PRIMA DIGITAL

In partnership with a leading UK
University of Medicine and Dentistry

This independent report shows Prima Digital tools are **more precise** and **more consistent** than the market leader.

The Report

1.0 Aim of the study

To evaluate the quality of milled crowns using topography analysis. Crowns from a Digital Model were milled using three set of tools Ø2mm, Ø1mm, Ø0.6mm made by three manufacturers. Volumes of the Outer Surface and the Inner Surface of milled crowns were measured and compared with the Digital Model.

2.0 Results – The Outer Surface

Fig. 1 – Outer Surface of the Digital Model

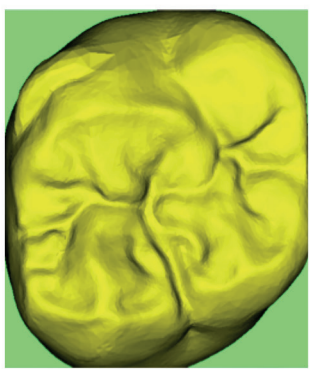


Fig. 2 – Scan of Prima Digital milled Crown

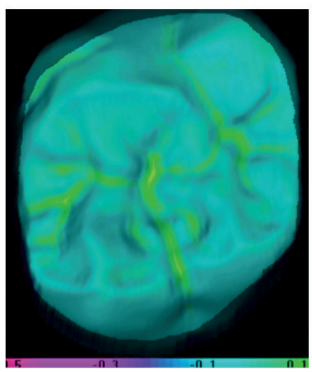


Fig. 3 – Scan of Competitor 1 milled Crown

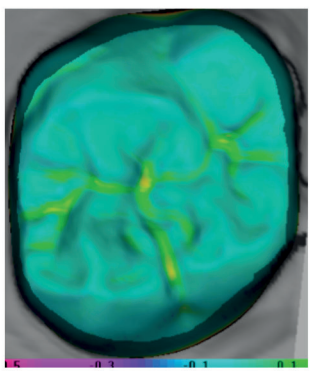
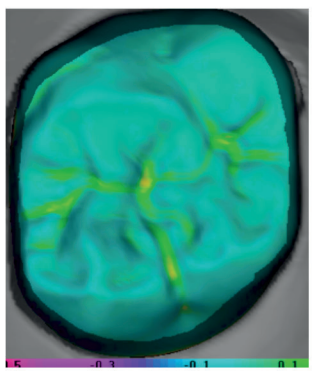


Fig. 4 – Scan of Competitor 2 milled Crown



This table summarises the results for the Outer Surface. Prima tools have been found to generate the least deviation from the digital model.

	Outer Surface	Mean Volume Deviation (mm^3)	Total Volume Deviation (mm^3)	Observations
Prima Digital	Disc 1	0.067	0.01	Deviation of milled crown volume to the Digital Model remains consistent throughout the life of the tools.
	Disc 4	0.06		
	Disc 9	0.07		
Competitor 1	Disc 1	0.02	0.13	Deviation of milled crown volume to the Digital Model increases when tools wear out.
	Disc 4	0.15		
	Disc 7	0.12		
Competitor 2	Disc 1	-0.14	0.16	Milled crown volume tends to be smaller than the Digital Model. Even though a small deviation of 0.02 is observed at Disc 7, chipped margin at crowns will still cause crowns to be rejected.
	Disc 4	-0.12		
	Disc 7	0.02		

3.0 Results – The Inner Surface

Fig. 5 – Inner Surface of the Digital Model

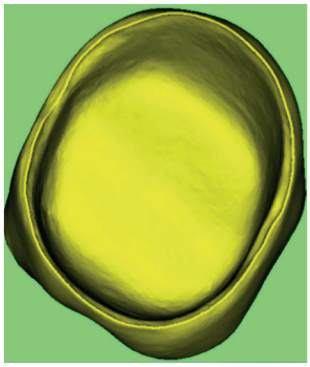


Fig. 6 – Scan of Prima Digital milled Crown

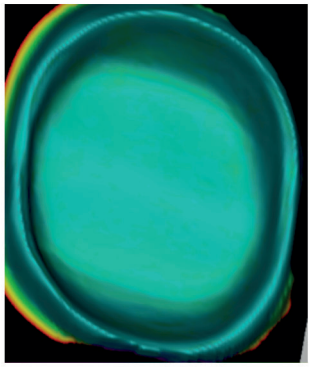


Fig. 7 – Scan of Competitor 1 milled Crown

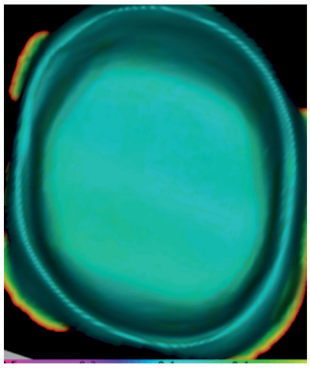
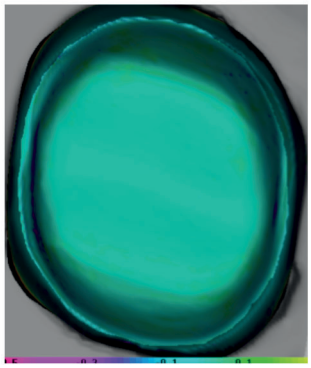


Fig. 8 – Scan of Competitor 2 milled Crown



This table summarises the results for the Inner Surface. Prima tools have been found to generate the least deviation from the digital model.

	Inner Surface	Mean Volume Deviation (mm^3)	Total Volume Deviation (mm^3)	Observations
Prima Digital	Disc 1	-0.19	0.3	Deviation of milled crown volume to the Digital Model increases as tools wear out. But total deviation value is the smallest among all tools.
	Disc 4	0.05		
	Disc 9	0.11		
Competitor 1	Disc 1	-0.24	1.2	Deviation of milled crown volume to the Digital Model increases as tools wear out. And, the total deviation value is the largest among all tools.
	Disc 4	0.66		
	Disc 7	0.96		
Competitor 2	Disc 1	-0.82	1.67	There is inconsistency in crown volume deviation from the Digital Model.
	Disc 4	0.85		
	Disc 7	-0.04		

4.0 Conclusion

Prima tool set has proven to be able to produce a more accurate restoration as compared to tools used in this test.

"Based on the findings of a leading UK University of Medicine and Dentistry's independent testing the Prima Digital tool set has proven to mill a more accurate restoration when compared to competitor tools used in this test."

Dr Marilyn Goh (Phd)