

# Experiment Proposal

Experiment number GP2022005

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**Experiment title** Microscopic characterization of abrasive strips for interproximal reduction

**SRF Instrument** **Scanning Probe Microscopes**

**Access Route** Rapid Access

**Science Areas** Biology and Bio-materials

**Sponsored Grant** None

**Grant Title** -

**Start Date** -

**Similar Submission?** -

**Industrial Links** -

**Non-Technical Abstract** Interproximal reduction (IPR) represents one of the main space-gaining orthodontic procedures in several clinical cases especially in clear aligner treatment. Combined with proclination and transversal expansion, it is a challenging alternative to dental extraction for the resolution of mild or moderate crowding. In these cases, the quantity of enamel removed should be calculated considering the space needed.

Several IPR systems have been introduced over the years. Among all, mechanical oscillating abrasive strips have gained in popularity for their accuracy, efficiency, reduced chairside time, and minimally invasive effects on enamel surfaces.

A clinically relevant aspect to consider is the necessity of a standardized clinical protocol. To evaluate the effects on enamel surfaces of oscillating mechanical systems for interproximal enamel reduction (IPR) we propose to use the SEM-EDX located at Unit-Univ Tor Vergata to set the basis for a statistical analysis of the enamel surface roughness and waviness.

**Publications** -

**Instruments**

**Access Route**

**Science Areas**

**Sponsored Grant**

**Grant Title**

**Start Date**

**Similar Submission?**

**Industrial Links**

**Days Requested:**

**Previous RB Number:**

**DOI:**

**Sponsor:**

**Grant Number:**

**Finish Date:**



## Sample record sheet

**Principal contact** Dr Laura Fazi, University of Rome Tor Vergata, ITALY  
**SRF Instrument** **Scanning Probe Microscopes** **Days Requested: 4**  
**Special requirements:**

### SAMPLE

<b>Material</b>	steel, C H N O	-	-
<b>Formula</b>	C, N, O, H, steel	-	-
<b>Forms</b>	Solid		
<b>Volume</b>	10 cc		
<b>Weight</b>	200-300 mg		
<b>Container or substrate</b>	-	-	-
<b>Storage Requirements</b>	-	-	-

### SAMPLE ENVIROMENT

<b>Temperature Range</b>	300 - 320 K	-	-
<b>Pressure Range</b>	1013 - 1013 mbar	-	-
<b>Magnetic field range</b>	- T	-	-
<b>Standard equipment</b>	None	-	-
<b>Special equipment</b>	-	-	-

### SAFETY

<b>Prep lab needed</b>	Yes	-	-
<b>Sample Prep Hazards</b>	-	-	-
<b>Special equip. reqs</b>	-	-	-
<b>Sensitivity to air</b>	No	-	-
<b>Sensitivity to vapour</b>	No	-	-
<b>Experiment Hazards</b>	-	-	-
<b>Equipment Hazards</b>	-	-	-
<b>Biological hazards</b>	-	-	-
<b>Radioactive Hazards</b>	-	-	-
<b>Additional Hazards</b>	-	-	-
<b>Additional Details</b>	-	-	-
<b>Sample will be</b>	Returned to user by instrument - scientist (when inactive)	-	-

