Answer on Question #54094 – Chemistry – General Chemistry

Question:

9. Rx: Cefuroxime 2 g powder for injection
Add 19.2 diluent (2 g/ 20 ml)
75 mg/kg /day divided q 12 h
Patient weights 45 lb

How many milliliters of active ingredient should you inject into the IV bag?

Answer.

$45\ lb \approx 20.5\ kg$

For 20.5 kg we need $75 \times 20.5 \approx 1538\ mg/day = 1.538\ g/day$.

For every 12 hours it must be $\frac{1.538}{2} = 0.769\ g$.

There are 2g of Cefuroxime in 20 ml of diluent.

So we need $\frac{0.769}{2} \times 20 = 7.69 \approx 7.7\ ml$.

Thus we should inject $7.7\ ml \approx 8\ ml$ of active ingredient into the IV bag.