



FAQ ACCUMAST®



Overview and Product History

Q: WHAT IS ACCUMAST®?

A: ACCUMAST® is an on-farm diagnostic kit that allows for the accurate differentiation of more than 11 different mastitis pathogens.

Q: WHAT ARE THE BACTERIA THAT ACCUMAST® CAN DETECT?

A: ACCUMAST® can accurately detect the following bacteria: *E. coli*, *Klebsiella*, *Enterobacter*, *Pseudomonas*, *Serratia*, *S. uberis*, *Streptococcus spp.*, *Enterococcus*, *Lactococcus*, *Staphylococcus spp.*, *Staphylococcus aureus*.

Q: CAN ACCUMAST® DETECT *S. aureus*?

A: ACCUMAST® is the only on-farm diagnostic test that can detect *S. aureus* with an accuracy of nearly 100%.

Q: HOW RAPID ARE THE RESULTS WITH ACCUMAST?

A: All bacterial organisms will grow within 16 hours, although in many cases the causative organism can be identified in as little as 8-10 hours post-incubation.

Q: HOW ACCURATE IS ACCUMAST®?

A: Scientifically proven, the overall accuracy of ACCUMAST® is >98%. An independent evaluation of four on-farm culture systems conducted at University of Illinois (Ferreira et al., 2018) concluded that ACCUMAST® was the most accurate on-farm culture system for identification of mastitis-associated pathogens.



Q: WHY IS IT IMPORTANT TO KNOW THE CAUSE OF MASTITIS?

A: Research has indicated that only 3 to 4 out of 10 cases of mastitis will benefit from antimicrobial therapy; *e. g.* mild cases of *E. coli* as well as culture negative cases do not benefit from antimicrobial therapy. Therefore, farmers save a lot of money (R.O.I. 10/1) in labor, drug costs, and milk discard by adopting a pathogen-based mastitis therapy management program. Additionally, knowing the cause of your mastitis problem will help devise strategies to prevent the problem. For instance, if *S. aureus* is the primary pathogen, identifying and culling infected animals as well as making appropriate improvements in milking routine will help decrease the spread of this contagious disease.

Q: WHY IS IT IMPORTANT TO DISTINGUISH *E. coli* FROM *Klebsiella* MASTITIS?

A: Recent research has demonstrated that intramammary antibiotic treatment of *E. coli* mastitis does not improve bacteriological cure rates (97% versus 98%). However, cows affected with *Klebsiella* mastitis that were treated with antibiotics had a bacteriological cure of 74% compared to only 18% cure rate for the non-treated group (Fuenzalida and Ruegg, 2019). ACCUMAST® is the only on-farm culture system capable of easily distinguishing *E. coli* from *Klebsiella*.

Q: WHAT IS THE COLOR-CODING TECHNOLOGY OF ACCUMAST®?

A: Each culture media in the ACCUMAST® system contains a combination of patented Chromogens (color forming chemicals) that are bound to enzymatic substrates. Different bacteria produce different unique enzymes that can cleave the chromogens from its substrates, and when released, the chromogens crystallize around the bacterial colony forming its signature coloration.

Q: WHAT IS THE SHELF LIFE OF ACCUMAST®?

A: Our products are manufactured in clean rooms (ISO 5 environmentally controlled room) and packaged using a proprietary technology that gives the product a 12-month self life even when stored at room temperature. The other culture systems only have 2-3 weeks of shelf life and often spoil on the farm before used.

Q: HOW IS THE TECHNICAL SUPPORT SERVICE FOR ACCUMAST®?

A: FERA Diagnostics and Biologicals Corp. has a team of 5 veterinarians (3 of which also have Ph.D. degrees) that are available 24-7 to provide technical support to their clients. The company's CEO (Rodrigo Bicalho DVM, Ph.D.) is an expert in bovine infectious diseases, and FERA's clients can consult directly with him by calling his cell phone (607-342-8135).

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