Mastitis diagnosis has never been this fast and easy



Animal diagnostics

VetMAX MastiType multiplex qPCR kits offer simultaneous detection of up to 15 mastitis-causing pathogens for immediate and informed action

Because bovine mastitis can cause significant losses, farmers need quick diagnostic results so they can take fast and appropriate action. Traditionally, culture has been used for the diagnosis of mastitis infections, but results can take a long time and pathogens can be difficult to grow, especially for *Mycoplasma* species.

Applied Biosystems[™] VetMAX[™] MastiType multiplex qPCR kits, together with the Applied Biosystems[™] MagMAX[™] CORE Nucleic Acid Purification Kit, are designed to provide same-day results even for *Mycoplasma* spp., enabling farmers and veterinarians to take fast and well-informed action.

We offer a range of kits to meet your specific needs

VetMAX MastiType Multi Kit—detects 15 major mastitis-causing
pathogens and penicillin-resistance genes in one PCR run

VetMAX MastiType Micro4 Kit—detects all major contagious mastitis-causing pathogens

VetMAX MastiType Myco8 Kit—detects all major *Mycoplasma* species infecting cattle

MagMAX CORE Nucleic Acid Purification Kit + Mastitis & Panbacteria Module—for fast and convenient nucleic acid extraction from milk samples, yielding high-quality nucleic acids

Advantages of using the VetMAX MastiType kits:

- Faster results—typical time from sample to result is 2.5–3 hours, compared to up to 10 days for a culture
- No bacterial culture needed—detection independent of viable bacteria as PCR detects DNA
- Detection of growth-inhibited pathogens—e.g., when treatment was already started
- Convenience—sample extraction does not require aspiration and centrifugation
- **Highly accurate**—high sensitivity and specificity for all individual pathogens, compared to up to 40% "no growth" results with bacterial culture
- Superior customer support—support from our experienced animal health service and support team
- Leverage our experience—large portfolio of veterinary diagnostics

Pathogens detected by VetMAX MastiType kits

VetMAX MastiType Multi Kit identifies:

- Staphylococcus aureus
- Staphylococcus spp. (including all major coagulase-negative staphylococci)
- Streptococcus agalactiae
- Streptococcus dysgalactiae
- Streptococcus uberis
- Escherichia coli
- Enterococcus spp. (including E. faecalis and E. faecium)
- Klebsiella oxytoca (and/or K. pneumoniae)
- Serratia marcescens
- Corynebacterium bovis
- Trueperella pyogenes and/or Peptoniphilus indolicus
- Staphylococcal β-lactamase gene (penicillin-resistance gene)
- Mycoplasma bovis
- Mycoplasma spp.
- Yeast
- Prototheca spp.

VetMAX MastiType Myco8 Kit identifies:

- Mycoplasma spp.
- Mycoplasma alkalescens
- Mycoplasma bovis
- Mycoplasma bovigenitalium
- Mycoplasma canadense
- Mycoplasma californicum
- Staphylococcus aureus
- Streptococcus agalactiae

VetMAX MastiType Micro4 Kit identifies:

- Mycoplasma bovis
- Staphylococcus aureus
- Streptococcus agalactiae
- Streptococcus uberis

Bovine mastitis diagnosis

Bovine mastitis is the most common and costly disease among dairy cows. It is an inflammation of the mammary gland that is predominantly caused by a bacterial infection. When mastitis is identified in a cow's quarter(s), it is important to identify the pathogen causing the infection because different categories of pathogens require different management strategies. Once the infection is identified, a dairy farmer can work with his or her veterinarian to target an effective treatment plan. Prudent use of antibiotics reduces the likelihood of resistant pathogens developing and can reduce the duration of treatment a cow may need, which in turn decreases operating costs.



Mastitis diagnosis example workflow

Samples	Nucleic acid extraction	Amplification	Interpretation
All VetMAX MastiType kits can be used with the following samples:	MagMAX CORE kit with Mastitis & Panbacteria Module	VetMAX MastiType Multi, Micro4, or Myco8 PCR kits	Applied Biosystems [™] VeriVet Software**
 Milk Bulk milk Preserved milk* (e.g., with bronopol) Frozen milk * Use of preserved milk samples eliminates the need for cooled transport of samples. 	 Fast extraction of nucleic acids: only 6 steps, 96 samples purified in 1 hr Convenient, without aspiration and centrifugation Manual and automated extraction protocols Automate for higher-throughput sample processing using the Thermo Scientific™ KingFisher™ Flex Magnetic Particle Processor with 96 Deep-Well Head 	 Multiplex real-time PCR kits based on unique proprietary gene targets High sensitivity and specificity Internal positive control to monitor for PCR inhibitors Compatible with PCR instruments such as the Applied Biosystems™ QuantStudio™ 5 and 7500 Fast PCR instruments 	 Easy readout of positive and negative results with interpretation software Innovative cloud-based dat analysis and storage Use with QuantStudio 5 an 7500 Fast PCR instruments
1 hour		1.5–2 hours	
Add lysis buffer Incubat	e 5 min, RT Add proteinase K		

Support from dedicated service and support team

Flex instrument

Our team supports the implementation of the workflow in the lab, including instrument installation and thorough hands-on training for laboratory staff. The training session covers sample preparation, proper use of the real-time PCR instrument, and interpretation of results using VeriVet Software.

Ordering information

Product	Quantity	Cat. No.		
VetMAX MastiType Micro4 Kit	100 tests	A39235		
VetMAX MastiType Myco8 Kit	100 tests	A39236		
VetMAX MastiType Multi Kit	100 tests	A39227		
Nucleic acid purification and qPCR all-in-one packages				
VetMAX MastiType Micro4 Combo Kit (A40289 + A39235)	100 tests	A40292		
VetMAX MastiType Myco8 Combo Kit (A40289 + A39236)	100 tests	A40291		
VetMAX MastiType Multi Combo Kit (A40289 + A39227)	100 tests	A40290		
Workflow products				
MagMAX CORE Nucleic Acid Purification Kit with Mastitis & Panbacteria Module	100 tests	A40289		
KingFisher Flex Magnetic Particle Processor with 96 Deep-Well Head	1 instrument	5400630		
QuantStudio 5 Real-Time PCR System, 96-well, 0.1 mL	1 instrument	A28138		
QuantStudio 5 Real-Time PCR System, 96-well, 0.2 mL	1 instrument	A28139		
7500 Fast Real-Time PCR System with Dell Notebook	1 instrument	4365464		
Related products				
MagMAY CORE Nuclaia Acid Purification Kit	100 reactions	A32700		
MagMAX CORE Nucleic Acid Purification Kit	500 reactions	A32702		
VetMAX M. bovis Kit	50 tests	MPBO50		