**Marks
8**

- Solution A consists of a 0.20 M aqueous solution of formic acid, HCOOH, at 25 °C. Calculate the pH of Solution A. The pK_a of HCOOH is 3.75.

Answer:

At 25 °C, 1.00 L of Solution B consists of 13.6 g of sodium formate, NaHCO$_2$, dissolved in water. Calculate the pH of Solution B.

Answer:

Solution B (1.00 L) is poured into Solution A (1.00 L) and allowed to equilibrate at 25 °C to give Solution C. Calculate the pH of Solution C.

Answer:

If you wanted to adjust the pH of Solution C to be exactly equal to 3.00, which component in the mixture would you need to increase in concentration?