



## OVINE SEMEN SEXING AGENT- FEMALE

PRODUCT: SHEEPPLUS-10    PRODUCT #: SP10-01    QTY: 10 UNITS

### INDICATIONS

For increasing the percentage of FEMALE lambs in ovine species.

### DOSAGE

- Each vial contains 10 units of sexing agent and will treat a total of 2.5 ml of extended semen. One unit will sex 0.25 ml of semen.
- Recommended insemination dose: 0.25 ml or 0.5 ml
- Recommended dilution: 2.5 ml of extended semen
- Recommended extension titer: 100-200 million live sperm/ml
- Recommended insemination titer : 50 million live sperm/ AI dose

### NOTICE

SHEEPPLUS is a non-prescription biopharmaceutical agent. Federal law (US) does not require that this product be used by or on the order of a licensed veterinarian. This is not a restricted drug. Please consult local regulations.

### DESCRIPTION

SHEEPPLUS is spermagenic agent for sexing of ovine semen. Packaged in kit form, each vial is lyophilized and sealed to maintain potency during storage. The agent is activated by the addition of extender directly to the SHEEPPLUS vial. After a short incubation in the SHEEPPLUS, the sexed semen is ready for cervical or laparoscopic artificial insemination (LAI).

### MODE OF ACTION

SHEEPPLUS works by enhancing the fertility of the X-chromosome bearing (female) sperm and reducing the fertility of the Y-chromosome bearing (male) sperm. When inseminated near the time of ovulation, more ova are fertilized by the X-chromosome bearing (male) sperm. The FEMALE SEX RATIO is increased to 70-80% and conception is boosted 5-25%.

### LIQUID SEMEN – PREPARATION

- Collect ram and determine semen parameters.
- Dilute the appropriate volume of raw semen using a standard OVINE semen extender. See recommended extension rates.
- Equilibrate both the extended semen and the SHEEPPLUS vial to 38°C (100.4°F) for 5 minutes.
- Add 2.5 ml of warm extended semen directly to the SHEEPPLUS vial. Reseal the vial and gently mix.
- Incubate for 5 minutes at 37-38°C (99-100°F).
- Load straws as usual and use immediately. See Table 1.

NOTICE: Sexed LIQUID semen must be inseminated within 30 minutes of mixing with SHEEPPLUS. Discard any unused semen after the 30 minute time-frame.

### FREEZING SEMEN – PREPARATION

- Collect ram and determine semen parameters.
- Prepare and warm ram semen extender (7% glycerol) to 28-32°C. One-step TRIS-CITRATE based extenders are recommended.
- Extend semen by slow addition of warm extender to 80% final volume and allow to equilibrate to 28-32°C (82-90°F). See recommended extension rates.
- Cool extended semen to 5°C (42°F) over a period of 2 hours and allow to equilibrate for at least 4 hours prior to freezing.
- Towards the end of the equilibration, re-hydrate the SHEEPPLUS with 0.5 ml of cooled extender (5°C, 42°F). See Table 1.
- At 5°C (42°F), slowly add the 0.5 ml of SHEEPPLUS to the extended semen. This will bring the extension to 100% final volume. Gently mix. See Table 1.
- Equilibrate at 5°C (42°F) for an additional 15 minutes before freezing.
- Load and seal straws as usual. Freeze following standard procedure.

NOTICE: FROZEN-THAWED sexed semen must be inseminated within 30 minutes of thawing.

Table 1 - Preparation of 2.5 ml of sexed semen\*

Straw volume (ml)	No. of straws	SHEEPPLUS	Extended Semen	SHEEPPLUS SEMEN
0.25	10	0.5 ml	2.0 ml	2.5 ml
0.50	5	0.5 ml	2.0 ml	2.5 ml

- \*Final concentration of 50 x 10<sup>6</sup> live sperm/straw (pre-freeze)

### RECOMMENDED SEMEN EXTENSION

- **0.25 ml straws:** 10 straws x 50 million live sperm/straw (pre-freeze) / 10 straws x 0.25 ml/straw] = 500 million live sperm/2.5 ml of extended semen = 200 million live sperm/ml.
- **0.50 ml straws:** 5 straws x 50 million live sperm/straw (pre-freeze) / 10 straws x 0.50 ml/straw] = 250 million live sperm/2.5 ml of extended semen = 100 million live sperm/ml.

### THAWING OF SEXED SEMEN

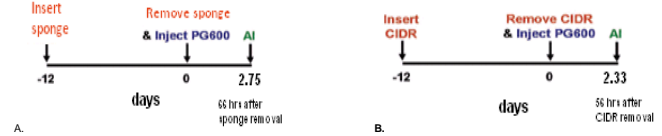
- Thaw at 35-38°C for 5 minutes and inseminate according to the recommendations below. NOTICE: FROZEN-THAWED sexed semen must be inseminated within 30 minutes of thawing.

### TIMING OF INSEMINATION

Variations in synchronization protocols, superovulation regimens and breed differences will give rise to variations in the time of onset of heat and time of ovulation. These variances are important when using fixed-time breeding. For fixed-timed inseminations, please consult the following recommendations. In general, apply SHEEPPLUS 4-6 hours prior to ovulation. Ovulation occurs 24-27 hours after onset of heat or 65 hours after sponge removal.

1. Synchronized with progestin implant (CIDR<sup>®</sup>) + PMSG (PG 600<sup>®</sup>, Folligon<sup>®</sup>) or FSH: Fixed-timed inseminations: Breed 56 hours after progestin withdrawal. See Fig. 1A
2. Synchronized with progestin implant (pessary sponge) + PMSG (PG 600<sup>®</sup>, Folligon<sup>®</sup>) or FSH: Fixed-timed inseminations: Breed 66 hours after progestin withdrawal. See Fig. 1B.
3. Synchronized heats and natural heats: Estrus detection: Breed 32 hours after marking by vasectomized male.

Fig. 1. Fixed-timed estrus synchronization protocols for sheep.



### STORAGE CONDITIONS

Store product in the freezer (-15-20°C). Keep desiccated and in the dark. Avoid moisture and strong sunlight. Do not reuse or store after dilution.

### HOW SUPPLIED

SHEEPPLUS is lyophilized in the following package sizes: 0.25 ml, 0.5 ml, 10 and 20 unit vials.

### WARNINGS

KEEP OUT OF REACH OF CHILDREN

Manufactured by:

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