



PROGRAMS AND BIBLIOGRAPHY

Subject	
Code	Name
QF632	Experimental Physical Chemistry I

Vector
OF:S-2 T:000 P:000 L:006 O:002 D:000 HS:008 SL:006 C:008 AV:N EX:S FM:75%

Pre requisite
QA217 *QF531/ QA282 QF531

Summary
Experiments related to: chemical thermodynamics, kinetics, electrochemistry, phase equilibria and colligative properties.

Program
<p>The experiments are designed to reinforce fundamental concepts from Physical Chemistry and are complementary to the content from the theoretical class. It also introduces new methods, techniques, and equipment to the students. The student is expected to develop and enhance his/her ability to understand phenomena, applying the scientific method and presentation and analysis of experimental results.</p> <p>Themes and Experiments</p> <p>Theme 1. Chemical kinetics and Ionic Mobility</p> <ol style="list-style-type: none">1 – Methylene Blue reduction kinetics2 – Sacarose inversion kinetics3 – Oscillating reaction4 – Conductivity <p>Theme 2. Phase equilibria</p> <ol style="list-style-type: none">1 – Liquid-vapor equilibrium2 – Liquid-liquid equilibrium3 – Phase equilibria in ternary systems4 – Solid-solid phase equilibria5 – Phase equilibria in pilot plant <p>Theme 3. Thermodynamics</p> <ol style="list-style-type: none">1 – Excess Molar Volume2 – Heat capacity of materials3 – Solution enthalpies <p>Theme 4. Chemical Equilibrium and Chemical Potential</p> <ol style="list-style-type: none">1 – Reaction equilibrium2 – Ebuliometry3 – Crioscopia4 – Electrochemistry

Bibliography

It will be given for each experiment.

Evaluation criteria

For grading policy, see: Regimento Geral de Graduação, Seção I – Normas Gerais, Capítulo V – Da Avaliação do Aluno na Disciplina. Students are required to attend 75 % of the lectures. For further details, see: Regimento Geral de Graduação, capítulo VI, seção X, artigo 72.