

6 ml of X ppm TDS in 1 L of water to achieve TDS of 700-800 ppm

We can use the concept of dilution. The formula for dilution is:

$$C_1 V_1 = C_2 V_2$$

Where:

C_1 = initial concentration of the solution (TDS of X ppm solution)

V_1 = initial volume of the solution (6 ml)

C_2 = final concentration of the solution after dilution (TDS of 700-800 ppm)

V_2 = final volume of the solution after dilution (1 L = 1000 ml)

We want to find the initial concentration C_1 (TDS of X ppm solution).

Given:

$V_1 = 6 \text{ ml}$

$C_2 = 750 \text{ ppm}$ (taking an average of the range 700-800 ppm)

$V_2 = 1000 \text{ ml}$

Using the dilution formula:

$$C_1 \times V_1 = C_2 \times V_2$$

$$C_1 \times 6 = 750 \times 1000$$

$$C_1 = (750 \times 1000) / 6$$

$$C_1 = 125000$$

So, the initial concentration C_1 , or the TDS of the X ppm solution, is 125000 ppm.