Figure Index

CHAPTER – 3: THEORETICAL CONSIDERATIONS

Figur	e Number	Tittle	Page	:
			•	
Fig 1	Slope of Equilibri	um/Distribution Curve	35	
Fig. 2	Right Angle Triar	gular Diagram	35	
Fig. 3.	.Determination of	Plait Point Composition	36	
	Graphical Technic	ue.		

CHAPTER- 4: EXPERIMENTAL

Figure	e Number Tittle	little		
		• •		
			r	
Fig I	Experimental Set up for Packed column.	4	140 •	

Fig. IISchematic diagram of Liquid-liquid Extraction Unit.141

XXX

Figure Index

CHAPTER - 5: RESULTS AND DISCUSSION FOR QUATERNARY LIQUID- LIQUID PHASE EQUILIBRIUM DATA

Figure Number Tittle Page Mutual Solubility Data: [M] Fig. M-.1 Mutual Solubility data of antisolvent effect as parameters for 169 system B-H-100/90/80%Dmf-0/10/20% W at 20 °C Fig. M-.2 Mutual Solubility data of antisolvent effect as parameters for 170 system B-H-100/90/80%Dmf-0/10/20% W at 30 °C Fig. M-.3 Mutual Solubility data of antisolvent effect as parameters for 171 system B-H-100/90/80%Dmf-0/10/20% W at 40 °C 174 Fig. M-4 Mutual Solubility data of antisolvent effect as parameters for system T-H-100/90/80%Dmf-0/10/20% W at 20 °C Fig. M-.5 Mutual Solubility data of antisolvent effect as parameters for 175 system T-H-100/90/80%Dmf-0/10/20% W at 30 °C Fig. M-.6 Mutual Solubility data of antisolvent effect as parameters for 176 system T-H-100/90/80%Dmf-0/10/20% W at 40 °C Fig. M-.7 Mutual Solubility data of antisolvent effect as parameters for 178 system X-H-100/90/80%Dmf-0/10/20% W at 20 °C Fig. M-.8 Mutual Solubility data of antisolvent effect as parameters for 179 system X-H-100/90/80%Dmf-0/10/20% W at 30 °C Fig. M-.9 Mutual Solubility data of antisolvent effect as parameters for 180 system X-H-100/90/80%Dmf-0/10/20% W at 40 °C Fig. M-10 Mutual Solubility data of antisolvent effect as parameters for 182 system B-H'-100/90/80%Dmf-0/10/20% W at 20 °C Fig. M-11 Mutual Solubility data of antisolvent effect as parameters for 183 system B-H'-100/90/80%Dmf-0/10/20% W at 30 °C Fig. M-12 Mutual Solubility data of antisolvent effect as parameters for 184 system B-H'-100/90/80%Dmf-0/10/20% W at 40 °C

xxxi.

Fig. M-13 Mutual Solubility data of antisolvent effect as parameters for	185
system B-Oct-100/90/80%Dmf-0/10/20% W at 20 °C	
Fig. M-14 Mutual Solubility data of antisolvent effect as parameters for	186
system B-Oct-100/90/80%Dmf-0/10/20% W at 30 °C	
Fig. M-15 Mutual Solubility data of antisolvent effect as parameters for	187
system B-Oct-100/90/80%Dmf-0/10/20% W at 40 °C	
Fig. M-16 Mutual Solubility data of antisolvent effect as parameters for	189
system B-H-100/90/80%Dmso-0/10/20% W at 20 °C.	
Fig. M-17 Mutual Solubility data of antisolvent effect as parameters for	. 190
system B-H-100/90/80%Dmso-0/10/20% W at 30 °C	
Fig. M-18 Mutual Solubility data of antisolvent effect as parameters for	191
system B-H-100/90/80%Dmso-0/10/20% W at 40 °C	
Fig. M-19 Mutual Solubility data of antisolvent effect as parameters for	195
system T-H-100/90/80%Dmso-0/10/20% W at 20 °C	
Fig. M-20 Mutual Solubility data of antisolvent effect as parameters for	196
system T-H-100/90/80%Dmso-0/10/20% W at 30 °C	
Fig. M-21 Mutual Solubility data of antisolvent effect as parameters for	197
system T-H-100/90/80%Dmso-0/10/20% W at 40 °C	
Fig. M-22 Mutual Solubility data of antisolvent effect as parameters for	199
system X-H-100/90/80%Dmso-0/10/20% W at 20 °C	
FigM.23 Mutual Solublity data of antisolvent effect as parameters for	200
system X-H-100/90/80%Dmso-0/10/20% W at 30 °C	
Fig. M-24 Mutual Solubility data of antisolvent effect as parameters for	201
system X-H-100/90/80%Dmso-0/10/20% W at 40 °C	ž.
Fig. M-25 Mutual Solubility data of antisolvent effect as parameters for	203
system B-Hep-100/90/80%Dmso-0/10/20% W at 20 °C	
Fig. M-26 Mutual Solubility data of antisolvent effect as parameters for	204
system B-Hep-100/90/80%Dmso-0/10/20% W at 30 °C	
Fig. M-27 Mutual Solubility data of antisolvent effect as parameters for	205
system B-Hep-100/90/80%Dmso-0/10/20% W at 40 °C	
Fig. M-28 Mutual Solubility data of antisolvent effect as parameters for	206
system B-Oct-100/90/80%Dmso-0/10/20% W at 20 °C	

Fig. M-29 Mutual Solubility data of antisolvent effect as parameters for	207
system B-Oct-100/90/80%Dmso-0/10/20% W at 30 °C	
Fig. M-30 Mutual Solubility data of antisolvent effect as parameters for	208
system B-Oct-100/90/80%Dmso-0/10/20% W at 40 °C	
Diagram for Tie line data [T]:	
Fig.T-1 Tie line data for the Quaternary System	241
Beneze(B)- Hexane (H)-Dmf(D) + Water(W) at 20°C	
with antisolvent concentration as a parameter	
Fig.T-2 Tie line data for the Quaternary System	242
Benzene(B)- Hexane (H)-Dmf(D) + Water(W) at 30°C	•
with antisolvent concentration as a parameter	
Fig.T-3 Tie line data for the Quaternary System	243
Benzene(B)- Hexane (H)-Dmf(D) + Water(W) at 40°C	• •
with antisolvent concentration as a parameter	
Fig.T-4 Tie line data for the Quaternary System	244
Toluene (T) Hexane (H)-Dmf(D) + Water(W) at 20°C	
with antisolvent concentration as a parameter	
Fig.T-5 Tie line data for the Quaternary System	245
Toluene (T) Hexane (H)-Dmf(D) + Water(W) at 30 °C	
with antisolvent concentration as a parameter	
Fig.T-6 Tie line data for the Quaternary System	246
Toluene (T) Hexane (H)-Dmf(D) + Water(W) at 40 °C	
with antisolvent concentration as a parameter	•
Fig7 Tie line data for the Quaternary System	247
Xylene(X)- Hexane (H)-Dmf(D) + Water(W) at 20°C	
with antisolvent concentration as a parameter	
Fig.T-8 Tie line data for the Quaternary System	248
Xylene(X)- Hexane (H)-Dmf(D) + Water(W) at 30°C	
with antisolvent concentration as a parameter	
Fig. T-9 Tie line data for the Quaternary System	249
Xylene(X)- Hexane (H)-Dmf(D) + Water(W) at 40°C	
with antisolvent concentration as a parameter	

Fig T 10 Tig line data for the Quaternary System	. 250
Fig.T-10 Tie line data for the Quaternary System Benzene(B)-Hept(H')-Dmf(D) + Water(W) at 20°C	230
with antisolvent concentration as a parameter	
with antisolvent concentration as a parameter	· ·
Fig.T-11 Tie line data for the Quaternary System	251
Benzene(B)-Hept(H')-Dmf(D) + Water(W) at 30°C	
with antisolvent concentration as a parameter	
Fig.T-12 Tie line data for the Quaternary System	. 252
Benzene(B)-Hept(H')-Dmf(D) + Water(W) at 40°C	• •
with antisolvent concentration as a parameter	•
Fig.T-13 Tie line data for the Quaternary System	253
Benzene(B)-Oct(O)-Dmf(D) + Water(W) at 20°C	
with antisolvent concentration as a parameter	
Fig.T-14 Tie line data for the Quaternary System	254
Benzene(B)-Oct(O)-Dmf(D) + Water(W) at 30°C	
with antisolvent concentration as a parameter	
Fig.T-15 Tie line data for the Quaternary System	255
Benzene(B)-Oct(O)-Dmf(D) + Water(W) at 40°C	
with antisolvent concentration as a parameter	
Fig.T-16 Tie line data for the Quaternary System	257
Benzene(B)- Hexane (H)-Dmso(D') + Water(W) at 20°C	
with antisolvent concentration as a parameter	· · · · ·
Fig.T-17 Tie line data for the Quaternary System	258
Benzene(B)- Hexane (H)-Dmso(D') + Water(W) at 30°C	
with antisolvent concentration as a parameter	
Fig.T-18 Tie line data for the Quaternary System	259
Benzene(B)- Hexane (H)-Dmso(D') + Water(W) at 40°C	
with antisolvent concentration as a parameter	
Fig.T-19 Tie line data for the Quaternary System	260
Toluene (T) Hexane (H)-Dmso(D') + Water(W) at 20°C	• •
with antisolvent concentration as a parameter.	ъ.

	Fig.T-20 Tie line data for the Quaternary System	261
	Toluene (T) Hexane (H)-Dmso(D') + Water(W) at 30°C	
	with antisolvent concentration as a parameter	•
	Fig.T-21 Tie line data for the Quaternary System	262
	Toluene (T) Hexane (H)-Dmso(D') + Water(W) at 40°C	
	with antisolvent concentration as a parameter	
	Fig.T-22 Tie line data for the Quaternary System	263
	Xylene(X)- Hexane (H)-Dmso(D') + Water(W) at 20°C	
	• with antisolvent concentration as a parameter	
,	Fig.T-23 Tie line data for the Quaternary System	264
	Xylene(X)- Hexane (H)-Dmso(D') + Water(W) at 30°C	•
	with antisolvent concentration as a parameter	
	Fig.T-24 Tie line data for the Quaternary System	265
	Xylene(X)- Hexane (H)-Dmso(D') + Water(W) at 40°C	
	with antisolvent concentration as a parameter	
	Fig.T-25 Tie line data for the Quaternary System	266
	Benzene(B)- Hept (H')-Dmso(D') + Water(W) at 20°C	
	with antisolvent concentration as a parameter	,
	Fig.T-26 Tie line data for the Quaternary System	267
	Benzene(B)- Hept (H')-Dmso(D') + Water(W) at 30°C	
	with antisolvent concentration as a parameter	
	Fig.T-27 Tie line data for the Quaternary System	268
	Benzene(B)- Hept (H')-Dmso(D') + Water(W) at 40°C	
	with antisolvent concentration as a parameter	
	Fig.T-28 Tie line data for the Quaternary System	269
	Benzene(B)- Oct (O)-Dmso(D') + Water(W) at 20°C	
	with antisolvent concentration as a parameter	
	Fig.T-29 Tie line data for the Quaternary System	270
	Benzene(B)- Oct (O)-Dmso(D') + Water(W) at 30°C	
	with antisolvent concentration as a parameter	•
	FigT-30 Tie line data for the Quaternary System	271
	Benzene(B)- Oct (O)-Dmso(D') + Water(W) at 40°C	
	with antisolvent concentration as a parameter	

. **.**

· .

•

٠

XXXV

•

Distribution Diagrams and Selectivity Diagrams[D and S] Fig. D-1 Distribution Diagrams for system: B-H-Dmf+W at different	293
temperatures with anti solvent concentrations as a parameter	
Fig. S-1 Selectivity Diagrams for system: B-H-Dmf-W at different	295
temperature with anti solvent concentrations as a parameter.	
Fig. D-2 Distribution Diagrams for system: T-H-Dmf+W at different	296
temperatures with anti solvent concentrations as a parameter	
Fig. S-2 Selectivity Diagrams for system: T-H-Dmf-W at different	297
temperature with anti solvent concentrations as a parameter.	
Fig. D-3 Distribution Diagrams for system: X-H-Dmf+W at different	299
temperatures with anti solvent concentrations as a parameter	
Fig. S-3 Selectivity Diagrams for system: X-H-Dmf-W at different	300
temperature with anti solvent concentrations as a parameter.	
Fig. D-4 Distribution Diagrams for system: B-Hep-Dmf+W at different	302
temperatures with anti solvent concentrations as a parameter	
Fig. S-4 Selectivity Diagrams for system: B-Hep-Dmf-W at different	303
temperature with anti solvent concentrations as a parameter.	
Fig. D-5 Distribution Diagrams for system: B-Oct-Dmf+W at different	305
temperatures with anti solvent concentrations as a parameter	
Fig. S-5 Selectivity Diagrams for system: B- Oct -Dmf-W at different	306
temperature with anti solvent concentrations as a parameter.	
Fig. D-6 Distribution Diagrams for system: B-H-Dmf+W at different	308
temperatures with anti solvent concentrations as a parameter	
Fig. S-6 Selectivity Diagrams for system: B-H-Dmso-W at different	309
temperature with anti solvent concentrations as a parameter.	٠
Fig. D-7 Distribution Diagrams for system: T-H-Dmso+W at different	312
temperatures with anti solvent concentrations as a parameter	
Fig. S-7 Selectivity Diagrams for system: T-H-Dmso-W at different	313
temperature with anti solvent concentrations as a parameter.	
Fig. D-8 Distribution Diagrams for system: X-H-Dmso+W at different	315
temperatures with anti solvent concentrations as a parameter	2
Fig. S-8 Selectivity Diagrams for system: X-H-Dmso-W at different	316
temperature with anti solvent concentrations as a parameter.	

xxxvi

Fig. D-9 Distribution Diagrams for system: B-Hep-Dmso+W at different	319
temperatures with anti solvent concentrations as a parameter	
Fig. S-9 Selectivity Diagrams for system: B-Hep-Dmso-W at different	320
temperature with anti solvent concentrations as a parameter.	·
Fig. D-10 Distribution Diagrams for system: B-Oct-Dmso+W at different	322
temperatures with anti solvent concentrations as a parameter	
Fig. S-10 Selectivity Diagrams for system: B- Oct -Dmso-W at different	324
temperature with anti solvent concentrations as a parameter.	
Fig. D-11 Distribution Diagrams for system: B-H-Dmf+W at different	• 326
anti solvent concentrations with temperatures as a parameter	
Fig. S-11 Selectivity Diagrams for system: B-H-Dmf-W at different	327
anti solvent concentrations with temperatures as a parameter.	
Fig. D-12 Distribution Diagrams for system: T-H-Dmf+W at different	330
anti solvent concentrations with temperatures as a parameter	
Fig. S-12 Selectivity Diagrams for system: T-H-Dmf-W at different	331
anti solvent concentrations with temperatures as a parameter.	
Fig. D-13 Distribution Diagrams for system: X-H-Dmf+W at different	333
anti solvent concentrations with temperatures as a parameter	
Fig. S-13 Selectivity Diagrams for system: X-H-Dmf-W at different	334
anti solvent concentrations with temperatures as a parameter.	
Fig. D-14 Distribution Diagrams for system: B-Hep-Dmf+W at different	336
anti solvent concentrations with temperatures as a parameter	
Fig. S-14 Selectivity Diagrams for system: B-Hep-Dmf-W at different	337
anti solvent concentrations with temperatures as a parameter.	
Fig. D-15 Distribution Diagrams for system: B-Oct-Dmf+W at different	339
anti solvent concentrations with temperatures as a parameter	
Fig. S-15 Selectivity Diagrams for system: B- Oct -Dmf-W at different	340
anti solvent concentrations with temperatures as a parameter.	
Fig. D-16 Distribution Diagrams for system: B-H-Dmso+W at different	343
anti solvent concentrations with temperatures as a parameter	
Fig. S-16 Selectivity Diagrams for system: B-H-Dmso-W at different	344
anti solvent concentrations with temperatures as a parameter.	

•	
	•
Fig. D-17 Distribution Diagrams for system: T-H-Dmso+W at different	346
anti solvent concentrations with temperatures as a parameter	,
Fig. S-17 Selectivity Diagrams for system: T-H-Dmso-W at different	347
anti solvent concentrations with temperatures as a parameter.	
Fig. D-18 Distribution Diagrams for system: X-H-Dmso+W at different	349
anti solvent concentrations with temperatures as a parameter	
Fig. S-18 Selectivity Diagrams for system: X-H-Dmso-W at different	350
anti solvent concentrations with temperatures as a parameter.	•
Fig. D-19 Distribution Diagrams for system: B-Hep-Dmso+W at different	352
anti solvent concentrations with temperatures as a parameter	•
Fig. S-19 Selectivity Diagrams for system: B-Hep-Dmso-W at different	353
anti solvent concentrations with temperatures as a parameter.	
Fig. D-20 Distribution Diagrams for system: B-Oct-Dmso+W at different	355
anti solvent concentrations with temperatures as a parameter	
Fig. S-20 Selectivity Diagrams for system: B- Oct -Dmso-W at different	356
anti solvent concentrations with temperatures as a parameter.	
Fig. D-21 Distribution Diagrams for system: B-T-X-Dmf+0%W at different	358
temperatures with molecular weight of Aromatic as a parameter.	
Fig. S –21 Selectivity Diagrams for system: B-T-X-Dmf+0%W at different	359
temperatures with molecular weight of Aromatic as a parameter.	
Fig. D 22 Distribution Diagrams for system: B-T-X-90%Dmf+10%W at different	361
temperatures with molecular weight of Aromatic as a parameter.	
Fig. S-22 Selectivity Diagrams for system: B-T-X-90%Dmf+10%W at different	362
temperatures with molecular weight of Aromatic as a parameter.	
Fig. D-23 Distribution Diagrams for system: B-T-X-80%Dmf+20%W at different	365
temperatures with molecular weight of Aromatic as a parameter.	
Fig. S-23 Selectivity Diagrams for system: B-T-X-80%Dmf+20%W at different	366
temperatures with molecular weight of Aromatic as a parameter.	
Fig. D -24 Distribution Diagrams for system: B-T-X-Dmso+0%W at different	368
temperatures with molecular weight of Aromatic as a parameter.	
Fig. S -24 Selectivity Diagrams for system: B-T-X-Dmso+0%W at different	369
temperatures with molecular weight of Aromatic as a parameter.	
XXXX	/iii [.]

xxxviii[.]

Fig. D -25 Distribution Diagrams för system: B-T-X-90%Dmso+10%W at different	371
temperatures with molecular weight of Aromatic as a parameter.	
Fig. S -25 Selectivity Diagrams for system: B-T-X-90%Dmso+10%W at different	372
temperatures with molecular weight of Aromatic as a parameter.	
Fig. D -26 Distribution Diagrams for system: B-T-X-80%Dmso+20%W at different	374
temperatures with molecular weight of Aromatic as a parameter.	·
Fig. S -26 Selectivity Diagrams for system: B-T-X-80%Dmso+20%W at different	375
temperatures with molecular weight of Aromatic as a parameter.	
Fig. D-27 Distribution Diagrams for system: B-H-Hep-Oct-Dmf+0%W at different	377
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. S –27 Selectivity Diagrams for system: B-H-Hep-Oct-Dmf+0%W at different	382
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. D-28Distribution Diagrams for system : B-H-Hep-Oct-90%Dmf+10%W at differ	ent 379
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. S –28 Selectivity Diagrams for system: B-H-Hep-Oct-90%Dmf+10%W at differe	ent 383
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. D-29 Distribution Diagrams for system: B-H-Hep-Oct-80%Dmf+20%W at differ	rent381
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. S-29 Selectivity Diagrams for system: B-H-Hep-Oct-80%Dmf+20%W at different	ent 385
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. D-30 Distribution Diagrams for system: B-H-Hep-Oct-Dmso+0%W at different	386
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. S –30 Selectivity Diagrams for system: B-H-Hep-Oct-Dmso+0%W at different	388
temperatures with molecular weight of Aliphatic as a parameter.	
Fig.D-31Distribution Diagrams for system:B-H-Hep-Oct-90%Dmso+10%W at different	nt 390
temperatures with molecular weight of Aliphatic as a parameter.	
Fig. S-31Selectivity Diagrams for system: B-H-Hep-Oct-90%Dmso+10%W at differen	nt 391
temperatures with molecular weight of Aliphatic as a parameter.	
Fig.D-32 Distribution Diagrams for system:B-H-Hep-Oct-80%Dmso+20%W at different	ent393
temperatures with molecular weight of Aliphatic as a parameter.	
Fig.S-32 Selectivity Diagrams for system: B-H-Hep-Oct-80%Dmso+20%W at different	nt 394
temperatures with molecular weight of Aliphatic as a parameter.	

xxxix

FigI Different Correlation for the system B-H-Dmf + W at 30°C	410
Fig. –II Different Correlation for the system B-H-Dmso + W at 30°C	411
Hand's plots for Different Systems[H]	· .
Fig.H -1 Hand's Plot for System : B-H-Dmf-Water	421
with temperature and anti solvent concentration as parameter	
Fig.H -2 Hand's plot for System : T-H-Dmf-Water	422
with temperature and anti solvent concentration as parameter	
Fig.H - 3 Hand's plot for System : X-H-Dmf-Water	423
with temperature and anti solvent concentration as parameter	
Fig.H -4 Hand's plot for System : B-Hept- Dmf-Water	424
with temperature and anti solvent concentration as parameter	
Fig.H - 5 Hand's plot for System : B-Oct-Dmf-Water	425
with temperature and anti solvent concentration as parameter	
Fig.H 6Hand's plot for System : B-H-Dmso-Water	426
with temperature and anti solvent concentration as parameter	
Fig.H – 7Hand's plot for System : T-H-Dmso-Water	427
with temperature and anti solvent concentration as parameter	4
Fig.H - 8Hand's plot for System : X-H-Dmso-Water	428
with temperature and anti solvent concentration as parameter	
Fig.H –9Hand's plot for System : B-Hept-Dmso-Water	429
with temperature and anti solvent concentration as parameter	
Fig.H–10Hand's plot for System : B-Oct-Dmso-Water	430
with temperature and anti solvent concentration as parameter	

Generalized Correlation Plots

4

Fig.GC-1 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.5}	460
for the development of Generalized correlation for system:B-H-Dmf-W	
Fig.GC-2 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.75} .	460
for the development of Generalized correlation for system:B-H-Dmf-W	
Fig.GC-3 Plots of log k Vs, log T'+log[$(S+W)/S$] ⁻³ .	460
for the development of Generalized correlation for system:B-H-Dmf-W	
Fig.GC-4 Plots of log k Vs, log T'+log[$(S+W)/S$]-2.5.	461
for the development of Generalized correlation for system:T-H-Dmf-W	
Fig.GC-5 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.75}	461
for the development of Generalized correlation for system: T-H-Dmf-W	
Fig.GC-6 Plots of log k Vs, log T'+log[(S+W)/S ^{]-3} .	461
for the development of Generalized correlation for system: T-H-Dmf-W	
Fig.GC-7 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.5} .	462
for the development of Generalized correlation for system:X-H-Dmf-W	
Fig.GC-8 Plots of log k Vs, log T'+log[$(S+W)/S$] ^{-2.75} .	462
for the development of Generalized correlation for system:X-H-Dmf-W	
Fig.GC-9 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³ .	462
for the development of Generalized correlation for system:X-H-Dmf-W	
Fig.GC-10Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.75}	463
for the development of Generalized correlation for system:B-H-Dmf-W	
Fig.GC-11 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³	463
for the development of Generalized correlation for system: B-H-Dmf-W	
Fig.GC-12 Plots of log k Vs, log T'+log[(S+W)/S] ^{-3.25} .	463
for the development of Generalized correlation for system: B-H-Dmf-W	
Fig.GC-13 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.75} .	464
for the development of Generalized correlation for syster T- H-Dmf-W	
Fig.GC-14 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³ .	464
for the development of Generalized correlation for system:T- H-Dmf-W	
Fig.GC-15 Plots of log'k Vs, log T'+log[(S+W)/S] ^{-3.25}	464
for the development of Generalized correlation for system: T- H-Dmf-W	
Fig.GC-16 Plots of log k Vs, log T'+log[$(S+W)/S$] ^{-2.75} .	465
for the development of Generalized correlation for system X-H-Dmf-W	
Fig.GC-17 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³	465
for the development of Generalized correlation for system: X-H-Dmf-W	
Fig.GC-18 Plots of log k Vs, log T'+log[(S+W)/S] ^{-3.25} .	465
for the development of Generalized correlation for system: X-H-Dmf-W	

xli

for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-21 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-22 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W	468 467 467 467 468 468 468
for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-21 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-22 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W	466 467 467 467 468 468
 Fig.GC-21 Plots of log k Vs, log T'+log[(S+W)/S]⁻¹. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-22 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S]^{-1.25}. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S]^{-1.25}. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.25}. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.55}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.55}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.55}. for the development of Generalized correlation for system: B-Oct-Dmf-W 	467 467 467 468 468
for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-22 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.25} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W	467 467 468 468 468
for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.25} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W	467 467 468 468 468
 Fig.GC-23 Plots of log k Vs, log T'+log[(S+W)/S]^{-1.} for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S]^{-1.25.} for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.25.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5.} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5.} for the development of Generalized correlation for system: B-Oct-Dmf-W 	467 468 468 468
for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} . for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.25} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W	467 468 468 468
 Fig.GC-24 Plots of log k Vs, log T'+log[(S+W)/S]^{-1.25}. for the development of Generalized correlation for system: B-Hep-Dmf-W Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.25}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W 	468 468 468
for the development of Generalized correlation for system: B-Hep-Dmf-WFig.GC-25Plots of log k Vs, log T'+log[(S+W)/S]^{-0.25} for the development of Generalized correlation for system: B-Oct-Dmf-WFig.GC-26Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-WFig.GC-27Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmf-WFig.GC-28Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-WFig.GC-28Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W	468 468 468
 Fig.GC-25 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.25} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W 	468 468
for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W	468 468
 Fig.GC-26 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W 	468
for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} . for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} . for the development of Generalized correlation for system: B-Oct-Dmf-W	468
 Fig.GC-27 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.75}. for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S]^{-0.5}. for the development of Generalized correlation for system: B-Oct-Dmf-W 	
for the development of Generalized correlation for system: B-Oct-Dmf-W Fig.GC-28 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmf-W	
for the development of Generalized correlation for system: B-Oct-Dmf-W	469
T T T T T T T T T T	
	469
for the development of Generalized correlation for system: B-Oct-Dmf-W	
	469
for the development of Generalized correlation for system: B-Oct-Dmf-W	171
Fig.GC-31 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.5} for the development of Generalized correlation for system: B-H-Dmso-W	476
2.75	476
for the development of Generalized correlation for system: B-H-Dmso-W	+70
- 2	176
for the development of Generalized correlation for system: B-H-Dmso-W	
Fig.GC-34Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.5}	477
for the development of Generalized correlation for system: T-H-Dmso-W	
	77
for the development of Generalized correlation for system: T- H-Dmso-W Fig.GC-36Plots of log k Vs, log T'+log[(S+W)/S] ⁻³	77
	:11
for the development of Generalized correlation for system: T-H-Dmso-W	-
	78
for the development of Generalized correlation for system: X-H-Dmso-W	
	78
for the development of Generalized correlation for system: X-H-Dmso-W	
xlii	

. . .

.

.

•

.

Fig.GC-39 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: X-H-Dmso-W	478
Fig.GC-40 Plots of log k Vs, log T'+log[(S+W)/S]-2.75 for the development of Generalized correlation for system: B-H-Dmso-W	479
Fig.GC-41 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³ for the development of Generalized correlation for system: B-H-Dmso-W	479
Fig.GC-42 Plots of log k Vs, log T'+log[(S+W)/S] ^{-3.25} for the development of Generalized correlation for system: B-H-Dmso-W	479
Fig.GC-43 Plots of log k Vs, log T'+log[(S+W)/S] ^{-2.75} for the development of Generalized correlation for system: T-H-Dmso-W	480
Fig.GC-44 Plots of log k Vs, log T'+log[(S+W)/S] ⁻³ for the development of Generalized correlation for system: T-H-Dmso-W	• 480
Fig.GC-45 Plots of log k Vs, log T'+log[(S+W)/S] ^{-3.25} for the development of Generalized correlation for system: T-H-Dmso-W	480
Fig.GC-46 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: X-H-Dmso-W	481
Fig.GC-47 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ for the development of Generalized correlation for system: X-H-Dmso-W	481
Fig.GC-48 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25} for the development of Generalized correlation for system: X-H-Dmso-W	481
Fig.GC-49 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.5} for the development of Generalized correlation for system: B-Hep-Dmso-W	482
Fig.GC-50 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: B-Hep-Dmso-W	482
Fig.GC-51 Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ for the development of Generalized correlation for system: B-Hep-Dmso-W	482
Fig.GC-52 Plots of log k Vs, log T'+log[(S+W)/S]-1.25 for the development of Generalized correlation for system: B-Hep-Dmso-W	483
Fig.GC-53 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.5} for the development of Genetalized correlation for system: B-Hep-Dmso-W	483
Fig.GC-54 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.75} for the development of Generalized correlation for system: B-Hep-Dmso-W	483
Fig.GC-55 Plots of log k Vs, log T'+log(S+W/S) ^{-0.5} for the development of Generalized correlation for system: B-Oct-Dmso-W	484
Fig.GC-56 Plots of log k Vs, log T'+log[(S+W)/S] ^{-0.75} for the development of Generalized correlation for system: B-Oct-Dmso-W	484
Fig.GC-57Plots of log k Vs, log T'+log[(S+W)/S] ⁻¹ for the development of Generalized correlation for system: B-Oct-Dmso-W	484

.

xliii

Fig.GC-58 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.25}	485
for the development of Generalized correlation for system: B-Oct-Dmso-W	
Fig.GC-59 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.5}	485
for the development of Generalized correlation for system: B-Oct-Dmso-W	
Fig.GC-60 Plots of log k Vs, log T'+log[(S+W)/S] ^{-1.75}	485
for the development of Generalized correlation for system: B-Oct-Dmso-W	
Fig.GC-61 Plots of log k Vs, X1 for the development of Generalized correlation	492
for systems B/T/X-H-Dmf-W	
Fig.GC-62 Plots of log k Vs, X2 for the development of Generalized correlation	492
for systems B/T/X-H-Dmf-W	
Fig.GC-63 Plots of log k Vs, X3 for the development of Generalized correlation	493
for systems B/T/X-H-Dmf-W	
Fig.GC-64 Plots of log k Vs, X4 for the development of Generalized correlation	494
for systems B/T/X-H-Dmf-W	.,
Fig.GC-65 Plots of log k Vs, X5 for the development of Generalized correlation	494
for systems B/T/X-H-Dmf-W	
Fig.GC-66 Plots of log k Vs, X1 for the development of Generalized correlation	495
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W	
Fig.GC-67 Plots of log k Vs, X2 for the development of Generalized correlation	495
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W	
Fig.GC-68 Plots of log k Vs, X3 for the development of Generalized correlation	496
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W	
Fig.GC-69 Plots of log k Vs, X1 for the development of Generalized correlation	496
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-70 Plots of log k Vs, X2 for the development of Generalized correlation	497
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	•
Fig.GC-71 Plots of log k Vs, X3 for the development of Generalized correlation	497
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-72 Plots of log k Vs, X1 for the development of Generalized correlation	498
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-73 Plots of log k Vs, X2 for the development of Generalized correlation	498
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-74 Plots of log k Vs, X3 for the development of Generalized correlation	499
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-75 Plots of log k Vs, X4 for the development of Generalized correlation	499
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-76 Plots of log k Vs, X5 for the development of Generalized correlation	500
for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	

Fig.GC-77	Plots of log k Vs, X6 for the development of Generalized correlation	500
	for systems B/T/X-H-Dmf-W and B-H'-Dmf-W and B-Oct-Dmf-W	
Fig.GC-78	Plots of log k Vs X1 for the development of Generalized correlation	507
- ,	for systems B/T/-H-Dmso-W	
Fig.GC-79	Plots of log k Vs X2 for the development of Generalized correlation	507
	for systems B/T/-H-Dmso-W	
Fig.GC-80	Plots of log k Vs X3 for the development of Generalized correlation	508
	for systems B/T/-H-Dmso-W	
Fig.GC-81	Plots of log k Vs X4 for the development of Generalized correlation	509
•	for systems B/T/-H-Dmso-W	
Fig.GC-82	Plots of log k Vs X5 for the development of Generalized correlation	509
	for systems B/T/-H-Dmso-W	
Fig.GC-83	Plots of log k Vs X1 for the development of Generalized correlation	510
	for systems B/T/X-H-Dmso-W	
Fig.GC-84	Plots of log k Vs X2 for the development of Generalized correlation	510
:	for systems B/T/X-H-Dmso-W	
Fig.GC-85	Plots of log k Vs X3 for the development of Generalized correlation	511
* <u>1</u>	for systems B/T/X-H-Dmso-W	
Fig.GC-86	Plots of log k Vs X4 for the development of Generalized correlation	512
	for systems B/T/X-H-Dmso-W	
Fig.GC-87	Plots of log k Vs X5 for the development of Generalized correlation	512
•	for systems B/T/X-H-Dmso-W	
Fig.GC-88	Plots of log k Vs X1 for the development of Generalized correlation	513
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	
Fig.GC-89	Plots of log k Vs X3 for the development of Generalized correlation	513
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	
' Fig.GC-90	Plots of log k Vs X2 for the development of Generalized correlation	514
- · ·	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	
Fig.GC-91	Plots of log k Vs X4 for the development of Generalized correlation	515
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	
Fig.GC-92	Plots of log k Vs X5 for the development of Generalized correlation	516
an a	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	, , , , <u>,</u> 4
Fig.GC-93	Plots of log k Vs X6 for the development of Generalized correlation	516
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W	
Fig.GC-94	Plots of log k Vs X1 for the development of Generalized correlation	517
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W and B-Oct-Dmso	
	xlv	,

Fig.GC-95	Plots of log k Vs X2 for the development of Generalized correlation	5
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W and B-Oct-Dmso-	-W
Fig.GC-96	Plots of log k Vs X3 for the development of Generalized correlation	5
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W and B-Oct-Dmso	-W
Fig.GC-97	Plots of log k Vs X4 for the development of Generalized correlation	5
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-Wand B-Oct-Dmso-	W
Fig.GC-98	Plots of log k Vs X5 for the development of Generalized correlation	5
	for systems B/T/X-H-Dmso-W and B-Hep-Dmso-W and B-Oct-Dmso-	W
Fig.GC-99	Plots of log k Vs X6 for the development of Generalized correlation	5
	for systems . B/T/X-H-Dmso-W and B-Hep-Dmso-W and B-Oct-Dmso-	W

4

. .

xlvi

.

ł

.

4

•

Figure Index

Chapter-6: Results and Discussion for Liquid-Liquid Extraction of Aromatics in Packed Column

Figure N	lumber	Tittle	Page
Fig.1 (a)	The plot of % Hold	l up Vs. Vd with Vc as a parameter	569
	for the system: B-H	H-80%Dmf+20%W at 30 ° C	· · · · ·
Fig.1 (b)	The plot of % Hold	up Vs. Vc with Vd as a parameter	569
	for the system: B-H	I-80%Dmf+20%W at 30 ° C	:
Fig. 2 (a)	The plot of % Hold	l up Vs. Vd with Vc as a parameter.	574
	for the system: B-H	I-80%Dmso+20%W at 40 ° C	
Fig. 2 (b)	The plot of % Hold	l up Vs. Vc with Vd as a parameter	574
	for the system: B-H	I-80%Dmso+20%W at 40 ° C	
Fig. 3	The plot of Vd + V	c(X/1-X) Vs. X(1-X)	579
	for the system : B-H	H-80%Dmf+20%W at 30 ° C	· .
Fig. 4	The plot of $Vd + Vd$	c(X/1-X) Vs. X(1-X)	579
	for the system B-H	-80%Dmso-20%Water at 40 °C	
Fig. 5	Comparison of plot	ts of Vd+Vc(X/1-X) Vs. X(1-X)	582
	for Solvents-Dmf a	nd Dmso.	
Fig.6	A Plot of limiting v	alues of %AE Vs S/F ratio	585
•	for systemB-H-80%	%Dmf-20%Wat30°C	
Fig.7	A Plot of limiting va	alue of %AE Vs S/F ratio	. 585
	For system B-H-80	%Dmso-20%Wat40°C	
Fig.8	The plot of % AE V	s. Vd with Vc as a parameter	588
	for the system: B-H	I-80%Dmf+20%W at 30 ° C	
Fig.9	The plot of % AE V	vs. Vc with Vd as a parameter	, 588
	for the system B-H-	-80%Dmf+20%W at 30 ° C	
Fig.10	Effect of Vd on %A	E with Vc as a parameter	593
•	for system B-H-80%	%Dmso-20%W at 40 ° C	· · · ·
Fig.11	Effect of Vc on %A	E with Vd as parameter	<u>593</u>
	for system B-H-80%	%Dmso-20%W at 40 ° C	
Fig.12(a)	A plot of %AE VsØ	1 for solvent Dmf	596
Fig.12 (b)	A plot of %AE VsØ	2 for solvent Dmf	596
Fig.13 (a)	A plot of %AE VsØ	1 for solvent Dmso	601
Fig.13(b)	A plot of %AE Vs.@	ð2 for solvent Dmso	601
Fig.14(a)	Comparison of plots	s %AE VsØ1 for solvents Dmf and D	mso 603
•			

xlvii

Fig.14(b)	Comparison of plots %AE VsØ2for solvents Dmf and Dms	o 603
Fig.15-I	Plot of 1/(HB1-H'B*) Vs. HB1 for determination of	608
	Area under the curve for the system:B-H-(Dmf+W)	
Fig.15-II	Plot of 1/(HB1-H'B*) Vs. HB1 for determination of	609
	Area under the curve for the system:B-H-(Dmf+W)	
Fig.15- III	Plot of 1/(HB1-H'B*) Vs. HB1 for determination of	610
	Area under the curve for the system:B-H-(Dmf+W)	
Fig.15-IV	Plot of 1/(HB1-H'B*) Vs. HB1 for determination of	611
	Area under the curve for the system:B-H-(Dmf+W)	· · · ·
Fig.15-V	Plot of 1/(H'B* - HB1) Vs. HB1 for determination of	612
	Area under the curve for the system:B-H-(Dmf+W)	· ·
Fig.15-VI	Plot of 1/(H'B* - HB1) Vs. HB1 for determination of	613
•	Area under the curve for the system:B-H-(Dmf+W)	
Fig.15-VII	Plot of 1/(H'B* - HB1) Vs. HB1 for determination of	614
	Area under the curve for the system:B-H-(Dmf+W)	
Fig.15-VIII	Plot of 1/(H'B* - HB1) Vs. HB1 for determination of	615
	Area under the curve for the system:B-H-(Dmf+W)	
Fig.16(a)	The plot of NIUod Vs. Vd with Vc as a parameter	617
	for the system:B-H-80% Dmf+20%W at 30° C	
Fig.16(b)	The plot of NTUoc Vs. Vc with Vd as parameter	617
	for the system:B-H-80% Dmf+20%W at 30° C	
Fig.17(a)	Plot for effect of Vd on Kodxa	620
• • • • •	with Vc as parameter for system B-H-80%Dmf-20%W at 30	
Fig.17(b)	Plot for effect of Vc on Kocxa	620
	with Vd as parameter for system B-H-80%Dmf-20%W at 30	
Fig.17(c)	The plot of (HTU)oc Vs. Gc/Gd	623
· · ·	system: B-H-80%Dmf-20%W at 30 ° C	4
Fig.17(d)	The plot of (HTU)od Vs. Gd/Gc	623
0 ()	system: B-H-80%Dmf-20%W at 30 ° C	
Fig.17(e)	Equilibrium Curve for B-H-80%Dmf-20%W at 30 ° C	624
Fig.18(a)	Plot of Kod.a Vs.Vd with Vc as a parameter	627
	System B-H-80%Dmf -20%W at 30 ° C	· · · · ·
Fig.18 (b)	Plot of Koc.a Vs.Vc with Vd as a parameter	627
	System B-H-80%Dmf -20%W at 30 ° C	· · · · · · · · · · · · · · · · · · ·
Fig.19I	Plot of 1/(HB1-HB*) Vs. HB1 for determination of	630
J	Area under the curve for the system:B-H-(Dmso+W)	050
		xlviii

	Fig.19II	Plot of 1/(HB1-HB*) Vs. HB1 for determination of		631
		Area under the curve for the system:B-H-(Dmso+W)	•	
	Fig.19 III	Plot of 1/(HB1-HB*) Vs. HB1 for determination of		632
		Area under the curve for the system:B-H-(Dmso+W)	•	
	Fig.19 IV	Plot of 1/(HB1-HB*) Vs. HB1 for determination of		633
		Area under the curve for the system:B-H-(Dmso+W)		
	Fig.19 V	Plot of 1/(HB* - HB1) Vs. HB1 for determination of		634
	. •	Area under the curve.	· · ·	. '
	Fig.19VI	Plot of 1/(HB* - HB1) Vs. HB1 for determination of		635
		Area under the curve for the system:B-H-(Dmso+W)	•	·
•	Fig.19VII	Plot of 1/(HB* - HB1) Vs. HB1 for determination of	•	636
		Area under the curve for the system:B-H-(Dmso+W)		
	Fig.19-VIII	Plot of 1/(HB* - HB1) Vs. HB1 for determination of	•	637
		Area under the curve for the system:B-H-(Dmso+W)		
	Fig20(a)	The plot of NTUod Vs Vd with Vc as parameter for the		641
		system: B-H-80%Dmso -20%Wat 40 ° C		
	Fig20(b)	The plot of NTUoc Vs Vc with Vd as parameter for the		641
		system: B-H-80%Dmso -20%W at 40 ° C	a.	
	Fig21(a)	The plot of HTUod Vs Vd with Vc as parameter for the	•	644
		system: B-H-80%Dmso -20%W at 40 ° C		
	Fig21(b)	The plot of HTUoc Vs Vc with Vd as parameter for the		644
	•	system: B-H-80%Dmso -20%W at 40 ° C		
	Fg.21©	Plot of(HTU)ocVs.Gc/Gd for	· · ·	645
		system: B-H-80%Dmso -20%W at 40 ° C		
	Fg.21(d)	Plot of(HTU)odVs.Gc/Gd		645
		system: B-H-80%Dmso -20%W at 40 ° C		
	Fig.21(e)	Equilibrium Curve for		646 '
		System:B-H-80%Dmso+20%Wat40°C		
	Fig.22(a)	Plot for effect of Vd on Kodxa with Vc as parameter for		649
	·	system B-H-80%Dmso-20%W at 40 ° C		
	Fig.22(b)	Plot for effect of Vc on Kocxa with Vd as parameter for		649
		system B-H-80%Dmso-20%W at 40 ° C	a an	(* *
	· .			

xlix