

Name: _____

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Analytical Chemistry II – Quiz (5th March, 2024)

1) - What is selectivity of analytical method? (1-2 sentences)

- How can we express mathematically the influence of compounds B and C on quantitative analysis of compound A? (1 formula)

Selectivity tells us whether an analytical method can discriminate between the analyte and other species present in the sample. It reveals interferences during analytical measurements.

$$S = m_A C_A + m_B C_B + m_C C_C + S_{bl}$$

$$k_{B,A} = m_B / m_A$$

$$k_{C,A} = m_C / m_A$$

$$S = m_A (C_A + k_{B,A} C_B + k_{C,A} C_C) + S_{bl}$$

2) What are the sources of chemical noise in analytical measurements? List three sources.

- undetected variations of temperature and pressure affecting chemical equilibria
- fluctuations in humidity affecting moisture content of samples
- laboratory fumes that interact with samples/reagents