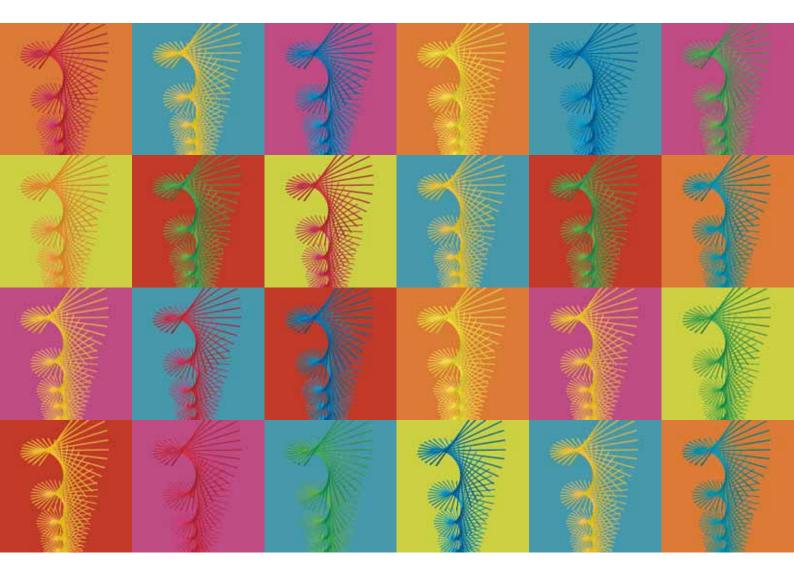


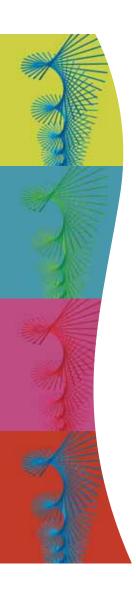
#### 

# Animal Reproduction Technology Small Ruminants: Sheep, Goat and Deer





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



Contents	Page
Semen Collection	04
Semen Evaluation	05 - 07
Semen Extenders	08
Semiautomatic Straw Processing and Freezing	09
Automatic Straw Processing and Freezing	10
Insemination and Pregnancy Detection	11 - 13
Embryo Collection and Transfer	14

# **WORLD WIDE ACTIVITIES**

#### Minitüb, Germany

 Phone:
 +49 8709 9229 0

 Fax:
 +49 8709 9229 39

 E-Mail:
 minitube@minitube.de

#### Minitub Ibérica

Phone:	+34 977 845 397
Fax:	+34 977 845 398
E-Mail:	info@minitub-iberica.com

#### **Minitube Central Europe**

 Phone:
 +421 377 877 915

 Fax:
 +421 377 877 916

 E-Mail:
 mtce@minitube.sk

#### **Minitub Chile**

Phone:	+56 9 9745 2036
Fax:	+56 2 2014 118
E-Mail:	minitub@minitubchile.cl

#### Minitub do Brasil

 Phone:
 +55 51 3222 7876

 Fax:
 +55 51 3346 4379

 E-Mail:
 minitub@minitube.com.br

#### Minitube Australia

 Phone:
 +61 3 5342 8688

 Fax:
 +61 3 5342 8788

 E-Mail:
 info@minitube.com.au

#### Minitube Indonesia

 Phone:
 +62 21 7721 2471

 Fax:
 +62 21 7720 4516

 E-Mail:
 zulkifli@minitube-indonesia.com

#### Minitube China

 Phone:
 +86 10 8240 3857

 Fax:
 +86 10 8240 3785

 E-Mail:
 minitubechina@gmail.com

If Minitube is not represented in your country, please contact Minitüb Germany.

#### **Minitube of America**

 Phone:
 +1 800 646 4882

 Fax:
 +1 608 845 1522

 E-Mail:
 usa@minitube.com

#### Minitube Canada

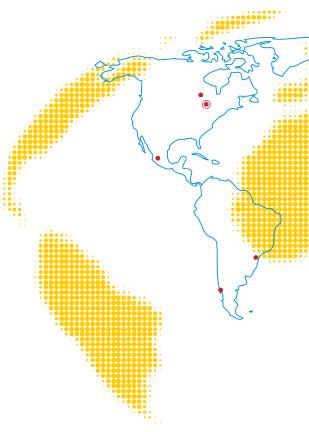
Phone:	+1 800 500 7978
Fax:	+1 519 485 0340
E-Mail:	canada@minitube.com

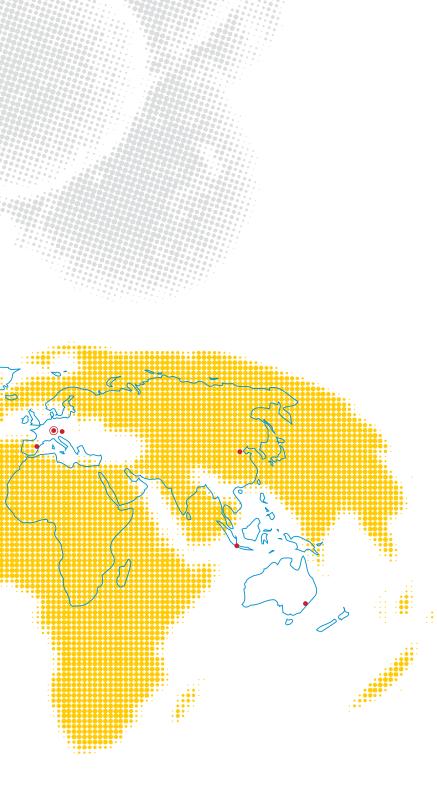
#### Minitube de México

 Phone:
 +52 800 216 9282

 Fax:
 +52 442 248 2746

 E-Mail:
 mexico@minitube.com





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 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 speciallytrained 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.

With Minitube of America's international centre for biotechnology in Wisconsin, USA, the Minitube group relies on high capacity facilities for training and research. Here 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. Important elements are furthermore biotechnical services for our customers, as well as training and technology transfer.

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 handling exports, we keep in contact with the international Al 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.

hun

**DR. CHRISTIAN SIMMET** MANAGING DIRECTOR

# **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 filing	REF.	: 11027/0100
miniLube™, 3.8 l (1 gallon) non spermicidal lubricant	REF.	: 17116/7010
Dispenser for 3.8 l gallon		: 17116/7011
<b>miniLube™</b> , 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



Sperm Vision

# PRODUCTION

# **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<sup>®</sup> Production an essential tool to quickly evaluate semen in the laboratory. All imagesand 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 straight forward, and easy to use due to the one page navigation screen. Sperm Vision<sup>®</sup> Production ensures integrity of both new and archived records through a password protection. These features and many more make Sperm Vision<sup>®</sup> Production the ideal choice for semen assessment and processing at an affordable price.

### **System Components**

- Sperm Vision<sup>®</sup> 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

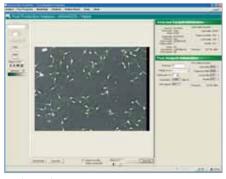
### **Alternative Systems**

Sperm Vision <sup>®</sup> Production Plus		
(contanis 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

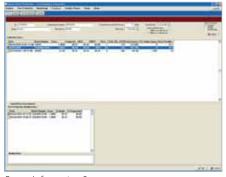




Integrated Semen Analysis Report



Motility Evaluation Screen



Donor Information Screen

# **SEMEN EVALUATION**

٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	•
				•						•

:

## 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
For solling of the for mounth of a sized analysis		
Farelly stain, for morphological evaluation,		
consisting of 3 components, 250 ml each	REF.	: 15405/0026
<b>Eosin G</b> , solution for supravital staining,		
50 ml	RFF	: 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<sup>9</sup> 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



Mathod	Ram
21.01.2002	
ID-Number Density Ejaculatevolume Motility SpernVdose Volume/dose	5648954781 2,54 1,5 ml 8096 120*10 ^ 6 0,25
Number doses	32
Volume extender	6,5



# **SEMEN EXTENDERS**

#### 

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<sup>\*</sup> one step semen processing at room temperature. 250 g concentrate, for preparation of 1 250 g extender

Triladyl°	REF.	: 13500/0250
Biladyl <sup>*</sup> for two step semen processing. Consists cocktail, for the preparation of 1000 g extend (Certified Semen Services) regulations		
Biladyl°, fraction A	REF.	: 13500/0004
Biladyl°, fraction B	REF.	: 13500/0006
<b>AB-Cocktail for Biladyl°</b> , mixture of 4 antibiotics for semen extender	REF.	: 13500/0005
Egg filter, funnel shaped, sterilized, 10/pack	REF.	: 13502/2010





### AndroMed<sup>®</sup>

**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

# SEMIAUTOMATIC 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.



### 

**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



# ············· AHDR/HDR Printer

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

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

## ····· 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

For 20 straws	REF.	: 15043/0636
For 100 straws	REF.	: 15043/0736



# 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

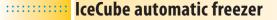
MPP UNO, complete	REF.	: 13017/0000
Exchangeable straw hopper	REF.	: 13017/0005
Filling nozzle 0.25 ml	REF.	: 13017/0012
Suction nozzle 0.25 ml	REF.	: 13017/0022
Filling nozzle 0.5 ml	REF.	: 13017/0017
Suction nozzle 0.5 ml	REF.	: 13017/0027
Washer, 5000/bag	REF.	: 13021/3000
Filling tubing, 100/bag	REF.	: 13021/3800
<b>`</b>		



## 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
<b>Color band</b> for straw printer Easy Coder,		
black, roll with 200 m	REF.	: 13038/0010



**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:  $540 \times 420 \times 520$  mm (l x w x h). 29 kg.

DIMENSIONS: 540 X 420 X 520 MMM (I X W X M). 29 Kg.

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

**REF.** : 16821/2000

 $\ensuremath{\textit{lcecube}}$  14S without monitor, with connector kit to be connected to computer and LN2 pressure container

**REF.** : 16821/1000

# Accessories

Rack for Icecube 14S, for 36 straws	REF.	: 16821/5036
Handling rack for IceCube 14S	REF.	: 16821/5030
Loading block for rack 16821/5036	REF.	: 16821/5037
Spacer for IceCube	REF.	: 16821/5018
Liquid Nitrogen pressure container		
for Icecube 14S, 60	REF.	: 16820/1900
Roller base for LN container	REF.	: 16501/0204



# **INSEMINATION**

# **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	excent	rical tip for intra-
cervical Al 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

# 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.

REF. : 17350/0000

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

: 17350/0010 REF.

### **Waginal Specula**

Vaginal speculum, battery handle with incorporated light, for sheep/goats, 240 x 24 mm	REF.	: 17373/0000
<b>Exchangeable transparent plastic tube</b> for edge, disposable, length 19 cm,	speculu	um, rounded front
diameter 17.3 mm, 50/package	REF.	: 17373/0001
Vaginal speculum, duckbill type,		
length 200 mm, stainless steel	REF.	: 17370/3772
<b>LED-lamp</b> , flexible neck, battery operation, clip for	DEE	. 17010/0010
fixing, up to 250 h battery operation, length 96 mm	REF.	: 17210/0010





# **INSEMINATION**

### **Robertson Pipette**

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

Standard	REF.	: 23700/2200
<b>For domon ourse</b> , suitable with thick utorus walls	DEE	. 22700/2201
For donor ewes, suitable with thick uterus walls	KEF.	: 23/00/2201
Robertson-applicator gun, for use with		
0.25 ml straws	REF.	: 23700/2205

# **Example 2** 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
<b>2 Trocars 7 mm with blunt tip</b> , consisting of multifunction valve	of spike	and sheath, with
	REF.	: 23700/1013
Hopkins forward oblique telescope 30°, e length 35 cm, autoclavable	nlarged	view, Ø 6,5 mm,
	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: <u>+</u> 0.2°C
- Power supply: 12 V DC (car battery)

35°C	REF. : 17044/0	035
37°C	REF. : 17044/0	037
38°C	REF. : 17044/0	038
50°C	REF. : 17044/0	050

# 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<br/>straws, 20 ml flaskREF.: 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





# 

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 I, without dispenser	REF.	: 17116/7010
Dispenser for 3.8 I gallon	REF.	: 17116/7011





# **EMBRYO COLLECTION AND TRANSFER**

II. At a set of Taxa of a

Embryo Collection and Ira	inster		
Embryo collection catheter 8 CH,			
3 ml baloon, 2way, Foley type	REF.	: 19009/6008	(
Babcock forceps for holding the uterine h	norn in surai	cal collection and	
transfer, 28 cm	ionn in surg.		
• 3	5	: 15010/6024	

# ......BoviPRO<sup>™</sup>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<sup>™</sup> 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<sup>™</sup> 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

for shipping embryos at 5°C RI	EF. :	: 17229/0005
Transport vial with secure snap cap, round bottom, 5 ml	FF .	: 19180/5006







# Minitüb is an ISO 9001:2008 certified company.

 : :

: :



REF. : 30000/0310 | 10/2011