

1 **Supplementary Table 1.** Volatile compounds ($\mu\text{g g}^{-1}$) in herbal tea samples *

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Samples									
Compounds	RI	S	SC	SH	SHC	T	TC	TH	THC
trans- β -Ionone-5,6-epoxide	668	N.D.	N.D.	N.D.	N.D.	1.21 $\pm$ 0.14 ^{bc}	1.36 $\pm$ 0.34 ^{bc}	0.74 $\pm$ 0.30 ^b	1.46 $\pm$ 0.29 ^c
2-Propanone	795	15.29 $\pm$ 2.30 ^b	3.02 $\pm$ 0.09 ^a	106.02 $\pm$ 11.84 ^e	2.46 $\pm$ 0.05 ^a	45.27 $\pm$ 3.65 ^d	27.28 $\pm$ 1.90 ^c	7.23 $\pm$ 0.62 ^{ab}	39.73 $\pm$ 3.83 ^d
2-Methylbutanal	906	1.39 $\pm$ 0.11 ^{bc}	1.73 $\pm$ 0.39 ^c	1.67 $\pm$ 0.24 ^c	1.35 $\pm$ 0.09 ^{bc}	0.82 $\pm$ 0.05 ^{ab}	0.85 $\pm$ 0.14 ^{ab}	0.66 $\pm$ 0.06 ^a	1.65 $\pm$ 0.44 ^c
3-Methylbutanal	910	1.95 $\pm$ 0.02 ^{ab}	2.46 $\pm$ 0.53 ^{bc}	2.05 $\pm$ 0.24 ^{bc}	1.97 $\pm$ 0.55 ^b	1.05 $\pm$ 0.30 ^a	2.83 $\pm$ 0.04 ^c	1.03 $\pm$ 0.04 ^a	1.63 $\pm$ 0.07 ^{ab}
Butanoic acid	982	0.29 $\pm$ 0.01 ^b	0.28 $\pm$ 0.02 ^b	N.D.	0.32 $\pm$ 0.04 ^b	N.D.	0.61 $\pm$ 0.01 ^d	0.42 $\pm$ 0.04 ^c	N.D.
α -Pinene	1021	100.45 $\pm$ 18.27 ^b	25.33 $\pm$ 1.94 ^a	253.71 $\pm$ 17.65 ^c	26.00 $\pm$ 2.11 ^a	80.20 $\pm$ 0.52 ^b	93.66 $\pm$ 17.31 ^b	47.95 $\pm$ 3.13 ^a	52.35 $\pm$ 4.92 ^a
α -Phellandrene	1025	0.84 $\pm$ 0.06 ^{ab}	3.53 $\pm$ 0.93 ^c	1.92 $\pm$ 0.51 ^b	0.90 $\pm$ 0.54 ^{ab}	N.D.	1.01 $\pm$ 0.37 ^{ab}	0.77 $\pm$ 0.16 ^a	0.91 $\pm$ 0.17 ^{ab}
Camphene	1066	1.26 $\pm$ 0.09 ^d	N.D.	5.83 $\pm$ 0.25 ^e	N.D.	N.D.	1.01 $\pm$ 0.03 ^c	0.57 $\pm$ 0.08 ^b	N.D.
Hexanal	1080	1.86 $\pm$ 0.17 ^{ab}	2.71 $\pm$ 0.70 ^c	1.64 $\pm$ 0.40 ^a	2.08 $\pm$ 0.77 ^{ab}	2.20 $\pm$ 0.12 ^{ab}	2.80 $\pm$ 0.16 ^c	1.33 $\pm$ 0.05 ^a	2.88 $\pm$ 0.13 ^c
β -Pinene	1102	38.30 $\pm$ 6.88 ^d	36.69 $\pm$ 1.46 ^d	64.99 $\pm$ 3.74 ^e	26.14 $\pm$ 1.20 ^{bc}	18.35 $\pm$ 1.18 ^a	28.07 $\pm$ 1.10 ^c	17.01 $\pm$ 0.73 ^a	20.76 $\pm$ 0.41 ^{ab}
Xylene	1128	N.D.	N.D.	N.D.	N.D.	0.50 $\pm$ 0.17 ^b	1.20 $\pm$ 0.28 ^c	0.48 $\pm$ 0.04 ^b	1.06 $\pm$ 0.15 ^c
β -Myrcene	1149	14.51 $\pm$ 4.45 ^a	34.44 $\pm$ 0.56 ^c	15.79 $\pm$ 1.17 ^a	18.98 $\pm$ 0.17 ^a	36.99 $\pm$ 1.72 ^c	44.82 $\pm$ 2.33 ^d	26.04 $\pm$ 0.32 ^b	46.94 $\pm$ 1.14 ^d
1-Penten-3-ol	1159	1.93 $\pm$ 0.22 ^{ab}	4.49 $\pm$ 1.46 ^c	4.61 $\pm$ 0.57 ^c	2.58 $\pm$ 0.15 ^b	1.09 $\pm$ 0.47 ^{ab}	1.30 $\pm$ 0.90 ^{ab}	0.68 $\pm$ 0.20 ^a	1.34 $\pm$ 0.50 ^{ab}
Hexanoic acid	1182	15.90 $\pm$ 0.21 ^b	2.74 $\pm$ 0.49 ^a	35.84 $\pm$ 7.78 ^c	2.60 $\pm$ 0.91 ^a	2.99 $\pm$ 0.21 ^a	3.38 $\pm$ 0.07 ^a	1.69 $\pm$ 0.19 ^a	2.77 $\pm$ 0.09 ^a
α -Terpinene	1185	3.59 $\pm$ 0.80 ^a	4.08 $\pm$ 1.44 ^a	14.23 $\pm$ 1.95 ^c	9.90 $\pm$ 0.32 ^b	3.05 $\pm$ 1.81 ^a	3.85 $\pm$ 0.10 ^a	1.88 $\pm$ 0.58 ^a	3.49 $\pm$ 1.01 ^a
dl-Limonene	1189	27.10 $\pm$ 3.95 ^{bc}	25.04 $\pm$ 1.79 ^b	56.28 $\pm$ 6.12 ^f	15.86 $\pm$ 0.12 ^a	33.72 $\pm$ 0.21 ^{cd}	38.62 $\pm$ 3.75 ^{de}	21.88 $\pm$ 0.52 ^{ab}	41.29 $\pm$ 2.26 ^e
1,8-Cineole	1212	206.49 $\pm$ 28.96 ^e	233.92 $\pm$ 18.69 ^e	118.79 $\pm$ 0.66 ^c	171.79 $\pm$ 4.51 ^d	87.84 $\pm$ 2.21 ^{ab}	97.08 $\pm$ 3.73 ^{bc}	62.83 $\pm$ 0.40 ^a	109.38 $\pm$ 2.60 ^{bc}
(E)-2-Hexenal	1225	9.29 $\pm$ 1.18 ^c	3.32 $\pm$ 0.89 ^{ab}	1.89 $\pm$ 0.53 ^a	1.51 $\pm$ 0.56 ^a	7.41 $\pm$ 1.50 ^c	8.74 $\pm$ 0.59 ^c	4.45 $\pm$ 0.24 ^b	5.11 $\pm$ 0.96 ^b
cis-Ocimene	1236	6.73 $\pm$ 0.52 ^d	2.19 $\pm$ 0.35 ^{ab}	13.10 $\pm$ 2.13 ^e	1.83 $\pm$ 0.01 ^a	6.00 $\pm$ 0.92 ^{cd}	6.91 $\pm$ 0.74 ^d	4.02 $\pm$ 0.14 ^{bc}	7.40 $\pm$ 0.23 ^d
γ -Terpinene	1246	0.26 $\pm$ 0.01 ^b	12.67 $\pm$ 0.20 ^c	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3-Octanone	1256	N.D.	3.49 $\pm$ 0.87 ^c	N.D.	1.38 $\pm$ 0.19 ^b	N.D.	N.D.	N.D.	N.D.
Styrene	1258	0.16 $\pm$ 0.04 ^a	0.34 $\pm$ 0.16 ^a	0.56 $\pm$ 0.24 ^a	0.58 $\pm$ 0.15 ^a	4.76 $\pm$ 1.12 ^b	5.14 $\pm$ 0.71 ^b	2.73 $\pm$ 0.82 ^b	6.19 $\pm$ 0.68 ^b
Acetic acid	1270	1.34 $\pm$ 0.39 ^a	1.00 $\pm$ 0.51 ^a	3.78 $\pm$ 0.78 ^b	2.33 $\pm$ 0.23 ^a	9.52 $\pm$ 0.00 ^d	5.13 $\pm$ 0.41 ^b	5.02 $\pm$ 1.10 ^a	6.87 $\pm$ 1.39 ^c

Suppl. Table 1 (Continued)									
Compounds	RI	S	SC	SH	SHC	T	TC	TH	THC
p-Cymene	1272	2.08±0.07 ^b	7.27±1.90 ^d	7.80±0.37 ^d	3.80±0.02 ^c	4.24±0.11 ^c	1.85±0.61 ^b	1.77±0.08 ^b	N.D.
α-Terpinolene	1283	10.47±1.93 ^b	4.73±0.02 ^a	20.61±1.99 ^c	3.85±0.09 ^a	9.75±0.01 ^b	10.89±1.34 ^b	4.75±0.75 ^a	5.53±0.48 ^a
Octanal	1294	N.D.	9.47±1.93 ^c	N.D.	5.46±0.03 ^b	N.D.	N.D.	N.D.	N.D.
2-Penten-1-ol	1327	N.D.	N.D.	N.D.	N.D.	1.55±0.11 ^b	1.10±0.53 ^b	0.73±0.31 ^{ab}	1.55±0.75 ^b
6-Methyl-5-Hepten-2-One	1343	3.01±0.92 ^{bc}	5.84±0.03 ^d	6.22±1.28 ^d	3.24±0.13 ^c	1.51±0.19 ^a	1.45±0.47 ^a	0.90±0.08 ^a	1.79±0.12 ^{ab}
1-Hexanol	1359	0.25±0.17 ^a	N.D.	1.37±0.69 ^a	N.D.	N.D.	9.81±1.73 ^c	5.94±0.03 ^b	13.66±0.90 ^d
2,3-Dimethyl-Pyrazine	1363	0.73±0.11 ^d	0.63±0.01 ^{bc}	0.69±0.05 ^c	0.45±0.05 ^b	N.D.	N.D.	N.D.	N.D.
1-Octenyl-3-acetate	1382	5.49±1.66 ^c	2.51±0.22 ^b	11.04±1.54 ^d	1.54±0.05 ^{ab}	N.D.	N.D.	N.D.	N.D.
Octanoic acid	1390	0.42±0.24 ^a	0.23±0.01 ^a	0.64±0.15 ^a	0.91±0.04 ^{ab}	1.19±0.19 ^b	0.99±0.22 ^{ab}	0.73±0.01 ^a	1.24±0.14 ^b
3-Hexen-1-ol	1393	12.21±0.95 ^b	5.35±0.06 ^a	25.02±0.36 ^c	3.19±0.02 ^a	4.64±1.38 ^a	4.52±0.41 ^a	2.45±0.81 ^a	3.18±0.51 ^a
3-Octanol	1395	N.D.	2.57±0.96 ^a	4.13±0.69 ^b	N.D.	N.D.	N.D.	N.D.	N.D.
Nonanal	1399	1.43±0.80 ^a	N.D.	N.D.	2.59±0.44 ^{ab}	9.11±0.22 ^d	6.90±1.06 ^c	3.90±0.01 ^b	3.88±0.56 ^b
Tetradecane	1402	8.10±1.35 ^c	4.57±0.22 ^b	3.38±0.57 ^a	4.59±0.13 ^b	N.D.	N.D.	N.D.	N.D.
2-Hexen-1-ol, (E)-	1412	0.95±0.03 ^a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1-Octen-3-ol	1452	2.32±0.42 ^{ab}	6.94±0.54 ^e	2.83±0.24 ^{ab}	5.77±0.11 ^{de}	4.84±1.32 ^{cd}	3.39±0.52 ^{bc}	2.60±0.81 ^{ab}	1.40±0.35 ^a
α-Cubebene	1465	7.48±0.30 ^c	3.88±0.89 ^b	N.D.	N.D.	14.34±1.68 ^e	11.49±0.54 ^d	11.36±1.50 ^d	5.73±1.53 ^{bc}
Borneol-L	1472	10.17±1.17 ^b	N.D.	35.45±2.18 ^c	N.D.	N.D.	N.D.	N.D.	N.D.
2,4-Heptadienal, (E,E)	1476	9.13±1.31 ^{bc}	3.60±0.46 ^a	19.00±0.20 ^d	8.59±0.85 ^b	6.47±0.61 ^{ab}	7.32±3.53 ^{ab}	5.50±0.02 ^{ab}	12.45±2.05 ^c
trans-Sabinene hydrate	1477	6.70±0.72 ^b	5.47±1.33 ^b	11.26±2.59 ^c	N.D.	N.D.	N.D.	N.D.	N.D.
cis-Linalool oxide	1487	13.24±1.93 ^c	14.22±1.26 ^c	32.91±0.39 ^d	9.45±0.23 ^b	2.67±0.45 ^a	2.30±0.46 ^a	2.53±0.26 ^a	2.74±0.41 ^a
2-Ethyl-hexanol	1493	0.29±0.09 ^a	0.28±0.05 ^a	0.71±0.08 ^b	0.45±0.34 ^{ab}	0.63±0.04 ^{ab}	1.16±0.08 ^c	0.70±0.14 ^b	0.64±0.06 ^{ab}
α-Copaene	1504	17.91±1.14 ^d	6.50±0.52 ^{ab}	30.72±1.09 ^e	5.00±0.15 ^a	20.73±2.01 ^d	18.55±3.44 ^d	10.10±0.77 ^{bc}	12.81±0.63 ^c
3,5-Octadien-2-one	1532	11.24±1.75 ^b	11.08±1.42 ^b	12.94±1.16 ^b	23.56±0.40 ^c	3.48±1.45 ^a	2.99±1.10 ^a	2.05±0.99 ^a	2.79±0.37 ^a

Suppl. Table 1 (Continued)									
Compounds	RI	S	SC	SH	SHC	T	TC	TH	THC
β-Bourbonone	1536	11.78±0.32 ^c	N.D.	N.D.	N.D.	17.40±0.00 ^e	13.08±0.33 ^d	7.85±0.08 ^b	17.23±1.10 ^e
Benzaldehyde	1543	11.78±0.77 ^b	37.21±0.62 ^f	17.79±1.57 ^d	30.76±0.42 ^e	14.73±0.03 ^c	N.D.	N.D.	N.D.
Linalool	1549	402.23±49.11 ^c	361.65±31.20 ^{bc}	1122.27±66.26 ^d	315.14±10.03 ^b	314.12±16.02 ^b	322.29±11.61 ^b	301.03±0.01 ^a	382.52±39.50 ^{bc}
Linalool-L	1550	N.D.	N.D.	N.D.	N.D.	75.12±4.19 ^a	N.D.	217.34±46.19 ^b	67.88±3.39 ^a
1-Octanol	1562	N.D.	1.91±0.27 ^{bc}	29.46±1.07 ^d	N.D.	2.38±0.13 ^c	2.42±0.72 ^c	1.12±0.24 ^{ab}	2.65±0.08 ^c
α-trans-Bergamotene	1594	73.99±3.63 ^d	25.30±0.61 ^b	8.49±0.33 ^a	9.71±0.08 ^a	37.22±3.47 ^c	38.15±2.50 ^c	24.95±2.35 ^b	34.74±1.17 ^c
β-Elemene	1601	103.10±1.53 ^d	22.27±0.32 ^a	172.55±4.20 ^e	16.46±1.31 ^a	73.08±5.27 ^c	52.42±1.59 ^b	20.45±0.37 ^a	46.88±1.39 ^b
α-Guaiene	1607	48.99±1.49 ^e	10.95±0.33 ^a	85.42±0.66 ^f	9.86±0.52 ^a	37.06±3.45 ^d	28.99±1.90 ^c	11.89±0.08 ^a	16.41±1.94 ^b
trans-Caryophyllene	1619	0.26±0.14 ^a	5.10±1.04 ^{bc}	0.71±0.06 ^a	0.56±0.13 ^a	9.99±0.67 ^d	6.59±0.79 ^c	4.33±0.75 ^b	10.26±1.32 ^d
Caryophyllene	1622	19.76±1.28 ^b	N.D.	37.76±7.17 ^c	N.D.	N.D.	3.80±1.28 ^a	N.D.	N.D.
Aromadendrene	1626	8.49±0.76 ^d	2.66±0.71 ^{ab}	31.71±1.50 ^e	0.91±0.10 ^a	4.31±1.58 ^{bc}	4.90±0.59 ^c	2.30±0.51 ^{ab}	3.74±0.99 ^{bc}
β-Cedrene	1627	20.92±0.30 ^c	2.31±0.57 ^b	71.42±1.51 ^d	1.07±0.04 ^{ab}	N.D.	N.D.	N.D.	N.D.
Benzoic acid	1643	12.73±2.96 ^c	9.99±0.47 ^{bc}	20.07±2.91 ^d	8.11±0.01 ^b	2.50±0.06 ^a	2.29±0.29 ^a	1.37±0.15 ^a	2.57±0.10 ^a
(E)-β-Farnesene	1669	7.32±0.03 ^a	6.73±0.04 ^a	12.77±0.19 ^b	6.22±0.48 ^a	22.27±1.49 ^d	18.40±0.18 ^c	11.07±0.47 ^b	24.83±2.54 ^e
Epiglobulol	1676	3.60±0.29 ^b	N.D.	10.10±0.04 ^d	N.D.	7.28±0.00 ^c	4.61±0.87 ^b	N.D.	10.30±1.41 ^d
p-Menth-1-en-8-ol	1688	12.29±1.54 ^c	7.04±0.82 ^b	22.97±0.04 ^d	5.94±0.73 ^b	6.85±0.17 ^b	5.77±0.22 ^b	3.82±0.02 ^a	6.68±0.14 ^b
α-Humulene	1694	67.26±0.55 ^e	21.62±0.36 ^c	117.34±0.62 ^f	16.84±0.65 ^b	32.48±3.51 ^d	24.10±1.92 ^c	12.55±0.10 ^a	15.62±0.32 ^{ab}
trans-β-Caryophyllene	1702	5.02±0.59 ^e	4.55±0.23 ^{de}	14.54±0.07 ^f	N.D.	2.64±0.31 ^{bc}	4.20±0.82 ^{de}	1.70±0.32 ^b	3.40±0.94 ^{cd}
α-Terpineol	1712	58.71±5.29 ^e	28.02±1.43 ^d	111.38±1.78 ^f	24.65±2.88 ^{cd}	17.29±2.00 ^b	14.34±1.11 ^{ab}	8.68±0.29 ^a	19.90±1.45 ^{bc}
Valencene	1725	N.D.	N.D.	N.D.	N.D.	0.55±0.29 ^b	1.16±0.25 ^c	0.60±0.12 ^b	1.86±0.07 ^d
Germacrene	1733	142.78±0.15 ^d	13.21±0.54 ^a	167.23±10.41 ^e	9.47±0.51 ^a	50.13±4.22 ^c	38.85±1.42 ^b	13.62±0.09 ^a	42.89±2.01 ^{bc}
α-Bulnesene	1739	1.09±0.01 ^b	6.13±0.15 ^d	4.25±0.05 ^c	6.10±0.60 ^d	N.D.	N.D.	N.D.	N.D.
β-Selinene	1752	9.54±0.35 ^c	3.45±0.31 ^b	20.95±1.45 ^d	3.62±0.42 ^b	N.D.	N.D.	N.D.	N.D.

Suppl. Table 1 (Continued)

Compounds	RI	S	SC	SH	SHC	T	TC	TH	THC
α -Selinene	1755	9.35 $\pm$ 0.16 ^d	2.76 $\pm$ 0.34 ^b	10.33 $\pm$ 0.27 ^e	3.30 $\pm$ 0.37 ^c	N.D.	N.D.	N.D.	13.36 $\pm$ 0.04 ^f
Bicyclogermacrene	1761	28.93 $\pm$ 0.45 ^e	4.42 $\pm$ 0.25 ^{ab}	44.98 $\pm$ 2.28 ^f	3.48 $\pm$ 0.27 ^a	24.28 $\pm$ 2.29 ^d	18.90 $\pm$ 1.00 ^c	7.64 $\pm$ 0.06 ^b	23.18 $\pm$ 2.15 ^d
γ -Cadinene	1784	31.58 $\pm$ 0.86 ^c	14.29 $\pm$ 1.58 ^a	54.57 $\pm$ 0.00 ^d	12.93 $\pm$ 0.97 ^a	21.70 $\pm$ 0.89 ^b	18.34 $\pm$ 0.47 ^b	10.85 $\pm$ 1.30 ^a	35.14 $\pm$ 4.21 ^c
Nerolidol	1808	N.D.	2.23 $\pm$ 0.25 ^b	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
α -Bisabolol	1809	3.70 $\pm$ 0.48 ^b	37.83 $\pm$ 2.98 ^d	11.47 $\pm$ 0.48 ^c	N.D.	N.D.	N.D.	N.D.	N.D.
Geraniol	1853	0.86 $\pm$ 0.05 ^b	N.D.	2.70 $\pm$ 0.41 ^c	N.D.	N.D.	N.D.	N.D.	N.D.
cis-Calamenene	1862	1.65 $\pm$ 0.05 ^c	1.58 $\pm$ 0.30 ^c	5.14 $\pm$ 0.28 ^d	N.D.	0.92 $\pm$ 0.20 ^b	0.97 $\pm$ 0.28 ^b	0.42 $\pm$ 0.02 ^a	1.33 $\pm$ 0.04 ^{bc}
Benzyl alcohol	1894	0.22 $\pm$ 0.04 ^a	N.D.	1.15 $\pm$ 0.95 ^b	N.D.	N.D.	N.D.	N.D.	N.D.
Phenylethyl alcohol	1934	12.31 $\pm$ 1.02 ^c	12.25 $\pm$ 0.14 ^c	19.38 $\pm$ 0.16 ^d	12.71 $\pm$ 1.38 ^c	4.05 $\pm$ 0.23 ^b	4.40 $\pm$ 0.21 ^b	2.06 $\pm$ 0.15 ^a	3.17 $\pm$ 0.46 ^{ab}
trans- β -Ionone	1956	N.D.	N.D.	3.89 $\pm$ 0.03 ^c	1.58 $\pm$ 0.14 ^b	N.D.	N.D.	N.D.	N.D.
β -Ionone	1967	2.17 $\pm$ 0.52 ^c	0.68 $\pm$ 0.16 ^b	5.98 $\pm$ 0.16 ^d	N.D.	1.10 $\pm$ 0.15 ^b	1.08 $\pm$ 0.14 ^b	0.64 $\pm$ 0.04 ^b	1.00 $\pm$ 0.01 ^b
Cubenol	2091	0.90 $\pm$ 0.16 ^c	N.D.	2.61 $\pm$ 0.34 ^d	N.D.	0.72 $\pm$ 0.12 ^{bc}	0.53 $\pm$ 0.05 ^b	N.D.	N.D.
2-Propenoic acid	2104	62.65 $\pm$ 3.71 ^a	202.86 $\pm$ 2.12 ^{bc}	434.17 $\pm$ 3.33 ^e	208.60 $\pm$ 12.43 ^c	189.78 $\pm$ 20.17 ^{bc}	171.73 $\pm$ 1.13 ^b	87.10 $\pm$ 0.41 ^a	267.76 $\pm$ 31.90 ^d
Eugenol	2158	135.14 $\pm$ 8.88 ^d	19.32 $\pm$ 0.61 ^{ab}	241.37 $\pm$ 8.64 ^e	25.94 $\pm$ 1.67 ^{bc}	22.43 $\pm$ 3.61 ^{abc}	15.84 $\pm$ 0.04 ^{ab}	11.19 $\pm$ 0.17 ^a	30.75 $\pm$ 1.26 ^c
α -epi-Muurolol	2188	6.93 $\pm$ 1.63 ^c	3.88 $\pm$ 1.22 ^b	9.05 $\pm$ 0.42 ^d	1.10 $\pm$ 0.27 ^a	3.83 $\pm$ 0.10 ^a	18.59 $\pm$ 0.12 ^e	1.88 $\pm$ 0.50 ^a	2.45 $\pm$ 0.07 ^{ab}

3 RI: Retention Index; ND: Not detected.

4 ^{a-f} : Values indicated by different letters in the same line are different from each other at $P < 0.05$ level.

5 *: Sample names and tea formulations are explained in Table 1 in main text

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