

Analytical Chemistry

Chapter 2

by

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Chapter Name

by Main Author's Name

<http://ocw.ump.edu.my/course/view.php?id=467>

Activity 4

1. An enzymatic method for determining alcohol in wine is evaluated by comparison with a gas chromatographic (GC) method. The same sample is analysed several times by both methods with the following results. Does the enzymatic method give the same value as the GC method at the 95% confidence level?

Enzymatic method (% ethanol)	GC method (% ethanol)
13.1	13.5
12.7	13.3
12.6	13.0
13.3	12.9
13.3	



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2. The following replicate molarities were obtained when standardizing a solution: 0.1067, 0.1071, 0.1066 and 0.1050. Can one of the results be discarded as due to accidental error at the 95% confidence level?



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3. Copper in an ore sample is at a concentration of about 3% (w/w). How many samples should be analysed to obtain a percent relative standard deviation of 5% in the analytical result at the 95% confidence level, if the sampling precision is 0.15% (w/w)?



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