A given mass of gass occupies 1000 ml at 0 degree ceisius What volume will the mass of gass occupy at 20degree?

Solution

$$\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2}$$

Since this is isobaric process, so the preasure is constantly.

$$\frac{V_1}{T_1} = \frac{V_2}{T_2}$$

The volume the mass of gas will be

$$V_2 = \frac{V_1 T_2}{T_1}$$

however Celsius to be converted to degrees Kelvin

$$V_2 = \frac{1\text{l}\ 293.15\ \text{K}}{273.15\ \text{K}} = 1.073\,\text{l} = 1073\ \text{ml}$$

Answer: 1073 ml