Animal Reproduction Technology
Small Ruminants and Camelids
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, sensorics, 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
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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
- Manual adjustable pulse/pause ratio
- Power output with 4 different types of curves enabling balanced setting according to the animal’s size and sensitivity
- Power supply: 115 V/60 Hz or 230 V/50 Hz

**Electro ejaculator**  
REF.: 11900/0000

Probes in different sizes available, e.g.

**Electro ejaculator probe 1”**  
REF.: 11900/0021

**Electro ejaculator probe 2”**  
REF.: 11900/0022

**Semen collection set for electro ejaculator**  
REF.: 11900/0250
Artificial vagina

For small ruminants
(1) Artificial vagina, 11 cm
- Rigid rubber casing with valve
- Latex inner liner with roll-up ends
- Rubber bands
- Graduated collection vial in tulip shape, 4 ml
- Warming bag

(2) Latex inner liner, smooth, for 11320/0000

For camelids
(3) Artificial vagina casing with valve, 30 cm
(4) Latex inner liner, smooth, for 11021/0033
(5) Latex inner liner, rough, for 11021/0033
(6) Semen collection vial for camelids, 8 ml, double walled, for 11021/0033
Silicone plug for the top of vial 11023/0017
Silicone plug for the bottom of vial 11023/0017

Accessories for all species
(6) Semen collection vial, tulip shape, graduated
- 2 ml
- 4 ml
- 8 ml
- 10 ml
Silicone plug for vial 11323/0004

(7) Warming bag

(8) Semen collection glove, sperm safe
(available in various sizes)

Thermometer, up to +100°C, red filling
Semen Evaluation

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
Phase contrast microscope MBL

Functional microscope for semen analysis with objectives 10x, 40x, 100x, heating system with temperature control unit HT 50 with digital temperature display for individual temperature adjustment

Binocular
Ref.: 12010/2000
Binocular, with ocular, color camera and monitor
Ref.: 12010/2100

Semen dyes

Spermac* semen dye for morphological evaluation, 4 x 50 ml
Ref.: 15405/0000
Farely stain for morphological evaluation, 3 x 250 ml
Ref.: 15405/0026
Eosin G, 2% solution for supravital staining, 50 ml
Ref.: 15405/0025
Nigrosin, 4% solution for supravital staining, 50 ml
Ref.: 15405/0029

*Not recommended for camelid semen

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, 1000/bag
Ref.: 12425/9409
SEMEN EVALUATION

Photometer SDM 6

Your benefits

• With programs for the determination of sperm concentration of ram, buck, bull, boar and stallion semen
• Automatic calculation of extender volume and number of doses
• Display of semen concentration in 10^9 sperm cells/ml
• Serial and parallel interfaces for data transfer
• Large touch screen, easy to use
• Optional: integrated printer for printout of ejaculate production data

Photometer SDM 6, with integrated printer  REF.: 12300/0006
Photometer SDM 6, without printer  REF.: 12300/0008

Accessories

Automatic diluter-dispenser  REF.: 12421/0504
Control cuvette set, 4 pieces  REF.: 12300/0010
Paper for printer  REF.: 12300/0311
Macro cuvette, 4 ml, 100/package  REF.: 12301/0003
NaCl solution, 0.9%, 1 l  REF.: 12301/4667
Dispenser 0.5-5 ml for NaCl solution  REF.: 12428/1815
Bottle for dispenser, 500 ml  REF.: 12428/1905
Varipette 10-100 μl, with digital display  REF.: 12425/4810
Pipette tip yellow, 1000/package  REF.: 12425/9409

Photometer SDM 1

The SDM 1 is a compact, highly accurate photometer developed for measuring sperm cell concentrations. It can be calibrated for small ruminant species, bovine, canine, equine, and porcine. Cleaning is simple, maintenance is minimal. The semen concentration is displayed in million sperm cells/ml.

• Calibration for ram or buck semen
• 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

Photometer SDM 1 for buck semen  REF.: 12300/0104
Photometer SDM 1 for ram semen  REF.: 12300/0106

Accessories

Microcuvette for SDM 1, 100/box  REF.: 12300/1111
Multispecies software for reprogramming to other species  REF.: 12300/0130
**Semen extenders**

**AndroMed®**
- Egg yolk free high performance medium for frozen and liquid semen
- Perfect biosecurity: no ingredients of animal origin
- No risk of microbiological contamination
- Reduced labour effort due to simple and fast preparation
- Constant, optimal freezing results and high fertility rates with every dilution ratio
- Increased efficiency of microscopic analysis: extremely clear cell images

AndroMed®, 200 ml, for a total of 1000 ml of extender, with antibiotic formula according to EC requirements  REF. : 13503/0200

AndroMed® CSS, One-step
200 ml, for a total of 1000 ml of extender  REF. : 13503/1200

**Steridyl®**
- TRIS based semen freezing extender with sterile egg yolk included
- Easy to prepare, time saving

Steridyl® 500 ml concentrate, for a total of 1250 ml of extender, sterilized, with antibiotic formula according to EC requirements  REF. : 13500/0260

Steridyl® CSS, One-step
500 ml, for a total of 1000 ml of extender  REF. : 13500/0280

Steridyl® CSS, Two-step, fraction 1
500 ml, for a total of 1000 ml of extender  REF. : 13500/0290

Steridyl® CSS, Two-step, fraction 2
500 ml, for a total of 1000 ml of extender  REF. : 13500/0295
SEMEN EXTENDERS

**Triladyl®**

Since decades, one of the most successful extenders for semen freezing in the world. Used for one-step semen processing at room temperature, it stands for constantly optimal results, even when using highly diluted ejaculates.

- Triladyl® 250 g, for a total of 1250 g of extender, with antibiotic formula according to EC requirements  
  **REF. : 13500/0250**
- Triladyl® CSS, 200 g, for a total of 1000 g of extender, without antibiotics  
  **REF. : 13500/1200**

**Biladyl®**

Two-step extender based on the proven Triladyl® formula, according to the CSS-requirements (Certified Semen Services). Consisting of fractions A, B and antibiotic supplement.

- Biladyl®, fraction A, 49 g, for a total of 500 g extender  
  **REF. : 13500/0004**
- Biladyl®, fraction B, 250 g, for a total of 750 g extender  
  **REF. : 13500/0006**

**Bovidyl®**

Medium for preservation of liquid semen, 270 ml. Needs addition of 30 ml egg yolk. With antibiotic formula according to EC requirements. For a total of 300 ml of extender.

**OviPlus**

Fresh semen extender concentrate, 24 ml, suitable for small ruminant semen. Requires addition of fresh egg yolk. For a total of 200 ml of extender.

**Antibiotic supplement**

Antibiotic formula in powder according to CSS protocol

- For One-step extender: 550 mg Gentamicin, 110 mg Tylosin, 330 mg Lincomycin, 660 mg Spectinomycin  
  **REF. : 13504/9000**
- For Two-step extender: 300 mg Gentamicin, 60 mg Tylosin, 180 mg Lincomycin, 360 mg Spectinomycin  
  **REF. : 13500/0005**

**HIGHEST PRODUCT SECURITY**

- GMP-certified quality control standards at each production stage
- guaranteed use of semen friendly components and materials
Straw Processing and Freezing

Semen straws 0.25/0.5ml

**MiniStraw.** 0.25 ml, clear, 2000/bag  
**REF.** : 13407/0010

**MediumStraw.** 0.5 ml, clear, 2500/bag  
**REF.** : 13408/0010

**EcoStraw.** 0.25 ml, clear, 2000/bag  
**REF.** : 13407/3010

**EcoStraw.** 0.5 ml, clear, 2500/bag  
**REF.** : 13408/3010

**EcoStraws** feature a plug with a shorter inner wick section that absorbs 3-4% fewer sperm cells than the corresponding symmetrical plugs of standard semen straws. They are ideal for overnight equilibration of semen at refrigerated temperatures. EcoStraws are used in exactly the same way as standard semen straws.

Semen straws made by Minitube are available in many different colors, and pre-printed upon request.
PRINTERS FOR SEMEN STRAWS

EasyCoder

Thermo transfer printer for straws with automatic straw feeder

- Unmatched neat and clear printing on 0.5 and 0.25 ml straws
- Immediately non-abrasive print
- Prints up to 3 lines per straw, even with barcodes, logos and specific characters
- Control via PC by a clear and user-friendly Minitube software
- Clean and odourless working without ink and solvents
- Very simple handling, only little maintenance required

EasyCoder  REF. : 13038/0000

Color band, black, roll with 200 m  REF. : 13038/0010

MultiCoder

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 writable 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  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
SFS 133

Semiautomatic filling and sealing machine
for 0.25 ml straws  REF. : 13133/0135
for 0.5 ml straws  REF. : 13133/0133

Low density vacuum pump, 30–60 Hg,
with manometer and adjustable valve, 230 V/50 Hz  REF. : 13133/0267

Loading device, for SFS 133 racks
0.25 ml  REF. : 13133/0025
0.5 ml  REF. : 13133/0005

Filling head with 6 nozzles  REF. : 13133/1000
Suction head with 6 nozzles  REF. : 13133/2000

Silicone tubing for SFS transparent, 3 x 1 mm  REF. : 13133/3550

Washer for all filling and suction nozzles, 2000/bag  REF. : 13021/3002

Metal sealing ball for 0.5 ml straw  REF. : 13400/9900
Metal sealing ball for 0.25 ml straw  REF. : 13400/9970

Colored glass sealing balls available

MPP Uno

Automatic filling and sealing machine for 0.25 and 0.5 ml straws
with ultrasound sealer
Capacity: approx. 4000 straws/hour
Power supply: 110 V/60 Hz or 230 V/50 Hz

MPP Uno  REF. : 13017/0000

Product features

• Seals and fills 1 straw per cycle (ideal for handling small volumes)
• Sealing performed by ultrasound
• Conversion between 0.25 ml straws and 0.5 ml straws without
  exchanging any parts and within only a few minutes
• Very compact device which takes up little space
• Vacuum pump and pressure controller integrated into the device
• Ultrasonic generator in an external casing that can be installed at a
  distance of up to 2.5 m (ON/OFF switch directly on the machine)
• Completely closed filling and sealing area: best hygienic and safety
  conditions fully guaranteed
• Optimal control: filling process is performed right in front of the user

Accessories

<table>
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<th>Item</th>
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<tbody>
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<td>Straw hopper</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>
</tr>
<tr>
<td>Filling nozzle 0.5 ml</td>
<td>13017/0017</td>
</tr>
<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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</table>
**SEMEN FREEZING**

**Automatic freezer IceCube 14S**

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

**Product features**

- Temperature range: +40 to -180°C
- Freezing rates: 0.01 to +60°C/min
- Heating rates: 0.01 to +15°C/min
- 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

- with 10" tablet [REF. 16821/3000](#)
- with 12" touch screen monitor to be connected to PC or laptop [REF. 16821/2000](#)
- without monitor to be connected to PC or laptop [REF. 16821/1000](#)

**Freezing units**

**Product features**

- The distance between straws and liquid nitrogen level can be adjusted with the floating rack (included)
- Fits 0.5 ml and 0.25 ml straws
- With high quality styrofoam chest and stainless steel inner box with working tray

(1) For 20 straws [REF. 15043/0636](#)
(2) For 90 straws [REF. 15043/0736](#)

**Accessories**

- Loading block for 90 straws rack [REF. 15043/0738](#)
- Additional racks:
  - (3) For freezing unit for 20 straws [REF. 5015043/0600](#)
  - (4) For freezing unit for 90 straws [REF. 5015043/0900](#)

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**IceCube 14S with tablet**

www.minitube.com
Insemination kit for small ruminants

Rugged plastic case contains:

- 1 electronic thawing unit MT 30/54 (see page 19)
- 50 Universal sheaths for all types of straws, short length for small ruminants
- 1 QuickLock insemination gun, short length for small ruminants
- 1 ReproJelly semen friendly lubricant, 100 ml
- 1 vaginal speculum for small ruminants, with 50 exchangeable transparent plastic tubes
- 1 MiniCutter
- 1 thermometer
- 1 pair of tweezers
- 1 canister clamp

Insemination kit for small ruminants  REF. : 17350/0100

Components also available individually!
Insemination pipettes for camelids

Long pipette with very flexible tube for deep intrauterine insemination. Smooth round tip for gentle introduction. Flexible shaft facilitates handling. 1/package, sterilized

<table>
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<tbody>
<tr>
<td>65 cm</td>
<td>17209/1265</td>
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<tr>
<td>75 cm</td>
<td>17209/1275</td>
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Flexible stylet used with insemination pipette and 0.5 ml straws
for 65 cm pipettes

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for 75 cm pipettes

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Insemination pipette for small ruminants

Insemination pipette with excenctrical tip, can be used with 0.25 ml and 0.5 ml straws, Minitubes and syringe with adapter, for intracervical AI under visual control (speculum), 50/bag

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Inseminator for small ruminants, for 0.25/0.5 ml straws and Minitubes, to be used with pipettes with excenctrical tip

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Disposable syringe. 5 ml, Luer mount, sterilized, all plastic, non spermicidal, 100/package

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Adapter for liquid semen pipette, with tubing

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QuickLock and sheaths

QuickLock insemination gun for small ruminants, to be used with Universal sheaths. Suitable for all kinds of straws (0.25 ml, 0.5 ml and Minitubes). For intravaginal AI without speculum. Very handy lock system for sheaths. Secure emptying of straws without backflow.

REF. : 17350/0000

Universal AI sheath for QuickLock gun for sheep and goat. Round smooth tip, very easy to use. 50/package.

REF. : 17350/0010

Vaginal specula

For small ruminants

(1) Vaginal speculum, with battery handle with incorporated lamp, total length 240 x 17.3 mm diameter

REF. : 17373/0000

(2) Exchangeable transparent plastic tube for speculum 17373/0000, smooth front edge, disposable, length 19 cm, diameter 17.3 mm, 50/package

REF. : 17373/0001

(3) Vaginal speculum, duckbill type, total length 200 mm, stainless steel

REF. : 17370/3772

For camelids

(4) Disposable speculum, made of cardboard, inside with reflecting aluminium coating, smooth front edge for gentle introduction, inner diameter: 3 cm, length: approx. 43 cm

REF. : 17210/0000

(5) LED-light, battery operated (up to 250 h), with clip for fixing, length: 96 mm

REF. : 17210/0010

(for use with 17370/3772 or 17210/0000)

Cytology brush for camelids

Disposable set for collecting endometrial cells for cytology.

Cytology brush for camelids, single packed and single use, sterilized, delivered with hygienic cover

REF. : 17075/0010
INSEMINATION

Cradle for laparoscopic Al in sheep

Facilitates secure fixation of the sheep during the whole procedure and allows tipping over in oblique position right before Al. Foldability and light weight allow easy transport and storage.

Dimensions (W x H x D): 1345 x 680 x 560 mm (folded: 550 x 310 x 270 mm)

Cradle for laparoscopic Al

Ref. : 23700/3000

Laparoscopic Al equipment for small ruminants

(1) HOPKINS® optic/laparoscope, autoclavable, with built-in fiberglass light path

Straight forward Optic 0°, Ø 5 mm, length 29 cm Ref. : 23700/1405
Straight forward Optic 0°, Ø 6.5mm, length 35 cm Ref. : 23700/1406
Forward oblique optic 30°, Ø 5 mm, length 29 cm Ref. : 23700/1401
Forward oblique optic 30°, Ø 6.5 mm, length 35 cm Ref. : 23700/1400

Trocars, consisting of spike and sheath, with multifunction valve

11 mm, green, conical tip, sheath length: 10.5 cm Ref. : 23700/1160
11 mm, green, conical tip, sheath length: 20 cm Ref. : 23700/1161
6 mm, black, conical tip, sheath length: 20 cm Ref. : 23700/1162
6 mm, black, pyramidal tip, sheath length: 10.5 cm Ref. : 23700/1163
11 mm, green-white, pyramidal tip, sheath length: 8.5 cm Ref. : 23700/1185

(2) Fibre optic light cable, Ø 3.5 mm, length 300 cm Ref. : 23700/1514

(3) CO2 insufflator with CO2-container and high pressure tubing Ref. : 23700/1450

Illumination

(4) Cold-light fountain with anti-fog pump Ref. : 23700/1512
(5) Light source for endoscopes, portable, incl. charger and spare battery Ref. : 23700/1517
INSEMINATION

Laparoscopic Al equipment

Robertson pipette, non sterile, 10/package  REF. : 23700/2200
For standard laparoscopic insemination, to be used with Lap Al gun or syringe
For donor ewes, longer needle for stimulated donors with thicker uterine wall  REF. : 23700/2201

(1) Lap Al Gun, for Robertson Pipettes 0.25 ml straws  REF. : 23700/2205
(2) Stylet for removal of emptied 0.25 ml straw out of Robertson Pipette  REF. : 23700/2206
(3) Inner catheter for Lap Al Gun for the insemination of bulk semen  REF. : 23700/2207

PBS Blue

For laparoscopic insemination in sheep: thaw medium for pellets, marker solution for straws, 20 ml flask  REF. : 21500/0001
INSEMINATION

Thawing Unit MT 30/54

- Electronic temperature control
- Accuracy: ± 0.2°C
- Power supply: 12 V DC (car battery)

35°C  REF. : 17044/0035
37°C  REF. : 17044/0037
38°C  REF. : 17044/0038
50°C  REF. : 17044/0050

Converter for thawing device 12V/220V  REF. : 17165/1395
Thermometer for thawing device  REF. : 17049/0000

MiniCutter for straws

- Precise cut of 0.25 and 0.5 ml straws
- Facilitates straight cut at exactly the right length, which helps to avoid semen loss
- Ergonomic shape
- Easy to keep clean

MiniCutter for straws  REF. : 17062/0010

Insemination gloves

(1) Sensitive, green, 5 finger, shoulder length, 100/box  REF. : 17080/0015
(2) Super-sensitive, transparent, 100/box  REF. : 17080/0050
Single packed, sterilized, 50/package  REF. : 17080/0250

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 with 100 ml, resealable  REF. : 11907/0100
3 l canister, without dispenser  REF. : 11907/3000
Dispenser for canister  REF. : 11907/3100
PREGNANCY DETECTION

Ultrasound device
Portable scanner, very robust, battery operated, easy to clean. Comes with rechargeable battery, power supply carry strap, ReproJelly and heavy duty case.

(1) Ultrasound device (7" TFT-LCD Monitor)  REF. : 23500/1005

Transabdominal pregnancy detection in small ruminants  
(2) Convex probe 3.5 MHz  REF. : 23500/1105

Transrectal pregnancy detection in camelids  
(3) Linear rectal probe 6.5 MHz  REF. : 23500/1106

Alternative for small ruminants  
Ultrasound device with probe included
Comes with 3.5 MHz convex probe (70° forward), stable carrying case, carrying strap, two rechargeable batteries, battery charger and USB cable to transmit pictures.

(4) Ultrasound device (5" TFT-Monitor)  REF. : 23500/1000

Pregnancy tester
• Instrument for diagnosis of pregnancy in small ruminants after 65 days by means of ultrasonic waves
• Operated with rechargeable or normal battery
• Very handy, robust and easy to operate
• Good freedom of movement due to a probe connected with a spiral cable
• Complete with carry case, test body, wrist band, contact gel bottle and standard battery

Pregnancy tester  REF. : 23350/2838
Charger for 100-240 V with rechargeable battery  REF. : 23350/2840
Minitube has been involved in the development of embryo transfer procedures and products since the technology was first introduced. In 1980, Minitube launched a full line of embryo transfer products.

Continuous research and development ensures that the product offering is comprised of the latest, most advanced products for embryo transfer.

**Media for embryo production**

- Manufactured under GMP conditions in dedicated clean room
- Gas-tight packaging for longer shelf life
- Convenient package sizes
- Quality control of each batch performed under veterinarian supervision
- Batch certificate available
EMBRYO COLLECTION

Flushing media
Flushing media are available in plastic bottles and infusion bags. A scale on the bottle/bag simplifies dosage. Easy suspension with hook due to fold-out lug at bottom of bottle and round opening in the bag. Infusion bags with 3-way port configuration and sealed ports for hygienic fluid removal.

Complete formulation containing buffer solution, BSA or PVA and Gentamicin. No additives required.

For small ruminants
BoviFlush - Recovery medium for bovine and ovine embryos
With BSA and antibiotic, 1 l, bag  REF.: 19982/6001
With BSA and antibiotic, 1 l, bottle  REF.: 19982/6003
With PVA and antibiotic, 1 l, bag  REF.: 19982/6011

For camels
CamelFlush - Recovery medium for camelid embryos
With BSA and antibiotic, 1 l, bag  REF.: 19982/6601
With BSA and antibiotic, 1 l, bottle  REF.: 19982/6701
With PVA and antibiotic, 1 l, bag  REF.: 19982/6611
With PVA and antibiotic, 1 l, bottle  REF.: 19982/6801

Holding medium
A multiple application medium for:
• Holding in vivo or in vitro derived embryos at room temperature in atmospheric air
• Washing and rinsing embryos
• Loading embryos for transfer to recipients

BoviHold
Buffered solution containing Pyruvate, BSA and antibiotics
3 bottles of 10 ml each  REF.: 19982/6047

Cryopreservation medium
Medium for conventional slow-rate freezing of embryos.
The cryopreservation solution contains a buffered solution with D-glucose, Sodium-pyruvate, BSA and antibiotic. With ethylene glycol for conventional freezing and direct transfer after thawing.

BoviFreeze
3 bottles of 10 ml each  REF.: 19982/6052
**Embryo collection catheters**

**For small ruminants**

1. Embryo collection catheter 8 CH, silicone, 3 ml balloon, 2-way, Foley type  
   **REF. : 19009/6008**

2. Single connector tubing  
   **REF. : 19009/6001**

3. Y-Tubing  
   **REF. : 19009/6002**

**Injection catheter**

for embryo flushing medium in surgical recovery  
**REF. : 19810/0960**

**Babcock forceps** for holding the uterine horn in surgical collection and transfer, 24 cm  
**REF. : 15010/6024**

1. Tomcat catheter, disposable, 50/bag  
   **REF. : 19001/0050**

**For camels**

Silicone catheters, 650 mm length (26’’), 20-30 ml inflation cuff, high volume recovery ports, Luer activated valve, sterilized, 1/bag

1. 2 way, Luer Lock  
   CH 18  
   **REF. : 19005/0103**  
   CH 20  
   **REF. : 19005/0104**

2. 2 way, Foley end  
   CH 18  
   **REF. : 19005/0222**  
   CH 20  
   **REF. : 19005/0223**

5. Disposable Y-junction tubing with clamps
   To be used in combination with any catheter and inline filter. Sterilized, 1/bag. Tubing made of very smooth, flexible material. End for filter connection requires no extra adapter.

   Luer end  
   **REF. : 19011/0100**

   Foley end  
   **REF. : 19011/0200**

Mandrin for flushing catheter, CH 18/20  
**REF. : 19007/0018**
Filters for embryo collection

Your benefits

- All-in-one filter and search dish
- Filter mesh cannot get dry as it remains in contact with fluid
- Secure fixation of the lid during and easy to open after collection
- Integrated search dish engraved with a grid makes it easy to search and find embryos
- Excess fluid is controlled and removed through outlet tubing with attached thumb clamp
- Connection to all types of Y-tubing is possible
- Absolute tightness
- Sterilized

EmSafe

The EmSafe is ideal for both large and small embryos. The filter system automatically holds a minimum level of 60 ml flushing fluid in the dish. The angled filter mesh provides an optimal flow-through rate and the air vent in the lid is secured by a filter. The air outlet is also provided with a filter to securely hold embryos in the system.

(1) EmSafe filter  REF. : 19010/6000

EmGuard & MiniFlush

Vertical all-in-one embryo recovery systems with a large filter surface area. The vertical design provides higher flow rates and reduces plugging of the embryo filter. Due to their shallow design, the filters are perfectly suited for use with all microscopes even when the working distance is limited. Embryos are easily found with the aid of the highly visible grid.

With the MiniFlush and EmGuard the entire flushing procedure can be completed without the need to monitor fluid levels as the filter automatically maintains a constant 20 ml volume.

(2) EmGuard filter  REF. : 19010/1000
(3) MiniFlush filter  REF. : 19010/2000
EMBRYO HANDLING

Vitrification unit

Set for vitrifying embryos or oocytes in OPS (=open pulled straws) or conventional straws.

Unit consists of:
• Styrofoam box with stainless steel vitrification bath
• Material for vitrification
• Video-instructions for working with OPS
• Manual with detailed description of media preparation

Herrid’s Vitrification Kit for Camels

Contains all media to vitrify up to 30 camel embryos:
• Holding medium
• Vitrification medium VS1, VS2 and VS3
• Thawing solution WS1 and WS2

Embryo freezing with the IceCube

With the Autoseeding Preparation, the IceCube (product details on page 13) can be used for freezing embryos.

Embryo Handling

Micropipettor: easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml
Model A
Model B

(1) Steripette for embryo handling, 55 mm, individually packed, sterilized, 50/package, for use with 1 ml insulin syringe

(2) Glass pipette for embryo handling, silicone treated (240°C), 100/package

(3) Adapter for glass pipette for connection with 1 ml Luer syringe (Ref.: 19801/0001), sterilized

Herrid’s Vitrification Kit

REF. : 19982/6850

Embryo freezing with the IceCube

Autoseeding Preparation for freezing embryos
REF. : 16821/5019
Autoseeding Rack*, capacity: 35 x 0.5 ml straws
REF. : 16821/5020
Autoseeding Rack*, capacity: 43 x 0.25 ml straws
REF. : 16821/5021

*Spacer included

Embryo Handling

Micropipettor: easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml
Model A
Model B

(1) Steripette for embryo handling, 55 mm, individually packed, sterilized, 50/package, for use with 1 ml insulin syringe
REF. : 19025/0050

(2) Glass pipette for embryo handling, silicone treated (240°C), 100/package
REF. : 19026/0100

(3) Adapter for glass pipette for connection with 1 ml Luer syringe (Ref.: 19801/0001), sterilized
REF. : 19026/1100
EMBRYO HANDLING

Embryo culture dish

Embryo culture dish, with lid, sterilized, 5 wells, rounded well edges, MEA performed for every batch, 4/bag, 100/box

REF. : 19021/0005

Petri dish

Petri dish, plastic
- diameter 35 mm  REF. : 19020/0035
- diameter 94 mm  REF. : 19020/0094
- diameter 145 mm  REF. : 19020/0145

Petri dish, plastic, with grid, diameter 65 mm  REF. : 19020/2065

Straws

0.25 ml straw, clear, sterilized, 10/package
- clear  REF. : 19042/0010
- yellow  REF. : 19042/1010
- with sealing balls  REF. : 19041/0010

0.25 ml straw, clear, sterilized, 10/package, with ID rod seal in different colors:
- white  REF. : 19040/0010
- beige  REF. : 19040/0011
- light yellow  REF. : 19040/0012
- light blue  REF. : 19040/0013
- red  REF. : 19040/0014
- pink  REF. : 19040/0015
- grey  REF. : 19040/0016
- light green  REF. : 19040/0018
- dark yellow  REF. : 19040/0020

CryoSealer

Manual sealer using ultrasound technology. Can be used for 0.25 and 0.5 ml straws. Ultrasound welding facilitates a perfect and uniform seal of each straw.

Power supply: 100V-240V/60Hz

CryoSealer  REF. : 13135/0000
Neopor transport box

Neopor transport box
for shipping embryos at 5°C

Transport vial with secure snap cap
round bottom, 5 ml

Transfit sheaths and stylets

Transfit Lateral, sheath with metal tip and side opening, to be used with 0.25 ml straws, sterilized, 5/package

ET Cannula to be used with Transfit Lateral sheath

Deep Chamber – for uncut straws

Shallow Chamber – for cut straws

Sanitary sheaths

- Hygienic sheath: thin plastic sheath
- Sanisheath: rigid hygienic sheath with perforable cap

Hygienic sheath, roll with 80 units

Sanisheath, 25/package

Laparoscopic equipment

Please refer to page 17 and 18 for laparoscopic equipment for small ruminants.
Training and education

Minitube offers a variety of seminars and training opportunities in small ruminant and camelid reproduction techniques worldwide, e.g.

- Laparoscopic artificial insemination
- Semen collection, evaluation and freezing
- Embryo flushing and transfer

The seminars begin with a get-together meeting to discuss each participant’s experience and practical expertise. A comprehensive theory presentation is followed by hands-on lessons during which the trainees repeatedly perform all steps under the supervision of the trainer. Minitube training sessions always offer many useful troubleshooting measures. The participants benefit greatly from a “learning by doing” approach.

Please contact us to get more information:

seminars@minitube.de

Mobile lab service

Minitube Middle East offers unique professional lab service to customers particularly in remote areas. The Mobile Lab is a van equipped with high-quality Minitube equipment to analyze and preserve/freeze animal semen or embryos.

Minitube Middle East offers the service to customers in the United Arab Emirates, Saudi Arabia and Oman, in regions which otherwise have no access to a professional laboratory for semen and embryo preservation.

Please contact us for further information about the service and if you would like to discuss how to construct your own mobile laboratory:

minitube@minitube.de
Minitüb is an ISO 9001:2015 certified company.