**Sedatives and Anaesthetic Drugs– CALCULATIONS**

* ***Xylazine***

Dose = 0.05 mg/kg

Concentration = 20 mg/ml

***Cattle***

Weight = 5000 kg

Volume (ml) = (Dose (mg/kg) × Weight (kg)) / Concentration (mg/ml)

= (0.05 mg/kg × 500 kg) / 20 mg/ml

= 1.25 ml ≈ 1.3 ml

(Xylazine may be used as a pre-anaesthetic in dogs at a dose of 0.2 – 1 mg/kg IV, IM or SC.)

* ***Lidocaine***

Toxic dose = 10 mg/kg

Concentration = 20 mg/ml

***Cattle:***

Weight = 500 kg

Toxic volume (ml) = (Dose (mg/kg) × Weight (kg)) / concentration (mg/ml)

= (10 mg/kg × 500 kg) / 20 mg/ml

= 250 ml

A volume of **250 ml** of Lidocaine (2%) would be toxic to this cow

TABLE 1 SHOWING THE VOLUME OF LIDOCAINE USED TO ENUCLEATE ONE EYE OF CATTLE.

|  |  |
| --- | --- |
| NERVE BLOCK | VOLUME (ml) |
| Peterson’s | 20 |
| Auriculopalpebral | 10 |
| Total | 30 |

A volume of **30 ml** was used to enucleate one eye. This is below the volume of **250 ml** which is considered toxic to this animal.

***Dog:***

Weight = 50 kg

Toxic volume (ml) = (Dose (mg/kg) × Weight (kg)) / concentration (mg/ml)

= (10 mg/kg × 50 kg) / 20 mg/ml

= 25 ml

A volume of **25 ml** of Lidocaine (2%) would be toxic to this dog.

TABLE 1 SHOWING THE VOLUME OF LIDOCAINE USED TO ENUCLEATE ONE EYE OF DOG.

|  |  |
| --- | --- |
| NERVE BLOCK | VOLUME (ml) |
| Peterson’s | 10 |
| Auriculopalpebral | 5 |
| Total | 15 |

A volume of **15 ml** was used to enucleate one eye. This is below the volume of **25 ml** which is considered toxic to this animal.