



BOVIFREE



Synthetic freezing extender for bull semen

BoviFree is an innovative, **entirely egg-free** extender: it contains no egg yolk or egg yolk derived components and no liposomes. Highly effective antioxidants and proprietary sperm membrane protectants as well as a strong buffering system provide unique protection to spermatozoa during freezing and thawing.

In extensive comparative tests, BoviFree achieved consistently **superior post-thaw results** in a number of sperm parameters of a wide variety of bulls.

BoviFree is very easy to prepare, allows for excellent microscopic images and thus is perfectly suited for CASA analysis.

Your benefits

- No ingredients of animal origin
- No risk of microbiological contamination
- Constant, optimal freezing results with all equilibration protocols
- Enhanced post-thaw semen parameters
- Very easy to prepare
- Brilliant microscopic images due to low viscosity and homogenous particle-free consistence
- Safe product made at Minitube's ISO and GMP certified extender production facility

**Unique sperm protection
during freezing and thawing**

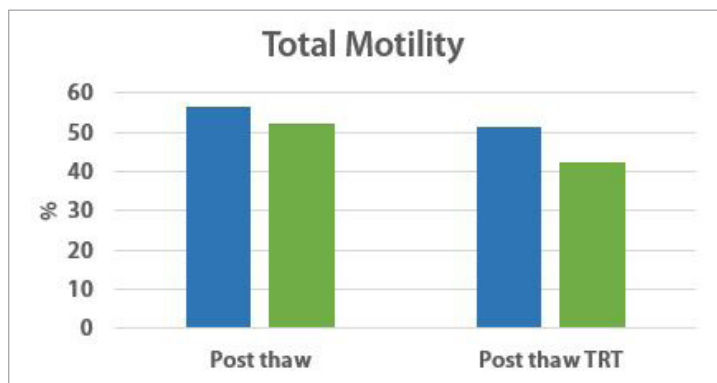




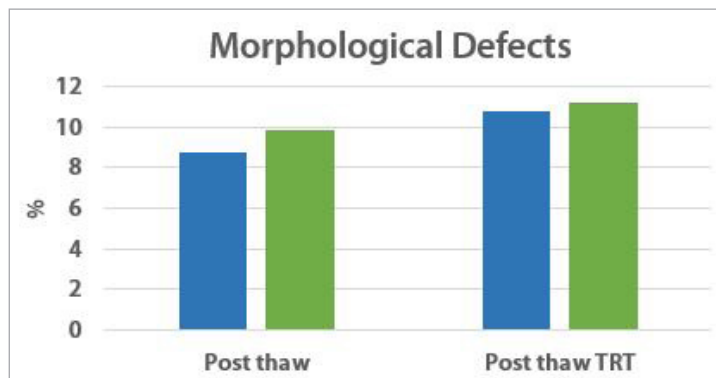
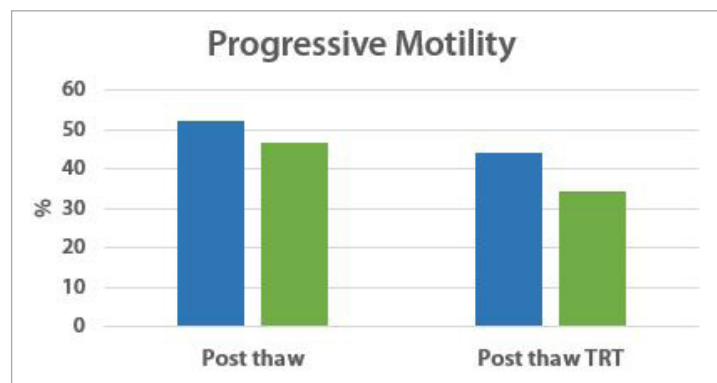
Proof of concept

study performed by University of Veterinary Medicine Hannover, Foundation

- **14 bulls:** Holstein-Friesian of different age groups
- **Split design:** BoviFree vs. control (standard animal protein-free extender)
- **Thermoresistance test (TRT):** Thawed semen sample incubated at +38°C for 120 minutes and then analysed
- **Morphology:** Manual count of acrosome, head, mid-piece and tail defects
- **Motility:** Measured with AndroVision® CASA system



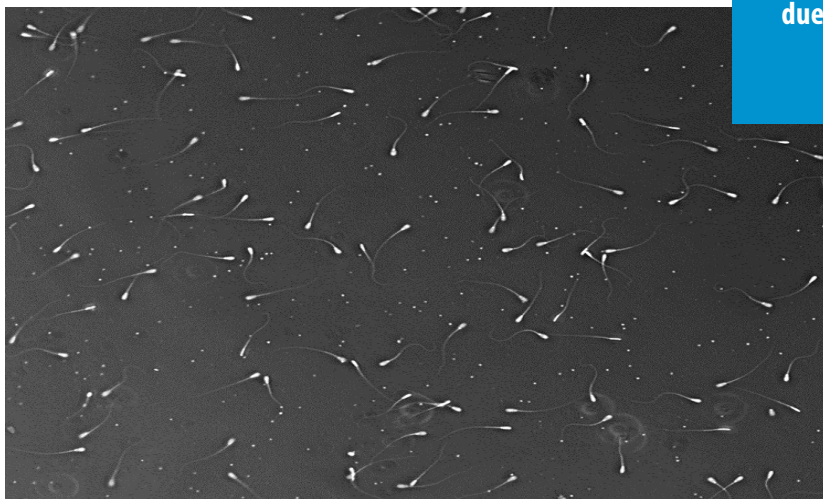
Increased motility and less morphological defects
due to highly protective extender formulation



■ BoviFree ■ Control

Composition

BoviFree contains aqua bidest., fructose, glycerol, citric acid, proprietary buffers, phospholipids, proprietary membrane protectants and antibiotics (Spectinomycin, Lincomycin, Tylosin, Gentamicin). BoviFree CSS contains no antibiotics. BoviFree corresponds with EU and CSS regulations.



Brilliant microscopic image
due to low viscosity and homogenous
particle-free quality

Ordering information

BoviFree, egg yolk free concentrated liquid medium for bull semen

BoviFree

200 ml concentrate for 1 l ready to use extender [REF.: 13501/0200](#)

BoviFree CSS one step

200 ml concentrate for 1 l ready to use extender [REF.: 13501/1200](#)

BoviFree CSS I two step

100 ml concentrate for 500 ml
ready to use extender

[REF.: 13501/1250](#)

BoviFree CSS II two step

200 ml concentrate for 500 ml
ready to use extender

[REF.: 13501/1251](#)

Antibiotic cocktail for CSS extenders

Concentration of antibiotics per 0.02 ml prepared antibiotic cocktail: 100 µg Tylosin, 500 µg Gentamicin, 600 µg Spectinomycin, 300 µg Lincomycin

For single step preparation

[REF.: 13504/9000](#)

For two step preparation

[REF.: 13500/0005](#)





GMP production standard

Full traceability of every compound and production step

Raw materials are produced according to GMP and DIN ISO 9001 norms, and are certified after Ph Eur, BP or USP standards. They are tested according to international valid quality guidelines concerning the testing of pharmaceutical substances and meet these requirements.

Each single component of each extender batch is tested chemically, physically and spermatologically under specialized veterinarian supervision for their adequacy for the semen conservation. Analysis certificates and testing protocols constitute full traceability.

Mixing and bottling of the extender is performed under GMP conditions in controlled atmosphere and documented with weighing records. The complete mixture is tested again chemically and physically for spermatologic adequacy as well as under practical conditions for the suitability for semen conservation under specialized veterinarian supervision, and by independent organizations.

Gain peace of mind by relying on the consistently high Minitube quality!

Efficient production protocols

The preparation of the final extender is as easy as this:

- warm content of the bottle to +35°C in a water bath
- warm sterile pure water to +35°C
- add water to the concentrate
- mix well

Microscopy is more efficient: BoviFree is a highly transparent medium and delivers extremely clear semen cell images under the microscope.

Customized media

BoviFree as well as all other Minitube media can be offered in other than the standard volumes and presentations.



Safe and reliable

**highest quality standard for semen
extenders in the industry**



minitube