Taurolidine-Citrate Catheter Solution

Cat/Ref TCS-04

- **Provides Broad-Spectrum Activity**
  Effective against gram positive and gram-negative bacteria and fungi most commonly associated with catheter-related infections

- **Prevents and Eradicates Biofilm**
  The first commercially available solution that eliminated protected microbial colonization of cathters effectively reducing the risk of cather-related infection

- **Does Not Induce Development of Drug-Resistant Bacterial Strains**
  Does not intefer with the efficiacy of therapeutic antibiotics

- **Non-Toxic Formulation**
  No risk of systemic effects

- **Effective Anticoagulant**
  - Promotes catheter patency
  - Avoids systemic anticoagulation associated with heparin

TCS **The Solution to Catheter-Related Infection**

TCS **A Revolutionary Approach to the Maintenance of Vascular Catheters**

Your Distributor is:
Braintree Scientific, Inc.
PO Box 850498, Braintree, MA 02185
781-917-9526
Email: Info@braintreesci.com
Web: www.braintreesci.com

TCS™

"the researchers new best friend"

Like no other product available today, TCS combines two components vital to effective management of vascular access catheters - taurolidine and citrate.

Taurolidine...

- interacts with components of microbial cell walls, resulting in irreparable injury
- acts effectively against a broad range of bacteria and fungi, including those commonly associated with catheter-related infection and many drug resistant strains
- inhibits and destroys biofilm that can allow protected microbial colonization
- does not induce development of resistant microbes

Citrate...

- forms a complex with calcium disrupting the normal coagulation cascade
- inhibits intraluminal blood coagulation with no systemic effect

improves catheter maintenance

TCS an efficient solution to meet your needs

What is TCS?

TCS is a catheter lock solution for central venous catheters and vascular access ports. It is instilled in device lumens to make the internal flow passages resistant to clot formation and hostile to bacterial and fungal growth.

What are the active ingredients?

Taurolidine as the antimicrobial agent and the citrate is the anti-coagulant component.

Prevention of catheter infection

TCS with its active microbial component Taurolidine, has a broad spectrum of antimicrobial activity against aerobic and anaerobic gram-negative and gram-positive bacteria, yeast and fungi.

Reduced risk of biofilm formation

TCS prevents biofilm development and consequently, bacterial and fungal colonization, thus decreasing the risk of infection

Supporting longer patency of catheters

The citrate is the anti-coagulant component of the solution and acts by removing calcium from by coagulation cascade by precipitating it into an unusable form. Lack of calcium ions inhibit the coagulation process.

No development of resistance

Both in-vitro and chemically, TCS does not induce any development of microbial resistance. Unlike antibiotics, its agent Taurolidine does not inhibit bacterial reproduction but weakens bacteria by attacking their cell walls and impairing agility.

Favorable safety profile

TCS is non-toxic. No topical or systemic effects are known.

How is TCS packaged?

Package: 10 vials per box
Filling volume: 7ml

How is TCS used?

Instillation instructions are provided in each box.

Antimicrobial TCS lock solution provides...

- improved catheter maintenance
- broad spectrum activity against microbes commonly associated with catheter-related infections
- no microbial resistance or adverse effects have been reported

Can TCS be used in all V-A-P's catheters?

No degradation of the port or catheter (polyurethene or silicone) has been detected in long-term tests

What if the TCS can't be aspirated and is injected into the animal?

The half-life of the antimicrobial ingredient within the body is less than 30 minutes. It is metabolized into the naturally occuring amino acid taurine. No toxic effects are expected or reported after injection.

How long is maximum dwell time of TCS within the catheter?

The dwell time of TCS is similar to the dwell time of heparin in the catheter due to the similar density of the products. TCS remains stable within the catheter for at least three months.

Bibliography - *call for copies*

Stoll L. J. et. al. "Taurolidine-Citrate as a Venous Access Port Lock Solution; A Review." ASR Newsletter Sept. 2009.

Taylor C. et. al. 2008. "A new hemodialysis-catheter locking agent reduces infections in hemodialysis patients." J Ren Care 34(3):116-20.

Simon A. et. al. 2008. "Taurolidine-citrate lock solution significantly reduces CVAD-associated gram-positive infections in pediatric cancer patients." BMC Infect Dis 29(8):102.

Percival S. et. al. 2007. "Intravascular catheters and biofilm control." J Vasc Access 8(2):69-80.

Mandolfo S. et. al. 2006. "Catheter lock solutions: its time for a change." J Vasc Access 7(3):99-102.

Jurewitsch B. et. al. 2005. "Taurolidine lock: Key to the prevention of recurrent catheter related blood stream infections. Clin Nut 24:462-5.

Koldehoff M. et. al. 2004. "Taurolidine is effective in the treatment of central venous catheter-related blood stream infections in cancer patients." Int J Antimicr 24:4 491-495.