Animal Reproduction Technology

Canine
We need detailed knowledge of reproductive physiology in order to ensure that you are successful in the use of artificial insemination. Veterinarians and agro-scientists specialized in this field therefore are responsible at Minitube for product development and for consulting with our clients. The technical demands of semen processing and preservation also require knowledge and expertise in other fields, such as electronics, sensor technology, mechanics, chemistry, cryobiology and many others. At Minitube, these demands are met by specially trained engineers and scientists.

For product development, our teams of veterinarians and engineers cooperate closely. Together, they offer all the knowledge and experience necessary to guarantee the best possible results.

Minitube offers you specialized training programs, courses and technology transfer. In close cooperation with renowned research institutions, we conduct fundamental research concerning assisted reproduction technologies as well as applied research that leads to improved techniques in production, evaluation and conservation of semen and embryos.

Originating in Tiefenbach, Bavaria, Minitube has established its competence over many years in more than 100 different countries all over the world. With several companies, highly trained local representatives, and multilingual professionals, we keep in contact with the international AI industry.

Innovative ideas, modern production techniques and a keen appreciation of product quality are the basic ingredients of our knowledge and your success.

We thank you for your interest and your confidence placed in us.

Dr. Christian Simmet
CEO

We look forward to your orders and inquiries:
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www.minitube.com
Semen Collection

Electro ejaculator

Electro ejaculator set, consisting of heavy-duty carrying case, control unit, battery and transformer/charger:

- Digital display and adjustment of the actual value in 0.5 volt steps
- Fully portable with remote control
- Connecting cables for external battery (12 V)
- Power supply: 115 V/60 Hz or 230 V/50 Hz

**Electro ejaculator** – basic unit with case  
**Ref.**: 11900/0000

**Electro ejaculator probe**, 3/8", Ø 0.95 cm  
**Ref.**: 11900/0509

**Electro ejaculator probe**, 1/2", Ø 1.27 cm  
**Ref.**: 11900/0510

For veterinarian use only - Anesthesia needed!
**Semen Collection**

**Canine collection system**

**Your benefits**
- Color-coded funnels to divide the different ejaculate fractions: dividing the fractions is useful in preventing unwanted bacteria and contaminations by prostatic fluid
- Allows examination of stud dog penis while being collected
- Spill-proof funnel design prevents accidents during the collection process
- Non-spermicidal materials are easy to clean, sterilize and re-use
- Samples are immediately ready for analysis, centrifugation or further processing

**Components**
- 3 color-coded funnels (red, white and blue)
- 4 centrifugation tubes, 15 ml each, graduated, plastic, with lid (also separately available: Ref.: 17500/0201)

**Canine collection system**
1. For small breeds
   (height of funnel without spout: 5.5 cm)  
   Ref.: 17500/0203
2. For all breeds
   (height of funnel without spout: 7.5 cm)  
   Ref.: 17500/0200

**Alternative**
- Semen collection funnel, disposable, 100/box  
  Ref.: 11521/0000

**Accessories**
- Semen collection glove, extra sensitive, sperm safe, 100/box
  - Size M  
    Ref.: 11128/0055
  - Size L  
    Ref.: 11128/0060
  - Size XL  
    Ref.: 11128/0065
  - Size XXL  
    Ref.: 11128/0070

- ReproJelly, non-spermicidal lubricant, water soluble, tube with 100 ml, resealable  
  Ref.: 11907/0100
Semen Evaluation

Photometer SDM 1

The SDM 1 is a compact, highly accurate photometer developed for measuring sperm cell concentrations. It can be calibrated for canine, bovine, equine, porcine, ovine and caprine. Cleaning is simple, maintenance is minimal.

- Raw semen samples can be used without dilution
- LED light source provides stable output
- Cuvette is securely fixed in the correct measuring position
- Calibration is performed automatically with each sample measurement
- Semen concentration is displayed in million sperm cells/ml

Photometer SDM 1, calibrated for canine semen  REF. : 12300/0103

Accessories

Multispecies software
for re-programing to other species  REF. : 12300/0130

Microcuvette for SDM 1, 100/box  REF. : 12300/1111
AndroVision®

This highly precise automated system for computerized semen analysis stands out for the integration of the classic CASA analysis with more advanced assays for sperm functionality.

Concentration and motility, acrosome integrity, viability, mitochondrial activity and DNA integrity can be assessed fast and accurately with up to 1000 cells per field, making AndroVision® the perfect tool for the objective and complete semen evaluation.

Its features make AndroVision® the ideal choice for semen assessment in a research and production lab. AndroVision® is intuitive and easy to use: only 3 clicks from start to result.

AndroVision® software
with PC and accessories  REF. : 12500/0000
AndroVision® camera
high speed color camera  REF. : 12500/4400

AndroVision® software modules

Morphology and Morphometry
Interactive system for analysis of sperm morphology and morphometry. Identifies sperm in stained as well as unstained samples and measures length and width of the sperm head, head shape and midpiece asymmetry of each single sperm cell (acc. to Kruger). Results can be classified into a large range of morphologic abnormalities.

Module Morphology and Morphometry  REF. : 12500/1300

Viability
Automated count of the percentage of membrane intact sperm, based on a double stain fluorescence assay.

Module Viability*  REF. : 12500/1400

Acrosome Integrity
Automated count of percentage of sperm with damaged acrosome, based on a double stain fluorescence assay.

Module Acrosome Integrity*  REF. : 12500/1600

Mitochondrial Activity
Automated count of percentage of sperm with active mitochondria, based on a double stain fluorescence assay.

Module Mitochondrial Activity*  REF. : 12500/1700

DNA Integrity
Automated reporting of the percentage of sperm with defective DNA based on the halo-technique combined with fluorescent staining.

Module DNA Integrity*  REF. : 12500/1800

* requires fluorescence microscope
SpermVision® SAR

Highly efficient, flexible and sophisticated digital tool for evaluating sperm cells in small animal reproduction. Concentration, motility, morphology and viability can all be accurately assessed, making SpermVision® SAR an essential tool for everything from donor evaluation to semen processing.

The user interface is straightforward, easy to use and can be customized through the preference menu to suit individual needs. SpermVision® SAR ensures evaluation integrity of both new and archived records through a password protected multilevel operational system. These features and many more make SpermVision® SAR ideal for the small animal reproductive specialist.

System includes

- SpermVision® SAR software
- Rapid scan digital camera
- Zeiss AxioLab microscope 10x, 40x phase objective, Turret condenser, phototube C-mount, integrated heated stage
- LD A-Plan 20x PH1 negative phase objective
- PC w/integrated LCD monitor
- Temperature control unit for heated stage with warming plate

SpermVision® SAR  REF. : 12520/5000

Optional upgrades

Upgrade to Research Version of SpermVision®; includes: comparative analysis report module, tank management module, all sperm motion characteristics, user defined settings  REF. : 12520/5010

Comparative analysis report module for SAR, allows for quick comparison of data from multiple ejaculates or evaluations of the same ejaculate over time; includes: software, license and USB hardware lock  REF. : 12520/5020

Semen tank inventory management module for SAR allows semen inventory to be entered and tracked across multiple tanks; includes: software, license and USB hardware lock  REF. : 12520/5030

Viability and fluorescence microscope upgrade for SAR; includes: high resolution color camera, Zeiss c-mount adapter, Zeiss AxioLab A1 fluorescence LED light source, filter set and two port camera adapter (Research Version upgrade required)  REF. : 12520/6080
**Phase contrast microscope MBL**

Functional microscope for semen analysis with phase achromat objectives 10x, 40x, 100x, heating system with temperature control unit HT 50 with digital temperature display and freely selectable temperature adjustment.

- **Binocular**  
  Ref. : 12010/2000
- **Binocular, with ocular color camera and monitor**  
  Ref. : 12010/2100
- **Digital color camera for microscopes, with integrated image display software**  
  Ref. : 12110/1600
- **Monitor 10" with HDMI input, for direct mounting on digital color camera**  
  Ref. : 12110/1610

**Semen dyes**

- **Spermac**, for morphological evaluation, 4 x 50 ml  
  Ref. : 15405/0000
- **Farelly stain**, for morphological evaluation, 3 components, 250 ml each  
  Ref. : 15405/0026
- **Eosin G**, solution for supravital staining, 50 ml  
  Ref. : 15405/0025
- **Nigrosin**, solution for supravital staining, 50 ml  
  Ref. : 15405/0029

**Microscopy supplies**

- **Microscope slide, 76 x 26 mm, 50/box**  
  Ref. : 15400/2400
- **Cover glass, 18 x 18 mm, 100/box**  
  Ref. : 15401/0990
- **Immersion oil, 8 ml**  
  Ref. : 12000/0101

**Counting chambers (hemocytometers)**

- **Thoma new**  
  Ref. : 15150/4771
- **Neubauer improved**  
  Ref. : 15152/4421
- **Bürker**  
  Ref. : 15153/0000

**Pipettor**

- **Pipettor 10-100 µl**  
  Ref. : 12425/4810
- **Tips for pipettor**  
  Ref. : 12425/9409
Semen Dilution

**Water bath**

Electronic temperature control, stainless steel, with grid and lid.

**7 l**
inner dimensions: 240 x 210 x 140 mm (W x H x D)

230 V/50-60 Hz  
115 V/60 Hz

REF. : 14078/0001  
REF. : 14078/0002

**10 l**
inner dimensions: 350 x 210 x 140 mm (W x H x D)

230 V/50-60 Hz  
115 V/60 Hz

REF. : 14079/0001  
REF. : 14079/0002
SEMEN EXTENDERS

**CaniPlus Chill ST**
- Short-term culture medium for canine semen (≤ 5 days)
- Ideal for short term shipping
- Animal protein free

*CaniPlus Chill ST* 20 ml  
REF. : 13700/0040

**CaniPlus Chill LT**
- Long-term culture medium for canine semen (≤ 10 days)
- Ideal for international / domestic shipping
- Animal protein free

*CaniPlus Chill LT* 20 ml  
REF. : 13700/0045

**CaniPlus Chill 10**
- Long-term culture medium for canine semen (≤10 days)
- Ideal for international / domestic shipping
- Requires addition of fresh egg yolk

*CaniPlus Chill 10* 20 ml  
REF. : 13700/0025

**CaniPlus Freeze One-Step**
- One-step culture medium for freezing canine semen
- Requires addition of fresh egg yolk
- Contains glycerol

*CaniPlus Freeze One-Step* 20 ml  
REF. : 13700/0060

**CaniPlus Freeze Two-Step**
- Two-step culture medium for freezing canine semen
- Requires addition of fresh egg yolk
- Fraction B contains glycerol

*CaniPlus Freeze Two-Step* 20 ml  
REF. : 13700/0065

**CaniPlus AI**
- Culture medium for thawing canine semen and for artificial insemination (AI)
- Contains motility enhancing ingredients
- Ideal for all AI, especially when using poor quality or low volume semen
- Animal protein free

*CaniPlus AI* 20 ml  
REF. : 13700/0070
Semen Storage and Transport

Neopor transport box
Minitube transport box made of highly insulating Neopor, holds optimal temperature for approx. 45 hours.

Includes
- Neopor container
- Cardboard container cover
- Two ice packs (refreezable)
- Two tubes, 13 ml for either semen or extender
- One 50 ml vial
- 5 ml syringe
- 10 ml syringe
- Two protecting caps for Luer end of syringe

Neopor transport box  REF.: 17229/0005

Product available worldwide, not sold in the US and Canada
Canine semen transport box

The canine transport box is designed to maintain chilled canine semen at approx. 4°C (± approx. 3°C) inside the container for approx. 45 hours based on an ambient temperature of +22°C.

Includes

- Ultra-dense styrofoam container
- Cardboard container cover
- Two ice packs (refreezable)
- Two 13 ml buffer tubes for semen or extender
- Two 50 ml conical bottom tubes as protector for 13 ml tubes
- 5 ml syringe
- 10 ml syringe

Canine semen transport box  REF. : 17229/0010
Semen Freezing

MPP Uno

Automatic filling and sealing machine for 0.25 and 0.5 ml straws with ultrasonic sealer.

Your benefits

• Conversion between 0.25 ml straws and 0.5 ml straws in only a few minutes
• Very compact device which requires minor space
• Very fast and easy cleaning
• Best hygienic and safety conditions due to completely closed filling and sealing area

Product features

• Capacity: approx. 4000 straws/hour
• Hopper capacity: 2200 straws of 0.25 ml or 1300 straws of 0.5 ml
• Machine dimensions: 460 x 350 x 410 mm (W x H x D) plus ultrasound generator
• Power supply: 110 V/60 Hz or 230 V/50 Hz
• Sealing performed by ultrasound
• Vacuum pump and pressure controller integrated into the device

MPP Uno, complete  REF. : 13017/0000

Accessories

<table>
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<tr>
<th>Item</th>
<th>REF.</th>
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<tbody>
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<td>Straw hopper</td>
<td>13018/0006</td>
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<tr>
<td>Filling nozzle 0.25 ml</td>
<td>13017/0012</td>
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<tr>
<td>Suction nozzle 0.25 ml</td>
<td>13017/0022</td>
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<tr>
<td>Filling nozzle 0.5 ml</td>
<td>13017/0017</td>
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<tr>
<td>Suction nozzle 0.5 ml</td>
<td>13017/0027</td>
</tr>
<tr>
<td>Washer, 2000/bag</td>
<td>13021/3002</td>
</tr>
<tr>
<td>Filling tubing, 100/bag</td>
<td>13021/3800</td>
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</tbody>
</table>
FREEZING OF CANINE SEMEN

EasyCoder

Clean and odorless working without ink and solvents.

- Thermo transfer printer for straws with automatic straw feeder
- Suitable for 0.25 ml and 0.5 ml straws
- Unmatched clean and clear, non-abrasive print
- Prints up to 3 lines per straw, including barcodes, logos and specific characters
- Very simple handling and little maintenance required
- Control via PC by a clear and user-friendly Minitube software

EasyCoder

REF. : 13038/0000

Color ribbon, black, roll with 200 m

REF. : 13038/0010

MultiCoder

Professionalize your lab process with quick and easy machine readable labeling of samples.

Your benefits

- Very versatile: print system can label most kinds of materials such as plastics, glass or aluminum
- Manually moveable slide and a unique, easy-to-use carrier system allow for a speedy work process
- Easily writeable information on the smallest amount of space, including text, barcode, QR-Code and logo

Product features

- High resolution inkjet printing
- Print head protection system (avoids drying-out of ink)
- Sensor based technique for print activation allows perfect manual workflow
- LED signalling of printer status
- No tools needed for change of product carriers
- Pre-designed print layouts
- Upload of MS Excel based data formats possible
- Automatic creation of content for ready-to-print designs via database

MultiCoder Printer

REF. : 13145/0000

UNIQUE, FLEXIBLE & VERSATILE

Quick and easy print on a whole range of items: semen straws, goblets, cassettes, culture dishes, macrotubes, syringes, cryovials and many more

www.minitube.com
FREEZING OF CANINE SEMEN

CryoSealer

Manual sealer using ultrasound technology.
Can be used for 0.25, 0.5 ml straws and 0.3 ml CBS™ cryobiostraws. Ultrasound welding facilitates a perfect and uniform seal of each straw. Power supply: 100 V-240 V/60 Hz

CryoSealer

Micropipettors

Micropipettor for filling of straws with semen. Easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml.

Type A
Type B

Manual ball sealer

Manual ball sealer for 0.5 ml straws

Sealing balls

Glass balls available in multiple colors.

glass, for 0.25 ml
metal, for 0.25 ml
glass, for 0.5 ml
metal, for 0.5 ml

Manual sealer for straws

Securely seals all kinds of straws by applying heat at the end of the straws. Also seals in liquid nitrogen vapour. Consists of a plier welding head adapted for straws and a control unit for varying heat level.

Manual sealer for straws

Labelling of straws

Pen for marking, very fine, alcohol permanent, black
FREEZING OF CANINE SEMEN

IceCube

Computer controlled freezer with convenient data input and automatic recording of the freezing curve.

Product features

- Temperature range: +40 to -180°C
- Freezing rates: 0.01 to +50°C/min
- Heating rates: 0.01 to +15°C/min
- Display accuracy: 0.01°C
- Temperature measurement via 2 Pt-100 resistance thermometers
- Capacity: approx. 900 straws per freezing cycle
- Dimensions: 540 x 420 x 520 mm (l x w x h), weight: 29 kg

Software for freeze program and control, unlimited storage of programs and processed files, color graphic display of all temperature curves, wide possibility of parameter settings.

IceCube 14S, with connector kit for LN2 pressure container,

(1) with 10" tablet  
ref.: 16821/3000
(2) Rack for IceCube 14S, holds 36 straws  
ref.: 16821/5036
(3) Handling rack for IceCube 14S  
ref.: 16821/5030
(4) Spacer for IceCube  
ref.: 16821/5037
(5) Loading device for straw rack  
ref.: 16821/5037
(6) Liquid Nitrogen pressure container, 60 l  
ref.: 16820/1900
(7) Roller base for LN container  
ref.: 16501/0204

Semen straws 0.25/0.5 ml

Semen straw, 0.25 ml, clear, 2000/bag  
ref.: 13407/0010
Semen straw, 0.5 ml, clear, 2500/bag  
ref.: 13408/0010

Semen straws made by Minitube are available in many different colors, and preprinted upon request.
Freezing units

Product features
- Simple but effective and robust standardization of vapour freezing
- Fits 0.5 ml and 0.25 ml straws
- High quality styrofoam chest and stainless steel inner box with working tray
- The distance between straws and liquid nitrogen level can be adjusted with the included floating rack
- Low nitrogen consumption
- Easy transport

(1) Freezing unit for 20 straws
   REF.: 15043/0636

(2) Freezing unit for 90 straws
   REF.: 15043/0736

Accessories

Loading block for 90 straw rack
   REF.: 15043/0738

Additional rack
- (3) for freezing unit for 20 straws
  REF.: 5015043/0600
- (4) for freezing unit for 90 straws
  REF.: 5015043/0900
Storage systems for straws

Cassettes

**Short and long triangular cassettes**
for 10/20 straws 0.5 ml or 28/56 straws 0.25 ml  
REF. : 16981/xxxx

**Short and long flat cassettes**
for 3/6 straws 0.5 ml or 6/12 straws 0.25 ml  
REF. : 16980/xxxx

Available in multiple colors.

Goblets

**Diameter 65 mm**, white 25/bag,  
capacity: approx. 800 x 0.25 ml straws  
REF. : 16965/0133

**Diameter 35 mm**, white, 25/bag,  
capacity: approx. 200 x 0.25 ml straws  
REF. : 16935/0135

**Diameter 13 mm**, white, 300/bag  
capacity: approx. 27 x 0.25 ml straws  
REF. : 16913/0133

Cryogenic containers for storage

**MVE storage container ET 20**
- 6 canisters, 279 x 41 mm  
- Capacity: 20.7 l liquid nitrogen  
- For 1758 semen straws 0.5 ml  
- Normal working duration: 113 days  
- Dimensions: neck opening: 55 mm, total height: 627 mm  
- Weight (full): 26 kg  
REF. : 16503/2056

**MVE storage container ET 35**
- 6 canisters, 279 x 41 mm  
- Capacity: 36 l liquid nitrogen  
- For 1758 semen straws 0.5 ml  
- Normal working duration: 182 days  
- Dimensions: neck opening: 55 mm, total height: 690 mm  
- Weight (full): 42 kg  
REF. : 16503/3606
Insemination and Diagnostics

Rigid AI pipettes for dogs

Rigid plastic pipettes with piece of tubing and Luer adapter

Length: 22 cm, 10/Package  REF. : 17500/0010
Length: 22 cm, 1/Package  REF. : 17500/0020
Length: 44 cm, 10/Package  REF. : 17500/0045
Length: 44 cm, 1/Package  REF. : 17500/0040
**MAVIC catheters for canine vaginal insemination**

- Designed to mimic the natural breeding process
- Available in three sizes to accommodate a variety of breeds
- Stainless steel spine with protective sheath to enhance rigidity
- Luer lock injection port with reflux check valve
- Inflatable balloon prevents unwanted back flow of semen
- Balloon equipped with monitoring pilot balloon and Luer lock check valve

1. **MAVIC AI Large, CH 36**
   - for large to giant sized dogs, length: 400 mm
   - sterilized, single use, with 10 ml syringe, 1/package
   - **REF. : 17500/0055**

2. **MAVIC AI Medium, CH 18**
   - for small to medium sized dogs, length: 250 mm
   - sterilized, single use, with 5 ml syringe, 1/package
   - **REF. : 17500/0050**

3. **MAVIC AI Small, CH 18**
   - for toy and small sized dogs, length: 120 mm
   - sterilized, single use, with 5 ml syringe, 1/package
   - **REF. : 17500/0052**

**Lubricant ReproJelly**

*Non-spermicidal lubricant, water soluble*

- Iso-osmotic and sperm friendly, supports the sperm cell viability
- Batches are tested for sperm compatibility
- Ideal viscosity to better coat gloves, AI equipment and instruments

- **Tube, 100 ml, resealable**
  - **REF. : 11907/0100**

- **Canister, 3 l, without dispenser**
  - **REF. : 11907/3000**

- **Dispenser for canister**
  - **REF. : 11907/3100**
INSEMINATION

Vaginal speculum

- Halogen light for consistent long lasting illumination
- Fiber optics provide cool distal ring of light – no reflections, no obstructions
- Autoclavable stainless steel for convenience and durability
- Hinged window with neoprene seal to avoid fogging during insufflation
- Graduated tube with removable tip
- Available in 4 lengths to accommodate all canine breeds

Vaginal speculum

11 x 100 mm  REF. : 17506/0110
11 x 250 mm  REF. : 17506/0111
15 x 250 mm  REF. : 17506/0112
19 x 350 mm  REF. : 17506/0113

To be used with

Manual insufflation pump  REF. : 17505/0010

Lithium ion rechargeable power handle

- 110 min on-time between charging
- With low battery indicator light
- No need to discharge between charging cycles
- Lightweight, durable and ergonomically designed  REF. : 17506/0100

Canine culture swab

Canine culture swab with introduction pipette (10/bag), length: approx. 320 mm, disposable, individually packaged, sterilized

Canine culture swab  REF. : 17500/0350

Syringes

Disposable syringe. Luer mount, sterilized, all plastic, non-spermicidal, 100/package

2 ml  REF. : 19801/0002
5 ml  REF. : 19801/0005
10 ml  REF. : 19801/0010
20 ml  REF. : 19801/0020

Shorr staining solution

Shorr staining solution for examining presence of cornification in epithelial cells of the female dog

500 ml  REF. : 15405/0080
TIMING OF INSEMINATION - ELISA PROGESTERONE TEST

MiniReader

Determining the optimal time for insemination is one of the most critical steps for successful breeding.

The MiniReader is an affordable, accurate and reliable device to read and provide the results of Minitube’s ELISA (enzyme-linked immunosorbent assay) test within 35 minutes. It is used with the ELISA test kit.

Application

- Detection of ovulation
- Determination of the ideal time for artificial insemination or natural breeding

Your benefits

- Small sample is needed (0.02 ml of blood serum)
- Fast and accurate results in just over half an hour for immediate assessment – any day of the week
- Accurate and consistent readings as absolute progesterone concentration is shown in ng/ml (not only relative readings of ‘high’ or ‘low’)
- Small device fits anywhere
- Size of test kit adapted to the needs of veterinarians
- Easy handling and maintenance

MiniReader  REF. : 21900/0000

Accessories

Test kit for measuring Progesterone in canine serum
- Standard 1, 2, 3
- Reagents
- Washing solution
- Coated wells
for 10 to 25 samples  REF. : 21900/1110

Warming unit for sample incubation during the ELISA reaction
Optimal conditions for ELISA reaction occur at 37°C and protected from light. The well holder is transferred directly to the MiniReader after the ELISA reaction is finished.

Warming unit  REF. : 21900/0100

Digital pipette, 20 - 200 µl  REF. : 12427/3120

Pipette tips, 0.5 - 250 µl, 1000/bag  REF. : 12427/0255
TRANSCERVICAL INSEMINATION

Minitube TCI FlexiLock Endoscopes

Product features
- Unique FlexiLock coupling system combines HD camera and LED light into one streamlined hand piece, providing ergonomic and lightweight operation
- Clearer image, due to significantly more optical fibers than most fiber-optic endoscopes
- Rigid design available with dual angled side ports
- Available in three different sizes to easily catheterize small to large canine breeds

Minitube TCI FlexiLock Endoscope
(1) length 15 cm, working channel CH5
REF. : 17505/0201
(2) length 35 cm, working channel CH8
REF. : 17505/0203
(3) length 50 cm, working channel CH8
REF. : 17505/0205
(4) FlexiLock hand piece, full HD camera and integrated LED illumination, for Minitube TCI FlexiLock Endoscopes, requires FlexiVision® HD Camera Control Unit
REF. : 17505/0215

Traditional TCI Endoscopes

Product features
- Angular optical eye-piece, autoclavable
- Dual right-angled side ports
- Easy access to the cervix and uterus in dogs of all sizes, also toy breeds
- Working channel (CH 5) enables insertion of instruments under direct visualization for insemination, biopsy and flushing

(5) TCI Endoscope Minitube, length 42.5 cm, removable instrument bridge
REF. : 17505/0101
(6) TCI Endoscope Storz, length 43 cm, integrated bilateral fibre glass cord
REF. : 23700/1510
(7) Camera head full HD Zoom, focal length 14.25-28 mm, for traditional TCI Endoscopes, requires FlexiVision® HD Camera Control Unit
REF. : 17505/0210
(8) FlexiLux LED light source, used with FlexiVision® HD Camera Control Unit and camera head, for traditional TCI Endoscopes
REF. : 17505/0225

Accessories for all endoscopes
(9) FlexiVision® HD Camera Control Unit (CCU), required for FlexiLock hand piece and FlexiVision® Full HD camera, with digital zoom, USB for full HD photo capturing, to be connected to a monitor
REF. : 17505/0220
(10) High-resolution color monitor
REF. : 18000/0191

www.minitube.com
**Transcervical catheters**

- Clear markings every centimetre with additional indicators every 5 cm
- Supple material reinforced by a removable stylet for easy insertion
- Adapter for syringe included
- Single packed

<table>
<thead>
<tr>
<th>TC cannulas with single port (70 cm)</th>
<th>TC cannulas with dual port (70 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye is 0.5 cm from tip to prevent blockage</td>
<td>Additional eye (approx. 2 cm from tip and rotated 60°)</td>
</tr>
<tr>
<td>CH4 [REF.: 17500/0004]</td>
<td>CH4 [REF.: 17500/0024]</td>
</tr>
<tr>
<td>CH5 [REF.: 17500/0005]</td>
<td>CH5 [REF.: 17500/0025]</td>
</tr>
<tr>
<td>CH6 [REF.: 17500/0006]</td>
<td>CH6 [REF.: 17500/0026]</td>
</tr>
<tr>
<td>CH8 [REF.: 17500/0008]</td>
<td>CH8 [REF.: 17500/0028]</td>
</tr>
</tbody>
</table>

**TCI shunt system**

The Minitube shunt system for transcervical insemination is a dual purpose endoscopic tool. It eliminates vaginal air loss around the endoscope during insufflation by creating an air tight seal. The shunt system also acts as a stabilizing platform for the endoscope during the procedure.

**TCI shunt system**

- for TCI FlexiLock Endoscopes [REF.: 17500/0060]
- for traditional TCI Endoscopes [REF.: 17500/0065]

| Shunt catheter, 55 mm [REF.: 17500/0062] |
| Shunt catheter, 105 mm [REF.: 17500/0064] |
| Shunt catheter, 150 mm (for scopes >35 cm) [REF.: 17500/0067] |
| Shunt catheter, 250 mm (for scopes >40 cm) [REF.: 17500/0068] |

Transcervical insemination is painless, non-invasive and typically performed without sedation.
Training and Education

All Minitube seminars blend theoretical knowledge and practical experience and are instructed by well-respected experts in the area of assisted animal reproduction. Seminar participants receive a participant certificate upon completion of the course. Minitube is committed to accommodating the needs of our customers and can provide education and training at our own facilities, partner facilities or at the customer site. Upon request, Minitube also offers individual seminars.

**Canine Artificial Insemination**

Theoretical and practical topics allow the participants to become familiar with the basic features of canine artificial insemination.

- Basic canine andrology
- Semen collection and evaluation
- Semen chilling and freezing
- Breeding management
- Technique for canine vaginal artificial insemination

**Canine Transcervical Insemination**

The seminar also consists of a theoretical and practical part and is designed especially for veterinarians who want to learn or deepen their knowledge of the technique of Transcervical Insemination. In a personal teaching environment (limited number of participants) the participants work with the latest endoscopic equipment. The lab practical in this course provides the veterinarian with all the necessary experience to perform TCI in practice.

**Theory:**
- Advantages/disadvantages of TCI versus surgical insemination
- Presentation of the required equipment
- Video demonstration of TCI technique
- Overview about breeding management
- The right AI timing with frozen or deficient semen

**Practical:**
- Small group participation
- Assembly and analysis of equipment
- Performing Transcervical Insemination
Online seminar

For those of our global customers of whom attending the offered Minitube seminars is not easy to manage logistically, Minitube and TherioConsult can now provide you with a time-saving and effective alternative: An online seminar on “Male Canine Reproductive Physiology and Semen Handling” is now offered with an easy and affordable expert interactive course available for PCs or smartphones.

Minitube’s educational course is designed for breeders and veterinarians to provide updated methods and eye-opening insights with an interactive platform that is easy to use and affordable. The course provides the tools and know-how to improve the management and effectiveness of dog reproduction enterprises including optimized consultation of clients.

Three main chapters are emphasized in the course:

- Male dog physiology and semen collection
- Canine semen evaluation (motility, morphology and special evaluations)
- Canine semen preservation (fresh, chilled and frozen semen)

More information and registration: courses.minitube.com

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>TYPE</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 3 - Semen Preservation</td>
<td>online</td>
<td>learning</td>
</tr>
<tr>
<td>Chapter 2 - Semen Evaluation</td>
<td>online</td>
<td>learning</td>
</tr>
<tr>
<td>Chapter 1 - Semen Collection</td>
<td>online</td>
<td>learning</td>
</tr>
<tr>
<td>2. General Introduction to the Canine Reproduction</td>
<td>online</td>
<td>learning</td>
</tr>
</tbody>
</table>

This triple plan gives you access at a highly discounted price on all 3 chapters of the male canine reproduction module. You will have access to all information concerning reproductive physiology of the male dog, semen collection, evaluation and processing for preservation. The information concerning the development of a semen bank are also available. This is the perfect plan for all wanted to special in male dog reproductive physiology and semen.
Minitube is an ISO 9001:2015 certified company.