Our calculated dose for Xylazine 20mg/ml is 0.25ml. As no 1ml syringe was available, a 1mg/ml Xylazine solution was made via dilution with 0.9% Saline solution. The following formula was utilized to formulate the dilution:

C1V1 = C2V2

Where,
C1= 20mg/ml

V1= 0.5ml

C2= 1mg/ml

V2= Must be calculated

C1V1 = C2V2

(20mg/ml)(0.5ml) = (1mg/ml)(V2)
V2 = 10ml

From 10ml, 9.5ml saline + 0.5ml 20mg/ml Xylazine.

Using a 1mg/ml Xylazine solution:

Volume of drug needed for Animal = (Weight of Animal \* Dose Needed)

 Concentration

V = (W\*D)/C

V = (100kg\*0.05mg/kg)/(1mg/ml)

V = 5ml of 1mg/ml Xylazine