



University of Iowa Sterilizer Monitoring Program

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Frequently Asked Questions

How does the test work?

Our test strips are composed of a white inner strip that is impregnated with bacterial endospores. These spores are specially selected strains of bacteria that are very resistant to the conditions of sterilizers. This assures that if the sterilizer is capable of neutralizing these particularly hardy bacteria they are also destroying any human pathogens that may be on your instruments. The white inner strip is covered with a white outer envelope that is impermeable to bacteria. This assures that bacteria from the environment doesn't contaminate the test, and that no bacteria from the test strip are able to spread to your sterilizer or hands.

When we receive the test strip and completed paperwork we assign each test a bio-indicator number, and we enter the test into our computer. The strip is dropped into a broth-based culture medium, and incubated for 7 days. The tubes are read daily for bacterial growth. Media from tubes with growth are applied to a slide, gram stained, and examined microscopically. After we have identified the type of bacteria that resulted in the growth we can declare the test to be either positive or contaminated, and we notify our client accordingly. An official negative result is released after the 7 day incubation time has completed.

Are the test strips dangerous?

No. The bacteria in the test strip are non-pathogenic in people with a normal immune system. Additionally, the white outer envelope is impermeable to bacteria when dry, so it is impossible for you to come into contact with the bacteria or for your skin bacteria to contaminate the test.

What time/temperature should I set my sterilizer to?

Set your sterilizer according to the directions in your sterilizer manual. The spore test strips are made to work in all sterilizers, so you should be able to follow the manufacturer's recommended settings to effectively sterilize the test strip. You should also follow any instructions regarding preheating the machine or allowing instruments to stay in the sterilizer through the entire cool-down cycle, these steps are often important components of sterilization success.

Should I run the strip for an extra-long cycle?

No. The experience of the test strip should mimic that of your instruments, so that the test accurately reflects whether or not the instruments are being sterilized. Run the test strip, with instruments, at whatever settings your office routinely uses for instruments.

Can I run a test with instruments?

Yes. Sterilizers are designed to run with instruments in them, so running an empty cycle can hinder a sterilizer's ability to hold and maintain the necessary temperature. Test strips should be run in normal sized loads on the cycle your office normally uses.

The bags are changing colors, isn't that a good enough indicator that my sterilizer is working?

No. The CDC and public health boards around the country require that a biological monitor be used to ensure that the sterilizer is actually capable of sterilizing all bacteria. The chemical indicators (such as color change spots on the bags) offer a quick way to tell if an item has been through a sterilizer cycle, but offer no information on how long the temperature was held or if the pressure was adequate. The more sophisticated chemical indicators (class five indicators) offer more information about sterilizer conditions, but don't show with certainty that the sterilizer is capable of destroying all organisms.

Do we have to send a positive control?

No. We run a positive control daily for each lot number here in our laboratory. Our program has determined that mailing a positive control back and forth for each test strip is unnecessary, as there are no conditions encountered in the mail that resemble the time, temperature, and pressure need to successfully sterilize our test strips. If you or any inspectors have questions regarding our positive or negative controls please call us at 800 626 4692.

What should I do if I accidentally run the strip through twice/drop it in a sink full of water/burn it to a crisp/have an error in the middle of the cycle?

Call us at 800 626 4692 and we will advise you what to do. With test volume of 66,000 strips per year we have answered questions about every possible misadventure a strip can have, and we will happily discuss what to do to get back on track.

Where can I get more information about sterilization protocol and bloodborne pathogen safety?

The CDC's "Guidelines for Infection Control in Dental Health-Care Settings 2003" is an excellent source of information for dentists, tattoo/piercing artists, or anyone else working in a setting with exposure to blood and other body fluids. This document can be found at <http://www.cdc.gov/oralhealth/guidelines.htm>