



Supplementary Tables

Table S1. Skin biophysical parameters in subjects ≥ 38 vs. < 38 years.

Parameter	Subjects ≥ 38 (n = 20)	Subjects < 38 (n = 24)	p
Smoothness (Sesm)			
Forearm	256.83 \pm 78.07	226.00 \pm 70.27	0.176
Cheek	333.88 \pm 116.35	360.05 \pm 123.68	0.239
Palm	392.92 \pm 182.43	420.92 \pm 124.56	0.550
Roughness (Ser)			
Forearm	2.28 \pm 1.70	2.6 \pm 1.76	0.544
Cheek	3.61 \pm 2.42	3.66 \pm 2.46	0.945
Palm	3.32 \pm 1.71	2.87 \pm 1.25	0.316
Desquamation (Sesc)			
Forearm	0.65 \pm 1.15	0.13 \pm 0.16	0.058
Cheek	0.81 \pm 1.19	0.60 \pm 1.22	0.569
Palm	0.11 \pm 0.23	0.06 \pm 0.15	0.435
Wrinkles (Sew)			
Forearm	80.96 \pm 25.36	76.65 \pm 23.80	0.564
Cheek	109.15 \pm 37.85	122.3 \pm 48.59	0.319
Palm	256.49 \pm 182.05	284.85 \pm 90.15	0.531
Surface area (%)			
Forearm	636.5 \pm 90.31	607.38 \pm 63.96	0.219
Cheek	680.73 \pm 143.99	654.99 \pm 104.52	0.497
Palm	506.21 \pm 98.01	452.76 \pm 49.14	0.035
Volume (mm³)			
Forearm	93.5 \pm 15.13	88.70 \pm 15.76	0.312
Cheek	109.44 \pm 10.53	103.42 \pm 14.09	0.122
Palm	83.19 \pm 19.86	84.00 \pm 22.66	0.902
Contrast (AU)			
Forearm	1.17 \pm 0.37	1.02 \pm 0.25	0.128
Cheek	1.22 \pm 0.43	1.23 \pm 0.44	0.954
Palm	0.76 \pm 0.36	0.58 \pm 0.12	0.031
Variance (AU)			
Forearm	4.47 \pm 0.83	4.14 \pm 0.66	0.142
Cheek	4.71 \pm 1.15	4.51 \pm 0.89	0.526
Palm	3.11 \pm 0.89	2.63 \pm 0.42	0.037
Homogeneity (AU)			
Forearm	1.38 \pm 0.06	1.41 \pm 0.06	0.198
Cheek	1.38 \pm 0.07	1.38 \pm 0.07	0.864
Palm	1.5 \pm 0.08	1.55 \pm 0.04	0.011
Anisotropy (AU)			
Forearm	34.39 \pm 10.37	33.57 \pm 12.72	0.819
Cheek	28.79 \pm 2.83	29.72 \pm 10.05	0.815
Palm	33.24 \pm 12.66	41.17 \pm 16.19	0.075
Total number of cells (AU)			
Forearm	118.9 \pm 33.27	121.79 \pm 27.14	0.752
Cheek	70.05 \pm 20.73	63.29 \pm 21.48	0.297
Palm	86.25 \pm 30.03	84.08 \pm 24.70	0.794
Hardness (AU)			
Forearm	9.42 \pm 4.02	9.46 \pm 4.03	0.969

Cheek	7.82 ± 3.25	8.05 ± 3.10	0.810
Palm	14.16 ± 3.84	12.45 ± 5.41	0.229
Friction (AU)			
Forearm	179.45 ± 91.83	166.18 ± 93.30	0.638
Cheek	97.24 ± 56.67	138.30 ± 87.36	0.165
Palm	181.88 ± 138.25	392.31 ± 279.69	0.003
Brightness (AU)			
Forearm	7.21 ± 0.96	9.31 ± 11.27	0.371
Cheek	7.41 ± 1.42	7.03 ± 1.19	0.340
Palm	8.19 ± 1.32	6.93 ± 1.16	0.002
Deformability (mm)			
Forearm	1.57 ± 0.38	1.51 ± 0.32	0.579
Cheek	1.87 ± 0.29	1.91 ± 0.22	0.692
Palm	1.23 ± 0.21	1.34 ± 0.29	0.159
Flaking index (%)			
Forearm	34.99 ± 6.52	29.39 ± 8.70	0.022
Cheek	22.05 ± 7.37	30.27 ± 13.65	0.015
Palm	13.20 ± 5.83	9.78 ± 7.80	0.113

p value based on Student's t-test for independent samples comparing the values of biophysical skin parameters between subjects ≥ 38 and < 38 years.

Table S2. Skin biophysical parameters in males vs. females.

Parameter	Male (n = 15)	Female (n = 29)	p
Smoothness (Sesm)			
Forearm	209.34 ± 47.78	255.00 ± 81.58	0.022
Cheek	382.86 ± 136.49	330.21 ± 108.72	0.170
Palm	381.27 ± 118.86	22.12 ± 167.67	0.355
Roughness (Ser)			
Forearm	3.63 ± 2.28	1.84 ± 0.90	0.010
Cheek	3.97 ± 2.27	3.47 ± 2.27	0.482
Palm	2.40 ± 1.09	3.42 ± 1.45	0.016
Desquamation (Sesc)			
Forearm	0.11 ± 0.13	0.50 ± 0.98	0.045
Cheek	0.88 ± 1.56	0.61 ± 0.98	0.494
Palm	0.06 ± 0.11	0.10 ± 0.22	0.379
Wrinkles (Sew)			
Forearm	73.90 ± 21.44	81.05 ± 25.71	0.361
Cheek	129.91 ± 46.46	109.29 ± 41.82	0.143
Palm	234.79 ± 77.15	291.19 ± 159.31	0.121
Surface area (%)			
Forearm	605.45 ± 61.98	628. 46 ± 84.36	0.356
Cheek	637.11 ± 80.18	681.99 ± 139.20	0.183
Palm	463.94 ± 47.31	484.10 ± 91.36	0.329
Volume (mm³)			
Forearm	86.12 ± 14.30	93.34 ± 15.75	0.145
Cheek	105.02 ± 13.31	106.74 ± 12.77	0.678
Palm	85.55 ± 18.09	82.64 ± 22.87	0.672
Contrast (AU)			
Forearm	0.99 ± 0.22	1.14 ± 0.35	0.146
Cheek	1.15 ± 0.33	1.26 ± 0.48	0.440
Palm	0.61 ± 0.09	0.69 ± 0.29	0.169

Variance (AU)			
Forearm	4.09 ± 0.71	4.39 ± 0.76	0.210
Cheek	4.40 ± 0.68	4.71 ± 1.14	0.265
Palm	2.76 ± 0.37	2.89 ± 0.83	0.447
Homogeneity (AU)			
Forearm	1.41 ± 0.05	1.39 ± 0.06	0.429
Cheek	1.39 ± 0.06	1.38 ± 0.07	0.702
Palm	1.54 ± 0.04	1.52 ± 0.07	0.392
Anisotropy (AU)			
Forearm	34.72 ± 10.20	33.54 ± 12.39	0.753
Cheek	29.68 ± 12.54	29.02 ± 10.78	0.855
Palm	39.53 ± 15.00	36.56 ± 15.26	0.542
Total number of cells (AU)			
Forearm	121.47 ± 27.70	119.97 ± 31.22	0.876
Cheek	66.27 ± 23.70	66.41 ± 20.19	0.983
Palm	80.40 ± 29.99	87.48 ± 25.44	0.415
Hardness (AU)			
Forearm	7.92 ± 3.15	10.23 ± 4.18	0.067
Cheek	9.09 ± 3.55	7.35 ± 2.78	0.080
Palm	12.65 ± 6.11	13.52 ± 4.03	0.622
Friction (AU)			
Forearm	187.05 ± 108.86	164.53 ± 82.69	0.447
Cheek	137.09 ± 95.22	102.39 ± 62.15	0.152
Palm	387.64 ± 273.91	249.60 ± 224.16	0.080
Brightness (AU)			
Forearm	10.66 ± 14.23	7.17 ± 1.13	0.359
Cheek	7.02 ± 1.54	7.30 ± 1.17	0.491
Palm	6.67 ± 1.20	7.93 ± 1.27	0.003
Deformability (mm)			
Forearm	1.46 ± 0.34	1.58 ± 0.34	0.253
Cheek	1.89 ± 0.24	1.89 ± 0.26	0.920
Palm	1.38 ± 0.31	1.24 ± 0.22	0.680
Flaking index (%)			
Forearm	29.70 ± 9.36	33.09 ± 7.44	0.198
Cheek	26.06 ± 9.96	26.78 ± 12.89	0.426
Palm	9.24 ± 7.03	12.41 ± 7.02	0.162

p value based on Student's t-test for independent samples comparing the values of biophysical skin parameters between males and females.

Table S3. Correlation between skin biophysical parameters and age at different body sites.

Parameter	Forearm	Cheek	Palm
Smoothness (Sesm)	r = 0.161	r = -0.027	r = -0.036
	p = 0.295	p = 0.861	p = 0.814
Roughness (Ser)	r = -0.126	r = -0.074	r = 0.129
	p = 0.417	p = 0.635	p = 0.406
Desquamation (Sesc)	r = 0.288	r = 0.130	r = 0.191
	p = 0.058	p = 0.401	p = 0.213
Wrinkles (Sew)	r = 0.064	r = -0.099	r = -0.036
	p = 0.678	p = 0.521	p = 0.816
Surface area (%)	r = 0.185	r = 0.119	r = 0.327*
	p = 0.228	p = 0.443	p = 0.030

Volume (mm ³)	r = 0.117 p = 0.450	r = 0.221 p = 0.149	r = -0.046 p = 0.769
Contrast (AU)	r = 0.212 p = 0.166	r = -0.013 p = 0.935	r = 0.373* p = 0.013
Variance (AU)	r = 0.213 p = 0.165	r = 0.109 p = 0.480	r = 0.321* p = 0.034
Homogeneity (AU)	r = -0.167 p = 0.277	r = -0.025 p = 0.873	r = -0.389** p = 0.009
Anisotropy (AU)	r = 0.038 p = 0.807	r = -0.004 p = 0.981	r = -0.296 p = 0.051
Total number of cells (AU)	r = -0.165 p = 0.283	r = 0.128 p = 0.409	r = 0.137 p = 0.375
Hardness (AU)	r = 0.045 p = 0.774	r = 0.087 p = 0.576	r = 0.184 p = 0.231
Friction (AU)	r = 0.046 p = 0.764	r = -0.169 p = 0.272	r = -0.520** p = <0.001
Brightness (AU)	r = -0.106 p = 0.492	r = 0.179 p = 0.245	r = 0.454** p = 0.002
Deformability (mm)	r = 0.099 p = 0.522	r = -0.153 p = 0.322	r = -0.168 p = 0.276
Flaking index (%)	r = 0.388** p = 0.009	r = -0.305* p = 0.044	r = 0.290 p = 0.056

r = Pearson's Correlation Coefficient; p = Bilateral significance (p); * Correlation is significant at the 0.05 ± bilateral level; ** Correlation is significant at the 0.01 ± bilateral level.

Table S4. Skin biophysical parameters in smokers vs. non-smokers.

Parameter	Smokers (n=14)	Non-smokers (n=30)	p
Smoothness (Sesm)			
Forearm	222.37 ± 72.45	248.23 ± 75.45	0.143
Cheek	337.50 ± 111.13	353.13 ± 125.44	0.340
Palm	414.07 ± 228.60	405.45 ± 104.67	0.012
Roughness (Ser)			
Forearm	2.84 ± 2.06	2.27 ± 1.55	0.182
Cheek	3.20 ± 0.92	3.84 ± 2.64	0.104
Palm	3.30 ± 1.65	2.97 ± 1.41	0.258
Desquamation (Sesc)			
Forearm	0.24 ± 0.35	0.43 ± 0.96	0.168
Cheek	0.56 ± 0.70	0.77 ± 1.38	0.251
Palm	0.15 ± 0.27	0.06 ± 0.13	0.069
Wrinkles (Sew)			
Forearm	76.77 ± 28.25	79.47 ± 22.75	0.378
Cheek	112.94 ± 42.57	117.90 ± 45.34	0.363
Palm	256.83 ± 203.43	279.03 ± 98.73	0.352
Surface area (%)			
Forearm	607.65 ± 60.04	626.67 ± 84.69	0.200
Cheek	670. 21 ± 110.38	665.05 ± 130.50	0.455
Palm	516.61 ± 97.05	458.60 ± 62.88	0.098
Volume (mm³)			
Forearm	87.30 ± 14.16	92.55 ± 16.03	0.141

Cheek	109.36 ± 9.40	104.66 ± 14.04	0.077
Palm	89.34 ± 16.52	80.98 ± 22.82	0.089
Contrast (AU)			
Forearm	1.05 ± 0.21	1.12 ± 0.35	0.213
Cheek	1.27 ± 0.43	1.20 ± 0.45	0.677
Palm	0.77 ± 0.35	0.62 ± 0.17	0.047
Variance (AU)			
Forearm	4.19 ± 0.54	4.34 ± 0.83	0.249
Cheek	4.63 ± 0.90	4.59 ± 1.07	0.452
Palm	3.20 ± 0.86	2.69 ± 0.57	0.028
Homogeneity (AU)			
Forearm	1.40 ± 0.05	1.39 ± 0.06	0.258
Cheek	1.37 ± 0.05	1.38 ± 0.73	0.225
Palm	1.50 ± 0.075	1.54 ± 0.05	0.037
Anisotropy (AU)			
Forearm	32.04 ± 11.59	34.84 ± 11.67	0.232
Cheek	28.64 ± 11.64	29.53 ± 11.28	0.407
Palm	32.56 ± 15.52	39.90 ± 14.51	0.074
Total number of cells (AU)			
Forearm	118.80 ± 27.96	124.07 ± 34.10	0.309
Cheek	62.57 ± 20.71	68.13 ± 21.50	0.210
Palm	82.43 ± 26.06	86.30 ± 27.69	0.328
Hardness (AU)			
Forearm	9.77 ± 3.82	9.28 ± 4.10	0.352
Cheek	7.87 ± 2.46	7.97 ± 3.44	0.639
Palm	13.61 ± 5.12	13.04 ± 4.71	0.365
Friction (AU)			
Forearm	170.23 ± 98.95	173.13 ± 90.01	0.463
Cheek	113.63 ± 92.21	114.50 ± 68.60	0.488
Palm	285.07 ± 280.38	302.07 ± 236.40	0.423
Brightness (AU)			
Forearm	6.98 ± 0.92	11.33 ± 14.64	0.007
Cheek	7.16 ± 1.41	7.23 ± 1.27	0.443
Palm	7.51 ± 1.71	7.50 ± 1.22	0.106
Deformability (mm)			
Forearm	1.48 ± 0.38	1.57 ± 0.33	0.242
Cheek	1.87 ± 0.27	1.90 ± 0.25	0.372
Palm	1.24 ± 0.23	1.31 ± 0.27	0.190
Flaking index (%)			
Forearm	62.16 ± 10.41	58.70 ± 13.42	0.041
Cheek	56.27 ± 20.42	52.45 ± 15.91	0.061
Palm	29.57 ± 16.11	25.40 ± 14.48	0.209

p value based on Student's t-test for independent samples comparing the values of biophysical skin parameters between smokers and non-smokers.

Table S5. Skin biophysical parameters in alcohol users vs. non-alcohol users.

Parameter	Alcohol users (n=22)	Non-alcohol user (n=22)	p
Smoothness (Sesm)			
Forearm	229.54 ± 58.94	250.49 ± 87.82	0.086
Cheek	347.65 ± 130.42	348.66 ± 111.69	0.606

Palm	435.86 ± 120.60	380.53 ± 177.10	0.117
Roughness (Ser)			
Forearm	2.10 ± 1.14	2.80 ± 2.13	0.046
Cheek	3.61 ± 2.63	3.66 ± 1.83	0.288
Palm	2.92 ± 1.18	3.23 ± 1.74	0.074
Desquamation (Sesc)			
Forearm	0.39 ± 1.09	0.35 ± 0.44	0.431
Cheek	0.73 ± 1.28	0.67 ± 1.14	0.433
Palm	0.06 ± 0.11	0.11 ± 0.25	0.069
Wrinkles (Sew)			
Forearm	74.18 ± 19.87	74.18 ± 19.87	0.108
Cheek	114.81 ± 48.81	117.84 ± 39.80	0.176
Palm	281.33 ± 96.10	262.60 ± 172.87	0.145
Surface area (%)			
Forearm	622.77 ± 91.10	618.46 ± 63.18	0.402
Cheek	675.32 ± 127.98	658.07 ± 120.56	0.308
Palm	465.86 ± 43.05	488.26 ± 103.47	0.148
Volume (mm³)			
Forearm	87.52 ± 14.92	94.24 ± 15.65	0.949
Cheek	105.87 ± 13.83	106.44 ± 12.06	0.443
Palm	86.08 ± 19.29	81.20 ± 23.14	0.760
Contrast (AU)			
Forearm	1.11 ± 0.38	1.08 ± 0.24	0.421
Cheek	1.30 ± 0.52	1.15 ± 0.31	0.238
Palm	0.61 ± 0.11	0.72 ± 0.33	0.162
Variance (AU)			
Forearm	4.29 ± 0.90	4.29 ± 0.57	0.328
Cheek	4.68 ± 1.08	4.52 ± 0.96	0.208
Palm	2.74 ± 0.38	2.96 ± 0.92	0.155
Homogeneity (AU)			
Forearm	1.40 ± 0.07	1.40 ± 0.49	0.391
Cheek	1.37 ± 0.08	1.39 ± 0.05	0.541
Palm	1.54 ± 0.03	1.52 ± 0.08	0.279
Anisotropy (AU)			
Forearm	33.51 ± 13.56	34.38 ± 9.52	0.06
Cheek	27.37 ± 10.66	31.11 ± 11.79	0.138
Palm	37.09 ± 16.10	38.06 ± 14.32	0.586
Total number of cells (AU)			
Forearm	128.23 ± 30.16	112.73 ± 27.87	0.359
Cheek	63.95 ± 23.33	68.77 ± 19.01	0.100
Palm	85.82 ± 23.57	84.32 ± 30.49	0.158
Hardness (AU)			
Forearm	9.88 ± 3.93	9.00 ± 4.06	0.490
Cheek	7.97 ± 3.35	7.91 ± 2.99	0.476
Palm	12.92 ± 5.39	13.52 ± 4.21	0.116
Friction (AU)			
Forearm	169.22 ± 95.91	175.20 ± 89.65	0.687
Cheek	135.97 ± 93.13	92.48 ± 45.79	0.002
Palm	407.65 ± 283.95	185.67 ± 139.78	< 0.001
Brightness (AU)			
Forearm	9.58 ± 7.14	9.58 ± 11.76	0.094
Cheek	7.08 ± 1.20	7.33 ± 1.40	0.273
Palm	7.04 ± 1.09	7.96 ± 1.49	0.184

Deformability (mm)			
Forearm	1.48 ± 0.33	1.60 ± 0.35	0.127
Cheek	1.86 ± 0.26	1.92 ± 0.25	0.238
Palm	1.29 ± 0.22	1.28 ± 0.29	0.386
Flaking index (%)			
Forearm	33.11 ± 7.94	30.76 ± 8.47	0.150
Cheek	29.32 ± 13.28	23.75 ± 9.76	0.039
Palm	29.83 ± 12.37	23.63 ± 16.87	0.083

p value based on Student's t-test for independent samples comparing the values of biophysical skin parameters between alcohol users and non-alcohol users.

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