

Antimicrobial CLAVE®



Simple. Safe. Secure.

ICU Medical is the world leader in needle-free intravenous connection devices. Our landmark technologies seek to improve patient outcomes while eliminating the risk of needle stick injuries in health care workers. The original CLAVE has demonstrated a reduction in bloodstream infection rates in patients when compared to other connectors (Moore 2009, Maragakis 2006); similar testing for the Antimicrobial CLAVE is not yet complete.

It's What's *Inside* That Counts!

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U.S. Pat. Nos: 5,685,866; 5,690,612;
5,694,686; 5,695,466; 5,873,862; 5,901,942;
5,928,204; 6,132,403; 6,572,592; 6,599,273;
5,738,663; 6,019,748; 6,325,782; 5,700,248;
6,132,404; 5,199,947; 5,344,414; 5,688,254;
5,776,116; 5,330,450; 5,971,950; 6,290,688;
6,669,673; 6,635,044; 6,572,592; 6,682,509;
6,726,672; 6,758,833;
Other Patents Pending. M1-1210 Rev.01

Reality...



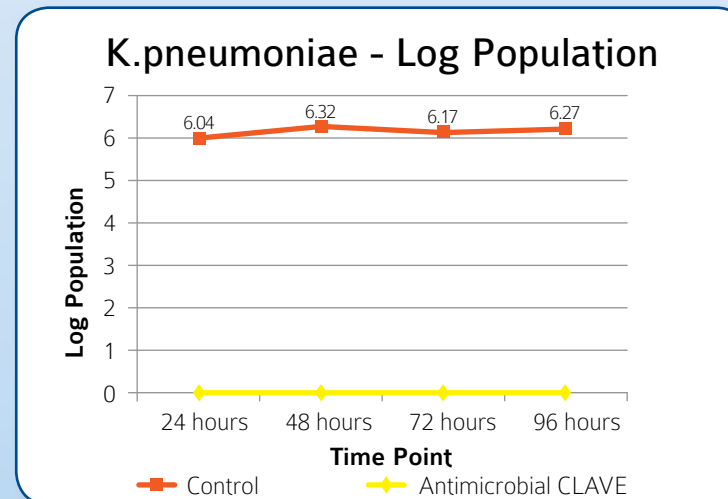
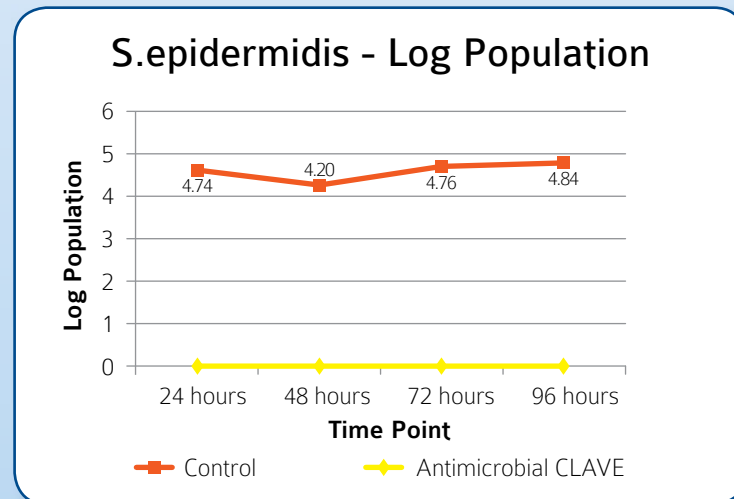
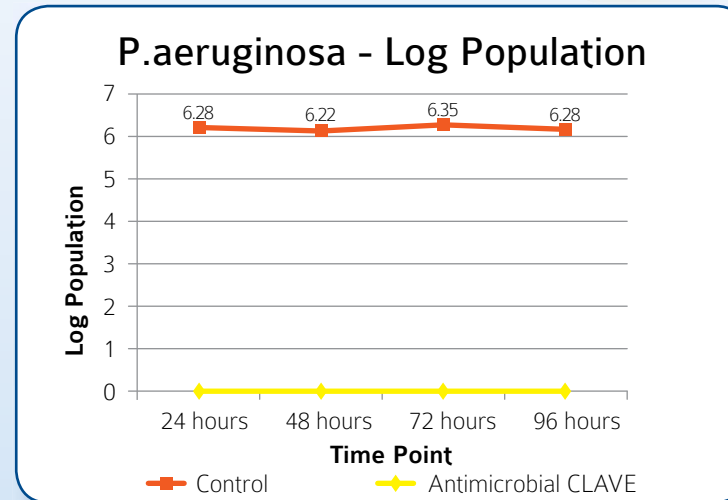
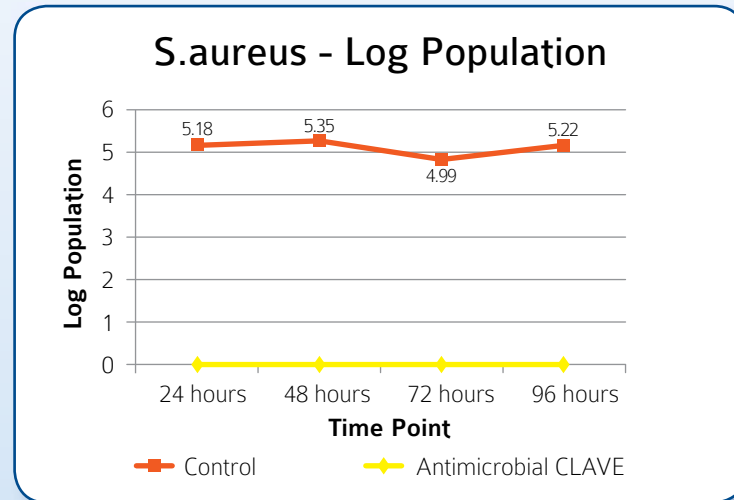
Keep Reality in check

Antimicrobial CLAVE®
NEEDLEFREE CONNECTOR



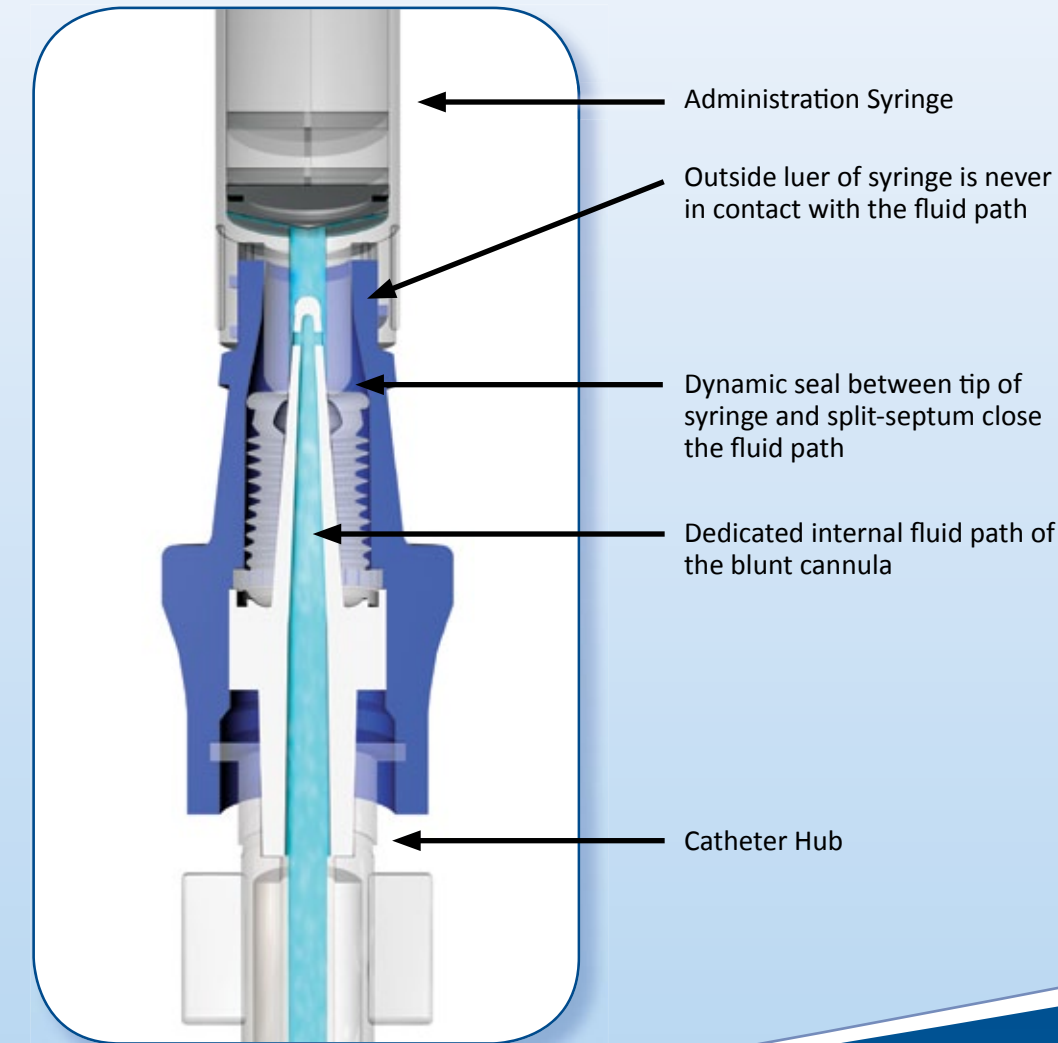
Antimicrobial CLAVE Efficacy DATA

99.99%

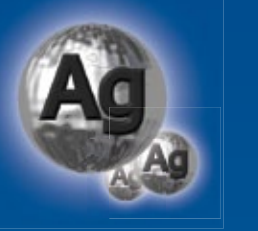
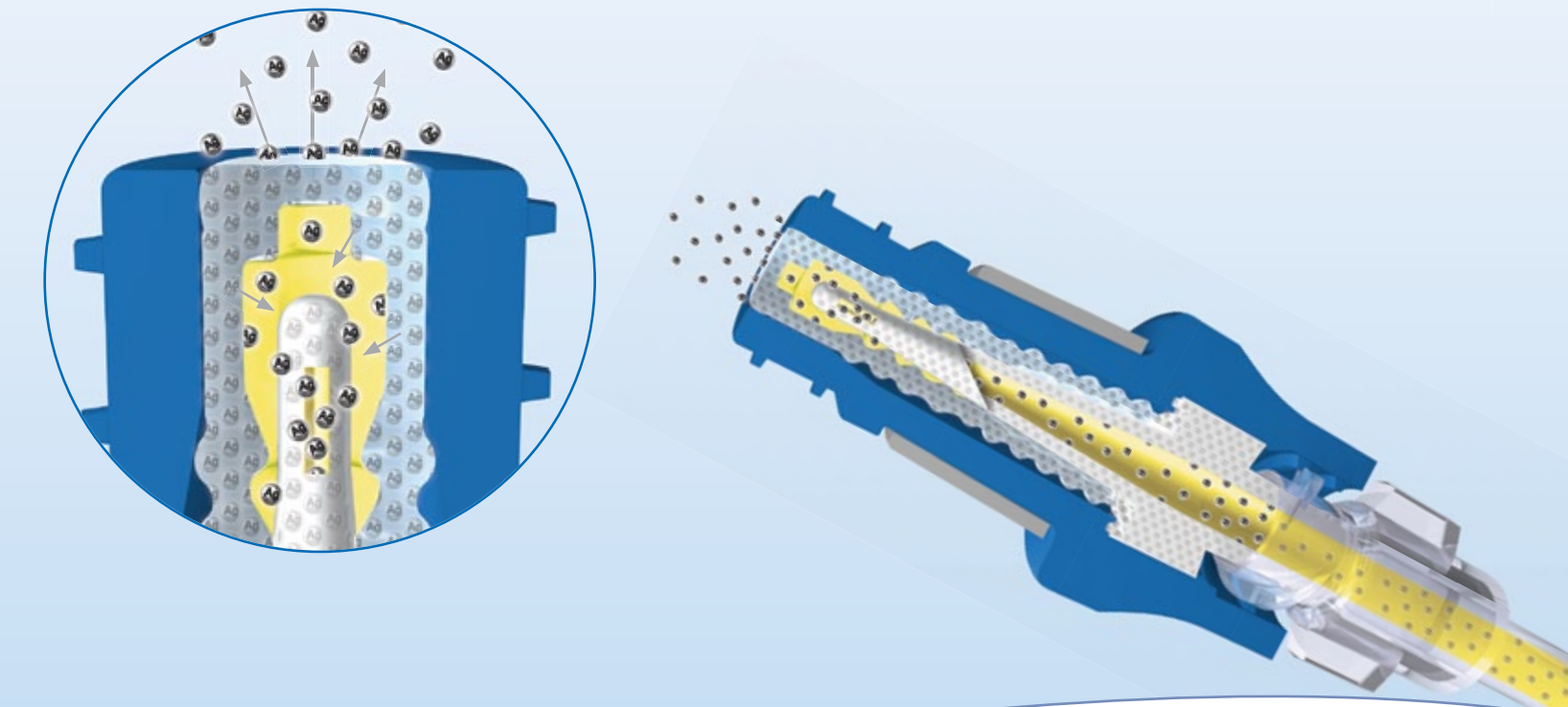


CLAVE TECHNOLOGY

CLAVE Internal Fluid Path Operation



How it WORKS



Testing Results

- Significant reduction in bacterial counts for a continued 96-hour use life. Antimicrobial effectiveness was proven for multiple time points in the entire four day period.
- Better than a 4-log kill and 99.99% reduction rate for all gram negative and gram positive bacterial strains.

Ionic Silver additive works in conjunction with the CLAVE design to add another barrier against microbial ingress. CLAVE is the only Needlefree Connector technology which has been proven to reduce intraluminal catheter colonization in a randomized clinical trial (Bouza, 2003). The reversed, split-septum technology and dedicated internal fluid path are the heart of what makes the CLAVE least likely to transmit bacteria than any other needlefree connector (Ryder, 2007).

Safe and Effective Antimicrobial Silver Technology

- Silver is integral to all components which have communication with the fluid path including the split-septum seal and internal blunt cannula. The antimicrobial agent is infused during the molding process which provides an even and continuous distribution of silver ions.
- Offers a continual and constant release of ions throughout a 96-hour use life.
- ICU Medical's efficient manufacturing method makes the Antimicrobial CLAVE both reliable and cost effective.

Antimicrobial Activity Occurs on the Swabbing Surface and in the Fluid Path

- Efficacy has been demonstrated on the dry external surface of the septum which is the swabbing surface.
- Silver escapes into all areas surrounding the silicone including the internal fluid path and area between the silicone and housing.