

#### References – in vitro studies

## EQUIA FORTE<sup>™</sup> HT

| TITLE     | Bond strength to tooth structure and flexural properties of a new precapsulated glass-ionomer cement for filling |
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| REFERENCE | Irie M <i>et al,</i> The J of the Jap Soc for Dent Mater and Devices<br>Vol.37 Special Issue 72, p.89 (2018).    |

EQUIA Forte HT (named EQUIA 3 in this study) presented higher shear bond strength to enamel (11.4 MPa) and to dentin (13 Mpa), greater flexural strength (36.6 MPa) and modulus of elasticity (16.8 GPa) when compared to Ketac Universal.

| TITLE  | Comparative radiopacity of different posterior restorative materials  |
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| REFERENCE  | S. Turkun <i>et al,</i> CED-IADR, Madrid, 2019.<br>https://www.ced-iadr2019.com/Madrid_Abstract_BOOK_Sept_7.pdf |
| Radiopacity values presented by EQUIA Forte HT (2.24±0.22) are in agreement with ISO requirements. |   |

| TITLE  | Evaluation of mechanical properties of new GI-restorative (EQUIA Forte HT)  |
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| REFERENCE  | Shimada Y <i>et al</i> , J Dent Res Vol 98 (Spec Iss A): 3662<br>https://iadr2019.zerista.com/event/member/582696 |
| EQUIA Forte HT presented high flexural strength (45.1 MPa) and high translucency (55.9). |   |

| TITLE     | Comparison of compressive strength and fluoride release of GIC restoratives  |
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| REFERENCE | Mori D <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1856,<br>https://iadr2020.zerista.com/event/member/677908  |
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EQUIA Forte HT presented the highest strength and the highest amount of fluoride release when compared to other materials (Ketac Universal, Riva Self cure, Chemfil Rock) in different time intervals.





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### EQUIA FORTE™ HT

| TITLE     | Stabilization time of chemical bonds in restorative glass-ionomer/glass-hybrid cements                          |
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| REFERENCE | Pascotto R <i>et al,</i> J Dent Res Vol 99 (Spec Iss A): 1051, https://iadr2020.zerista.com/event/member/679151 |
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Time for chemical bonds stabilization of EQUIA Forte HT was 740s , while for Riva it was 393s . The longer it takes to stabilize the chemical bonds, the greater the amount of chemical bonds, improving the mechanical properties.

| TITLE     | Compression fracture resistance of four different glass-ionomer cements   |
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| REFERENCE | Glavina D <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1284, https://iadr2020.zerista.com/event/member/677597 |
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EQUIA Forte HT presented significantly higher fracture resistance than other materials (EQUIA Forte HT 245,3N; Ketac Molar 140,7N; IonoStar Molar 114,5N).

| TITLE     | Compressive strength, microhardness, acid erosion of restorative glass hybrid/glass-ionomer cements    |
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| REFERENCE | Navarro M et al, J Dent Res Vol 99 (Spec Iss A):1310, https://iadr2020.zerista.com/event/member/679417 |

EQUIA Forte HT presented the highest values for compressive strength (207.58MPa) when compared to other groups. Microhardness values were 130.95KHN, higher than those of Ketac Molar. No difference on the acid-erosion was detected among the groups.

| TITLE   | The influence of surface resin coating on the color stability of restorative glass-ionomer /glass hybrid cements     |
|---|--|
| REFERENCE   | Menezes-Silva R <i>et al</i> , J Dent Res Vol 99 (Spec Iss A):1312, https://iadr2020.zerista.com/event/member/679419 |
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The surface coating improved color stability overtime. Ketac Universal presented significant color alterations when compared to EQUIA Forte HT.





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| TITLE  | Mechanical and optical properties of a novel bulk fill glass hybrid restorative dental material                 |
|--|---|
| REFERENCE  | Shahrooz S <i>et al,</i> J Dent Res Vol 99 (Spec Iss A): 3382, https://iadr2020.zerista.com/event/member/677755 |
| EQUIA Forte HT presented outstanding translucency and flexural strength. |   |

| TITLE   | Effect of Coca-Cola on microhardness of glass-hybrid and glass ionomer materials                                  |
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| REFERENCE   | Baraba A <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1313,<br>https://iadr2020.zerista.com/event/member/679420 |
| After 3 months, microhardness of EQUIA Forte HT (with and without coat) was not affected by the exposure to Coca-Cola . |   |

