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 | Adverse  Effects | | | 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. | Sweating  Piloerection  Tremors  Ruminal Tympany  Hypersalivation  Diuresis  Penile Prolapse  Hypothermia  Regurgitation  Ataxia  Premature Parturition | | | Meat:  1 days  Milk:  0 days | Dose : 0.05mg/kg  Conc- 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 days  Milk - 48 hours | Conc- 100mg/ml  Dose: 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 - 28days  Milk - 15days | Concentration - 20mg/ml  Dose-1.0mg/kg | 450𝑘𝑔 𝑥 1.0𝑚𝑔/𝑘𝑔  20𝑚𝑔/𝑚𝑙  =22.5 mls  Toxic = 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/ml  Dose- 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/ml  Dose: 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/kg  Conc: 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 |
| Neomycin  Sterile ointment | Antibiotic ointment or Eye drops | Prolonged administration can cause overgrowth of organism that are not susceptible to neomycin | | Elevation of intraocular pressure with possible development of glaucoma  Infrequent optic nerve damage  Posterior sub capsular cataract formation  Delayed wound healing | | None | Administer 3 - 4 x daily (opthalmic) | Not indicated | |
| 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 10kg  No 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 | |