Answer on Question#54729 – Chemistry – Organic chemistry

Question: determination of pH of0.1M 0.05M acetic acid by using quinhydrone calomel electrode

Answer:

The determination of pH by using quinhydrone calomel electrode is carried out by standard procedure [1],[2] and pH is calculated using equation:

$$pH = \frac{E^{o}_{Q/H_2O} - E_{cal} - E}{2.303 \frac{RT}{F}}$$

References:

1. Crowther, E. M. (1927), THE QUINHYDRONE ELECTRODE METHOD OF HYDROGEN ION CONCENTRATION MEASUREMENTS. Journal of the Institute of Brewing, 33: 459–463.
2. Exercise 6 POTENTIOMETRIC MEASUREMENT OF pH – laboratory manual (www.fpharm.uniba.sk)