Sterilization Instructions/Recommendations for Acumed Burs

1. Is the residue on both the diamond burs and carbide burs? The diamond burs have a stainless steel body while the carbide burs are all tungsten carbide.

Our stainless steel burs are made of 300 stainless steel which harder than the 400 series used for surgical blades. I mention this because either chrome plated steel or a softer grade of stainless would exhibit problems of a "residue" sooner than a 300 stainless steel.

2. The sterilization recommendations for burs are similar to what is done or recommended for surgical instruments. That is, use steam sterilization first when possible.

The following is a standard recommendation for the two different types of steam sterilization.

"Steam sterilization is the most commonly used process for sterilizing instruments, trays, and cassettes. According to the CDC, steam under pressure is the process of choice whenever possible as it is considered safe, fast, and the most cost-effective for health care facilities. Steam sterilizers come in many different sizes and sterilizer cycles can vary among manufacturers. The cycle a sterilizer runs can typically be found in the sterilizer manual. The following are examples of standard cycle parameters (AAMI ST79, AORN) for packaged instruments.

- Gravity – 121°C/250°F for 30 minutes exposure and 15–30 minutes drying time
- Gravity – 132°C/270°F for 15 minutes exposure and 15–30 minutes drying time
- Gravity – 135°C/275°F for 10 minutes exposure and 30 minutes drying time
- Dynamic Air Removal – 132°C/270°F for 4 minutes exposure and 20–30 minutes drying time
- Dynamic Air Removal – 135°C/275°F for 3 minutes exposure and 16 minutes drying time

Other commercially available sterilization processes include: chemical vapor, dry heat, ethylene oxide, vaporized hydrogen peroxide, and ozone. Although each of these processes offer advantages and disadvantages, the decision about which sterilization process the health care facility should choose lies with the instrument manufacturer as to what was validated in their instructions for use (IFU). For patient safety, the process must be compatible as to not cause damage and must be efficacious to ensure sterility."

3. The question about the residue may be more related to cleaning, packaging and sterilization than sterilization only. Sterilization could become an issue with staining of instruments when stainless steel instruments are routinely run through a "flash cycle". The rapid temperature change may cause changes to the instrument's surface.

4. The problem of the residue may have to do with cleaning and packaging and the pH of the water used in the sterilizer. I dislike mentioning this because it points the problem back to the customer. Is this is a problem that has occurred with other instruments?

5. I would suggest that the customer use a mild detergent when cleaning the instruments and thoroughly clean the burs using a bur brush. And dry the burs before packaging and sterilization.

This is a complicated issue to determine where the problem occurs. If you want, please send back one of the burs back to us for evaluation.

I have several reprints about sterilization and instrument stains that I can send to you. Let me know if you would like these articles.

Please contact me with any other questions.

Best regards, David, Acumed Instruments Corporation