

Question #61191, Chemistry / Physical Chemistry

The heat of neutralization of strong acid and a strong alkali is 57 kJ/mol.
what is the heat released when 0.5 mole HNO₃ solution is mixed with 0.2 mole of KOH ?

Solution:

In case if V_1 (HNO₃ sln) = V_2 (KOH sln), then HNO₃ is in excess, we use KOH quantity for the calculations (0.2 mole):



$$57 \times 0.2 = 11.4 \text{ kJ of heat.}$$

That's the water formation heat.

Answer: 11.4 kJ of heat.