

A student set up an experiment to investigate the relationship between the temperature of an acid and the rate of carbon dioxide production when reacted with a base. In each trial the student timed how long in seconds it took to produce 100 mL of carbon dioxide in a gas syringe. The results are shown below.

Temperature of acid (°C)	Time taken to produce 100 mL of carbon dioxide (s)
30	91
40	65
50	64
60	21

10. Which of the following would improve the reliability of the data produced in this investigation?
- (i) conduct multiple trials for each temperature
 - (ii) change the concentration of the acid
 - (iii) use a range of bases to react with the acid
 - (iv) increase the range of temperatures investigated
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- (a) ii, iii and iv
 - (b) i, ii and iii
 - (c) iii and iv only
 - (d) i and iv only