


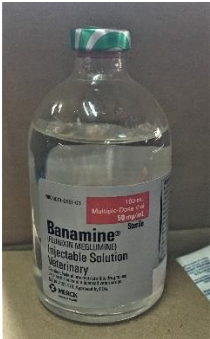



| Drug | Conc. | Dose | Calculations | Route of admin. | Withdrawal time | Contraindications |
|--|----------|------------|---|-----------------|--------------------------------|--|
| 2% Xylazine  | 20 mg/ml | 0.025mg/kg | $\begin{aligned} \text{Volume} &= \frac{0.025 * 150}{20} \\ &= 0.19\text{ml} \end{aligned}$ | IM | 14 days meat 48 hrs milk | <ul style="list-style-type: none"> -Do not use in animals receiving epinephrine or having active ventricular arrhythmias -Do not use in the last trimester of cattle pregnancy -Do not give to ruminants that are debilitated, dehydrated or have a urinary obstruction |
| 10% Ketamine  | 100mg/ml | 0.05mg/kg | $\begin{aligned} \text{Volume} &= \frac{0.05 * 150}{100} \\ &= 0.08\text{ml} \end{aligned}$ | IM | 3 days meat and milk | <ul style="list-style-type: none"> -Not for use in animals with prior hypersensitivity reactions, hypertension, severe cardiac, hepatic or regional impairment, head trauma, seizure disorders, glaucoma or head injuries |

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|---|----------|------------------------------------|---|-----------------|----------------------------|--|
| 2% Lidocaine (local anesthetic)  | 20 mg/ml | 10ml per site, toxic dose= 10mg/kg | $\frac{1}{2} \text{ toxic dose}$ $= \frac{5 * 150}{20} = 37.5 \text{ ml}$ | SC | 1 day meat and milk | Not for use in animals with prior hypersensitivity reactions |
| Flunixin meglumine (post-op analgesic)  | 50 mg/ml | 1.1mg/kg | Volume $= \frac{1.1 * 150}{50}$ $= 3.3 \text{ ml}$ | IV | 4 days meat, 36 hours milk | Do not use in cattle who have shown prior hypersensitivity reactions |

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|---|---------------|---------------------------------|---|-----------------|----------------------------|--|
| Penicillin-streptomycin (antibiotics)  | 200,000 IU/ml | 20,000 IU/kg | $\begin{aligned} \text{Volume} &= \frac{20,000 * 150}{200,000} \\ &= 15\text{ml} \end{aligned}$ | IM | 30 days meat, 10 days milk | -Do not use in animals hypersensitive to it, nor those with renal insufficiency |
| Epinephrine (for anaphylactic reactions) | 1mg/ml | 0.02mg/kg | $\begin{aligned} \text{Volume} &= \frac{0.02 * 150}{1} \\ &= 3\text{ml} \end{aligned}$ | IV | - | Not for use in animals with narrow angle glaucoma, hypersensitivity to epinephrine, shock due to non-anaphylactoid causes, general anesthesia with halogenated hydrocarbons, during labour, dilated cardiomyopathy or coronary insufficiency |
| Tolazoline (Xylazine reversal) | 100 mg/ml | 4 times xylazine dose =0.1mg/kg | $\begin{aligned} \text{Volume} &= \frac{0.1 * 150}{100} \\ &= 0.15\text{ ml} \end{aligned}$ | IV | - | -Do not use in animals hypersensitive to it |
| Atropine (for bradycardia < 30 bpm) | 0.54 mg/ml | 0.04 mg/kg | $\begin{aligned} \text{Volume} &= \frac{0.04 * 150}{0.54} \\ &= 11.1\text{ml} \end{aligned}$ | IV | 14 days meat, 3 days milk | -Do not use in animals with narrow angle glaucoma, tachycardia, ileus, urinary obstruction |

*Ketamine and Xylazine were used in conjunction to produce a modified ketamine stun. This enabled the calf to remain standing during the procedure, thereby reducing any injuries due to casting, or recumbency (such as regurgitation and aspiration of rumen contents).

*Lidocaine was used as a local anesthetic, in order to reduce the sensation of the inevitable pain the dehorning would have caused.

*Banamine and Combikel were administered for post-op purposes. Combikel would help reduce bacterial contamination, and Banamine has an analgesic effect that would act up to 24 hours, long after the lidocaine effects have worn off.

*All drugs in red indicate emergency drugs, and they should all be administered IV.