Additional questions on acid base titrations

*All of the following questions have not (as yet!) appeared in the NCEA Level 3 Exams*

**1.** A student titrated a 25.00mL sample of a 0.20molL-1 HX (unknown) acid with 0.20 molL-1 NaOH. The following data was collected

|  |  |
| --- | --- |
| volume of base added (mL) | pH |
| 0.00 | 2.72 |
| 10.00 | 4.57 |
| 24.90 | 7.14 |
| 24.99 | 8.14 |
| 25.00 | 8.88 |
| 25.01 | 9.60 |
| 26.00 | 11.59 |
| 35.00 | 12.52 |

**(a)** Describe the acid HX a strong or weak. Support your answer with two observations from the results table

**(b)** Select an appropriate indicator for this titration and identify the colour at the equivalence point

**2.** In a titration, 25.00mL of 0.10 mol L-1 HCl was neutralised by slowly adding 50.00mL of 0.10molL-1 NaOH

**a)** Sketch the titration curve for the reaction and label

- the initial pH of the HCl

- the volume of NaOH required to neutralise the HCl

- the pH at the equivalence point

**b)** select a suitable indicator for this titration

**Reference:** <http://moodle.st-anns.ca/pluginfile.php/1828/mod_resource/content/0/acidwritten.pdf>

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