

Program: Chemistry (15025012071P6)

Course: ADVANCED ANALYTICAL CHEMISTRY

Code: PPGQU0039

Workload: 90 hours

Credits: 06

Syllabus:

Thermodynamic treatment of equilibrium state; Ionic strength of the medium; Activity and activity coefficient; Chemical equilibrium and activity; Acid-base equilibrium and activity; Construction of equilibrium diagrams; Heterogeneous equilibrium and activity; Ionic pair; Effect of the common ion and non-common ion; Construction of heterogenous equilibrium diagrams.

Bibliography:

SCHENK, G. H. Qualitative Analysis and Ionic Equilibrium, Cengage Learning, 1995.

WISMER, R. K. Qualitative Analysis with Ionic Equilibrium, Macmillan, 1991.

BUTLER, J. N. Ionic Equilibrium: Solubility and pH Calculations, John Wiley & Sons, 1998.

BUTLER, J. N. Ionic Equilibrium: A Mathematical Approach, Reading Addison-Wesley, 1964.

LAITINEN, H. A.; HARRIS, W. E. Chemical Analysis: An Advanced Text and Reference, McGraw-Hill, 2009.

CHRISTIAN, G. D. Analytical Chemistry, Wiley, 2003.

SKOOG, D. A.; WEST, D. M.; HOLLER, F. J.; CROUCH, S. R. Fundamentals of Analytical Chemistry, translation of the 9th ed., São Paulo: Cengage Learning, 2018.

FATIBELLO FILHO, O. Ionic Equilibrium: Applications in Analytical Chemistry, 2nd edition; São Carlos: EdUFSCar, 2019.

McBREWSTER, J.; MILLER, F.P.; VANDOME, A.F. Chemical Equilibrium, Alphascript Publishing, 2009.

WRIGHT, M. R. An Introduction to Aqueous Electrolyte Solutions, Wiley, 2007.

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