

SBO Dental Laboratory

Quality starts with you -IMPRESSIONS-

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Christmas Closing

Merry Christmas to all
from everyone at SBO
Dental Laboratory

The laboratory will be
closed from December
23rd opening again on
5th January 2009

Quality starts with you Impressions - December 2008

Dear mark,

Welcome to the first of a 4 part series of information emails designed to help us as a laboratory improve quality. I have decided to name this series "Quality starts with you", because ultimately, no matter which laboratory you use, it will be difficult to achieve the highest quality if the laboratory doesn't have the right information to work on.

In this 4 part series I will cover:

1. Impressions
2. Preparations
3. Bite registrations
4. Communication

I know you will find these emails useful, so why not save them for future reference. In each issue I will cover the problems we encounter as a laboratory and how this can affect the overall quality of the case.

If you know of a colleague who you think might benefit from the information here, why not [forward this issue to them](#)

As ever, please feel free to comment by replying to this email, I can then include your comments in next month's issue.

There are of course many reasons for problems with impressions, I hope here to cover just a few of the main problems we have, I can however strongly recommend 3M Espe's helpsheet "Taking Better Impressions", [downloadable from our website.](#)

Best regards for now,

Mark

Triple Tray Impressions





Many of our dentists use triple tray impressions routinely, we have a strict protocol for handling them in the lab to ensure they do not distort and that the bites locate accurately.

However, we prefer to pour 2 models of every case; one to work on and one as a check model - as can be seen from the image above, triple tray impressions often tear making a second pour impossible.



Triple trays have to be poured in plaster with both arches together, this way a lock can be made to locate the bite. However, if the patient bites through the tray and makes a hole the plaster runs through. The hole can be seen on the image above in the 5 region.

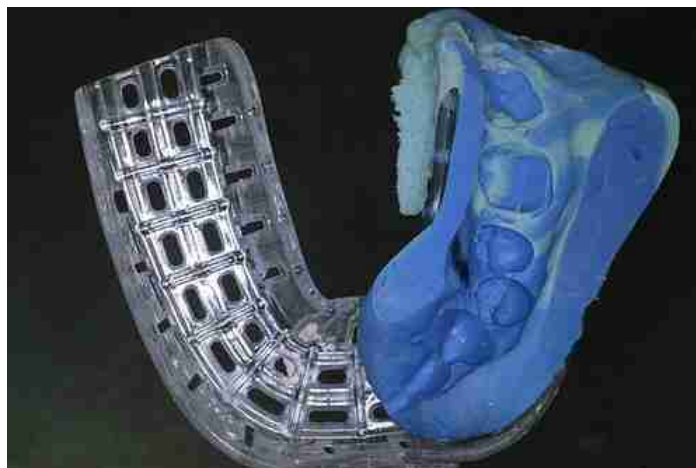


This image shows the resultant model, the yellow area on the 5 is where the opposing die stone has run through. This means that anywhere where there is a hole the models lock, this causes the model to break in this area and ultimately can lead to inaccuracies.

If you take this style of impression be please ensure that:

1. There is an adequate thickness of impression material to prevent distortion
2. The type of tray used has an impervious membrane between the arches to prevent the models locking
3. The impression material is stuck to the tray

Quadrant Impressions



The problem with quadrant impressions is achieving an accurate bite. even with a good squash record the models have a tendency to rock. If, as a dental team, we are looking for the highest quality we would like to recommend that we find an alternative to quadrant impressions.

Another problem with quadrant impressions is there is half the arch missing...obviously! This means we can only equilibrate the restoration in working side occlusion, we are not able to do balancing side as the teeth which provide the guidance for this are missing. Once again this can lead to a compromise in quality.

The impression in this photo is also so small that we have very little to go on by way of reference. We can see so few teeth that even a working side occlusal balance will be difficult to achieve.



Lack of impression detail





The following information is taken from the 3M Espe trouble shooting guide "Taking better impressions", this can be [downloaded from our website](#).

Lack of Impression Detail

Visual Appearance: Muted detail reproduction.

Result: Crowns may be too tight, or loose, and not fit correctly.

CAUSES & SOLUTIONS

For Polyether materials

Substances with pH < 4 inhibit setting reaction, most commonly by contact with acidic retraction materials and hemostatic agents containing epinephrine or ferric sulfates.

Use retraction materials having pH ≥ 4.

Select retraction materials and hemostatic agents not containing these chemicals.

Rinse, remove, and dilute hemostatic solution from the preparation with water spray and suction. Dry before taking the impression.

For all impressions

Impression material stored at elevated temperature.

Store impression material at room temperature.

Impression material stored at too low a temperature (prolongs the setting reactions, changes viscosity and requires exceptionally high extrusion forces for automix materials).

Keep impression material at a temperature of 18°C/64°F at least one day prior use.

Thick blood/saliva pooled around prep.

Remove blood and saliva prior to making impression.

Use 2-step impression technique.

Inadequate retraction of sulcus around prep.

Use good retraction technique, with proper moisture control.

Exceeding the working time.

Follow manufacturer's working time specifications.

Choose material with longer working time.

Inadequate disinfection effects surface quality (detail reproduction) and dimensional stability.

Use water based disinfectants according to FDA guidelines.

If you would like a printed copy of this please call me at the lab.

The next issue of these "Quality starts with you" emails will be on preparations

Sincerely,

Mark Oborn
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