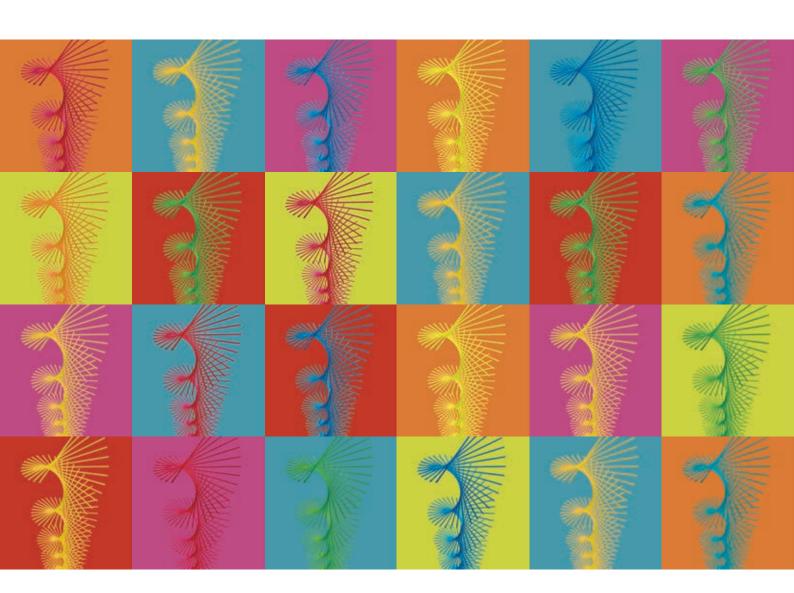




# **Animal Reproduction Technology Equine**





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



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# **WORLD WIDE ACTIVITIES**

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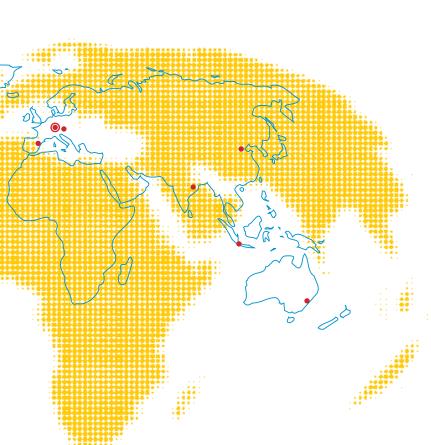
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Minitube is a registered trademark of Minitüb GmbH, Germany.





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 quarantee 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 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

CE0

Juni

## **COLLECTION OF STALLION SEMEN**

### ····· Hannover artificial vagina

**Equine artificial vagina Hannover** with valve, inner liner (100 cm), 3 rubber rings, leather handle

REF. : 11220/0145

#### **Accessories**

Inner liner (1) for model Hannover, rubber, with roll-up ends, sterilizablelong version, 100 cmREF.: 11222/0002short version, 70 cmREF.: 11222/0003

**Disposable inner liner (2)**, width approx. 21 cm, roll with approx. 200 m; "sensitive": smooth and resistant material

REF. : 11222/0120

**Warming bag (3)** for collection glass, protects the semen from low temperature and UV radiation

REF. : 11225/0026

Rubber band (4) for model Hannover REF. : 11222/0001

Small valve (5) for model Hannover REF. : 11222/0005

**Disposable inner liner**, fits model Hannover/Colorado with built-in filter, 10/package (not shown)

REF. : 11232/0420

Semen collection bottle (6),

200 ml, sterilizable plastic, 100/package REF. : 11231/0200

Coupling nut for 200 ml semen bottle,

25/package (not shown) REF. : 11231/0301

**Leather handle** for model Hannover REF. : 11222/0008

## ····· Missouri artificial vagina

**Equine artificial vagina Missouri**, double latex liner with valve and leather casing, adapter and collection bottle,

#### **Accessories**

Disposable inner liner "AV-Liner"

**With built-in filter and collection pouch**, for model Missouri (no collection bottle needed), 10/package

REF. : 11245/0420

without filter, for model Missouri,

25/package (without illustration) REF. : 11245/0450

without filter, fits models Hannover, Colorado and Missouri,

10/package (without illustration) REF. : 11232/0440









## **COLLECTION OF STALLION SEMEN**

## ::::: Colorado artificial vagina

**Equine artificial vagina Colorado**, complete with 2 inner rubber liners (tubular and conical), 10 rubber bands, 2 clamps, 25 disposable inner liners, 25 semen bottles, 25 coupling nuts, 25 nylon filters and warming bag

REF. : 11230/0000

#### **Accessories**

**Disposable inner liner (1)**, plastic, width 30 cm, roll with approx. 200 m; "sensitive": smooth and resistant material

REF. : 11232/0030

Disposable inner liner Colorado (2), 25/package REF. : 11232/0110

Disposable inner liner Colorado (3),

Semen collection bottle Colorado (4),

200 ml, sterilised plastic, 100/package REF. : 11231/0200

Coupling nut for 200 ml semen bottle,

100/package (without illustration) REF. : 11231/0301

Semen filter Colorado (5), nylon, fits Colorado

collection bottle, 25/package REF. : 11231/0400

#### **Accessories for semen collection**

**Vaseline**, 1000 g REF. : 11905/0100

Lubricating jelly Bengen,

1 l, water soluble **REF.** : 11906/1000

Semen filter, non woven, 150 x 60 mm,

100/package **REF.** : 11245/3100

 $\label{eq:continuous} \textbf{Equine semen filter pouch},$ 

plastic, 10/package REF. : 11260/1000

Thermometer for artificial vagina,

 Bimetal, nonbreakable, 0-100°C
 REF.
 : 11027/0000

 Mercury, 0-100°C, graduation 0.1°C
 REF.
 : 11027/0100

 Mercury, 0-200°C, graduation 0.1°C
 REF.
 : 11027/0200

**Semen collection glove**, disposable, non spermicidal, different sizes (M/L/XL), 100/box

REF. : 11128/0055



#### Warming bag (6/7),

Small, for 200 ml collection bottle	REF.	: 11225/0026
Large, blue	REF.	: 11231/0185

**Rubber inner liner for Colorado artificial vagina (8)**, tapered end for connection to the bottle

flared front end	REF.	: 11231/0102
straight form	REF.	: 11231/0101
round form	RFF.	: 11231/0201

#### Rubber inner liner tubular,

flared ends (not shown) REF. : 11231/0103



## **COLLECTION OF STALLION SEMEN**

## **Hannover phantom for stallions**

Adjustable in height and inclination, covered with reinforced synthetic material coating, well padded, contoured body style, includes bite belt. Size of the phantom fits for all breeds:

Body: 200 x 60 x 55 cm (W x H x D)

Height of the dummy: 1.30 m to approx. 1.70 m

REF. : 11200/0000

**Hannover phantom** with hydraulic height adjustment of both legs. Hydraulic height adjustment ensures low fatigue operation. Both feet can be lifted or lowered about 40 cm either individually or together by means of a hand pump.

REF. : 11200/1000

#### **Accessories**

**Cover for phantom**, synthetic material, collection side closed, with belts for attachment

REF. : 11200/2601

**Leather blanket for phantom for stallions**, collection side closed, with belts for attachment

REF. : 11200/2501

Bite belt REF. : 11200/2100

Stretch foil for protection of phantom,

length 300 m REF. : 32000/0010



## ..... 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, Al equipment and instruments

Tube with 100 ml, resealable	REF.	: 11907/0100
3.0 I canister, without dispenser	REF.	: 11907/3000
<b>Dispenser</b> for canister	REF.	: 11907/3100





## MICROSCOPY AND VOLUME MEASUREMENT

## Phase contrast microscope CX 31

#### **Technical features**

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

with objectives 10x, 20x, 40x REF. : 12004/0331

with phototube (trinocular),

with objectives 10x, 20x, 40x REF. : 12004/0631



Functional microscope for semen analysis with phase achromatic 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

## With ocular video camera and monitor REF. : 12010/2100

## **Semen dyes**

**Spermac** semen dye for morphological evaluation,

4 x 50 ml REF. : 15405/0000

**Farelly stain** for morphological evaluation,

3 x 250 ml REF. : 15405/0026

**Eosin G** solution for supravital staining,

REF. : 15405/0025

**Nigrosin** solution for supravital staining,

50 ml REF. : 15405/0029

## **Laboratory** scale

Precision scale for the determination of the ejaculate volume, weighing range max. 2000 g, resolution 0.1 g, weighing pan 130 x 130 mm

REF. : 14295/0444

















## ANDROVISION® - MORE THAN CASA

#### ..... Integrated sperm analysis

This highly efficient 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 as well as sperm integrity and viability can be assessed accurately and quickly with up to 1000 cells per field, making AndroVision® the perfect tool for the objective and complete semen evaluation. All images and data are stored for later review. The user interface is straightforward and easy to understand. An analysis report can be generated as a hard copy print or a digitized file. These features and more make AndroVision® the ideal choice for semen assessment in a researchand production lab.

#### AndroVision® Software

with PC and accessories REF. : 12500/0000

AndroVision® Camera

High velocity colour camera REF. : 12500/4200



#### ..... AndroVision® software modules

#### Morphology and morphometry:

Interactive, self learning system for analysis of sperm morphology and morphometry (Krüger). Determines length and width of the sperm head, head shape and the angle of tail insertion. Sperms are classified into morphologic abnormalities.

#### AndroVision® software module:

Morphology and morphometry REF. : 12500/1300

#### Membrane integrity:

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

#### AndroVision® software module:

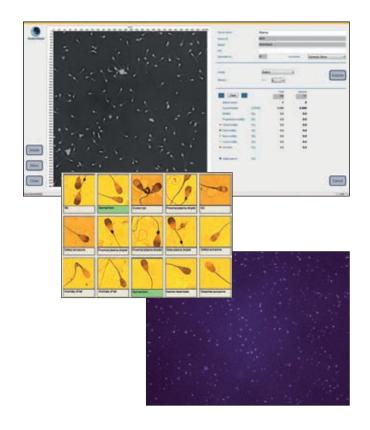
Membrane integrity\* REF. : 12500/1400

#### Acrosome integrity:

Automated count of sperm with damaged acrosome, based on a triple stain fluorescence.

AndroVision® software module:

Acrosome integrity\* REF. : 12500/1600



<sup>\*</sup> requires flourescence microscope

## **PHOTOMETRY**

#### :---- Photometer SDM6

#### Your benefits

- Touch screen operated, large display
- Programs for the determination of sperm concentration of stallion, bull, boar, ram and buck semen
- Automatic calculation of extender volume and number of doses
- Display of semen concentration in 109 sperm cells/ml
- Optional: integrated printer for printout of production data of ejaculate
- Serial and parallel interfaces for data transfer

#### **Technical features**

- Spectral range: 340-578 mm
- Filter: 546 nm
- Halogen lamp
- Use of 10 mm macro cuvettes
- Analysis time: 2 seconds/sample
- Power supply: 230 V/50 Hz or 110 V/60 Hz

**Photometer SDM6** for 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
<b>Macro cuvette</b> , 4 ml, 100/package	RFF	: 12301/0003
macro carecte, 1 mi, 1007 package	ner.	1 12301,0003
NaCl solution, 0.9 %, 1	REF.	: 12301/4667
<b>Dispenser</b> 0.5-5 ml for NaCl solution	REF.	: 12428/1815
<b>Pipette</b> 10-100 μl, with digital display	REF.	: 12425/4810
Pipette tip yellow, 1000/package	REF.	: 12425/9409

**Automatic diluter-dispenser** for precise sample preparation and concentration measurement. Use of disposable syringes for semen sampling. Power supply: 110-220 V

REF. : 12421/0503

## ::::: Photometer SDM 1



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

- Calibration for stallion 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. : 12300/0101

#### Accessory

Multispecies software for reprogramming to other species

REF. : 12300/0130

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



# MINITUBE STALLION SEMEN EXTENDERS CHILLED SEMEN PROCESSING

#### **EquiPlus**

Balanced medium with specific purified caseinates for preservation of sperm activity up to 72 hours.

REF.	: 13570/0202
REF.	: 13570/0201
REF.	: 13570/0210
REF.	: 13570/0240
REF.	: 13570/0301
REF.	: 13570/0253
	REF. REF. REF.

Minitube extenders are produced according to highest quality standards. All components are from constantly excellent, controlled sources. Each extender batch is tested for its chemical, microbiological, physical and biological properties. Certificates are available upon request.









#### ::::::::::: Gent

for fresh semen, with egg yolk and antibiotics, ready to use

45 ml	REF.	: 13571/0045
100 ml	REF.	: 13571/0100

### ..... AndroMed®-E

Liquid semen extender without animal proteins. Contains egg yolk substitutes and antibiotics. 25 ml concentrate for 125 ml diluent

REF. : 13573/0020

## ..... AndroColl® Equine

Centrifugation with AndroColl® Equine improves the qualtity of equine ejaculates by separating the normal, motile sperm population from poor quality spermatozoa and bacteria.

250 ml REF. : 13580/0005





#### ::::: CushionFluid

for gentle centrifugation of stallion spermatozoa. Assures a higher yield of sperm cells as compared to standard centrifugation.

100 ml REF. : 13580/0001

## ····· Centrifugation medium

Powder for 1 I transparent EDTA glucose solution REF. : 13565/0001

#### **Water for semen extenders**

Bidistilled, sterilised, pyrogen-free

11	,	, , ,	,	REF.	: 13570/1000
100 ml				REF.	: 13570/1100



# MINITUBE STALLION SEMEN EXTENDERS CRYOPRESERVATION OF SEMEN

## **EquiPlus Freeze**

Media for the cryopreservation of stallion semen

#### Your Benefits

- Ready to use and easy to handle
- Not necessary to add pure water
- Can be transported at ambient temperatures up to +25°C
- Available as 1-step (filling at ambient temperature) or 2-step type (filling at 5°C)

#### EquiPlus Freeze 1-step with egg yolk

Two liquid components: 95 ml medium and 5 ml egg yolk-glycerol mixture

REF. : 13570/0410

#### EquiPlus Freeze 1-step without egg yolk

One liquid component: Medium with glycerol. Addition of 2 ml freshly filtered egg yolk by the user

REF. : 13570/0420

#### EquiPlus Freeze 2-step with egg yolk

consists of three fractions:

- 1. Component A: EquiPlus for centrifugation and predilution.
- 2. Component B: EquiPlus Freeze: liquid medium. The egg yolk-glycerol component is added before using.
- 3. Component C: Egg yolk-glycerol mixture.

REF. : 13570/0510

#### EquiPlus Freeze 2-step without egg yolk

consists of two liquid fractions:

- 1. Component A: EquiPlus for centrifugation and predilution.
- 2. Component B: EquiPlus Freeze contains glycerol: the operator adds 4 ml of fresh egg yolk before using.

REF. : 13570/0520

## .....Gent extender

Freezing extender with egg yolk, glycerol and antibiotics, ready to use

45 ml REF. : 13571/1045

















## PROCESSING OF STALLION SEMEN

#### **Water bath**

Electronic temperature control, stainless steel, with grid and lid

**71**, inner dimensions:

240 x 210 x 140 mm (W x H x D) REF. : 14078/0001

**10 I**, inner dimensions:

350 x 210 x 140 mm (W x H x D) REF. : 14079/0001

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



## **Rolling mixer RM5**

for gentle, constant homogenization of semen doses in tubes. Appropriate for use inside the refrigerator.

Dimensions: 430 x 180 mm (W x H)

REF. : 14340/0348



## **Centrifuge**

with swing-out rotor for 4 x 100 ml, complete with buckets and 100 ml glass vials. Maximum rotations: 3900 per minute, LCD-display, speed displayed in rpm and g (gravitational force or rcf)

REF. : 14602/0500

Also available for 50 ml glass vials or Falcon tubes REF. : 14602/0575



### ::::::::::: Shaker Vibramax

Platform with two fixation devices and non-slip rubber pad, includes timer Shaking frequency: 150-1350 cycles/min
Area of platform: 220 x 220 mm

REF. : 14703/0304



## **PROCESSING OF STALLION SEMEN**

#### .....Glass ware

Measuring pipettes, graduated cylinders, beakers, dispensers, test tubes, Erlenmeyer flasks etc.

#### Please ask for a detailed list of our lab glass ware!

## ..... Plastic vials

Plastic vial with graduation and screw cap.

30 ml	REF.	: 17231/0030
50 ml	REF.	: 17220/0017
<b>Sterile</b> , 13 ml, with cap	REF.	: 17230/6001
Plastic vial, 13 ml, round bottom	REF.	: 17230/6000

#### Screw cap for plastic vial, 13 ml

red	REF.	: 17230/6055
blue	REF.	: 17230/6056
green	REF.	: 17230/6058
white	REF.	: 17230/6054
violet	REF.	: 17230/6057
yellow	REF.	: 17230/6059
<b>Rack</b> for 20 plastic vials 12/13 ml, acrylic glass	REF.	: 17230/9384
<b>Rack</b> for 20 plastic vials 30 ml, acrylic glass	REF.	: 17231/9384
<b>Rack</b> for 24 test vials of 18 mm, stainless steel,		
with numbers	REF.	: 14076/0005

## **Sterile bags**

with incorporated wire and write-on tag, 100/package

Volume 60 ml	REF. : 17224/0250
Volume 120 ml	REF. : 17224/0500
Volume 350 ml	REF : 17224/1000

## **Disposable syringes**

all plastic, sterilised

<b>10 ml</b> , 100/package	REF. : 19801/0010
<b>20 ml</b> , 100/package	REF. : 19801/0020
<b>30 ml</b> , 500/package	REF. : 19801/0063
<b>50 ml</b> , 300/package	REF. : 19801/0060











## TRANSPORT OF CHILLED SEMEN

## **Equitainer**

#### Your benefits

- A world-wide proven system for cooling, storage and transport of fresh stallion semen
- The warm semen is automatically and gently cooled down to the ideal storage temperature within 6 to 10 hours
- The desired temperature is reliably maintained for about 70 hours
- Very high level of protection against potential x-ray induced damage of the enclosed semen sample

#### Equitainer cup style

Complete with cup-style isothermalizer, sterilised plastic cup with lid, 2 ballast bags and 2 coolant cans

REF. : 17220/0010

#### Equitainer tube style

Complete with tube-style isothermalizer, to fit two 50 ml tubes, 6 x 50 ml tubes and 2 coolant cans

REF. : 17220/0015

REF. : 17221/0130

#### **Accessories**

Thermo bag (2)

Coolant can (1) REF. : 17221/0120

Isothermalizer cup style (3) for 240 ml cup REF. : 17220/0011

Isothermalizer tube style (4)

for two 50 ml tubes REF. : 17220/0016

Inner plastic cup (5), 240 ml, graduated, with lid REF. : 17221/0240

50 ml tubes (6) REF. : 17220/0017

## ..... Neopor transport box

Minitube transport box, made of highly insulating Neopor, complete with two ice-packs, two syringes (20 ml) and outer shipping carton, holding optimal temperature for appr. 45 hours

REF. : 17229/0002



## **Universal pipettes:**

#### **Your benefits**

- Suitable for liquid and frozen-thawed semen in straws
- Smooth round tip for gentle introduction
- · Flexible shaft facilitates handling
- Precision tooled tip with inner cone for 0.5 ml straws to allow direct position of semen into the uterus and to ensure 100 % semen delivery
- The reload system: if used with the A. I. stylet for 0.5 ml straws, the same pipette can be reloaded with consecutive straws in situ
- Finger handle with adapter to fit syringe and macrotube straw

Length: 57 cm

5/package	REF.	: 17209/0005
1/package, sterilised	REF.	: 17209/0001

**Long pipette** with very flexible shaft for deep intrauterine insemination.

Length: 65 cm

zengen os em		
5/package	REF.	: 17209/1165
1/package, sterilised	REF.	: 17209/1265
Length: 75 cm		
5/package	REF.	: 17209/1175
1/package, sterilised	REF.	: 17209/1275

## Deep intrauterine insemination pipette with inner catheter

For deep intrauterine insemination with small volumes of liquid semen, if straws can not be used. The pipette is provided with an inner catheter to reduce the volume of the channel where the semen has to pass through.

Length: 65 cm

1/package, sterilised

5/package	REF.	: 17207/1165
1/package, sterilised	REF.	: 17207/1265
Length: 75 cm		
5/package	REF.	: 17207/1175





REF. : 17207/1275

## ..... Deep intrauterine kit

includes deep intrauterine universal pipette with inner catheter, 5 ml syringe, supersensitive glove, sterilised.

 Length: 65 cm
 REF.
 : 17207/2065

 Length: 75 cm
 REF.
 : 17207/2075

## ......Stylet for insemination of frozen semen

With Universal Pipette plus stylet, semen in 0.5 ml straws is directly placed into the uterus, ensuring 100 % semen delivery. The stylet is made of stainless steel and is provided with 2 knobs to pull out empty straws, thus the same pipette can be reloaded several times.

#### Stylet for pipettes

Flexible stylet for deep intrauterine or transcervical insemination with 0.5 ml straws and 2 knobs for pulling out empty straws.

Length: 57 cm	REF.	: 17209/1057
Length: 65 cm	REF.	: 17209/1065
Length: 75 cm	REF.	: 17209/1075

## ..... Insemination pipettes for liquid semen

(without illustration)

Length: 60 cm, rounded tip,

<u>25/bag, fits luer syringe</u> **REF.** : **17209/2000** 

With tubing, 1/bag, sterilised REF. : 17209/2210

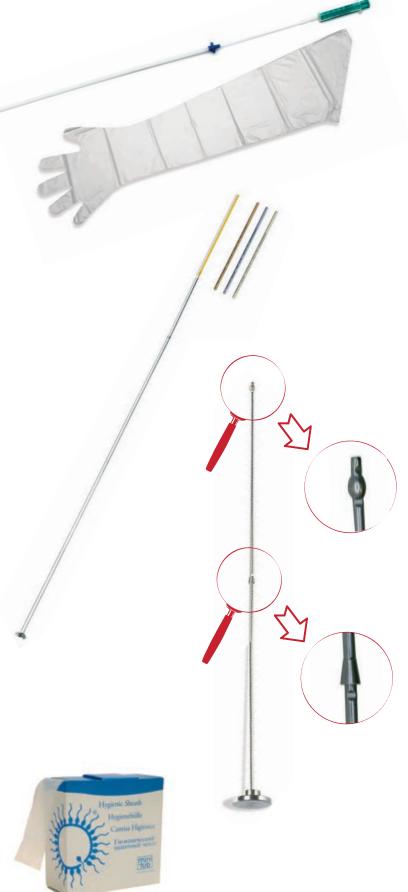
Length: 65 cm, big diameter,

25/bag, fits luer syringe **REF.** : 19290/1105

## ::::::::::::: Hygienic sheath

Disposable sheath to protect ET or Al pipette during uterine passage, length: 62.5 cm (70/roll)

REF. : 17209/5070



#### ..... Uterus culture swab

consists of introduction pipette with pre-perforated cap for sampling without risk of contamination. Predetermined breaking point of the sample-protecting sheath. Includes two closing caps for transport of the swab to the lab. Swab may be inserted directly into AMIES transport medium to avoid dehydration of the sample. Individually packaged and gamma irradiated.

Swab with AMIES transport medium REF. : 17214/2951

Swab without transport medium REF. : 17214/2950



## ::::: Cytology brush

for picking up cells of the uterus of mares to perform cytology smears for immediate evaluation.

REF. : 17214/2960



## ..... Disposable speculum for mares

made of cardboard, inside with reflecting aluminum coating, smooth front edge for gentle introduction, inner diameter: 3 cm, length: approx. 43 cm

REF. : 17210/0000

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

REF. : 17210/0010



**Metal case** with lid and handles for sterilisation and transport of speculum and cervical forceps, 560 x 230 x 120 mm (W x H x D)

Polansky speculum REF. : 17215/0149

**Cervical forceps** according to Götze

 with lamp, 54 cm
 REF.
 : 17212/0055

 without lamp
 REF.
 : 17212/0054

**Biopsy forceps**, 66 cm length (not shown) REF. : 17214/5066



## **Thawing devices**

#### MT 30/54

- Electronic temperature control
- Central, built-in thawing chamber with lift
- Temperature setting:  $+38^{\circ}$ C, also available with 35°C, 37°C and 50°C
- LEDs for indicating the activation of heating cycle and temperature
- Accuracy: ±0.2°C
- Power supply: 12 V DC (car battery)

REF.: 17044/0038

#### Geysir 70

- Free temperature setting: up to 75°C
- 12 different time settings preprogrammed
- Straw is automatically thrown out after thawing

REF. : 17043/7000

#### **Accessories**

Transformer for thawing device MT

for 12 V/220 V REF.: 17165/1395

Transformer for thawing device Geysir 70 REF. : 17165/1397

## ..... Insemination gloves

Sensitive (1)

green, 5 finger, shoulder length, 100/box REF. : 17080/0015

Super-sensitive (2)

transparent, 100/box REF. : 17080/0050

Single packed,

sterile, 50/package **REF.** : 17080/0250

## **Colostrum refractometer**

Determines the amount of immunoglobulin in the mare calostrom to ensure sufficient supply for the new born foal. Colostrum of good quality should be frozen for emergency use. Only one drop of colostrum is required for testing. No batteries, no consumables, easy handling.

REF. : 24400/0150









## **STERILISATION**

## ::::: Steriliser STERIVAR

Low pressure steriliser for artificial vaginas and accessories, made of stainless steel, double wall with insulation, with pressure safety valve, timer, water drain, protection against overheating and insert grid

## **Technical features**

- Temperature range: up to +100°C
- Pressure: max. 0.02 bar
- Inside dimensions: Ø approx. 750 x 400 mm
- Power supply: 230 V/50 Hz
- Power consumption: 3500 W

REF. : 11050/0015

## **Accessory**

Roller base for STERIVAR REF. : 11051/0000



## **Warming cabinet**

#### for warming and sterilisation.

Temperature range: +30°C to +220°C. 230 V 50/60 Hz

Various sizes available.

(Dimensions inside, W x H x D)

<b>32 I</b> , 400 x 320 x 250 mm, 44 kg	REF. : 14127/	0032
<b>53 I</b> , 400 x 400 x 330 mm, 55 kg	REF. : 14127/	0053
<b>108 l</b> , 560 x 480 x 250 mm, 72 kg	REF. : 14127/	0108
<b>256 I</b> , 640 x 800 x 500 mm, 96 kg	REF. : 14127/	0256



## FILLING & SEALING OF STRAWS



Automatic filling and sealing machine for 0.25 and 0.5 ml straws

#### Your benefits

- Sealing and filling of one straw per cycle
- Capacity of the exchangable hopper: approx. 1300 straws 0.5 ml
- Compact device, low space requirement, integrated vacuum pump and pressure controller; ultrasound generator integrated in external casing, mounting at a distance of up to 2.5 m possible
- Best hygienic and safety conditions due to a closed filling and sealing area
- Also suitable for 0.25 ml straws (very easy exchange)

MPP Uno, complete REF. : 13017/0000

#### **Technical features**

- Capacity: approx. 4000 straws/hour
- No wearing parts. Very fast and easy cleaning
- Machine dimensions: 460 x 320 x 410 mm (W x H x D)
  - + ultrasound generator
- Power supply: 110 V/60 Hz or 230 V/50 Hz



Exchangeable straw hopper	REF. : 13017/0005
Filling nozzle 0.5 ml	REF. : 13017/0017
Suction nozzle 0.5 ml	REF. : 13017/0027
Washer, 5000/bag	REF. : 13021/3001
Filling tubing, 100/bag	REF. : 13021/3800
Semen cone, 200 ml, 100/bag	REF. : 13018/0100



for 0.5 ml straws. The straws are filled and sealed 6 by 6. Safe and hygienic sealing system with beads. The air bubble is created automatically. Output: approx. 2000/hour

REF. : 13133/0133

**Vacuum pump** with adjustable valve

and manometer REF. : 13133/0267

**Loading block** with rack and 10 magazines

for 36 straws each REF. : 13133/0005

#### **Accessories**

Sealing beads, glass (various colours)	REF. : 13400/0xxx
Sealing heads metal	REF : 13400/9900





## PRINTING MACHINE FOR SEMEN STRAWS

## **EasyCoder**

#### Printing of straws without ink

#### Your benefits

- Unmatched neat and clear printing on 0.5 and 0.25 ml straws
- Up to 3 lines with a total of about 200 characters, even on Ministraws
- Printing of barcode signs, logos and specific characters
- Immediately non-abrasive print
- Control via PC by a clear and user-friendly Minitube software
- Sequential numbers can be printed on straws

- Adjustable character fonts and graduations from micro to macro
- Freely eligible number of lines and of printing positions
- Clean and odourless working without ink and solvents
- Easy handling, little maintenance required
- Easy and quick conversion between different straw sizes

EasyCoder printer, complete REF. : 13038/0000

EasyCoder software upgrade REF. : 18800/0001





## **Technical features**

- Thermal transfer printer with automatic straw supply
- Output: 3600 straws per hour
- Windows based Minitube software with data base for storing names and numbers
- Data transfer by serial port or USB adapter (included)
- Individual composition of printing lines possible; different configurations can be stored in memory
- Dimensions (W x H x D): 690 x 370 x 310 mm (PC not included)
- Power supply: 110-230 V AC, 50/60 Hz

#### **Accessories**

#### Color ribbon for straw printer EasyCoder

black	REF. : 13038/0010
gold	REF. : 13038/0012
red	REF. : 13038/0015
silver	REF. : 13038/0017

#### :::::::::: IceCube

**IceCube 145:** 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 x 0.5 ml 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: 570 x 500 x 520 mm (W x H x D), weight: 29 kg

**IceCube 14S with 12"** touch screen monitor and connector kit to be connected to computer and  $LN_2$  pressure container

REF. : 16821/2000

**IceCube 14S** without monitor, with connector kit to be connected to computer and  $LN_2$  pressure container

REF. : 16821/1000



Please ask for Embryo Freezing Equipment for the IceCube!

#### **Accessories**

Roller base for LN <sub>2</sub> pressure container	REF.	: 16501/0204
for IceCube 14S, 60 I	REF.	: 16820/1900
Liquid Nitrogen pressure container		
Spacer for IceCube (not shown)	REF.	: 16821/5018
	· ·	
<b>Handling rack</b> for Icecube 14S (2)	RFF	: 16821/5030
Loading Device	REF.	: 16821/5037
Rack for Icecube 14S (1), for 36 straws	REF.	: 16821/5036

## Larger alternative: IceCube 14M

Capacity: approx. 2300 x 0.5 ml straws

IceCube 14M without monitorREF.: 16820/6000IceCube 14M with touch monitorREF.: 16820/7000



## **Freezing units**

The freezing units are compact and easy to handle. They are made of a styrofoambox of high quality, an inner container out of stainless steel and a floating rack. The stainless steel container is filled with liquid nitrogen. The rack keeps the needed distance between 0.5 ml or 0.25 ml straws during the first down phase, while it floats on liquid nitrogen. After that, the straws get manually immersed into the nitrogen. The freezing units are an easy but robust and effective solution for standard freezing in nitrogen vapour.

#### **Technical details**

- The distance between straws and liquid nitrogen level can be adjusted
- Fits 0.5 ml and 0.25 ml straws
- Low nitrogen consumption
- With high quality styrofoam chest and stainless steel inner box with working tray
- Transportable

For 20 straws REF. : 15043/0636

For 90 straws REF. : 15043/0736





#### **Accessories**

Loading block for 90 straws floating rack (without illustration)

Additional rack for freezing unit for 20 straws REF. : 5015043/0600 for freezing unit for 90 straws REF. : 5015043/0900



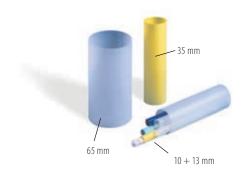
## **Goblets**

Plastic containers for the storage of straws, available in different sizes and colors:

Diameter	Color		
7.1 mm	white	REF.	: 16965/6071
10 mm	white	REF.	: 16912/0133
13 mm	white	REF.	: 16913/0133
13 mm	blue	REF.	: 16913/1133
13 mm	red	REF.	: 16913/3133
13 mm	pistachio	REF.	: 16913/4133
13 mm	yellow	REF.	: 16913/5133
35 mm	white	REF.	: 16935/0135
65 mm	white	REF.	: 16965/0133

Goblet hexagonal for 36 of the 0.5 ml or 80 of the 0.25 ml straws (without illustration)

white	REF.	: 16970/0036
green	REF.	: 16970/0136



## 

In many different colors.

## ..... Macrotubes

Volume: 2.5 ml, length: 140 mm	REF. : 13441/013	3
Volume: 4 ml, length: 240 mm	REF. : 13441/024	0
Volume: 5 ml, length: 280 mm	REF. : 13441/028	0

Sealing balls for macrotubes: Metal or glass, in many different colors available.

Straws can also be delivered preprinted. Please ask for the Minitube printing service!





### ..... Cryogenic containers for storage

**MVE storage container ET20**, 6 canisters, 279 x 41,9 mm, capacity: 20.5 l liquid nitrogen, 1758 0.5 ml semen straws; normal working-duration: 111 days; neck opening: 55 mm, total height: 652 mm, weight (full): 28.3 kg

REF. : 16503/2056

**MVE storage container ET35**, 6 canisters, 279 x 37 mm, capacity: 36 l liquid nitrogen, approx. 1464 0.5 ml semen straws; normal working-duration: 182 days; neck opening: 55 mm, total height: 657 mm, weight (full): 44.0 kg

REF. : 16503/3606

**MVE storage container ET40-10**, 10 canisters, 279 x 70 mm, capacity: 37,8 l liquid nitrogen, approx. 10000 0.5 ml semen straws; normal working-duration: 59 days; neck opening: 127 mm, total height: 668 mm, weight (full): 47.4 kg

REF. : 16502/3710



## ::::: One-Way-Shipper 3.0

Single use shipper; ensures a safe shipment of temperature-sensitive semen doses. IATA conform.

Static holding time: 4 days Capacity: 200 x 0,25/100 x 0.5 ml straws, 3 liter Weight: 4,5 kg

REF. : 16502/0003

## **Wapor shipper**

**SC 4/2**, 1 canister, 278 x 67 mm, capacity: 3.6 l liquid nitrogen, approx. 880 x 0.5 ml semen straws or 90 macrotubes, static holding time: 14 days, neck opening: 70 mm, total height: 468 mm, weight (full): 8.1 kg, IATA conform

REF. : 16504/2001

**SC 4/3**, 1 canister, 278 x 46 mm, capacity: 4.3 l liquid nitrogen, approx. 420 x 0.5 ml semen straws or 30 macrotubes, static holding time: 21 days, neck opening: 51 mm, total height: 492 mm, weight (full): 9.3 kg, IATA conform

REF. : 16504/3001

Protecting shipping container for Vapor Shipper,

made of plastic, IATA conform REF. : 16504/3010



MVEsc 4/2

## **Embryo flushing catheters for mares**

**Made of silicone**, CH 28, length approx. 90 cm, autoclavable, 100 ml balloon, sterilised

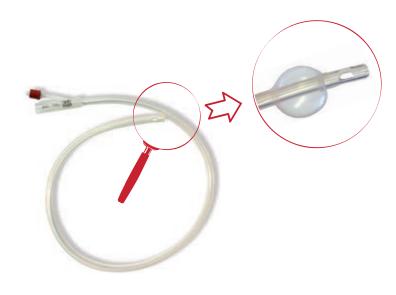
REF. : 19009/0027

Made of silicone, CH 32, length approx. 90 cm, autoclavable, 100 ml balloon, sterilised

REF. : 19009/0032

**Made of silicone**, CH 36, length approx. 90 cm, autoclavable, 100 ml balloon, sterilised

REF. : 19009/0036



## ..... Flushing tubing

Disposable Y-junction tubing with clamps, to be used in combination with any catheter and inline filter, sterilised (gamma irradiated), 1/bag, tubing made of very smooth and flexible material, end for filter connection without extra adapter

High flow Y-junction tubing (1) REF. : 19009/0040

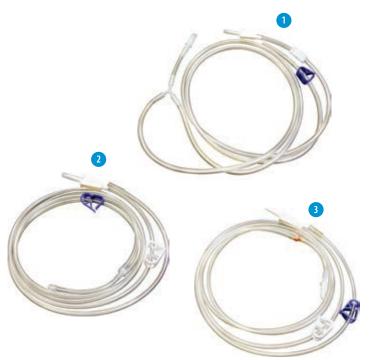
#### Standard Y-junction tubing:

 Luer end (2)
 REF.
 : 19011/0100

 Foley end (3)
 REF.
 : 19011/0200

**Luer adapter** for CH 28-38 catheters

and for foley catheters REF. : 19009/1238



#### **EmSafe filter**

#### Your benefits

- · All-in-one filter and search dish
- Angled filter mesh, assuring smooth flow-through
- Filter mesh cannot get dry as it remains in contact with fluid
- Secure fixation of the lid during collection and easy to open after collection
- Air vent of the lid secured by filter
- Integrated search dish facilitates evaluation of the embryo in the EmSafe
- Cup holds a minimum of 60 ml of fluid level
- Transparent cup allows to find bigger embryos without microscope
- Excess fluid is controlled and removed through outlet tubing with attached thumb clamp

**EmSafe filter** for embryo recovery with integrated petri dish with grid, mesh size  $65~\mu$ , sterilised

REF. : 19010/6000



## ····· Media for flushing and holding

#### EquiFlush

Ready for use, contains buffers, BSA or PVA and antibiotic

 With BSA, 2 liters
 REF.
 : 19982/6202

 With PVA, 2 liters
 REF.
 : 19982/6212

#### EquiHold

Applicable for

- holding embryos at room temperature in ambient conditions
- transporting embryos
- washing and rinsing embryos
- loading embryos for transfer to recipient animal

Contains buffers, glucose, pyruvate, BSA, amino acids, growth factors and antibiotic

3 x 5 ml vials REF. : 19982/6250



#### **Equine VIT-Kit**

Vitrification is a proven method for cryopreservation of Equine embryos. The VIT-Kit for equine embryos contains everything needed for vitrification of three equine embryos: Equilibration Medium (3 x VS1, 3 x VS2, 3 x VS3), 3 x Diluent, 1 x Syringe 1 ml, 3 x Pipette tip, 4 x 5-well dish, 10 x 0.25 ml sterile straws, 10 x 0.5 ml sterile straws, 3 x IDSticks, 1 x 10 mm goblet cane, 3 x 10 mm goblets

REF. : 19982/6251

## ::::: Handling of embryos

**Micropipettor**, for handling of embryos. Easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml

 Type A
 REF.
 : 19022/0000

 Type B
 REF.
 : 19022/0002

Glass capillary tube, 250/package

 10 μl
 REF.
 : 19022/0010

 20 μl
 REF.
 : 19022/0020

 50 μl
 REF.
 : 19022/0050

Steripette for embryo handling, 55 mm length, sterilised,

50/package REF. : 19025/0050

Disposable syringe 1 ml luer end,

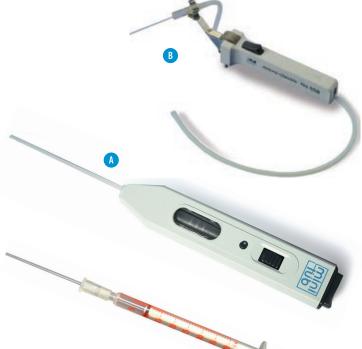
sterilised REF.: 19025/0000

**Embryo culture dish** with lid, sterilised, 5 wells, rounded well edges, shallow wells for easy handling, 4/bag (not shown)

REF. : 19021/0001







### **Stereo microscope**

**Magnification 10x to 70x**, eye-pieces 10x, LED light source, light-/dark-field mirror, transmitted light illumination

REF. : 12014/0000

#### **Accessories**

Heating stage for stereo microscope,

180 x 180 mm REF. : 12055/0003

Control unit HT 50, for heating stage,

adjustable temperature, digital display REF. : 12055/0050



## **Embryo transfer with 0.5 ml straws**

**Sheath for equine embryo transfer**, front end opening, individually packaged, 10/package, sterilised

REF. : 19290/1050

**Sheath for equine embryo transfer**, side openings, individually packaged, 10/package, sterilised

REF. : 19290/1060

Finger support and ring, for use with sheath

for equine ET and Al stylet 17209/1065 **REF.** : 19290/1048

**Equine embryo transfer pipette**, metal tip with side opening, flexible, 1/package, disposable, sterilised, use with Al stylet 17209/1065

REF. : 19290/1065

**Inner catheter** for equine embryo transfer pipette, to flush embryo into the uterus with approx. 2 ml volume, no need to load it into a straw (not shown)

REF. : 19290/1066



## **Stainless steel ET instrument**

**Sterilisable transfer instrument** for 0.5 ml straws, 1 side outlet, length 55 cm, screw-off tip

REF. : 19290/0000

## **Embryo transfer with 0.25 ml straws**

Deep intrauterine ET/AI set

with finger support, stylet, fixation rings REF. : 17015/0100

**Sheath for equine ET/Al**, 0.25 ml straws, side opening, for usage with stylet 17015/0100, sterile, individually packaged, 10/bag

REF. : 17015/0660



## ::::: Embryo transfer > day 8

ET/Al Pipette, rounded ends, use with syringe, sterilised, 1/bag

REF. : 19290/1101

#### **Straws**

0.5 ml straw, clear, gamma irradiated

with ID rod seal, 10/package	REF. : 19043/00XX
without seal, 10/package	REF. : 19043/1010
length 90 mm, 10/package	REF. : 19044/9110

0.25 ml straw, clear, gamma irradiated

with ID rod seal in many bright colors, 10/package	REF.	: 19040/00XX
with sealing ball, 10/package	REF.	: 19041/0010
without seal, 10/package	REF.	: 19042/0010



## ..... Hygienic sheath

**Disposable sheath** to protect ET or AI pipette during uterine passage, length: 62.5 cm (70/roll)

REF. : 17209/5070

You are interested in freezing of embryos, OPU, micro-manipulation and ICSI? Please ask our specialists!







