

Radiant Restorations



Lead Contamination in Labwork

Recently it was announced that lead had been found in crowns that were outsourced to dental labs in China. Due to these findings, lead contamination has now become a concern for some dentists and their patients. Crown and bridge seems to be the majority of work being outsourced to foreign labs and about a fifth of the crowns placed in Americans' mouths are produced overseas (American Dental Association). The primary reason for this being the dramatic cost reduction of as little as one tenth what a crown would cost domestically (American Dental Association). Although assumptions have been made, where the lead is coming from is still unknown. It is possible that the metals are of a lower grade or it could also exist in the stains and glazes. Many dentists are completely unaware that their work is being outsourced primarily because they are uninformed by their lab. Due to the lack of regulations in foreign countries the FDA would like dentists to be notified if the work is being done elsewhere. Where the actual lab work is done may not be the greatest concern for many doctors as long as they can be assured of the quality and safety of the materials used.

The Renstrom/Crocus lab is a certified dental lab that prides itself on quality and the expertise to deliver restorations that meet prescription specifications. All of the work received by doctors is done internally at the lab. The environment our technicians work in is clean and professional which is why we encourage and welcome studio tours. The Renstrom and Crocus team inspects each case with the permanent instructions or preferences by the doctor and assure the proper materials are always used. Communication is vital in order to maintain a high standard of quality which is why the doctor is always informed if any substitute materials need to be used.

At Renstrom we use top quality dental materials that are kept up with the latest advancements. We offer a variety of highly refined gold alloys that have been time tested for 100+ years. Our PFM restorations are made from the highest quality porcelains and used with noble and high noble metals. The veneering porcelains we use feature abrasive qualities comparable to natural enamel and low solubility in the mouth. We also offer a com-



plete line of all ceramics from Sirona, Procera, and 3M Lava. All ceramics are made with bio compatible materials that can be used for restorations anywhere in the mouth due to its core strength. CAD/CAM technologies are used to accommodate these materials in producing custom manufactured copings, frameworks, and implant abutments to recreate the beauty of natural teeth.

The safety of patients and our technicians is extremely important which is why everything is disinfected when it arrives and leaves to ensure maximum protection from cross contamination. Renstrom can justify the prices for their work due to the fact that the products and materials are of the highest quality and craftsmanship available.

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Newsletter**

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The American Dental Association recommends asking dental laboratories the following questions:

- If work is outsourced, is any of it being sent to a foreign lab?
- Can a document detailing the materials used in my work be provided?
- Has the foreign lab doing the work been visited?
- If working with a foreign lab can the FDA registration number be provided?
- Do any of the materials used to fabricate my work contain lead?

Technical Tips: Improving Shade Communication

Tooth shades can be the most difficult, while at the same time most important, thing to communicate between the dental office and lab. The success of a crown and bridge case, particularly single unit cases, depends to a great degree on how closely the shade of the crown matches the shade of the adjacent teeth. One way to improve the precision and accuracy of communicating shades is with the use of the Vita 3-D Master shade guide. This well organized and user friendly guide not only makes sense but allows the dental clinician to choose up to 81 possible shades from 5 degrees of value (or six when using the bleach or 0 tab). In addition to a greater degree of shade possibilities, today's porcelains are formulated in the same ways the shade guide is organized- for example, when a technician mixes 1M1 porcelain with 2M1 porcelain, the combination results in a 1.5M1. This organization gives us a very precise and accurate system for creating dental restorations that match their patient's natural dentition. Let's take a closer look and review the Vita 3D-Master shade guide.



Figure 1

The shade value, or the degree of light to dark, is arranged from left to right with the lighter shades on the left and the darker shades on the right. The top middle shade tab in each group is the basic shade and the starting point for determining a shade (See Figure 1). These values are labeled 1,2,3,4,5 (and 0 for bleach shades). The 3D Master shade guide allows you to select a shade that is between two groups- for example if the shade is between a 2M and a 3M the shade is a 2.5M and is indicated in this way on a prescription. After the value of the tooth shade has been selected, the next step is to determine the shade's chroma, or the degree of paleness or richness of the shade. As you work down a shade group the intensity of color (chroma) increases. Shades at the top of the shade guide are paler and shades at the bottom are very rich (See Figure 2).



Figure 2

As with value, the 3D Master shade guide allows you to select a chroma in-between two shade tabs. Example- The

shade between a 3M1 and a 3M2 is a 3M1.5 and would be indicated on the prescription in the same way (See Figure 3).

The last step in determining a shade with the 3D guide is to check the hue of the shade. If a shade appears more red or yellow than the middle shade tab the R (red) tabs and the L (yellow) tabs are available (See Figure 4). A shade that is slightly more yellow than a 2M2 is a 2L2, slightly redder a 2R2. Again a shade can be in-between and the tabs and indicated so on the prescription (between 3L1.5 & 3L2.5 is a 3L2).

In summary, when selecting a shade using the 3D Master shade guide begin with the value (top middle shade tabs). Then determine the intensity or richness (chroma) of the tooth shade (the tabs are arranged from pale on top to rich on bottom). Finally, determine if the shade is yellower (L) or redder (R) when compared to the middle (M) shade if necessary (See Figure 5).



Figure 3

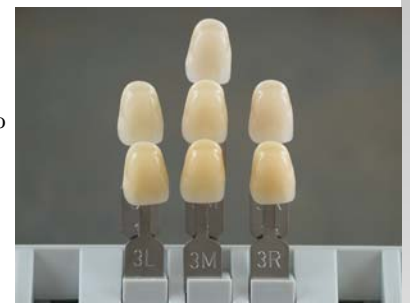


Figure 4

From subjective to systematic arrangement



Figure 5

Case Study: Restoring implants, #8, #9 with Procera

Restoring a case with implants in the #8 and #9 positions can prove to be a challenging clinical situation. A well functioning and esthetically pleasing result is crucial to the success of such a case. If the implant placement is less than ideal- which can sometimes happen, restoring the implant can be especially difficult. An excellent option in such a situation is the custom abutment, and when esthetic demands are particularly high (such as with the #8 and #9 positions) a zirconia abutment and zirconia crown deliver an exceptional solution. Custom abutments also make the case easier for the restorative doctor because the abutments can be designed on the master cast to achieve ideal shape, contour, emergence profiles, and margin depths- tasks that can prove to be difficult in the mouth.

Restoration of an implant using a Procera custom abutment is one of the easiest ways for a dentist to restore an implant case. The dentist simply needs to impression the implants as they would in a crown and bridge case and send the impression to the lab. At that point the dental lab technician pours the master cast, designs the abutment, and scans it for milling. When the abutment returns to the lab, the technician will then scan the abutment and design copings for milling. The milled zirconia copings are built up with porcelain, stained and glazed, and then finished for return to the office. At the seat appointment the doctor seats the abutments and torques them into place. The finished crowns are then seated over the abutments for a highly functional and esthetically pleasing result.

Here is a two unit (#8, #9) implant case restored with Procera custom zirconia abutments and Procera zirconia crowns:

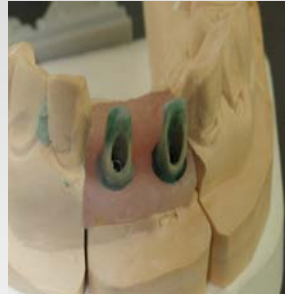
1. The lab receives the impression. Impression copings and implant analogs are placed in the impression.



2. The master cast is poured and mounted with pink tissue at the sites of the implants.



3. The technician waxes up an anatomically "ideal" abutment.



4. The Procera Forte scans the wax-up for milling of the zirconia abutment and the coping.



5. The Milled zirconia abutments achieve excellent esthetics and allow for adequate porcelain build-up.



6. Scanning of the abutment for designing copings for crowns.



7. Procera zirconia copings ready for porcelain build-up.



8. Final restoration ready for the seat appointment.





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*Our goal is to get you patient
referrals with every case we do!*

Important Dates:

Join us for Our Evening Seminars this Summer

June 26th, 2008

Taking Better Impressions

Presenter: Angela Usher, GC America

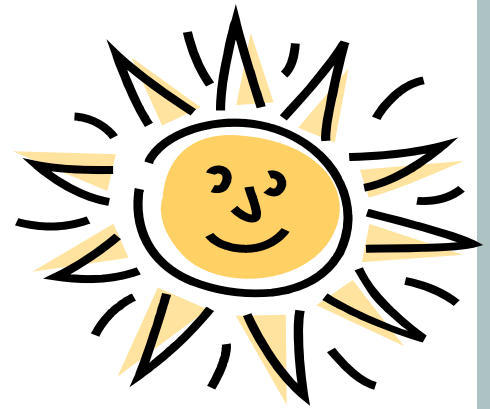
Held At:

Renstrom Dental Studio

4225 White Bear Parkway

Vadnais Heights, MN 55110

Look for more continuing
education classes and
seminars
coming in the fall!



**Have a fun and
enjoyable summer!**

**Check us out on the web!
www.renstrom.com**