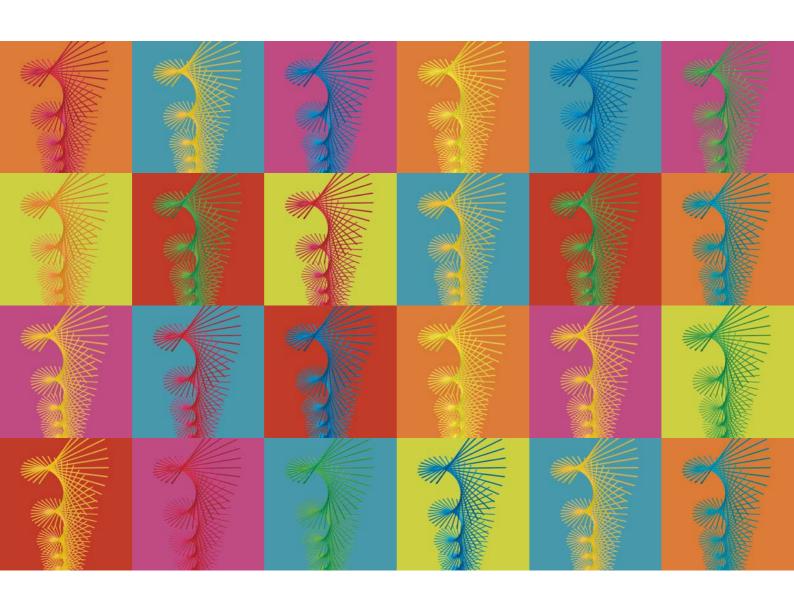


Minitüb

Animal Reproduction Technology
Small Ruminants

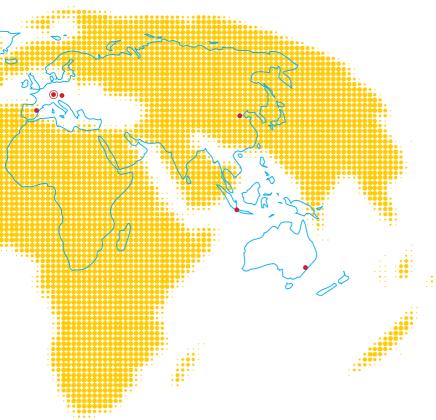




INNOVATIVE IDEAS, MODERN PRODUCTION TECHNIQUES AND A KEEN APPRECIATION OF PRODUCT QUALITY ARE THE BASIC INGREDIENTS OF OUR KNOWLEDGE AND YOUR SUCCESS.



Contents	Page
Collection	04
Evaluation	05 - 06
Extenders	07
Processing	08
Semen Freezing	08 - 11
Insemination	12 - 13



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 Minitüb 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 Minitüb, 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.

With Minitube of America's international centre for biotechnology in Wisconsin, USA, the Minitüb 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, 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 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.

DR. CHRISTIAN SIMMET
MANAGING DIRECTOR

03

COLLECTION

Artificial Vagina for Rams and Bucks

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
- 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 REF. : 11027/0100

MiniLube, 3.8 L (1 gallon) REF. : 17116/7010







Electro Ejaculator for Rams :

Electro ejaculator set, consisting of heavy-duty carrying case, with probe and control unit, battery and transformer/charger, semen collection funnel with holding device and tube.

Power supply: 115 V/60 Hz or 230 V/50 Hz

Set with ram probe, diameter 1" REF. : 11900/0010





EVALUATION

Phase contrast microscope CX 31

- · Infinity optic system: sharp images over the complete field
- · Phase achromatic optics with universal condenser
- Heated original microscope stage with temperature control unit HT 200 with additional warming plate and two digital temperature displays
- Temperature freely selectable
- Ergonomic design of the support
- Phase achromatic objectives 10x, 20x, 40x, 100x
- 6V/30 W halogen light

Binocular	REF.	: 12004/0331
With photo tube	REF.	: 12004/0431



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 photo tube, camera and monitor REF. : 12010/2100



: Semen dyes :

Spermac, semen dye for morphological evaluation, 4 x 50 cc : 15405/0000 REF. Farelly stain, consisting of 3 components, 250 cc each : 15405/0026 REF. Eosin G, solution for supravital staining, : 15405/0025 50 cc REF. Nigrosin, solution for supravital staining, 50 cc : 15405/0029 REF.





05

EVALUATION

Photometer SDM5

Your benefits

- ergonomic design, large display, easy handling
- automatic calculation of extender volume and number of doses
- display of semen concentration in 10° sperm cells/ml
- · with programs for ram, buck, bull, boar and stallion semen
- optional: integrated printer for printout of production data per ejaculate
- serial and parallel interfaces for data transfer

Photometer SDM5, for the determination of semen concentration and calculation of doses, with integrated printer and interfaces

REF. : 12300/0005

Photometer SDM5, without printer REF. : 12300/0007

Accessories

Paper for printer	REF.	: 12300/0311
Macro cuvette 4 cc 100/package	REE	• 12301/0003

: Photometer SpermaCue

Your benefits

- precalibrated for concentration measurement of ram or buck semen
- with transformer 220 V and batteries for wireless operation
- result display in millions per ml
- use of self loading microcuvettes for minimum and exactly defined sample size
- control cuvette for routine check of the calibration
- automatic zero measurement after each concentration measurement
- constant light intensity with durable LED light source

REF. : 12300/0500





Accessories

Microcuvette for photometer SpermaCue

Precision made, may be used at the same time as pipette, test tube and cuvette, 50/package

REF. : 12300/0550

Cleaning sticks for SpermaCue, soaked in Ethanol,

1 set with 5 sticks REF. : 12300/1200



EXTENDERS

OviPro :

Fresh semen extender concentrate, 20 ml, suitable for ram and buck semen. Requires addtion of fresh egg yolk.

REF. : 13610/0025



Triladyl®

Semen exytender concentrate for freezing of bull, ram and buck semen, with antibiotics and glycerol. For one step semen processing at room temperature. 250 g concentrate, for preparation of 1.250 g extender.

REF. : 13500/0250



Biladyl®

Extender concentrate for freezing bull, ram and buck semen with the two step semen process. Consists of 3 fractions A, B and AB cocktail, for the preparation of 1.000 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 BiladyI®, mixture of 4 anti-biotics for semen extender

REF. : 13500/0005



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





PROCESSING

Cooling Box for Transport:

Your benefits

- transport at controlled refrigerator temperature
- temperature can be set between +3° and +9°C
- versatile power supply: 12V (car battery) and 220 V (wall outlet)
- capacity: 33 liter

REF. : 17161/1500



SEMEN FREEZING

Semen straws 0.25/0.5cc

Semen straw, 0.25 cc, clear, 2,000/bag REF. : 13407/0010

Semen straw, 0.5 cc, 2,500/bag, clear REF. : 13408/0010

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



SFS:

Semiautomatic filling and sealing machine SFS, for medium straws $0.5\ cc$

REF. : 13133/0133

Semiautomatic filling and sealing machine SFS, for ministraws 0.25 $\,cc$

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 racks

0.25 cc	REF.	: 13133/0025
0.5 cc	RFF	13133/0005





SEMEN FREEZING

MPP UNO:

Automatic filling- and sealing machine for 0.25 and 0.5 cc straws

Your benefits

- The MPP UNO seals and fills 1 straw per cycle. Therefore the machine is ideal for handling small volumes of valuable ejaculates. The sealing is performed by means of ultrasonic welding.
- Conversion between 0.25 cc straws and 0.5 cc straws without exchanging any parts within only a few minutes. The exchangeable hoppers hold either 2.200 straws of 0.25 cc or about 1.300 straws of 0.5 cc.
- A very compact device which requires minor space. The vacuum pump and the pressure controller are integrated in the device.
 The ultrasonic generator is integrated in an external casing that can be mounted at a distance of up to 2.5 m. ON/OFF switch directly on the machine.
- The filling and sealing area is completely closed: Best hygienic and safety conditions are therefore fully guaranteed. Optimal control by the user: the filling process is performed right in front of the user, who can easily observe the procedure.

MPP UNO, complete REF. : 13017/0000

Technical features

- Capacity 4.235 straws/hour
- No wearing parts. Very fast and easy cleaning.
- Machine dimensions: 370 x 460 x 320 mm (W x D x H)
 + ultrasound generator
- Power supply: 110 V / 60 Hz or 230 V / 50 Hz

Accessories

Exchangeable straw hopper	REF.	: 13017/0005
Filling nozzle 0.25 cc	REF.	: 13017/0012
Suction nozzle 0.25 cc	REF.	: 13017/0022
Filling nozzle 0.5 cc	REF.	: 13017/0017
Suction nozzle 0.5 cc	REF.	: 13017/0027
Washer, 5000/bag	REF.	: 13021/3000
Filling tubing, 100/bag	REF.	: 13021/3800

09





SEMEN FREEZING

AHDR/HDR Printer

For 0.5 or 0.25 cc straws and Minitubes, with counter. Capacity: approx. 7.200 straws/hour

REF.	: 13142/1000
REF.	: 13140/0000
REF.	: 13052/0000
REF.	: 13052/0010
REF.	: 13056/0032
REF.	: 13056/0033
REF.	: 13056/0207
REF.	: 13056/0327
REF.	: 13056/0210
REF.	: 13056/9000
	REF. REF. REF. REF. REF. REF.



Easy Coder

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 cc and 0.5 cc straws

REF. : 13038/0000



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

REF. : 13038/0010





SEMEN FREEZING

Floating Freeze Rack

Your benefits

- simple but effective standardization of vapor freezing
- automatic plunging of straws
- the distance between straws and liquid nitrogen level can be adjusted
- for 0.5 cc and 0.25 cc straws
- with high quality styrofoam box and stainless steel inner box with working tray

Floating freeze rack includes styrofoam chest, stainless steel inserts and basic rack

REF. : 15043/0036

Adapter for 100 0.5 cc straws REF. : 15043/0236

Adapter for 150 0.25 cc straws REF. : 15043/0336

Vapor Freezing - The simple way

The amount of liquid nitrogen to be filled into the styrofoam box doesn't need to be exact, since the rack automatically floats on the correct height over the liquid nitrogen level for 20 minutes. It then descends due to its own weight and the straws are automatically plunged into the liquid nitrogen. With this method, vapor freezing is finally becoming more standardized.



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 freezing programming and control, unlimited storage of programs and processed files, color graphic display of all temperature curves, wide possibility of parameter settings Dimensions: $540 \times 420 \times 520 \text{ mm}$ (I x w x h). 29 kg.

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

Accessories

Rack for Icecube 14S, for 36 straws	REF.	: 16821/5036
Handling Rack for Icecube 14S	REF.	: 16821/5030
Spacer for IceCube	REF.	: 16821/5018
Liquid Nitrogen pressure container		
for Icecube 14S, 60 I	REF.	: 16820/1900
Roller base for LN container	REF.	: 16821/5035



INSEMINATION

Insemination Pipettes

Insemination pipette for sheep and goats with excentrical tip (blue), for fresh semen, 50/bag

REF. : 17300/1000

Insemination pipette for sheep and goats with excentrical tip (white), for 0.25 cc straws and Minitubes, 50/bag

REF. : 17300/0000

Inseminator for sheep/goat, for 0.25/0.5 cc straws and Minitubes, stainless steel. To be used with pipettes with excentrical tip, white and blue

REF. : 17320/0000



QuickLock and Sheaths:

QuickLock insemination gun for sheep, to be used with Universal sheaths. Suitable for all kinds of straws (0.25, 0.5 and Minitubes). Very handy lock system for sheaths. Secure emptying of straws without backflow.

REF. : 17350/0000

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

REF. : 17350/0010



Thawing Device :

MT 35/42

- · with electronic control
- control and temperature indications via LEDs
- · central, built-in thawing chamber with lift
- temperature setting: +38°C, other setting upon demand
- accuracy: 0.2°C
- power supply: 12 V DC (car battery)

REF. : 17043/3542

Accessories

Transformer for thawing device MT,

for 12 V/ 220 V	REF.	: 17165/1390
for 12 V/ 110 V	REF.	: 17165/9110





INSEMINATION

Vaginal Specula:

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

REF. : 17373/0000

Exchangeable transparent plastic tube for sheep/goat speculum, rounded front edge, disposable, length 17 cm, diameter 17 mm, 50/package

REF. : 17373/0001

Vaginal speculum, for sheep/goats, length 160 mm, duckbill type, stainless steel

REF. : 17370/3772

LED-Light, flexible neck, battery operation, clip for fixing, up to 250 h battery operation, length 160 mm

REF. : 17210/0010



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

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

