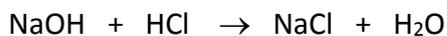# Answer on Question #44673 - Chemistry – Physical Chemistry

4g naoh was added with 20 cc of 2N HCl and was diluted to 1litre. predict nature of resulting soln and find its normality

Solution

$NaOH + HCl \rightarrow NaCl + H_2O$

1 mole   1 mole   1 mole

ν (NaOH) = $\dfrac{4\ g}{40\ g/mole}$ = 0,1 mole

ν (HCl) = $\dfrac{20\ cc \cdot 2\ mole}{1000\ cc}$ = 0,04 mole

This portion of HCl reacts with 0,04 mole of NaOH and gives 0,04 mole of NaCl.

So: 0,1 – 0,04 = 0,06 (mole) of NaOH left.

Total normality: 0,06 mole of NaOH + 0,04 mole of NaCl = 0,01 mole in 1 litre.

Answer: base; 1 N.