

LIST OF TABLES

Table No.	Titles	Page No.
4. 1. 1	Experimental Data of Dielectric Constants (ϵ) and corresponding Capacitances (in pF) of Sulphates at 298K.	140
4. 1. 2	Experimental Data of Dielectric Constants (ϵ) and corresponding Capacitances (in pF) of Chlorides at 298K.	141
4. 1. 3	Experimental Data of Dielectric Constants (ϵ) and corresponding Capacitances (in pF) of Nitrates at 298K.	142
4. 1. 4	Theoretical and Experimental Data of Dielectric Constants of Benzene, Methanol, Nitrobenzene And water at different temperatures.	143
4. 2. 1	Parameters of Pitzer's Thermodynamic functions for chosen Sulphates, Chlorides and Nitrates in water at 298K	154
4. 2. 2	Experimental Data of Dielectric Constants(ϵ), calculated activity (γ), osmotic coefficients (ϕ) from Pitzer model for some aqueous Sulphates, Chlorides and Nitrates at 298K.	155-160
4. 2. 3	Calculated slopes of $m^{1/2} \text{ Vs } A_{\phi}$, $m^{1/2} \text{ Vs } -\ln \gamma$ and $m^{1/2} \text{ Vs } (1-\phi)$ for chosen Sulphates, Chlorides and Nitrates with Pitzer model using Experimental Dielectric data.	166
4. 2. 4	Comparison of calculated Activity Coefficients of Sulphates from Pitzer model (γ_P) and Bromley model (γ_B) with the data collected from Robinson and Stokes ($\gamma_{R.S}$) at 298K.	167
4. 2. 5	Comparison of calculated Osmotic Coefficients of Sulphates from Pitzer model (ϕ_P) and Bromley model (ϕ_B) with the data collected from Robinson and Stokes ($\phi_{R.S}$) at 298K.	167
4. 2. 6	Comparison of calculated Activity Coefficients of Chlorides from Pitzer model (γ_P) and Bromley model (γ_B) with the data collected from Robinson and Stokes ($\gamma_{R.S}$) at 298K.	168
4. 2. 7	Comparison of calculated Osmotic Coefficients of Chlorides from Pitzer model (ϕ_P) and Bromley model (ϕ_B) with the data collected from Robinson and Stokes ($\phi_{R.S}$) at 298K.	169

4. 2. 8	Comparison of calculated Activity Coefficients of Nitrates from Pitzer model (γ_P) and Bromley model (γ_B) with the data collected from Robinson and Stokes ($\gamma_{R.S}$) at 298K.	170
4. 2. 9	Comparison of calculated Osmotic Coefficients of Nitrates from Pitzer model (ϕ_P) and Bromley model (ϕ_B) with the data collected from Robinson and Stokes ($\phi_{R.S}$) at 298K.	171
4. 2. 10	Calculated Excess Gibbs Energy (in KJ/mol) values, G^E (in KJ/mol) of chosen aqueous sulphates at 298K	175
4. 2. 11	Calculated Excess Gibbs Energy values, G^E (in KJ/mol) of chosen aqueous Chlorides at 298K	176
4. 2. 12	Calculated Excess Gibbs Energy values, G^E (in KJ/mol) of chosen aqueous Nitrates at 298K	177
4. 3. 1	Ultrasonic velocity data (in m/s) of CuSO_4 for 6 concentrations (gm.mol/lit or M) in 11 compositions of BSM of EG+WATER at different temperatures	190-191
4. 3. 2	Density data (in kg/m^3) of CuSO_4 for 6 concentrations in 11 compositions of BSM of EG+WATER at different temperatures	196-197
4. 3. 3	Intermolecular Free Length data (L_f in mt) of CuSO_4 for 6 concentrations in 11Compositions of BSM of EG+WATER at different temperatures	204-205
4. 3. 4	Acoustic Impedance data (Z in $\text{kgm}^{-2}\text{s}^{-1}$) of CuSO_4 for 6 concentrations in 11 Compositions of BSM of EG+WATER at different temperatures	211-212
4. 3. 5	Adiabatic Compressibility data (β in $\text{kg}^{-1}\text{ms}^2$) of CuSO_4 for 6 concentrations in 11 compositions of BSM of EG+WATER at different temperatures	220-221
4. 3. 6	Apparent Molal Volume data (ϕ_v in m^3/mol) of CuSO_4 for 6 concentrations in 11 compositions of BSM of EG+WATER at different temperatures	233-234
4. 3. 7	Apparent Molal Compressibility data (ϕ_K in m^2/N) of CuSO_4 for 6 concentrations in 11 compositions of BSM of EG+WATER at different temperatures	239-240

4. 3. 8	Relative Association of solution data (R_A) of CuSO_4 for 6 concentrations in 11 Compositions of BSM of EG+WATER at different temperatures	246-247
4. 3. 9	Surface Tension data (σ in Nm^{-1}) of CuSO_4 for 6 concentrations in 11 Compositions of BSM of EG+WATER at different temperatures	256-257
4. 3. 10	Refractive Index data of CuSO_4 for 6 concentrations in 11 compositions of BSM of EG+WATER at different temperatures	266-367