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

<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semen Collection</td>
<td>04</td>
</tr>
<tr>
<td>Semen Evaluation</td>
<td>05 - 07</td>
</tr>
<tr>
<td>Semen Extenders</td>
<td>08</td>
</tr>
<tr>
<td>Semiautomatic Straw Processing and Freezing</td>
<td>09 - 10</td>
</tr>
<tr>
<td>Automatic Straw Processing and Freezing</td>
<td>11</td>
</tr>
<tr>
<td>Insemination and Pregnancy Detection</td>
<td>12 - 15</td>
</tr>
<tr>
<td>Embryo Collection and Transfer</td>
<td>16</td>
</tr>
</tbody>
</table>
WORLD WIDE ACTIVITIES

Minitube International AG
Phone: +1 800 582 7047
E-Mail: minitube@minitube-international.com

Minitüb, Germany
Phone: +49 8709 9229 0
E-Mail: minitube@minitube.de

Minitub Ibérica
Phone: +34 977 845 397
E-Mail: info@minitub-iberica.com

Minitube Central Europe
Phone: +421 377 877 915
E-Mail: mtce@minitube.sk

Minitub Chile
Phone: +56 9 974 520 36
E-Mail: minitub@minitubchile.cl

Minitub do Brasil
Phone: +55 51 3222 7876
E-Mail: minitub@minitube.com.br

Minitube Australia
Phone: +61 3 5342 8688
E-Mail: info@minitube.com.au

Minitube Indonesia
Phone: +62 21 7591 75-96/94
E-Mail: zulkifli@minitube-indonesia.com

Minitube China
Phone: +86 10 8240 3857
E-Mail: info@minitube.com.cn

Mexitube Alemania
Phone: +52 442 246 7346/47
E-Mail: info@mexitube.mx
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 specialised in this field therefore, are responsible at Minitub 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 Minitub, 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 International 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, Minitüb 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 handling exports, 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.
SEMEN COLLECTION

Artificial Vagina

Product features

- rugged rubber casing with valve
- latex inner liner with roll-up ends
- rubber bands
- latex collection cone
- graduated collection vial in tulip shape, 4 ml
- warming bag

REF. : 11320/0000

Accessories

Latex inner liner, brown, smooth REF. : 11322/0002

Semen collection vial, 4 ml, tulip shape, graduated REF. : 11323/0004

Semen collection glove REF. : 11128/0055

Thermometer, 100°C, red filling REF. : 11027/0100

miniLube™, 3.8 l (1 gallon) non spermicidal lubricant REF. : 17116/7010

Dispenser for 3.8 l gallon REF. : 17116/7011

miniLube™, 90 ml REF. : 17116/7000

Electro Ejaculator

Electro ejaculator set, consisting of heavy-duty carry case, with power supply unit and connecting cables for external battery.

Power supply: (17 V) 100 - 240VDC

Electro ejaculator REF. : 11900/0000

Electro ejaculator probe 1” REF. : 11900/0020

Semen collection set for electro ejaculator REF. : 11900/0250
The CASA System for the Production Lab

An all inclusive system for the computerized analysis of sperm cells that is highly efficient and user friendly. Concentration and motility can be accurately assessed, making Sperm Vision® Production an essential tool to quickly evaluate semen in the laboratory. All images and data can be stored for later review. Automatic dose calculation makes processing semen simple by determining the exact number of doses and amount of extender needed to process each ejaculate. The user interface is straightforward, and easy to use due to the one page navigation screen. Sperm Vision® Production ensures integrity of both new and archived records through a password protection. These features and many more make Sperm Vision® Production the ideal choice for semen assessment and processing at an affordable price.

System Components

- Sperm Vision® Production Software
- Microscope with 10x CASA Objective
- Integrated heated stage and HT200 control unit with warming plate
- Digital high speed camera
- PC and 19" monitor included: 2.93 GHz processor, 2 GB RAM, 250 GB hard drive.*

Sperm Vision® Production
REF. : 12520/7000

*Subject to Change

Sperm Vision® Production Modules

Optionally available as add-on

Basic Morphology Module
REF. : 12520/7030

External Devices Communication Module
(IDA/IDEE, Semen Scale, Automated Stage, Auto Dilutor)
REF. : 12520/7040

Extended Reports Module
REF. : 12520/7050

Particle Filter Module
REF. : 12520/7010

All Species Module
REF. : 12520/7020

Accessories and Supplies

Makler counting chamber
REF. : 12050/0000

Disposable standard counting chamber, 20 µ
REF. : 12050/0300

Alternative Systems

Sperm Vision® Production Plus
contains all optional modules
REF. : 12520/8000

Sperm Vision® Professional
(research version)
REF. : 12520/3502

Sperm Vision® Therio
(version for vet practice and clinics)
REF. : 12520/6000

www.minitube.de
**Phase Contrast Microscope MBL 2000**

Functional microscope for semen analysis with phase achromatic objectives 10x, 40x, 100x, heating system with temperature control unit HT50 with digital temperature display and freely selectable temperature adjustment

- **Binocular**  
  REF.: 12010/2000

- **With ocular video 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, consisting of 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**, 8ml  
  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.: 12425/5000

- **Tips for pipettor**  
  REF.: 12425/5001
SEMEN EVALUATION

Photometer SDM6

Your benefits
- large touch screen, easy handling
- 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
- optional: integrated printer for printout of production data per ejaculate
- serial and parallel interfaces for data transfer

Photometer SDM6, for the determination of semen concentration and for dose calculation, with integrated printer
REF. : 12300/0006

Photometer SDM6, without printer
REF. : 12300/0008

Accessories

Paper for printer
REF. : 12300/0311

Macro cuvette, 4 ml, 100/package
REF. : 12301/0003

Photometer SDM 1

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

- Calibration for ram or buck semen
- No dilution of semen samples necessary
- 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
REF. : 12300/0104

Accessory

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

www.minitube.de
SEMEN EXTENDERS

**OviPro**

*Fresh semen extender concentrate*, 20 ml, suitable for small ruminant semen. Requires addition of fresh egg yolk

REF. : 13610/0025

**Triladyl® and Biladyl®**

*Semen extender concentrates* for freezing of bull, ram and buck semen, with antibiotics and glycerol. Triladyl® one step semen processing at room temperature. 250 g concentrate, for preparation of 1250 g extender

Triladyl®

REF. : 13500/0250

Biladyl® for two step semen processing. Consists of 3 fractions A, B and AB cocktail, for the preparation of 1000 g extender, according to the CSS (Certified Semen Services) regulations

Biladyl®, fraction A

REF. : 13500/0004

Biladyl®, fraction B

REF. : 13500/0006

AB-Cocktail for Biladyl®, mixture of 4 antibiotics for semen extender

REF. : 13500/0005

Egg filter, funnel shaped, sterilized, 10/pack

REF. : 13502/2010

**AndroMed®**

*Egg yolk free medium* for liquid semen preservation and for freezing. No risk of microbiological contamination, no ingredients of animal origin. With antibiotics. Very easy to prepare. Centrifugation of the prediluted ejaculate not necessary. 200 g concentrate, for preparation of 1 liter extender

REF. : 13503/0200

www.minitube.de
SEMEN EXTENDERS

www.minitube.de

SEMI AUTOMATIC STRAW PROCESSING AND FREEZING

Semen straws 0.25/0.5ml

Semen straw, 0.25 ml, clear, 2000/bag  REF. : 13407/0010

Semen straw, 0.5 ml, 2500/bag, clear  REF. : 13408/0010

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

SFS 133

Semiautomatic filling and sealing machine, for ministraws 0.25 ml (also available for 0.5 ml straws)  REF. : 13133/0135

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
SEMIAUTOMATIC STRAW PROCESSING AND FREEZING

**AHDR/HDR Printer**

For 0.5 or 0.25 ml straws and Minitubes, with counter.
Capacity approx. 5000/3000 straws/hour (AHDR/HDR)

<table>
<thead>
<tr>
<th>Description</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHDR, automatic printer</td>
<td>13142/1000</td>
</tr>
<tr>
<td>HDR, manual printer</td>
<td>13140/0000</td>
</tr>
<tr>
<td>Set of alpha-numerical characters for 0.5 ml straws and Minitubes</td>
<td>13052/0000</td>
</tr>
<tr>
<td>for 0.25 ml straws</td>
<td>13052/0010</td>
</tr>
<tr>
<td>Printing ink ER, 40 ml, black</td>
<td>13056/0033</td>
</tr>
<tr>
<td>Thinner for ER printing ink, 1000 ml</td>
<td>13056/9000</td>
</tr>
<tr>
<td>Doublestick tape</td>
<td>13050/0010</td>
</tr>
</tbody>
</table>

**Freezing Unit**

Robust vapor freezing system for straws 0.5 ml and 0.25 ml

- Adjustable distance between straws and liquid nitrogen
- Compact and easy to handle

<table>
<thead>
<tr>
<th>Quantity</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 20 straws</td>
<td>15043/0636</td>
</tr>
<tr>
<td>For 100 straws</td>
<td>15043/0736</td>
</tr>
</tbody>
</table>
**AUTOMATIC STRAW PROCESSING AND FREEZING**

### MPP UNO

Automatic filling- and sealing machine for 0.25 and 0.5 ml straws with ultrasound sealer. Capacity 4235 straws/hour.

*Power supply: 110 V / 60 Hz or 230 V / 50 Hz*

<table>
<thead>
<tr>
<th>Component</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPP UNO, complete</td>
<td>13017/0000</td>
</tr>
<tr>
<td>Exchangeable straw hopper</td>
<td>13017/0005</td>
</tr>
<tr>
<td>Filling nozzle 0.25 ml</td>
<td>13017/0012</td>
</tr>
<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, 5000/bag</td>
<td>13021/3000</td>
</tr>
<tr>
<td>Filling tubing, 100/bag</td>
<td>13021/3800</td>
</tr>
</tbody>
</table>

### Easy Coder 2.0

**Thermo transfer printer** for straws with automatic straw feeder. Unmatched clean and clear, non-abrasive print. Prints up to 3 lines per straw, even with barcodes, logos and specific characters. Very simple handling, only little maintenance required. Suitable for 0.25 ml and 0.5 ml straws

*REF. : 13038/0000*

**Color band** for straw printer Easy Coder, black, roll with 200 m

*REF. : 13038/0010*

### IceCube automatic freezer

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

#### Technical features

- Temperature range: +40 to -180°C
- Freezing rates: 0,01 to +60°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.

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

Dimensions: 540 x 420 x 520 mm (l x w x h). 29 kg.

#### Accessories

<table>
<thead>
<tr>
<th>Component</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack for Icecube 14S, for 36 straws</td>
<td>16821/5036</td>
</tr>
<tr>
<td>Handling rack for IceCube 14S</td>
<td>16821/5030</td>
</tr>
<tr>
<td>Loading block for rack 16821/5036</td>
<td>16821/5037</td>
</tr>
<tr>
<td>Spacer for IceCube</td>
<td>16821/5018</td>
</tr>
<tr>
<td>Liquid Nitrogen pressure container for Icecube 14S, 60 l</td>
<td>16820/1900</td>
</tr>
<tr>
<td>Roller base for LN container</td>
<td>16501/0204</td>
</tr>
</tbody>
</table>

**Icecube 14S** with 12“ touch screen monitor and connector kit to be connected to computer and LN2 pressure container

*REF. : 16821/2000*

**Icecube 14S** without monitor, with connector kit to be connected to computer and LN2 pressure container

*REF. : 16821/1000*

www.minitube.de
**Insemination Kit for Small Ruminants**

Rugged plastic case contains:

- 1 Electronic thawing unit MT 30/54
- 50 Universal sheaths for all types of straws, short length for small ruminants
- 1 QuickLock insemination gun, short length for small ruminants
- 1 miniLube semen friendly lubricant, 90 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

---

**Insemination Pipettes**

**Insemination pipette** for small ruminants with excentrical tip for intra-cervical AI under visual control (speculum), 50/bag

**Blue tip** for fresh semen  REF.: 17300/1000

**White tip** for 0.25 ml straws and Minitubes  REF.: 17300/0000

**Inseminator for small ruminants**, for 0.25/0.5 ml straws and Minitubes, stainless steel. To be used with pipettes with excentrical tip, white

REF.: 17320/0000
**INSEMINATION**

### QuickLock and Sheaths

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

**Universal sheath** for insemination with short Quicklock and all kinds of straws, round smooth tip, very easy to use. 50/package.

**REF. : 17350/0000**

### Vaginal Specula

**Vaginal speculum**, battery handle with incorporated light, for sheep/goats, 240 x 24 mm.

**REF. : 17373/0000**

**Exchangeable transparent plastic tube** for speculum, rounded front edge, disposable, length 19 cm, diameter 17.3 mm, 50/package.

**REF. : 17373/0001**

**Vaginal speculum**, duckbill type, length 200 mm, stainless steel.

**REF. : 17370/3772**

**LED-lamp**, flexible neck, battery operation, clip for fixing, up to 250 h battery operation, length 96 mm.

**REF. : 17210/0010**

[www.minitube.de](http://www.minitube.de)
INSEMINATION

Robertson Pipette

For laparoscopic insemination, complete with tubing, non sterile, 10/package

Standard REF. : 23700/2200

For donor ewes, suitable with thick uterus walls REF. : 23700/2201

Robertson-applicator gun, for use with 0.25 ml straws REF. : 23700/2205

Laparoscope set for artificial insemination

contains the following components:

Cold-light fountain with antifog pump included, 400 A cable, 230 VAC, 50/60 Hz REF. : 23700/1512

2 Trocars 7 mm with blunt tip, consisting of spike and sheath, with multifunction valve REF. : 23700/1013

Hopkins forward oblique telescope 30°, enlarged view, Ø 6.5 mm, length 35 cm, autoclavable REF. : 23700/1400

Fiber optic light cable Ø 3.5 mm, 300 cm length REF. : 23700/1514

Thawing Unit MT

- Electronic temperature control
- Central, built-in thawing chamber with lift
- 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

Accessories

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

PBS Blue for sheep semen

Thaw medium for pellets, marker solution for straws, 20 ml flask REF. : 21500/0001
**PREGNANCY DETECTION**

**Pregnancy Tester**

Instrument for diagnosis of pregnancy after 35 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 and contact gel bottle.

**REF. : 23350/2835**

Charger for 220 V  
**REF. : 23350/2840**

Charger for 115 V  
**REF. : 23350/2841**

**Ultrasound Scanner**

Portable ultrasound scanner for pregnancy detection. Very robust, battery operated, with 3.5 Mhz sensor, carrying case and wrist holder.

**REF. : 23500/0000**

**Lubricant miniLube™**

Non spermicidal lubricant, water soluble

- Iso-osmotic and sperm friendly, supports the sperm cell viability
- Batches are tested for sperm compatibility
- Ideal viscosity
- Produced by Minitube in a Hepa-filtered dedicated clean room

**Tube with 90 ml, resealable**  
**REF. : 17116/7000**

**Gallon 3.8 l, without dispenser**  
**REF. : 17116/7010**

**Dispenser for 3.8 l gallon**  
**REF. : 17116/7011**
EMBRYO COLLECTION AND TRANSFER

**Embryo Collection and Transfer**

- **Embryo collection catheter 8 CH.** 3 ml balloon, 2-way, Foley type  
  REF.: 19009/6008
- **Babcock forceps** for holding the uterine horn in surgical collection and transfer, 28 cm  
  REF.: 15010/6024
- **Tomcat catheter**, disposable, 50/bag  
  REF.: 19001/0050

**BoviPRO™ Recovery medium**

A complete formulation containing Zwitterionic buffer solution, BSA or PVA, Kanamycin and Gentamycin.

- Process-Patented purified and enriched BSA
- No additives required
- Gas-tight package — prevents oxidation and change in pH
- 3-way port configuration

**With BSA** 1 litre  
REF.: 19982/1100

**With PVA** 1 litre  
REF.: 19982/1106

**BoviPRO™ 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

**BoviPRO™ Holding Medium**  
Zwitterion-buffered solution containing D-glucose, Napyruvate, 0.4 % BSA, amino acids, growth factors, vitamins, Kanamycin and Gentamycin. 3-Tube pack, 10 ml/tube  
REF.: 19982/1250

**Neopor Transport Box**

- **Neopor transport box** for shipping embryos at 5°C  
  REF.: 17229/0005
- **Transport vial with secure snap cap**, round bottom, 5 ml  
  REF.: 19180/5006
Minitüb is an ISO 9001:2008 certified company.