To assure that sterilization with the Anprolene process can be carried out reliably, three important parameters must be controlled: the concentration of sterilant gas, the length of exposure to the gas, and the temperature. The AN87 Dosimeter is designed to integrate the effects of time, temperature, and the concentration of ethylene oxide on the sterilization load. The yellow material in the indicator column will turn blue in proportion to the dose of sterilizing gas, thus providing immediate graphic evidence that the conditions necessary for sterilization of properly prepared materials have or have not been met.

Authorities have reported that at (68°F 20°C), 1500 mg/liter-hours of exposure to ethylene oxide will sterilize instruments heavily contaminated with spores, providing that these spores have not been dehydrated before exposure to the gas. A margin of safety has been designed into the use of the Dosimeter by setting its triangular pointer (▲) to indicate at least 2000 mg/liter-hours of exposure.

Careful preparation of the items to be sterilized is the key to reliable sterilization using the Anprolene system. Disassemble all instruments to the extent possible. Remove all caps, plugs, stoppers, plungers, valves, stylets, or other obstructions to provide easy access for the gas to interior cavities. Coatings of dried protein, such as dried blood, serum, or pus, protect microorganisms from the sterilizing gas. Spores that might be on the instruments may became very dry if the RH is below 35%, which makes them resistant to Anprolene. The simplest way to humidify items is to wash them. Scrub instruments surgically clean in detergent and water. If the nature of an instrument excludes immersion in water, place it in 100% relative humidity for at least four hours prior to wrapping and sterilization. To humidify items that cannot be washed (such as laptops, cameras, and delicate electronics) it is necessary to enclose them in a plastic bag with an AN1071 Andersen Humidichip® placed inside a Humiditube for 4 hours before activating the ampoule.

Items to be sterilized in Anprolene should only be wrapped in cloth, paper, or Seal & Peal® a transparent, peel-open, extended shelf-life packaging material specifically designed for use with the Anprolene sterilization system. Some other plastic films, such as nylon and polyester, are virtually impervious to ethylene oxide. Do not use any plastic film to wrap items for sterilization unless it is approved for use with Ethylene Oxide.

In addition to using the AN87 Dosimeter, it is important that a protocol be established for challenging your sterilizer with a biological indicator (consistent with the guidelines set forth by the regulatory or licensing agency governing your organization). The AN80 Steritest® is a reliable and convenient bacterial challenge designed specifically for use with Anprolene.