Answer on the Question #64610, Chemistry / General chemistry

What are the balanced oxidation and reduction reactions taking place on a zinc nail placed in a solution of white vinegar?

Answer:

The chemical formula of white vinegar is CH₃COOH. When we are placing a zinc nail in a solution of white vinegar a chemical reactions occurs:

$$Zn + 2CH_3COOH = Zn(CH_3COO)_2 + H_2$$

From this equation we can see that oxidation and reduction processes occur, because zinc and hydrogen change their oxidation degree:

 $Zn - 2\bar{e} = Zn^{2+} - oxydation \ process$ $2H^+ + 2\bar{e} = H_2 - reduction \ process$

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