

## Answer on Question #51870 - Chemistry – Other

### Question

If 15cm<sup>3</sup> of 10.25M HCl solution is made up to volume in a 500 ml volumetric flask, what will be its new concentration?

0.306M

3.06M

5.13M

0.52M

### Answer:

Number of moles of HCl in the initial solution is:

$$n(\text{HCl}) = C_1V_1 = 10.25 \cdot 0.015 = 0.153 \text{ mol}$$

New molar concentration of the solution is:

$$C_2 = \frac{n}{V_2} = \frac{0.153}{0.5} = 0.306 \text{ M}$$

**Answer:** 0.306 M