Case Study

3Shape Test Case | 3Dent™

Test Conditions:

- The dental model (preparation, antagonist & die) were designed by 3Shape Model Builder and printed on EnvisionTEC's 3Dent™ printer.

- The coping was designed in 3Shape Dental Designer software using the original input from the raw scan.

- The coping was then printed on EnvisionTEC's Desktop Digital Dental Printer (DDDP) with the EC1000 material.

- The printed coping was placed on the removable die tooth 45 on the model (quadrant) which is printed on EnvisionTEC's 3Dent™ printer to check for fit.
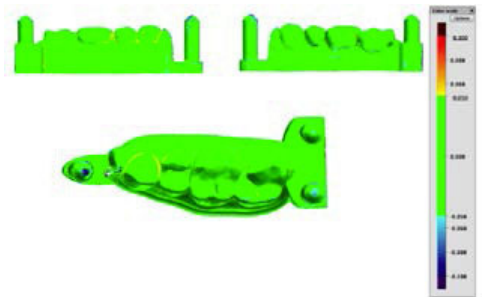
Test Description:

- Scan the dental model printed on EnvisionTEC's 3Dent™ printer and analyze in 3Shape Convince software.

- Register the scan to the model STL file and confirm the model's accuracy.

- Check the fit of the printed coping on the die model (here tooth 45) printed on the EnvisionTEC machine and the relative position to the neighbor teeth (here 44, 46) and the antagonist tooth (here 14).
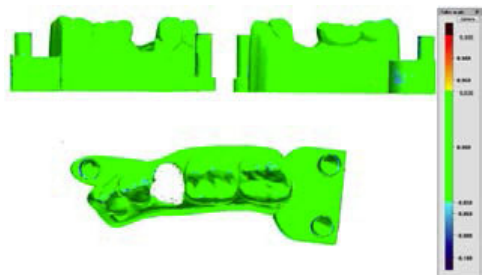
Results:

Scans of 3Dent™ printed parts:
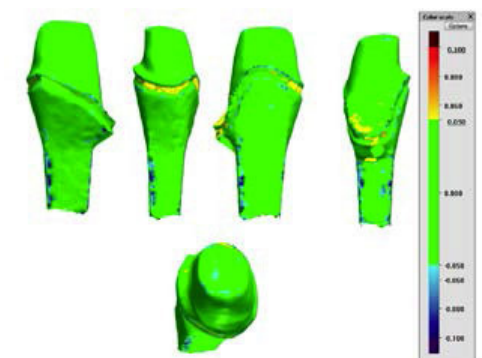
1. Upper Jaw:

All green areas are within 50 μm (within specs)

2. Lower Jaw:

All green areas are within 50 μm (within specs)

3. Die:

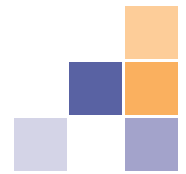

All green areas are within 50μm (within specs)

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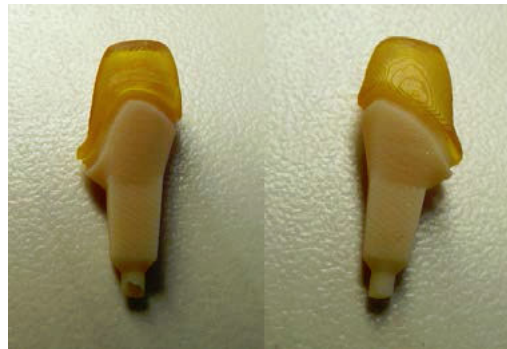www.envisiontec.com
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Case Study

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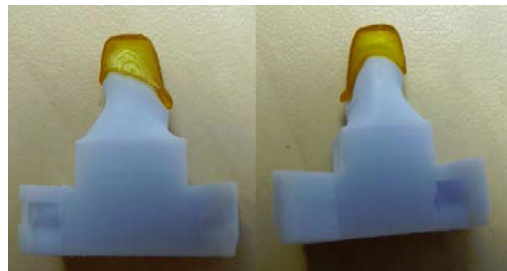Photographs showing the coping's fit:

EnvisionTEC's 3Dent™ die with coping printed on DDDP:

Perfect fit of coping on die

Borders of coping are sitting directly on margin line

Competitor die with coping printed on DDDP:

A gap between the borders of the coping and margin line of the die is clearly visible.

Photographs showing the coping's fit:

Die inserted in quadrant model EnvisionTEC 3Dent™ (antagonists placed together) with precise position of die and coping in quadrant model (one precise system):

Homogenous surface of model leads to precise die fit and occlusion of antagonists.

Competitor die with inserted in quadrant model (antagonists placed together):

Coping with bad fit and wrong position in quadrant model

Layer lines, also known as stair-stepping, are visible

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