

Investigation 14.C: Separate an Organic Mixture Answer Key

Answers to Analysis Questions

1. You should find that it is difficult to completely separate the vinegar and cyclohexane with only one attempt. The difference in boiling points of fractions should ideally be greater than 40 °C for easy separation. Therefore, it is likely that at least some water, and possibly ethanoic acid, will appear with the cyclohexane.
2. Complete separation will be unlikely given the closeness of the boiling points.
3. Collection containers were switched when the temperature began to rise quickly.
4. Your answer could include more closely monitoring the temperature. If you have done outside reading, you might also mention using a vacuum apparatus for increased efficiency.

Answer to Conclusion Question

5. You will likely note that the distillation procedure in this case is not as effective as could be desired.