***Calculations of Drugs for Dehorning/Disbudding***

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| **Drug** | **Dose** | **Concentration** |
| Xylazine | 0.025 mg/kg | 2% |
| Ketamine | 0.05 mg/kg | 10% |
| Lidocaine | 0.2 mg/kg | 2% |
| Tolazoline | 0.05 mg/kg and 0.1 mg/kg | 10% |
| Epinephrine | 0.02 mg/kg | .01% |
| Combikel (pen-strep) | 10000 IU | 200000 IU |
| Flunixin | 1.1 mg/kg | 5% |

Estimated Weight of Animal = 121 kg

Formula -> volume = (weight × dose) / Concentration

* **Toxic dose of lidocaine** = W – 121 KG D = 10 mg/kg C = 2%= 20 mg/ml

V = (121 \* 10) 20 = 60.50 ml

Therefore, half toxic dose is = 30.25 ml

* + Total amt of lidocaine used

10ml at each sight

6ml additional

therefore

Total = 26ml

* **Volume of Xylazine given**

V = (121 \* 0.025)/ 20 = 1.5 ml

* **Volume of ketamine given**

V = (121 \* .05)/100 = 0.06ml approx. 0.1ml

* **Volume of epinephrine**

V = (121\*0.02)/ 1 = 2.24 ml

* **Volume of Tolazoline**

Can be given two time the dose of Xylazine for animal showing signs of mild depressions

Can be given four time the dose of Xylazine for severely depressed animals

For × 2 = (121\*0.05)/100 = 0.06 ml

For × 4 = (121\* 0.1)/10 = 0.12 ml

* **Volume of Combikel**

V = (121 \* 10000) / 200000 = 6.5 ml

* **Volume of Flunixin**

V = (121 \* 1.1)/50 = 2.7 ml