APPENDICES

APPENDIX A

Conclusion sizes of fluid droplets on the peripheral area of the unetched dentin surface

Table 9 Conclusion sizes of fluid droplets on the peripheral area of the unetched dentin surface at 0 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	4.34	16	69.48	-0.95	0.91
2	7.04	3	21.12	1.75	3.05
3	2.89	13	37.62	-2.40	5.76
4	4.28	26	111.28	-1.01	1.03
5	5.38	4	21.51	0.08	0.01
6	5.80	8	46.39	0.50	0.25
7	9.42	2	18.84	4.13	17.02
8	5.88	4	23.50	0.58	0.34
9	7.34	4	29.38	2.05	4.20
10	7.10	7	49.73	1.81	3.28
11	5.36	5	26.80	0.07	0.004
12	7.85	3	23.55	2.56	6.53
13	5.11	13	66.40	-0.19	0.03
14	7.68	2	15.36	2.39	5.69
15	6.98	5	34.92	1.69	2.85
16	6.57	9	59.15	1.28	1.63
17	3.95	4	15.78	-1.35	1.82
18	6.89	8	55.15	1.60	2.56
19	4.52	9	40.71	-0.77	0.60
20	7.34	3	22.02	2.04	4.18
21	4.71	4	18.84	-0.58	0.34
22	4.95	8	39.60	-0.34	0.12
Sum		160	847.09		62.20
$\Sigma \bar{x}$			*5.29*		
$\Sigma (x-\bar{x})^2/N$					0.39
$\frac{\Sigma (x-\bar{x})^2/N}{\sqrt{\sum (x-\bar{x})^2/N}}$					*0.62*

Table 10 Conclusion sizes of fluid droplets on the peripheral area of the unetched dentin surface at 15 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	6.54	4	26.16	1.19	1.41
2	5.38	12	64.56	0.03	0.00
3	4.64	11	51.04	-0.71	0.51
4	4.98	19	94.62	-0.37	0.14
5	5.07	13	65.92	-0.28	0.08
6	7.39	7	51.72	2.03	4.14
7	5.06	10	50.59	-0.30	0.09
8	6.93	4	27.71	1.57	2.48
9	4.66	9	41.94	-0.69	0.48
10	6.62	7	46.34	1.27	1.60
11	6.80	3	20.40	1.45	2.09
12	6.36	7	44.52	1.01	1.01
13	3.83	11	42.16	-1.52	2.32
14	5.36	5	26.80	0.01	0.00004
15	7.67	4	30.66	2.31	5.34
16	/	/	/	/	/
17	4.23	11	46.48	-1.13	1.27
18	7.06	3	21.19	1.71	2.92
19	4.85	6	29.10	-0.50	0.25
20	6.56	2	13.12	1.21	1.45
21	7.35	3	22.05	2.00	3.98
22	4.28	8	34.24	-1.07	1.15
Sum		159	851.30		32.72
$\Sigma\,\bar{x}$			*5.35*		
$\Sigma\,(x-\bar{x})^2/N$					0.21
$\sqrt{\Sigma\,(x-\bar{x})^2/N}$					*0.45*

Table 11 Conclusion sizes of fluid droplets on the peripheral area of the unetched dentin surface at 30 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	5.08	8	40.64	-0.79	0.63
2	6.05	8	48.40	0.18	0.03
3	4.71	4	18.84	-1.16	1.35
4	5.21	22	114.62	-0.66	0.44
5	6.12	10	61.20	0.25	0.06
6	7.95	5	39.73	2.07	4.30
7	5.58	7	39.06	-0.29	0.09
8	4.59	7	32.13	-1.28	1.64
9	6.69	3	20.07	0.82	0.67
10	6.62	5	33.10	0.75	0.56
11	4.72	3	14.16	-1.15	1.33
12	7.05	5	35.23	1.17	1.38
13	6.38	12	76.56	0.51	0.26
14	7.33	4	29.32	1.46	2.13
15	8.40	5	42.01	2.53	6.40
16	4.87	10	48.67	-1.01	1.01
17	3.80	10	38.05	-2.07	4.27
18	5.98	7	41.86	0.11	0.01
19	7.45	8	59.56	1.57	2.47
20	7.21	5	36.03	1.33	1.78
21	6.76	10	67.58	0.89	0.78
22	4.37	6	26.22	-1.50	2.26
Sum		164	963.02		33.84
$\Sigma\,\bar{x}$			*5.87*		
$\Sigma\,(x-\bar{x})^2/N$					0.21
$\sqrt{\Sigma\,(x-\bar{x})^2/N}$					*0.45*

Table 12 Conclusion sizes of fluid droplets on the peripheral area of the unetched dentin surface at 45 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	7.00	5	35.00	0.49	0.24
2	7.40	4	29.60	0.89	0.79
3	5.75	4	23.00	-0.76	0.58
4	6.54	4	26.16	0.03	0.001
5	5.70	5	28.51	-0.81	0.65
6	5.16	7	36.12	-1.35	1.82
7	7.44	4	29.76	0.93	0.87
8	6.75	10	67.50	0.24	0.06
9	6.97	9	62.75	0.46	0.21
10	7.71	5	38.56	1.20	1.44
11	5.19	4	20.76	-1.32	1.74
12	/	/	/	/	/
13	7.84	5	39.18	1.33	1.76
14	5.20	4	20.80	-1.31	1.71
15	11.85	1	11.85	5.34	28.47
16	/	/	/	/	/
17	4.37	13	56.85	-2.14	4.57
18	7.79	4	31.15	1.28	1.63
19	7.72	6	46.31	1.21	1.46
20	8.92	3	26.75	2.41	5.79
21	8.21	3	24.62	1.70	2.87
22	4.39	2	8.78	-2.12	4.49
Sum		102	663.97		61.16
$\Sigma\,\bar{x}$			*6.51*		
$\Sigma\,(x-\bar{x})^2/N$					0.60
$\frac{\Sigma\,(x-\bar{x})^2/N}{\sqrt{\sum(x-\bar{x})^2/N}}$					*0.77*

APPENDIX B

Conclusion sizes of fluid droplets on the central area of the unetched dentin surface

Table 13 Conclusion sizes of fluid droplets on the central area of the unetched dentin surface at 0 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	4.62	16	73.92	0.91	0.83
2	6.16	10	61.55	0.63	0.39
3	3.09	13	40.17	2.44	5.95
4	/	/	/	/	/
5	/	/	/	/	/
6	5.06	4	20.26	0.47	0.22
7	6.73	8	53.84	1.20	1.44
8	/	/	/	/	/
9	/	/	/	/	/
10	6.55	1	6.55	1.02	1.03
11	7.23	8	57.83	1.70	2.89
12	7.02	5	35.08	1.49	2.21
13	/	/	/	/	/
14	/	/	/	/	/
15	6.88	4	27.52	1.35	1.83
16	5.87	14	82.20	0.34	0.12
Sum		83	458.90		16.90
$\Sigma\,\bar{x}$			*5.53*		
$\Sigma\,(x-\bar{x})^2/N$					0.20
$\frac{\bar{x}}{\sqrt{\sum(x-\bar{x})^2/N}}$					*0.45*

Table 14 Conclusion sizes of fluid droplets on the central area of the unetched dentin surface at 15 cmH_2O

Exp	Diameter	No	Diameter x No	x-$\bar{x}$	(x-$\bar{x}$)^2
1	5.65	9	50.84	0.04	0.001
2	6.34	10	63.45	0.73	0.54
3	4.21	22	92.55	-1.40	1.97
4	/	/	/	/	/
5	/	/	/	/	/
6	/	/	/	/	/
7	7.35	8	58.77	1.74	3.01
8	/	/	/	/	/
9	6.28	11	69.06	0.67	0.44
10	6.77	4	27.07	1.16	1.34
11	/	/	/	/	/
12	5.66	12	67.98	0.05	0.003
13	/	/	/	/	/
14	5.96	7	41.73	0.35	0.12
15	6.97	5	34.85	1.36	1.85
16	4.57	12	54.81	-1.04	1.09
Sum		100	561.08		10.37
$\Sigma \bar{x}$			*5.61*		
Σ (x-$\bar{x}$)^2/N					0.10
$\sqrt{\sum}(\frac{\Sigma(x-\bar{x})^2/N}{x-\bar{x})^2/N}$					*0.32*

Table 15 Conclusion sizes of fluid droplets on the central area of the unetched dentin surface at 30 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	5.79	16	92.58	-0.04	0.002
2	7.49	10	74.89	1.66	2.76
3	3.78	28	105.79	-2.05	4.20
4	/	/	/	/	/
5	/	/	/	/	/
6	5.56	13	72.22	-0.27	0.07
7	7.51	8	60.06	1.68	2.82
8	6.07	12	72.87	0.25	0.06
9	6.52	12	78.28	0.70	0.48
10	7.33	5	36.63	1.50	2.24
11	/	/	/	/	/
12	5.73	13	74.48	-0.10	0.01
13	8.97	4	35.86	3.14	9.85
14	/	/	/	/	/
15	/	/	/	/	/
16	5.95	12	71.39	0.12	0.01
Sum		133	775.02		22.51
$\Sigma \bar{x}$			*5.83*		
$\Sigma (x-\bar{x})^2/N$					0.17
$\frac{\Sigma (x-\bar{x})^2/N}{\sqrt{\sum (x-\bar{x})^2/N}}$					*0.41*

Table 16 Conclusion sizes of fluid droplets on the central area of the unetched dentin surface at 45 cmH_2O

Exp	Diameter	No	Diameter x No	x-x̄	$(x-\bar{x})^2$
1	5.44	16	86.97	1.37	1.88
2	10.50	4	41.99	3.69	13.61
3	11.44	5	57.19	4.63	21.45
4	5.58	18	100.47	1.23	1.50
5	7.51	8	60.07	0.70	0.49
6	9.38	5	46.88	2.57	6.60
7	8.73	7	61.09	1.92	3.69
8	/	/	/	/	/
9	/	/	/	/	/
10	5.77	7	40.40	1.04	1.07
11	/	/	/	/	/
12	5.28	12	63.39	1.52	2.32
13	/	/	/	/	/
14	/	/	/	/	/
15	/	/	/	/	/
16	6.75	5	33.76	0.05	0.003
Sum		87	592.19		52.62
Σ x̄			*6.81*		
$\Sigma (x-\bar{x})^2/N$					0.60
$\sqrt{\sum (\frac{\Sigma \bar{x}}{x-\bar{x})^2/N}}$					*0.78*

APPENDIX C

Conclusion sizes of dentinal tubules on the etched dentin surface

Table 17 Conclusion sizes of dentinal tubules on the etched dentin surface at 0 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	2.61	12	31.33	0.15	0.0225147
2	2.75	21	57.78	0.29	0.0847165
3	1.96	32	62.61	0.50	0.2539771
4	2.80	21	58.89	0.34	0.1181159
5	2.63	14	36.89	0.17	0.0303718
6	2.10	22	46.13	0.36	0.1321682
7	3.00	16	48.03	0.54	0.2928919
8	2.46	4	9.84	0.00	0.0000001
9	2.13	9	19.18	0.33	0.1083184
10	3.03	11	33.29	0.57	0.3198371
11	2.54	3	7.63	0.08	0.0068833
12	2.43	7	16.98	0.04	0.0012509
13	2.48	3	7.43	0.01	0.0002141
14	2.17	6	13.01	0.29	0.0857715
15	2.43	6	14.57	0.03	0.0010262
16	2.46	10	24.59	0.00	0.0000019
17	1.90	24	45.48	0.57	0.396406
18	3.23	12	38.78	0.77	0.5949022
19	2.75	5	13.75	0.29	0.0833086
20	2.44	10	24.35	0.03	0.0006435
21	2.20	13	28.57	0.26	0.0689983
22	2.25	7	15.73	0.21	0.0457699
23	2.26	5	11.28	0.21	0.0421759
24	2.82	10	28.17	0.36	0.1268303
25	2.80	6	16.82	0.34	0.1176255
Sum		289	711.05		2.86
$\Sigma\,\bar{x}$			*2.46*		
$\Sigma\,(x-\bar{x})^2/N$					0.01
$\frac{\Sigma\,\bar{x}}{\sqrt{\sum(\frac{(x-\bar{x})^2/N}{x-\bar{x})^2/N}}}$					*0.10*

Table 18 Conclusion sizes of dentinal tubules on the etched dentin surface at 15 cmH_2O

Exp	Diameter	No	Diameter x No	x-x̄	$(x-\bar{x})^2$
1	2.09	11	22.98	-0.33	0.1463141
2	2.90	19	55.12	0.430	0.1848192
3	1.95	40	78.06	-0.520	0.2701625
4	2.70	28	75.58	0.228	0.0520475
5	2.32	5	11.59	-0.154	0.0237612
6	2.53	19	48.16	0.064	0.0040437
7	3.70	6	22.18	1.226	1.5018995
9	2.91	15	43.60	0.436	0.1899011
10	1.74	3	5.23	-0.728	0.5297121
11	2.56	9	23.08	0.093	0.0087045
12	2.14	13	27.87	-0.327	0.1071256
13	2.36	9	21.21	-0.114	0.0131057
14	2.23	6	13.40	-0.238	0.0565551
15	2.98	5	14.90	0.509	0.2589318
16	1.93	12	23.18	-0.539	0.2910386
17	/	/	/	/	/
18	2.55	13	33.11	0.076	0.0057421
19	2.33	7	16.30	-0.143	0.0205319
20	/	/	/	/	/
21	3.14	7	21.98	0.669	0.4473649
22	2.61	11	28.68	0.136	0.0185303
23	2.34	15	35.14	-0.129	0.0165929
24	3.19	3	9.56	0.714	0.5095867
25	2.66	9	23.97	0.192	0.0369357
26	/	/	/	/	/
Sum		265	654.85		4.69
$\Sigma \bar{x}$			*2.47*		
$\Sigma (x-\bar{x})^2/N$					0.02
$\sqrt{\Sigma (x-\bar{x})^2/N}$					*0.31*

Table 19 Conclusion sizes of dentinal tubules on the etched dentin surface at 30 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	2.79	24	67.07	0.312	0.0974852
2	2.38	11	26.16	-0.104	0.0109039
3	2.07	15	31.01	-0.415	0.1723486
4	2.44	20	48.72	-0.046	0.0021297
5	2.34	4	9.37	-0.141	0.0198525
6	2.91	15	43.70	0.431	0.1858174
7	2.44	11	26.84	-0.042	0.0017765
9	2.50	24	60.01	0.018	0.0003337
10	2.23	5	11.13	-0.256	0.0656122
11	2.38	18	42.79	-0.105	0.0110680
12	2.33	2	4.66	-0.155	0.0239163
13	/	/	/	/	/
14	2.20	13	28.59	-0.283	0.0800427
15	2.42	3	7.26	-0.064	0.0040724
16	2.31	3	6.93	-0.172	0.0296352
17	2.36	32	75.40	-0.126	0.0158899
18	2.69	13	34.95	0.206	0.0424064
19	2.45	20	48.95	-0.035	0.0012005
20	2.45	18	44.19	-0.027	0.0007522
21	2.77	4	11.07	0.284	0.0807135
22	2.38	14	33.25	-0.107	0.0114809
23	2.29	8	18.34	-0.190	0.0359667
24	2.79	5	13.93	0.304	0.0923255
25	2.86	13	37.16	0.376	0.1416112
26	2.89	2	5.78	0.405	0.1643095
Sum		297	737.20		1.2916506
$\Sigma \bar{x}$			*2.48*		
$\Sigma (x-\bar{x})^2/N$					0.004
$\sqrt{\Sigma (x-\bar{x})^2/N}$					*0.07*

Table 20 Conclusion sizes of dentinal tubules on the etched dentin surface at 45 cmH_2O

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	2.73	14	38.17	0.165	0.0272930
2	2.55	16	40.84	-0.009	0.0000816
3	2.35	30	70.40	-0.215	0.0461058
4	2.67	16	42.67	0.106	0.0111624
5	2.58	3	7.74	0.017	0.0002928
6	2.67	10	26.71	0.109	0.0119415
7	2.88	14	40.28	0.316	0.0995801
9	2.58	12	31.02	0.023	0.0005457
10	2.71	5	13.57	0.152	0.0230364
11	2.58	14	36.06	0.014	0.0002100
12	2.63	6	15.80	0.072	0.0052000
13	2.81	18	50.61	0.250	0.0627222
14	/	/	/	/	/
15	2.53	8	20.21	-0.035	0.0012231
16	/	/	/	/	/
17	2.47	2	4.94	-0.091	0.0083216
18	2.48	5	12.42	-0.077	0.0059633
19	2.93	19	55.62	0.366	0.1340627
20	/	/	/	/	/
21	2.21	15	33.15	-0.352	0.1235916
22	2.35	13	30.56	-0.211	0.0444527
23	2.28	15	34.15	-0.285	0.0811619
24	/	/	/	/	/
25	2.72	10	27.17	0.155	0.0241111
26	2.40	29	69.74	-0.156	0.0244594
Sum		274	701.78		0.7355189
$\Sigma\,\bar{x}$			*2.56*		
$\Sigma\,(x-\bar{x})^2/N$					0.003
$\sqrt{\Sigma\,(x-\bar{x})^2/N}$					*0.05*

APPENDIX D

Conclusion sizes of dentinal tubules on the etched dentin dry surface

Table 21 Conclusion sizes of dentinal tubules on the central area of the etched dentin dry surface

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	1.95	25	48.64	-0.82	0.6802
2	2.86	26	74.26	0.09	0.0073
3	3.00	35	104.97	0.23	0.0523
4	3.41	7	23.89	0.64	0.4128
5	2.76	8	22.04	-0.02	0.0002
6	2.94	22	64.66	0.17	0.0285
7	2.97	18	53.40	0.20	0.0385
8	2.45	2	4.91	-0.32	0.1010
9	2.38	15	35.72	-0.39	0.1513
10	3.02	3	9.07	0.25	0.0640
11	3.05	16	48.81	0.28	0.0785
Sum		177	490.36		1.61
$\Sigma \bar{x}$			*2.77*		
$\Sigma (x-\bar{x})^2/N$					0.01
$\sqrt{\Sigma (x-\bar{x})^2/N}$					*0.10*

Table 22 Conclusion sizes of dentinal tubules on the peripheral area of the etched dentin dry surface

Exp	Diameter	No	Diameter x No	$x-\bar{x}$	$(x-\bar{x})^2$
1	2.28	11	25.04	-0.04	0.00181
2	2.50	9	22.47	0.18	0.03141
3	2.79	23	64.17	0.47	0.22196
4	2.04	6	12.23	-0.28	0.07870
5	1.96	16	31.32	-0.36	0.13082
6	2.38	19	45.21	0.06	0.00367
7	2.31	15	34.70	-0.01	0.00003
8	2.07	4	8.29	-0.25	0.06132
9	2.21	4	8.83	-0.11	0.01268
10	1.64	12	19.65	-0.68	0.46484
11	2.61	14	36.53	0.29	0.08413
Sum		133	308.41		1.09
$\Sigma \bar{x}$			*2.32*		
$\Sigma (x-\bar{x})^2/N$					0.01
$\sqrt{\Sigma (x-\bar{x})^2/N}$					*0.09*

APPENDIX E

Statistic analysis of sizes of fluid droplets on the peripheral area of the unetched dentin surface at difference pressures

One Way Analysis of Variance
Data source: The peripheral area of unetched dentin surface

Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks

Data source: The peripheral area of unetched dentin surface

Group	N	Missing	Median	25%	75%
0mmH2O	160	0	5.150	3.870	6.457
15mmH2O	159	0	5.070	4.304	6.412
30mmH2O	164	0	5.537	4.398	7.040
45mmH2O	102	0	6.338	4.895	7.990

H = 27.874 with 3 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

All Pairwise Multiple Comparison Procedures (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
45mmH2O vs 0mmH2O	103.588	4.837	Yes
45mmH2O vs 15mmH2O	91.962	4.289	Yes
45mmH2O vs 30mmH2O	54.282	2.547	No
30mmH2O vs 0mmH2O	49.306	2.625	No
30mmH2O vs 15mmH2O	37.680	2.003	Do Not Test
15mmH2O vs 0mmH2O	11.626	0.614	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

APPENDIX F

Statistic analysis of sizes of fluid droplets on the central area of the unetched dentin surface at difference pressures

One Way Analysis of Variance

Data source: Unetch Center

Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks

Data source: Unetch Center in Notebook 1

Group	N	Missing	Median	25%	75%
0mmH2O	83	0	4.820	3.392	6.210
15mmH2O	100	0	4.960	3.685	6.270
30mmH2O	133	0	4.620	3.878	6.632
45mmH2O	87	0	5.140	4.210	7.478

H = 8.449 with 3 degrees of freedom. (P = 0.038)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = 0.038)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

All Pairwise Multiple Comparison Procedures (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
45mmH2O vs 0mmH2O	47.460	2.656	Yes
45mmH2O vs 30mmH2O	37.350	2.325	No
45mmH2O vs 15mmH2O	36.650	2.146	Do Not Test
15mmH2O vs 0mmH2O	10.810	0.625	No
15mmH2O vs 30mmH2O	0.699	0.0453	Do Not Test
30mmH2O vs 0mmH2O	10.111	0.621	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

APPENDIX G

Statistic analysis of sizes of fluid droplets on the central and peripheral area of the unetched dentin surface at o cmH_2O

t-test
Data source: unetched ocmH_2O (compare peripheraland central)

Normality Test: Failed (P < 0.050)

Test execution ended by user request, Rank Sum Test begun

Mann-Whitney Rank Sum Test È**Data source:** unetched ocmH2O(compare peripheral and central) in Notebook 1

Group	N	Missing	Median	25%	75%
peripheral	47	0	3.945	3.164	5.862
central	59	0	4.795	3.545	6.380

T = 2273.500 n(small)= 47 n(big)= 59 (P = 0.126)

The difference in the median values between the two groups is not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.126)

APPENDIX H

Statistic analysis of sizes of fluid droplets on the central and peripheral area of the unetched dentin surface at 15 cmH_2O

t-test

Data source: unetched 15cmH_2O (compare peripheral and central)

Normality Test: Passed (P = 0.164)

Equal Variance Test: Failed (P < 0.050)

Test execution ended by user request, Rank Sum Test begun

Mann-Whitney Rank Sum Test

Data source: unetched 15cmH_2O (compare peripheral and central)

Group	N	Missing	Median	25%	75%
peripheral	43	0	4.750	4.070	5.190
central	69	0	4.990	3.911	6.053

T = 2244.500 n(small)= 43 n(big)= 69 (P = 0.270)

The difference in the median values between the two groups is not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.270)

APPENDIX I

Statistic analysis of sizes of fluid droplets on the central and peripheral area of the unetched dentin surface at 30 cmH_2O

t-test
Data source: unetched 30cmH_2O (compare peripheral and central)

Normality Test: Failed (P < 0.050)

Test execution ended by user request, Rank Sum Test begun

Mann-Whitney Rank Sum Test
Data source: unetched 30cmH_2O (compare peripheral and central)

Group	N	Missing	Median	25%	75%
border	33	0	4.900	4.002	5.765
central	84	0	4.992	3.953	6.737

T = 1862.500 n(small)= 33 n(big)= 84 (P = 0.611)

The difference in the median values between the two groups is not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.611)

APPENDIX J

Statistic analysis of sizes of fluid droplets on the central and peripheral area of the unetched dentin surface at 45 cmH_2O

t-test

Data source: unetch uncut 45cm compare peripheral and central in Notebook 1

Normality Test: Failed (P < 0.050)

Test execution ended by user request, Rank Sum Test begun

Mann-Whitney Rank Sum Test
Data source: unetch uncut 45cm compare border and central in Notebook 1

Group	N	Missing	Median	25%	75%
border	23	0	5.390	4.513	6.557
central	49	0	6.035	4.648	7.759

T = 739.000 n(small)= 23 n(big)= 49 (P = 0.227)

The difference in the median values between the two groups is not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.227)

APPENDIX K

Statistic analysis of sizes of dentinal tubule of etched dentin surface at difference pressure

One Way Analysis of Variance
Data source: etched dentin
Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks

Data source: Data 1 in Notebook 1

Group	N	Missing	Median	25%	75%
0mmH2O	282	0	2.415	2.030	2.795
15mmH2O	265	0	2.430	2.034	2.837
30mmH2O	297	0	2.475	2.141	2.805
45mmH2O	274	0	2.563	2.210	2.895

H = 10.030 with 3 degrees of freedom. (P = 0.018)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = 0.018)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

All Pairwise Multiple Comparison Procedures (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
45mmH2O vs 0mmH2O	81.874	2.989	Yes
45mmH2O vs 15mmH2O	66.087	2.376	No
45mmH2O vs 30mmH2O	54.601	2.019	Do Not Test
30mmH2O vs 0mmH2O	27.274	1.016	No
30mmH2O vs 15mmH2O	11.487	0.421	Do Not Test
15mmH2O vs 0mmH2O	15.787	0.571	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

APPENDIX L

Statistic analysis of sizes of dentinal tubule of etched dentin dry surface

t-test
Data source: etched dentin dry surface
Normality Test: Passed (P = 0.159)

Equal Variance Test: Passed (P = 0.576)

Group Name	N	Missing	Mean	Std Dev	SEM
central	177	0	2.770	0.554	0.0417
border	133	0	2.327	0.514	0.0446

Difference 0.443

t = 7.184 with 308 degrees of freedom. (P = <0.001)

95 percent confidence interval for difference of means: 0.322 to 0.564

The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups (P = <0.001).

Power of performed test with alpha = 0.050: 1.000

APPENDIX M

Statistic analysis of sizes of dentinal tubule on the central area of the unetched dentin surface at 0 cmH_2O and dry dentin surface

t-test

Data source: etched dentin and dry dentin surface

Normality Test: Passed (P = 0.161)

Equal Variance Test: Passed (P = 0.198)

Group Name	N	Missing	Mean	Std Dev	SEM
dry surface	266	0	2.811	0.543	0.0333
0mmH2O	240	0	2.458	0.571	0.0368

Difference 0.353

t = 7.132 with 504 degrees of freedom. (P = <0.001)

95 percent confidence interval for difference of means: 0.256 to 0.450

The difference in the mean values of the two groups is greater than would be expected by chance; there is a statistically significant difference between the input groups (P = <0.001).

Power of performed test with alpha = 0.050: 1.000

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