.0 Volts			0.3481
Tobacco Cigarette	> 0.9999	0.1592	0.0071
Air (Control)	0.4391	0.0268	0.0005

Effect of Battery Output Voltage on CXCL2			
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		0.9779	0.0132
4.0 Volts			0.1860
Tobacco Cigarette	0.9003	0.2525	0.0071
Air (Control)	0.5741	0.0733	0.0009
Effect of Battery Output Voltage on CXCL10			
	3.3 Volts	4.0 Volts	4.8 Volts
3.3 Volts		> 0.9999	0.0181
4.0 Volts			0.1496
Tobacco Cigarette	0.8086	0.2931	0.0072
Air (Control)	0.8619	0.3003	0.0021

Table 1E. Effect of flavors on cell viability, cell metabolic activity, and cytokine production.

	Effect of Flavors on Cell Viability				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	> 0.9999	0.0064
Piña Colada			> 0.9999	> 0.9999	0.0040
Menthol				> 0.9999	0.0459
Coffee					0.1386
Tobacco Cigarette	0.0007	0.0004	0.0051	0.0096	> 0.9999
Air (Control)	0.7976	> 0.9999	0.4160	0.0088	< 0.0001
	Effect of Flavors on Cell Metabolic Activity				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	0.0016	0.1392	0.0006
Piña Colada			0.2802	> 0.9999	0.1524
Menthol				> 0.9999	> 0.9999
Coffee					> 0.9999
Tobacco Cigarette	< 0.0001	0.0018	0.4732	0.0238	0.6247
Air (Control)	0.1437	0.0040	< 0.0001	0.0003	< 0.0001
	Effect of Flavors on IL-1 β				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	> 0.9999	> 0.9999
Piña Colada			> 0.9999	> 0.9999	0.4684
Menthol				0.4684	0.0804
Coffee					> 0.9999
Tobacco Cigarette	0.4776	> 0.9999	> 0.9999	0.1312	0.0273
Air (Control)	0.4306	> 0.9999	> 0.9999	0.1284	0.0302
	Effect of Flavors on IL-6				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		0.3117	> 0.9999	0.9597	> 0.9999
Piña Colada			> 0.9999	0.0002	> 0.9999
Menthol				0.0156	> 0.9999
Coffee					0.0038
Tobacco Cigarette	0.0529	0.6447	> 0.9999	0.0004	0.7018
Air (Control)	0.0331	> 0.9999	> 0.9999	< 0.0001	> 0.9999
	Effect of Flavors on IL-10				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	0.7289	0.0340
Piña Colada			> 0.9999	> 0.9999	0.1204
Menthol				0.6384	0.0280
Coffee					> 0.9999
Tobacco Cigarette	> 0.9999	> 0.9999	0.6528	0.0563	0.0036
Air (Control)	> 0.9999	> 0.9999	> 0.9999	0.0581	0.0017

	Effect of Flavors on CXCL1				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	0.4201	0.0279
Piña Colada			> 0.9999	> 0.9999	0.2305
Menthol				0.1675	0.0081
Coffee					> 0.9999
Tobacco Cigarette	> 0.9999	> 0.9999	0.4549	0.0381	0.0036
Air (Control)	> 0.9999	> 0.9999	0.3708	0.0076	0.0005
	Effect of Flavors on CXCL2				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	0.5958	0.0450
Piña Colada			> 0.9999	0.6374	0.0494
Menthol				0.4512	0.0307
Coffee					> 0.9999
Tobacco Cigarette	> 0.9999	> 0.9999	0.9854	0.0381	0.0036
Air (Control)	> 0.9999	> 0.9999	> 0.9999	0.0135	0.0008
	Effect of Flavors on CXCL10				
	Tobacco	Piña Colada	Menthol	Coffee	Strawberry
Tobacco		> 0.9999	> 0.9999	> 0.9999	0.1679
Piña Colada			> 0.9999	> 0.9999	0.3138
Menthol				> 0.9999	0.0853
Coffee					> 0.9999
Tobacco Cigarette	0.7737	> 0.9999	0.5471	0.1038	0.0068
Air (Control)	> 0.9999	> 0.9999	0.9284	0.1560	0.0028