

Name:

School year:

Group: GM

Date of measurement:

Report

Topic: Calorimetry

Exercise: Measure the thermodynamic parameters of NaCl solution

Device: PARR 6755- solution calorimeter, distilled water, NaCl.

Procedure: According to the instructions.

Measured values and calculations:

Endothermic Reaction

Determine the heat of solution of solid NaCl, when dissolved in distilled water.

NaCl = 1 gram

distilled water = 100 grams

Corrected temperature rise

$\Delta T_C =$ °C (from Fig. 1)

$T(0.63R) =$ °C

Energy equivalent, e = cal/°C

Energy evolved $Q = (\Delta T_C) (e) =$ calories

Enthalpy change $\Delta H_T = \frac{-Q}{m} =$ cal/g

Or, multiplying by the molecular weight of NaCl

$\Delta H_T =$ (cal/g) (g/mol)
= Kcal/mol

1 g of solid NaCl dissolved in 100 g of distilled water

Baseline = °C

$T_f =$ (+) °C

$T_i =$ (°C +)

$\Delta T_C =$ - °C

$T(0.63R) =$ (+) °C = °C

Conclusions and commentary: