Cementation of VITA In-Ceram® all-ceramic restorations

- **Conventional cementation** with zinc phosphate cements
  - Indication:
    - For In-Ceram ALUMINA and ZIRCONIA crowns and bridges
  
  Compared with other cements zinc phosphate cements are relatively opaque and have a higher degree of solubility.

- **Conventional cementation** with glass ionomer cements
  - Indication:
    - For SPINELL, ALUMINA and ZIRCONIA crowns
    - For ALUMINA and ZIRCONIA bridges
    - For patients showing allergic reactions to constituents of adhesive composites
    - In cases where it is not possible to completely dry the area of treatment

Examples of glass ionomer adhesive cements:
- Fuji I Capsule Glass Ionomer Luting Cement (GC)
- Ketac-Cem Aplicap (Espe)

- **Cementation with glass ionomer-composite cements and compomer adhesive cements**

  Currently, cementation is not recommended with these types of cement.

  Previous studies indicate that these adhesive materials tend to expand after a certain time in situ due to the absorption of moisture (see literature). This can lead to fractures of all-ceramic restorations (In-Ceram and feldspar ceramic). Therefore further studies are required.

- **Adhesive cementation** with PANAVIA 21 TC (Kuraray)

  - Indication:
    - For all In-Ceram restorations

This chemically setting, modified Bis-GMA luting composite includes an adhesive compomer which forms a durable bond with In-Ceram. PANAVIA 21 TC (tooth color) is particularly translucent and is therefore especially suitable to produce esthetic restorations.

- **Laboratory procedure**
  - Sandblast the inner surfaces of the In-Ceram restoration with aluminium oxide (max. 50 μm).
    - **Pressure ≤ 2.5 bar.**
  - Sandblasted surface must not be touched.
  - Silanization is no longer required.

  **Note:** Acid treatment of In-Ceram restorations with hydrofluoric acid is not possible.

- **Clinical procedure**:
  - Place a rubber dam to keep the treatment area dry
  - Try-in of the In-Ceram restoration
  - After contamination with saliva, etc. the sandblasted restoration must be cleaned in organic solvent (e.g. chloroform, acetone, alcohol) in the ultrasonic unit
  - Mix and apply PANAVIA 21 TC according to the manufacturer’s instructions
  - We recommend the use of an enamel/dentine adhesive system to ensure optimum bonding to the tooth substance.

**Literature**

### VITA all-ceramic systems - guideline cementation

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<td>Zinc Phosphate</td>
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<tr>
<td>Glass Ionomer</td>
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<tr>
<td>Composite</td>
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<tr>
<td>Composite, Resin Reinforced Glass Ionomer</td>
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● = indicated for adherence

We recommend especially for In-Ceram crowns/bridges PANAVIA 21 TC or PANAVIA F TC (Kurasy)

Currently no sufficient scientific results on clinical long-term testing are available

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**Note:**

For the adhesive cementation of etchable ceramic restorations made of fine-particle feldspar ceramic (VITABLOCS® Mark II for CEREC®, VITABLOCS® ESTHETIC LINE for CEREC® and VITABLOCS® for CELAY®) as well as VITADUR ALPHA and VITAPRESS, the VITA LUTING SET with working instructions No. 799 E is at your disposal.