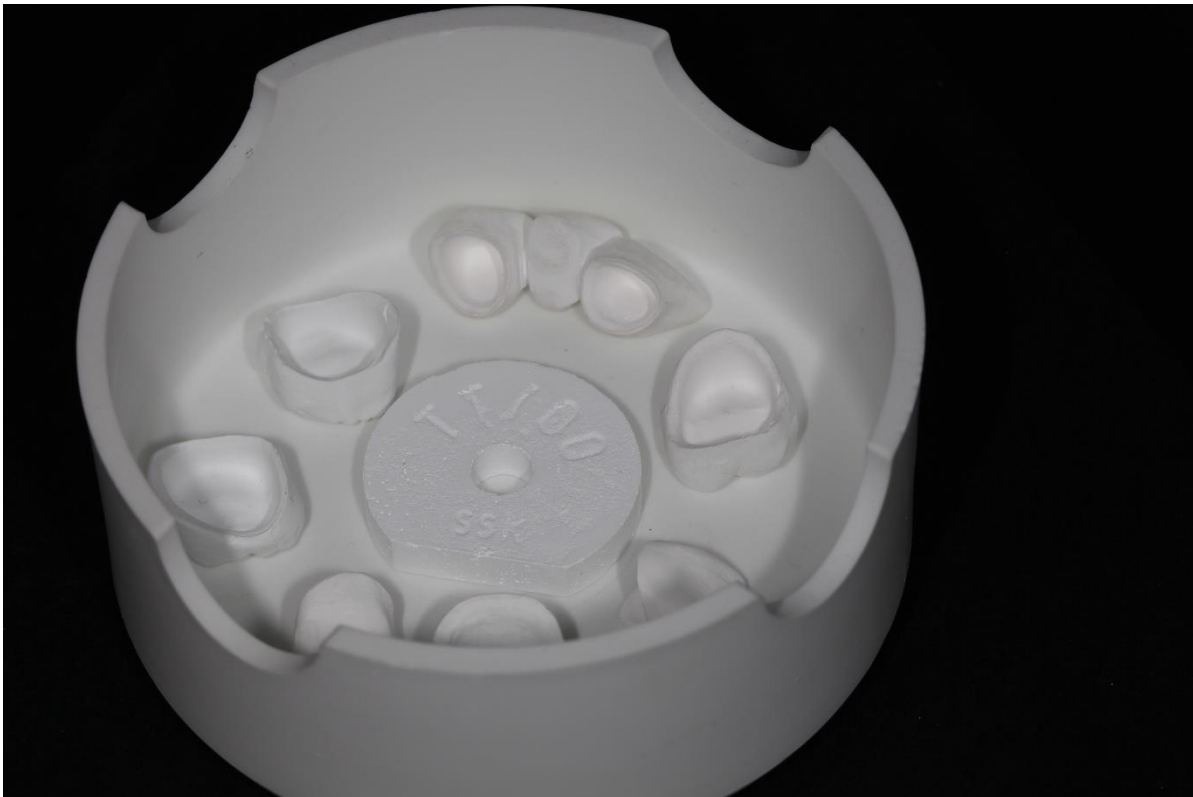




TempTAB^(patented)

Control and Monitor Dental Sintering Furnaces with ease



Ceramic Materials, like dental zirconia, undergo important changes as they are heated, changes that are necessary to develop properties like strength and color. To produce a Dental implant from zirconia, control over the heating cycle is critical in developing those key product properties. **Control of temperature alone will not produce a quality product.** Ceramic materials are affected by both the **temperature** and the length of **time** they are exposed to temperature. Properly monitoring both the time and temperature are essential for maintaining control. TempTAB measure the amount of energy input into the Sintering process, commonly referred to as heatwork, the combined effect of time and temperature. TempTAB are made from ceramic materials that react to heatwork in such a way as to undergo a high degree of shrinkage when sintered. Orton's engineers have developed precise data tables to convert the shrinkage to an equivalent sintering temperature.

Why use **TempTAB** and when are they used?

- Process temperature verification
- Preventative maintenance

The actual temperature inside a furnace when measured by a thermocouple will not give a true representation of the amount of heat absorbed by the product within the furnace. A thermocouple can only report the temperature at a fixed location inside the furnace. TempTAB can be placed in the furnace next to the parts that will be sintered, and will report the amount of energy absorbed over time where the parts are, not where the thermocouple is located

Thermocouples and electronic equipment used to control furnaces are not foolproof. Thermocouples degrade over their useful life and can break without warning. Electronic controllers need to be calibrated to read temperature properly. Since TempTAB *are not* subject to degradation and do not need to be calibrated, they can be relied upon to report actual changes in the process. Through daily use, they can spot temperature variations and help in making decisions on how accurately the product reached temperature. By using them immediately with a new furnace or after a furnace calibration, it will help to insure the furnace continues to sinter properly.

How are **TempTAB** measured?

Gather the TempTAB after completion of the sintering cycle and measure the fired diameter with a digital caliper. Use the Temperature table to convert the shrinkage measurement taken in millimeters into the sintering temperature. Be sure to choose the correct hold time column for the sintering cycle used.

Where can I purchase **TempTAB**?

You can purchase directly from the Orton website
<https://www.ortonceramic.com/en/TempTABs/>

Questions can be directed to:
info@ortonceramic.com