Clinical applications

DMD2

2025

Acknowledging: D R M I N A D I Z D A R E V I C

Digitest – Pulp Vitality Scanner

- Electrically stimulates the tooth to test for vitality
- Compares the response of the suspected tooth to a known healthy tooth
- Helps identify the source of the patient's pain by comparing responses to identical stimuli

Digitest – Pulp Vitality Scanner

https://www.youtube.com/watch?v=NL_rJ4w89e0

Digitest – Pulp Vitality Scanner

- Anterior & posterior (short/long) probe tips available in Clinic 1

- Patient holds the metal clip

- Use plastic mouth mirror

- Requires toothpaste as conductive medium (enhances electrical conductivity)

FracFinder

“Cracked Tooth Syndrome”:
Occasionally seen in restored posterior teeth
Typically originates in the deepest part of the occlusal box with crack running diagonally under a cusp

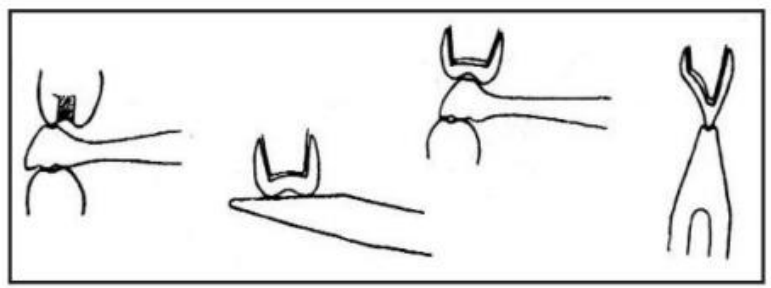
Signs and Symptoms:
Sensitivity to temperature changes
Sensitivity to sugar
Tenderness on biting

Detection Challenges:
Cracked tooth often undetectable clinically or radiographically
Difficult to diagnose or localise

FracFinder

- Assists in locating cracks in teeth
- Reusable plastic
- Sterilised in autoclave

■ Placing Fracfinder on the suspected cusp.



FracFinder

- Small indentation on the Fracfinder is to be placed on the suspected cusp.

- The opposite side of the indentation is grooved for better control on the cusp.

Shade Selection

Selection Guidelines

- Lighting: Use natural daylight or daylight-balanced artificial light. Avoid using fluorescent or incandescent lighting as they can distort colour perception.
- Shade Guides: Use a shade guide that matches the material of the restoration being used (e.g., composite, porcelain). Ensure the shade guide is clean and well-maintained.
- Background: Choose a neutral background to avoid colour distortion. A white or grey background is often ideal.

Prepare the Tooth:

- Clean the Surface: Ensure the tooth is clean and free of stains or debris. Clean it with a toothbrush or air abrasion to get an accurate colour match.
- Moisture: Assess the shade with the tooth in its natural wet state as it is more reflective of the final restoration.

Select the Shade:

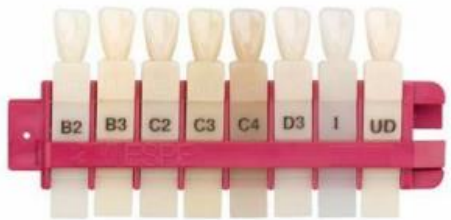
- Assess Multiple Shades: Compare the tooth colour to multiple shades in the guide, if necessary, to find the closest match.
- Check Multiple Areas: Compare the shade from different areas of the tooth (e.g., incisal edge, middle third, cervical area) to ensure consistency.
- Choose the Right Material: Ensure the shade guide matches the type of restorative material being used.

Consult with the Lab (for indirect restorations/dentures etc):

- Communicate the Shade: Clearly document and communicate the selected shade to the dental lab. Provide any additional information, such as any specific characteristics or variations in the tooth colour.
- Alternatively in difficult cases get lab to select shade for indirect restorations (e.g., anterior veneers)

Shade Selection

Shade Guides at OHCWA



3M Composite Shade Guide

Portrait Shade Guide: Acrylic teeth (dentures)

Vita 3D Master – Classic: Indirect Restorations: Crowns, Onlays

Vita 3D Master Linear : Select from five value tabs, then choose mix of chroma and hue within value range

Adjusting occlusion

Adjusting Occlusion

Select the Appropriate Articulation Paper:
- Thickness & Colour (e.g., blue for centric occlusion, red for excursive movements) to differentiate contact points.
-Use Millar's forceps

Check the Occlusion:
- Dry the Teeth
- Ask the patient to bite down on the articulation paper in their natural centric occlusion (the position where the teeth naturally meet when the jaws are closed) 'tap tap together'.
-Excursive Movements: Have the patient slide their teeth side to side and forward and backward to mark contacts during lateral and protrusive movements. 'Grind from side to side, and slide teeth forward'.

Analyse the Marks:
- Look for Heavy Contacts: Heavier contacts will leave darker and larger marks, while lighter contacts will leave smaller, fainter marks.

Identify High Spots:
- High spots are areas where the restoration or tooth is interfering with the normal occlusion. These are typically the larger and darker marks.

Check the Pattern:
- Normal occlusion should show multiple small, even marks. If you see one or two large, dark spots, these are likely high spots that need adjustment.

Adjust the Occlusion:
- Drill Away High Spots: Use a fine diamond bur to carefully adjust the high spots identified by the larger, darker marks. Remove a small amount of material at a time.
- Re-check Occlusion: After each adjustment, dry the teeth again, place the articulation paper, and have the patient bite and move their jaw as before.
- Repeat if Necessary: Continue to adjust and check until the marks are even and consistent, indicating that the occlusion is balanced.

Verify Occlusion in Centric and Excursive Movements:
- Centric Occlusion: Ensure that the patient has uniform contact on both sides when biting down.
- Excursive Movements: Ensure there is no heavy contact during lateral or protrusive movements.

Polish the Restoration:
-Final Finish: After achieving a balanced occlusion, polish the adjusted areas to smooth the surface and ensure patient comfort (discs, enhance bur etc)