|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Drug** | **Dose Rate (mg/kg)** | **Concentration (mg/ml)** | **Volume (ml)** | **Indications for use** | **Withdrawal Time** | **Volume Calculations =** $\frac{Dose × Weight}{Concentration}$ |
| **Lidocaine** (Local anaesthetic) | 1.0 | 20 | 7.5 | Induce loss of sensation | Meat – 1 dayMilk – 24 hrs | $\frac{1 × 150}{20}$ = 7.5 ml |
| (Intra-Spermatic Cord Block) | 3 |  |
| Subcutaneous block of testicular region | 2 |  |
| Intratesticular block | 5 |  |
| **Lidocaine** (Caudal Epidural) | 0.2 | 20 | 1.5 | Induce loss of sensation in parts of the caudal region | No WDT | $\frac{0.2 × 150}{20}$ = 1.5 ml |
| **Xylazine** (Sedative/Anaesthetic Induction) | 0.05 | 20 | 0.375 | Induction of general loss of consciousness and sensation | Meat – 14 daysMilk - 48 hrs | $\frac{0.05 × 150}{20} $= 0.375ml |
| **Xylazine** (Sedative/Anaesthetic Maintenance) | 0.19 | Maintenance of general loss of consciousness and sensation | ½ of Xylazine induction dose = 0.1875 = 0.19 ml |
| **Ketamine** (Sedative/Analgesic Induction) | 0.5 | 100 | 0.75 | Induction of general loss of sensation | Meat – 2 daysMilk – 3 days | $\frac{0.5 × 150}{100}$ = 0.75 ml |
| **Ketamine** (Sedative/Analgesic Maintenance) | 0.38 | Maintenance of general loss of sensation | ½ of Ketamine induction dose = 0.375 = 0.38 ml |
| **Flunixin** (Analgesic Pre-Op) | 1.1 | 50 | 3.3 | Pre-emptive analgesia | Meat - 4 days | $\frac{1.1 × 150}{50}$ = 3.3 ml |
| **Flunixin** (Analgesic Post-Op Care) | 2.2 | 50 | 6.6 | Post-op analgesia for 3 days | $\frac{2.2 × 150}{50}$ = 6.6 ml |
| **Penstrep** (Antibiotic) | 20,000 IU/kg | 200,000 IU/kg | 15 | Antibiotic | 30 days | $\frac{20,000 × 150}{200,000}$ = 15 ml |
| **Ivermectin** (Antiparasitic) | 0.2 | 10 | 3 | Antiparasitic | 28 days | $\frac{0.2 × 150}{10}$ = 3 ml |
| **Epinephrine** | 0.02 | 1 | 3 | Anaphylactic reactions | No WDT | $\frac{0.02 × 150}{1}$ = 3 ml |
| **Atropine** | 0.04 | 0.54 | 11.11 | If bradycardia, <30 bpm, occurs | Meat - 14 daysMilk – 3 days | $\frac{0.04 × 150}{0.54}$ = 11.11 ml |
| **Tolazoline** | 0.1 | 100 | 0.15 | Xylazine reversal | No WDT | $\frac{0.1 × 150}{100}$ = 0.15 ml |