

## Shade match with VITA classical A1–D4® shade standard

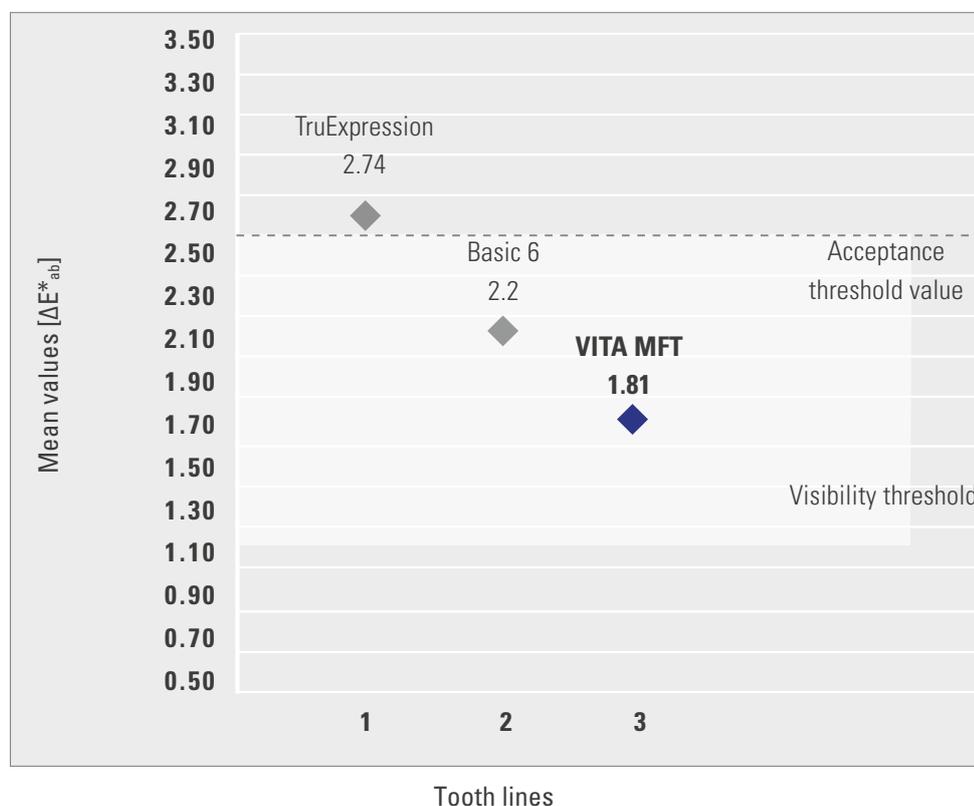
### a) Materials and methods

This test investigated the shade match of the tooth lines listed below with the VITA classical A1–D4® shade guide. In the first step, teeth 21 and 22 were fixed in a custom-built holder from randomly selected anterior sets of teeth in shades A1, A3, and C3. In the second step, five measurements were taken for each tooth and shade using an electronic dental spectrophotometer (Shadepilot, DeguDent). A mean was determined for each set and then an overall mean calculated over the three shades. Five measurements were also taken on the reference shade guide (VITA classical A1–D4®, VITA Zahnfabrik) for each shade test piece and the mean values formed. The result graph shows the mean values of the determined shade deviation ( $\Delta E^*_{ab}$ ) for each line of teeth or set of teeth to the reference shade guide (A1, A3, C3). The numeric value  $\Delta E^*_{ab} = 1.2$  was selected for the perceptibility threshold (visibility threshold) and  $\Delta E^*_{ab} = 2.7$  was selected for the acceptance threshold in accordance with ISO/TR 28642:2016.

### b) Source

Johannes Gutenberg University of Mainz, Dr. M.Sc. Christopher Igiel, Research Associate, Mainz, report 04/18

### Shade match with VITA classical A1–D4® shade standard\*



#### Specification of the tooth lines tested\*:

- TruExpression; geometry: 42F
- Basic 6; geometry: A10
- VITA MFT; geometry: T46

The test results indicate that on average, the VITAPAN MFT® anterior teeth that were tested, exhibit a comparatively good shade match to the VITA classical A1–D4® scale in shades A1, A3 and C3.

\*) Note: The results only allow an initial statement to be made about the trend, as shades can deviate, depending on the geometry and production batch of the respective tooth line.

## Good mechanical resistance

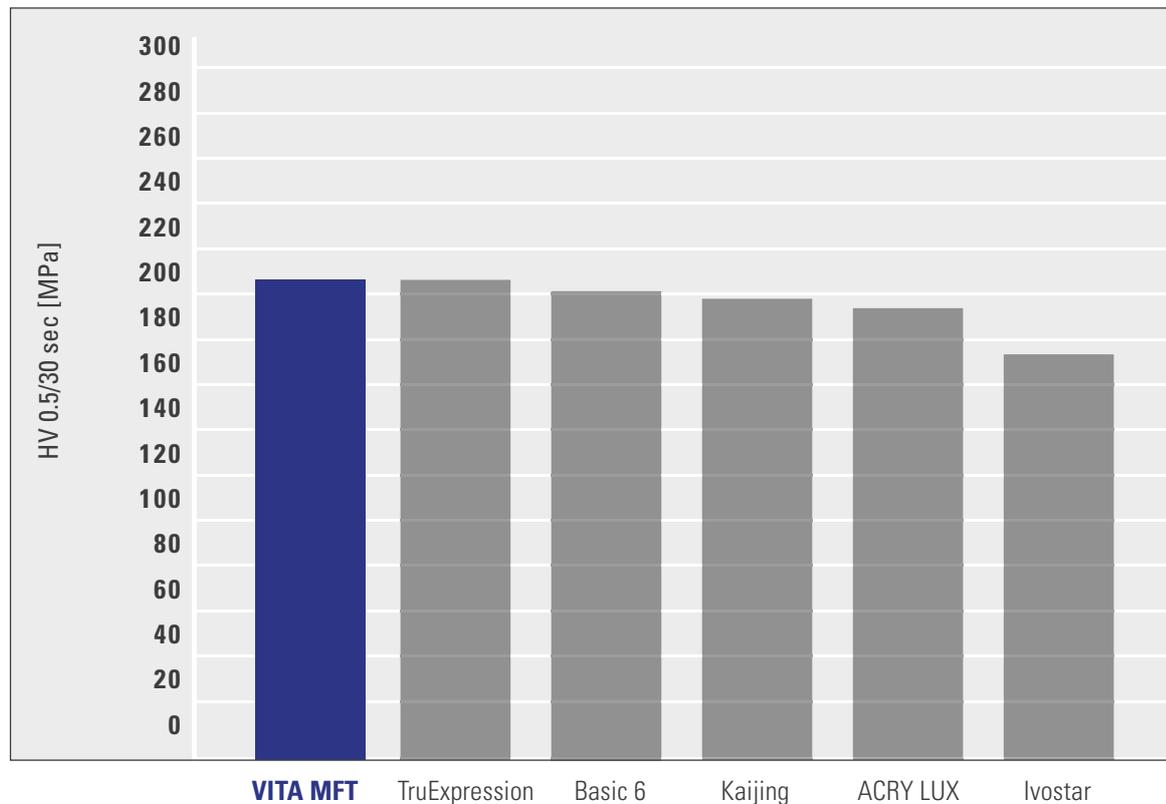
### a) Materials and methods

One denture tooth from each of the tooth lines below was cut through the middle, then embedded in epoxy resin and polished to a high luster. Three hardness indentations were applied to each polished tooth section in the test machine, using a testing force of 5 Newton (N) for 30 seconds. After measuring the indentation diagonals, the hardness was calculated in megapascals (MPa). This test was carried out in accordance with ISO 6507-1. The result graph shows the mean values from the three measurements for each tooth line.

### b) Source

Internal study, VITA R&D, Dr. Stefan Aechtner, Project manager for material development, Bad Säckingen, report 04/18

### Vickers hardness (HV)



#### Specification of the tooth lines tested:

- VITA MFT; geometry: S50
- TruExpression; geometry: 62 G
- Basic 6; geometry: L06
- Kaijing; geometry: C4 M
- ACRY LUX; geometry: L4
- Ivostar; geometry: 34

When tested in a comparison group, the VITA MFT® denture teeth achieved a good value in the Vickers hardness test, with a comparable level of hardness overall. Thanks to the cross-linked matrix made from MMA and cross-linkable monomers, a high level of mechanical resistance can be expected.