-continued

Instron		PSI	MPa	
		Group 26		
1	29.3	3316.7	22.87 Simplicity	
2	29.1	3295.2	22.73	
3	27.5	3115.4	21.49	
AVERAGE	28.7	3242.5	22.36 dentin	
ST. DEV	1.0	110.6	0.76	
CO. VAR., %	3.4	3.4	3.4	
		Group 30		
1	24.1	2724.0	18.79 Simplicity	
2	45.3	5126.7	35.36 enamel	
3	29.1	3291.8	22.70	
4	37.9	4288.5	29.58	
5	22.5	2547.5	17.57	
AVERAGE	31.8	3595.7	24.80	
ST. DEV	9.7	1092.6	7.53	
CO. VAR., %	30.4	30.4	30.4	
		Group 29		
1	25.3	2860.9	19.73 Simplicity	
2	34.4	3893.7	26.85 dentin	
3	23.4	2642.5	18.22	
4	29.0	3282.8	22.64 DF	
5	32.0	3616.5	24.94	
AVERAGE	28.8	3259.3	22.48	
ST. DEV	4.6	517.1	3.57	
CO. VAR., %	15.9	15.9	15.9	
		Group 36		
1	8.4	953.6	6.58 One-Up	36, 37, 40
2	3.0	339.4	2.34 Bond	and 34
3	12.6	1420.8	9.80 air-thin	show how
AVERAGE	8.0	904.6	6.24 5 sec	competing systems
ST. DEV	4.8	542.4	3.74 dentin	suffer when
CO. VAR., %	60.0	60.0	60.0	thinned with compressed air. The present system does not suffer this drawback
		Group 37		
1	34.1	3856.3	26.60 simplicity	
2	29.4	3322.4	22.91 5 sec	
3	22.2	2507.9	17.30 air thin	
AVERAGE	28.5	3228.9	22.27 dentin	
ST. DEV	6.0	679.1	4.68	
CO. VAR., %	21.0	21.0	21.0	
		Group 40		
1	16.5	1871.0	12.90 Touch & Bond	
2	16.1	1822.4	12.57 5 sec	
3	12.5	1409.5	9.72 air thin	
AVERAGE	15.0	1701.0	11.73 dentin	
ST. DEV	2.2	253.6	1.75	
CO. VAR., %	14.9	14.9	14.9	
		Group 34		
1	9.2	1044.7	7.20 SE Bond	
2	16.0	1810.0	12.48 5 sec	
3	10.5	1187.8	8.19 air-thin	
4	17.4	1970.6	13.59 resin	
5	11.3	1278.3	8.82 dentin	
AVERAGE	12.9	1458.3	10.06	
ST. DEV	3.6	407.1	2.81	
CO. VAR., %	27.9	27.9	27.9	

Although the present invention has been described with reference to preferred embodiments, persons skilled in the art will recognize that changes may be made in form and detail without departing from the spirit and scope of the invention. All references cited throughout the specification, including those in the background, are incorporated herein in their entirety. Those skilled in the art will recognize, or be able to ascertain, using no more than routine experimentation, many equivalents to specific embodiments of the invention described specifically herein. Such equivalents are intended to be encompassed in the scope of the following claims.

I claim:

1. A dental etching solution comprising

nitric acid;

an organic acid;

a solvent; and

water;

wherein the nitric acid concentration is between about 6 and about 8 parts by weight, the organic acid is present in amount from about 0.01 to about 20 parts by weight, the solvent is present in an amount from about 1 to about 50 parts by weight, the water being present in an amount to equal a total of 100 parts by weight of all components.

2. The dental etching solution of claim **1**, wherein the organic acid is selected from the group consisting of lactic acid, pyruvic acid, glycolic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, cyanoacetic acid, tartaric acid, succinic acid, glutaric acid, maleic acid, fumaric acid, malonic acid, citraconic acid, ortho-phthalic acid, meta-phthalic acid, para-phthalic acid, citric acid, tricarballyic acid, 1,3,5-pentanetricarboxylic acid and trimellitic acid.

3. The dental etching solution of claim **1**, wherein the solvent is selected from the group consisting of acetone, dimethyl sulfoxide, and ethanol.

4. The dental etching solution of claim **3**, wherein the solvent concentration is between about 10 and about 30 parts by weight.

5. The dental etching solution of claim **3**, wherein the solvent is ethanol.

6. The dental etching solution of claim **5**, wherein the solvent concentration is between about 10 and about 30 parts by weight.

7. A dental etching solution comprising

an inorganic acid;

succinic acid;

a solvent; and

water;

wherein the inorganic acid is present in an amount of from about 1 to about 10 parts by weight, the succinic acid is present in amount from about 0.01 to about 20 parts by weight, the solvent is present in an amount from about 1 to about 50 parts by weight, the water being present in an amount to equal a total of 100 parts by weight of all components.

8. The dental etching solution of claim **7**, wherein the succinic acid concentration is between about 1.0 and about 3.0 parts by weight.

9. The dental etching solution of claim **7**, wherein the inorganic acid is selected from the group consisting of nitric acid, sulfuric acid, hydrochloric acid and phosphoric acid.

10. The dental etching solution of claim **7**, wherein the solvent is selected from the group consisting of acetone, dimethyl sulfoxide, and ethanol.

11. The dental etching solution of claim **10**, wherein the solvent concentration is between about 10 and about 30 parts by weight.