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Background

• Section B.3.2.4 of Standard 61 as currently written contains a solder preparation method with conflicting parameters that are not typically possible to achieve in the laboratory.

• The standard specifies both a temperature (20°C above liquidus) at which to melt the solder and time frame (1-2 minutes) in which the solder is to melt.

• Muffle furnace temperatures in excess of liquidus ratings are needed to bring the solder to liquidus temperatures within the 1-2 minute time period in the standard due to the insulating properties of the ceramic boats and may vary due to specific chemistry of the solder and amount of solder to be melted.

• The proposed revision simplifies the requirements to focus on setting the oven at a temperature sufficient to melt the solder within 1-2 minutes.
B.3.2.4 Solders

These products shall be prepared by placing the solder in a ceramic combustion boat (96 x 12 x 10 mm). The amount of solder used shall be sufficient to cover the bottom of the boat. The boat (with solder) shall then be placed in a muffle furnace that has been set to a temperature sufficient to melt the solder within 20 °C (36 °F) above the liquidus temperature of the product being evaluated. For example, 95/5 tin/antimony solder has a melting range of 232 to 240 °C (450 to 464 °F). The oven shall be set at 260 °C (500 °F) for this solder. The boat (with solder) shall be placed in the oven and allowed to heat until the solder has melted (approximately 1 – 2 minutes). The boat shall be allowed to cool and the solder piece removed.