

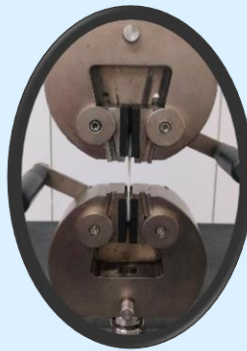
Division of Dental Materials

Research Facilities at Dental Materials Research Centre

Universal Testing Machine (UTM)

A Universal testing machine (UTM) is used for characterizing the mechanical properties of various dental materials by exerting tensile, compressive or transverse stresses. The following tests can be carried out at Dental Materials Research Centre using UTM.

- Compressive strength
- Tensile and diametral tensile strength
- Shear strength
- Flexural strength
- Shear bond strength
- Tensile bond strength
- Pushout bond strength
- Pullout bond strength
- Peel bond strength
- Fracture resistance



**Regular
Tensile**



**Micro-tensile
bond strength**



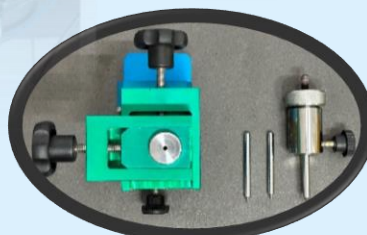
**Shear bond
strength**



Compression



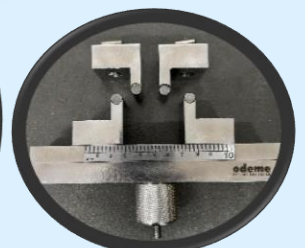
**Pneumatic grips
for Tensile test on
rubber-base
materials**



Push-out bond strength



**3-Point
Bending**



4-Point Bending



Micro-Vickers Hardness



Impact Strength



Shore-D-Durometer



Gillmore Needle



Vicat Penetrometer



Surface Roughness Tester



Plastic Deformation Assessing Equipment



Strain-in-Compression Apparatus



Dr Rama Krishna Alla

The Dental Materials division is led by Dr Rama Krishna Alla MSc. (Dental Materials, Manipal), PhD., with 22 years of teaching and research experience. He has published more than 90 scientific papers in various national, international journals and a textbook to his credit. He is serving as Editor-in-Chief for the International Journal of Dental Materials.

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