

DRUGS USED OR KEPT ON STANDBY FOR POSSIBLE USE DURING TEAT AND UDDER SURGERY (STANDING SEDATION)

Drug Used	Concentration	Dosage	Volume to be Administered (w*d/c)	Reason for utilizing drug	Withdrawal Period of Drug	Comments
Xylazine	20mg/ml or 2%	0.025mg/kg	0.5ml IM	To achieve standing sedation	14 days from meat	Drug is an alpha-2 agonist which causes respiratory depression so care must be taken when administering.
Flunixin Meglumine	50mg/ml or 5%	1.1mg/kg	8.8 ml IV	Utilized for its analgesic properties	4 days from meat	
Lidocaine	20mg/ml or 2%	5mg/ml	100.00 ml (This volume would not be used but is the maximum volume that can be used to achieve half the toxic dose to this animal)	To achieve local anaesthesia at the site of the procedure.	24hrs from meat.	The calculated volume is not needed for nerve blocks or blocking the teat. Small volumes of 5-6ml can be used in a ring/v-block for teat analgesia.
Penn strep - Procaine benzylpenicillin + Dihydrostreptomycin sulphate.	200 000 IU/ml	20 000 IU/kg	40ml	Antibiotic drug therapy	30 days from meat.	Used as a prophylactic to prevent infection after the procedure.
Tolazoline	100mg/ml	0.05mg/ml	0.2ml	Reversal agent for alpha-2 agonists		In the case a large dose of Alpha-2-Agonist must be used, tolazoline can be used to antagonise the agonist resulting in alleviated respiratory depression.

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Atropine	150mg/ml	6mg/kg	16ml	Kept on standby if the heart needs assistance in returning to a normal manner of beating.	-	-
Epinephrine	10mg/ml	0.02mg/kg	0.8ml	Kept on standby in the occurrence of an anaphylactic reaction.	-	-

Consider the following sample calculation for finding volume of drug administered for a 400kg animal.
Using Xylazine @ a concentration of 20mg/ml and dosage of 0.025mg/kg:

$$\text{Volume of Xylazine Needed} = \frac{(\text{Weight of the animal} * \text{Dose of Xylazine Needed})}{\text{Concentration of Xylazine}}$$

$$\text{Volume of Xylazine Needed} = \frac{(400 \text{ kg} * 0.025\text{mg/kg})}{20\text{mg/ml}}$$

Volume of Xylazine Needed = 0.5ml of 20mg/ml Xylazine.