The weight of this animal was estimated to be around 450kg

Drug vol. = 𝑤𝑒𝑖𝑔ℎ𝑡 (𝑘𝑔) 𝑥 𝑑𝑜𝑠𝑒 (𝑚𝑔/𝑘𝑔) = ml

𝑐𝑜𝑛𝑐𝑒𝑛𝑡𝑟𝑎𝑡𝑖𝑜𝑛 (𝑚𝑔/𝑚𝑙)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Drug | Uses  | Contraindications | AdverseEffects | WDT | Concentration and Dose | Calculations |
| Xylazine | It is an Alpha-2-Adrenoceptor stimulant that results in sedation, muscle relaxation and analgesia | This drug should not be used in: - animals with cardiac and respiratory distress. -animals with renal or hepatic-animals suffering from hypotension- cows in the last trimester of pregnancy-cows receiving ovum implants- ruminants that are debilitated, dehydrated or have a urinary tract infection.When given the animal should remain in sternal recumbency to avoid bloat.  | SweatingPiloerectionTremorsRuminal TympanyHypersalivationDiuresisPenile ProlapseHypothermiaRegurgitationAtaxiaPremature Parturition | Meat:1 daysMilk: 0 days | Dose : 0.05mg/kgConc- 20mg/ml | 450𝑘𝑔 𝑥 0.05𝑚𝑔/𝑘𝑔 20𝑚𝑔/𝑚𝑙 =1.125 mls |
| Ketamine | This drugs is used for general anesthesia during surgery.It is an induction agent. | Should not be used in patients with significant hypertension, heart failure and/or aterial aneurysms as it can be dangerous. This drug should not be used alone as it does not cause muscle relaxation. | Inability to move rigid muscles, increase in body temperature, rapid heartrate, convulsions and coma.  | Meat: 3 daysMilk - 48 hours  | Conc- 100mg/mlDose: 2mg/kg | 450𝑘𝑔 𝑥 2𝑚𝑔/𝑘𝑔 100𝑚𝑔/𝑚𝑙 =2.25 mls |
| Lidocaine | This drug : -Can block the conduction of nerve fibres resulting in muscle paralysis and loss of sensation- it can also block the conduction pathways in the myocardial cells- used for topical, infiltration, intravenous, regional and conduction anesthesia.- used in extradural and spinal injections- it can decrease the rate of ventricular firing, the action potential duration, the absolute refractory period and will increased the relative refractory period. | If it is being used in conjunction with Epinephrine,Do not use in:-Intra-articular administration -Epidural administration- Intradigital administration-Intravenous administration-Treatment of ventricular arrhythmias - Cardiac and Hepatic insufficiency | .Overdose-Convulsions followed by CNS depression | Meat - 28daysMilk - 15days | Concentration - 20mg/mlDose-1.0mg/kg | 450𝑘𝑔 𝑥 1.0𝑚𝑔/𝑘𝑔 20𝑚𝑔/𝑚𝑙 =22.5 mlsToxic = 450𝑘𝑔 𝑥 10𝑚𝑔/𝑘𝑔 20𝑚𝑔/𝑚𝑙 =225ml (for subconjunctival injections no more than 1 ml should be given) |
| Tolazoline | This drug is a sedative antagonist, it is an Alpha-adrenoceptor blocking drug, it reverses the effects of xylazine.How does it do this?Xylazine is a Alpha-2-adrenoceptor, since Tolazoline blocks these alpha adrenoceptors it will displace xylazine | Do not use in animals showing signs of stress, Debilitation, cardiac disease, hypovolemia or shock.  | Causes gastrointestinal disturbances, tachycardia and mild hypertension | Meat - 96 hours Milk - 48 hours | Conc - 20mg/mlDose- 0.1mg/kg | 450𝑘𝑔 𝑥 0.1𝑚𝑔/𝑘𝑔 20𝑚𝑔/𝑚𝑙 =2.25 mls |
| Flunixin Meglumine | This is an NSAID that for is used for the treatment of fever and inflammation associated with bovine respiratory disease and acute mastitis | Should not used in cows with hypersensitivity reactions. IM route should only be used when IV route is not available since using IM can cause tissue reactions/ irritations.  | Can cause anaphylactic reaction, gastrointestinal irritation, ulceration, vomiting. | 12-48 hours for milk cows and 5-14 days for beef | Dose : 2.2 mg/kg Conc: 50 mg/ml | 450𝑘𝑔 𝑥 2.2𝑚𝑔/𝑘𝑔 50𝑚𝑔/𝑚𝑙 =19.8 mls |
| Atropine | This drug can act as a pre-anaesthetic to either reduce or prevent secretions from the respiratory tract. (Treat the effects of Xylazine)Also treats sinus bradycardia.  | Do not use in* patients with glaucoma, myocardia
* ischemia
* has a hypersensitivity to anticholinergic drugs, severe ulcerative colitis, obstructive uropathy.
 | Adverse effects include: -dry mouth-dysphagia-constipation-urinary retention-drowsiness-ataxia-respiratory depression-seizures  | Meat - 14 days Milk - None | Concentration - 0.54mg/mlDose: 0.04mg/kg | 450𝑘𝑔 𝑥 0.04𝑚𝑔/𝑘𝑔 0.54𝑚𝑔/𝑚𝑙 =33.33 mls |
| Epinephrine | Treat anaphylactic reactions | Hypersensitivity to epinephrine, narrow closed glaucoma, during general anesthesia with halothane | Anxiety, tremor, excitability, arrythmias, vomiting | None | Dose: 0.02mg/kgConc: 1 mg/ml | 450𝑘𝑔 𝑥 0.02𝑚𝑔/𝑘𝑔 1𝑚𝑔/𝑚𝑙 =9 mls |
| Tetanus  | Recommended for use in immunocompromised animals (eg goats) or those who have suffered wounds that may or may not been contaminated with soil | Do not use in animals with history of hypersensitivity reactions | Can cause anaphylactic shock | Meat: 21 days Milk: 24 hours | Dose rate: 1-2 mg/kg 1500 units SC/IM for prevention | Prevention dosage: 1500 units SC/IM |
| Penstrep- 400 LA | Procaine penicillin G and benzathine penicillin G: bactericidal action against mainly Gram-positive bacteria (eg Clostridium | -Hypersensitivity to penicillins, procaine and aminoglycosides | Hypersensitivity reaction-neurotoxicity, nephrotoxicity-High doses lead to diminished immune systems in swine | Meat: 30 days milk: 5 days kidney: 45 days | IM:1 ml per 10kgNo more than:-20 ml in cattle-10 ml in swine-5 ml in calves sheep and goat per injection site | 450𝑘𝑔 𝑥 20,000𝐼𝑈/𝑘𝑔 200,000𝐼𝑈/𝑚𝑙=45ml |