			MPS values					
	Boundary conditions	material	Occlusal margin	Gingival margin	Mesial margin	Distal margin	Cavity depth	Total
Mechanical stress analysis	Buc.T	cavity	9.5195	2.0314	4.2334	-0.49453	-0.58881	-
		RC	7.5788	-6.5427	1.986	0.98168	2.6811	21.325
		1%	7.5303	-2.1684	1.5479	0.42335	2.2134	23.686
		2%	6.7132	-2.1224	1.4293	0.35935	2.1213	22.7
		3%	6.4769	-2.067	1.034	0.23815	1.9204	21.81
		5%	6.27	-1.9305	0.885	0.22697	1.9125	21.225
	Buc.B	cavity	10.728	9.0365	7.398	7.7382	23.607	-
		RC	6.0571	30.395	28.919	6.9574	6.8231	37.303
		1%	4.6493	29.731	27.185	5.6687	5.9561	37.83
		2%	4.39	28.115	26.757	5.483	5.5891	37.617
		3%	4.065	27.9635	26.3325	5.2312	5.3366	37.416
		5%	3.8669	27.7547	26.0102	4.8856	5.1566	37.279
	Buc.L	cavity	3.624	2.0219	2.717	1.8424	-1.2664	-
		RC	6.019	-2.7603	6.3537	-0.34775	3.3919	59.812
		1%	4.65	-2.6659	5.4494	-0.22246	3.2678	65.762
		2%	4.3538	-1.983	4.9877	-0.19915	3.2219	63.274
		3%	3.6319	-1.7774	3.8038	-0.00975	3.1339	61.031
		5%	3.46	-1.3285	2.5589	-0.0045	2.9406	59.56
	Cent	cavity	1.5973	0.17026	0.99476	0.3166	-0.14322	-
		RC	3.3944	-0.46647	0.19215	0.41447	0.69212	5.8793
		1%	3.7439	-0.4368	0.15368	0.32513	0.63708	6.5746
		2%	3.5392	-0.35702	0.14281	0.26059	0.61548	6.2764
		3%	3.4758	-0.32823	0.13366	0.2469	0.51588	6.0169
		5%	3.3573	-0.26756	0.11542	0.1966	0.43737	5.8511
Thermal stress analysis	˚60C	cavity	0.023365	0.071108	0.26084	0.42052	0.052661	-
		RC	29.59	3.3961	27.287	10.16	8.9412	24.365
		1%	23.465	2.8571	25.013	9.0121	8.8891	33.89
		2%	22.787	2.259	21.769	7.4648	8.7259	25.322
		3%	21.415	1.8787	19.99	6.4096	8.6375	23.236
		5%	19.462	0.78983	14.519	5.0562	8.1938	20.201
	˚4C	cavity	0.012996	0.04563	0.2153	0.325	0.02363	-
		RC	39.661	2.223	55.391	12.325	11.0237	38.9691
		1%	37.546	2.1615	50.125	11.562	10.8696	46.2624
		2%	34.344	1.9889	48.6943	10.1596	10.4432	39.2571
		3%	32.298	1.7531	47.5891	9.6987	10.1289	35.8615
		5%	31.025	1.521	46.7569	9.0123	9.8546	34.5648

Table S2. supplementary: The absolute MPS values under various boundary conditions at six different probe sites.