Appendices :

Appendix I : Nomenclature

f_i^M	=	activity coefficient of surfactants i in the mixed micelle
f_i^s	=	activity coefficient of surfactants i in mixed surface pseudo-phase
α_i	=	mole fraction of component i in the total mixed solute
C_1^M, C_2^M, C_{12}^M	=	CMC of pure surfactants 1 , 2 and the mixture (mol dm^{-3})
C_1^0, C_2^0, C_{12}	=	concentration of pure surfactants 1 , 2 and the mixture at given γ
C_{1m} , C_{2m}	=	monomer concentrations of surfactants in the mixed system
$C_1^{0,CMC}$, $C_2^{0,CMC}$	=	molar concentrations of individual surfactants 1 and 2 , respectively , required to yield a surface tension equal to γ^{CMC} of any mixture
C_g	=	concentration of counterion or gegenion
C_S	=	concentration of salt
x^M	=	mole fraction of surfactant 1 in the mixed micelle .
x^σ	=	mole fraction of surfactant 1 at the monolayer of mixed surfactant (Rosen's model)
x^s	=	mole fraction of surfactant 1 in mixed surface pseudo-phase (Holland's model)
γ	=	surface tension (mN m^{-1})
γ_0	=	surface tension of water (mN m^{-1})
$\gamma_i^{0,CMC}$	=	surface tension values at CMC of pure surfactant i
γ_{12}^{CMC}	=	surface tension values at CMC of any mixture
K_1, K_2	=	slopes of the $\gamma - \ln C$ plots of the individual surfactant 1 and 2 respectively
π	=	surface pressure (mN m^{-1})
π^{CMC}	=	surface pressure values at CMC
π_i^{max}	=	maximum surface pressures for pure component i
A_i^o	=	molar interface areas occupied by surfactants i in pure system
A_i	=	partial molar interface areas occupied by surfactants i in mixed system
A_{av}	=	average area per surfactant molecule in the mixed monolayer at the interface
Γ_i	=	surface excess of component i (mol m^{-2})
Γ_t	=	total surface excess
β^M	=	molecular interaction parameter for the mixed micelle formation
β^σ	=	molecular interaction parameter for the mixed monolayer formation at the interface (Rosen's model)
β^s	=	surface interaction parameter (Holland's model)

δ	=	additional interaction parameter (Fung's model)
I_1 , I_2	=	factors accounting for variations for surfactants 1 and 2 (Fung's model)
K_{g1}, K_{g2}, K_g	=	counterion binding parameter of surfactants 1, 2 and mixtures
W_{11}, W_{22}, W_{12}	=	the energies of interaction between molecules in the pure micelles 1 , 2 and in the mixed micelle
w_{12}	=	interchange energy per molecule
ΔG^E	=	molar excess free energy
q_i	=	empirical parameters of the Redlish-Kister expansion
n_i	=	molar number of the i th component in the micellar phase
a_i	=	activity of the i th species in the solvent phase
N	=	Avogadro's number (mol^{-1})
k	=	Boltzmann's constant ($J\ K^{-1}$)
R	=	Universal gas constant ($J\ mol^{-1}\ K^{-1}$)
T	=	absolute temperature (K)

Appendix II : Turbo C Programs used to calculate interaction parameter β^{M} , $\beta^{\sigma E}$ and $\beta^{\sigma R}$

Program AP-01 : Calculation of β^{M}

Turbo C program used to calculate micellar interaction parameter , β^{M} . The micellar mole fraction of [Cu(C_{12}tmed)(acac)Cl] in total surfactants concentration is given by x1(M) .

```
//Filename : betam.c
#include<math.h>
main()
{
  int i;
  float a1,a2,cmc1,cmc2,cmix,g1,g2;
  float x1,x2,xm1,xm2,f1,f2,f=0,beta;
  printf("Enter the value of α1,cmc1,cmc2,cmcmix\n");
  scanf("%f,%f,%f,%f",&a1,&cmc1,&cmc2,&cmix);
  a2=1-a1;
  g1=cmix*a1/cmc1;
  g2=cmix*a2/cmc2;
  x1=0;x2=1;
  for(i=1;i<25;i++) {
    xm1=0.5*(x1+x2);
    xm2=1-xm1;
    f1=xm1*xm1*log(g1/xm1);
    f2=xm2*xm2*log(g2/xm2);
    f=f1-f2;
    if (f>0) x1=xm1;
    else if (f<0) x2=xm1;
  }
  beta=log(g1/xm1)/(xm2*xm2);
  printf("Micelle beta,β(M)=%f\n",beta);
  printf("Monomer mole fraction of component 1,x1(M)=%f",x1);
}
```

Program AP-02 : Calculation of $\beta^{\sigma E}$

Turbo C program used to calculate monolayer interaction parameter , $\beta^{\sigma E}$. The monolayer mole fraction of [Cu(C_{12}tmed)(acac)Cl] in total surfactants concentration is given by x1(σE) .

```
//Filename : betase.c
#include<math.h>
main()
{
  int i;
  float a1,a2,c1o,c2o,c12,g1,g2;
  float x1,x2,xm1,xm2,f1,f2,f=0,beta;
  printf("Enter the value of α1,c1o,c2o,c12\n");
  scanf("%f,%f,%f,%f",&a1,&c1o,&c2o,&c12);
  a2=1-a1;
  g1=c12*a1/c1o;
  g2=c12*a2/c2o;
  x1=0;x2=1;
  for(i=1;i<25;i++) {
    xm1=0.5*(x1+x2);
```

```
    xm2=1-xm1;
    f1=xm1*xm1*log(g1/xm1);
    f2=xm2*xm2*log(g2/xm2);
    f=f1-f2;
    if (f>0) x1=xm1;
    else if (f<0) x2=xm1;
  }
  beta=log(g1/xm1)/(xm2*xm2);
  printf("Monolayer beta,β (σE)=%f\n",beta);
  printf("Monomer mole fraction of component 1,x1(σE)=%f",x1);
}
```

Program AP-03 : Calculation of $\beta^{\sigma R}$

Turbo C program used to calculate monolayer interaction parameter , $\beta^{\sigma R}$. The monolayer mole fraction of [Cu(C_{12}tmed)(acac)Cl] in total surfactants concentration is given by x1(σR) .

```
//Filename : betasr.c
#include<math.h>
main()
{
  int i;
  float a1,c1o,c2o,c12,g1,g2;
  float o,A1o,A2o,Av,T;
  float x1,x2,xm1,xm2,f1,f2,q=0,f=0,beta;
  printf("Enter the value of α1,c1o,c2o,c12,γ,A1o,A2o,Av,T\n");
  scanf("%f,%f,%f,%f,%f,%f,%f,%f,%f",&a1,&c1o,&c2o,&c12,&o,&A1o,&A2o,&Av,&T);
  q=o*6.023e23/(8.314*(273.15+T));
  g1=a1*c12/c1o;
  g2=(1-a1)*c12/c2o;
  x1=0;x2=1;
  for(i=1;i<25;i++) {
   xm1=0.5*(x1+x2);
   xm2=1-xm1;
       f1=xm1*xm1*(log(g1/xm1)-q*A1o*(1-(Av*6.023e23/(xm1*6.023e23*A1o+
xm2*6.023e23*A2o))));
       f2=xm2*xm2*(log(g2/xm2)-q*A2o*(1-(Av*6.023e23/(xm1*6.023e23*A1o+
xm2*6.023e23*A2o))));
   f=f1-f2;
   if (f>0) x1=xm1;
   else if (f<0) x2=xm1;
  }
            beta=((log(g1/xm1))-q*A1o*(1-(Av*6.023e23/(xm1*6.023e23*A1o+
xm2*6.023e23*A2o))))/(xm2*xm2);
  printf("Monolayer beta,β(σR)=%f\n",beta);
  printf("Monomer mole fraction of component 1,x1(σR)=%f",x1);
}
```

After being compiled with turbo C , three executable files , i.e. , betam.exe , betase.exe and betasr.exe were obtained . These files can be run under dos environment .

Example of calculation :

```
C:\>betam
Enter the value of α1,cmc1,cmc2,cmcmix
0.235676,1.8109e-4,1.1739e-3,3.8894e-5
Micelle beta,β(M)=-10.507990
Monomer mole fraction of component 1,x1(M)=0.527680

C:\>betase
Enter the value of α1,c1o,c2o,c12
0.381413,1.4267e-4,7.0244e-4,1.8375e-5
Monolayer beta,β(σE)=-11.410074
Monomer mole fraction of component 1,x1(σE)=0.541390

C:\>betasr
Enter the value of α1,c1o,c2o,c12,γ,A1o,A2o,Av,T
0.381413,1.4267e-4,7.0244e-4,1.8375e-5,41e-3,4.271e-19,3.538e-19,1.784e-19,20.0
Monolayer beta,β(σR)=-20.095070
Monomer mole fraction of component 1,x1(σR)=0.515978
```

Appendix III : Flow charts to indicate method of calculating interaction parameter β^M and δ based on Fung's equation

Figure AP-04 : obtain δ_{opt}

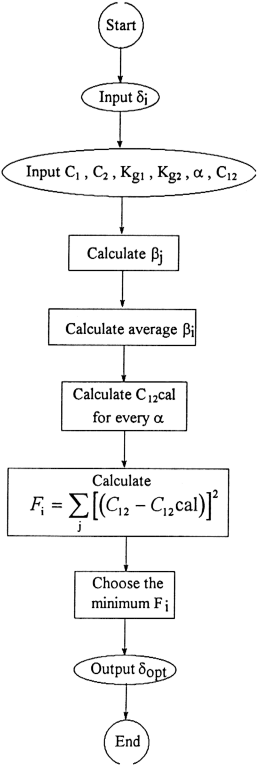
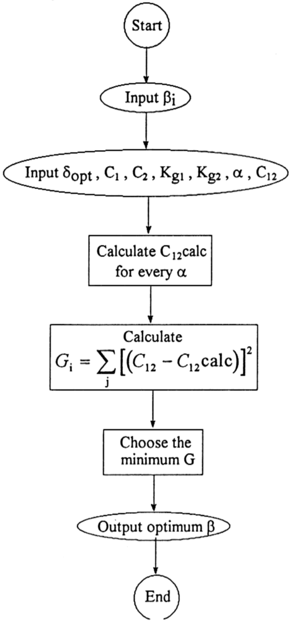


Figure AP-05 : obtain β_{opt}



Appendix IV : MathCAD 5.0 programs used to calculate interaction parameter β^M and δ based on Fung's equation

Program AP-06 : Calculation of δ_{opt}

Input guess value of δ to obtain minimum SumF

$Kg1 := 0.71 \quad Kg2 := 0.744 \quad C1 := 1.8109\cdot10^{-4} \quad C2 := 1.1739\cdot10^{-3}$ Input guess value -> $\delta := 0.6$

$\alpha01 := 0.0898 \quad C1201 := 4.5227\cdot10^{-5} \quad x01 := 0.02 \quad y01 := 0.02$

$\alpha02 := 0.3814 \quad C1202 := 3.1011\cdot10^{-5} \quad x02 := 0.02 \quad y02 := 0.02$

$\alpha03 := 0.6801 \quad C1203 := 3.2637\cdot10^{-5} \quad x03 := 0.02 \quad y03 := 0.02$

$\alpha04 := 0.9080 \quad C1204 := 3.7974\cdot10^{-5} \quad x04 := 0.02 \quad y04 := 0.02$

Given

$$\frac{1}{(1-x01)^2}\cdot\ln\left[\frac{(\alpha01\cdot C1201)^{1+Kg1}}{x01\cdot C1^{1+Kg1}}\right]=\frac{1}{x01^2}\cdot\ln\left[\frac{((1-\alpha01)\cdot C1201)^{1+Kg2}}{(1-x01)\cdot C2^{1+Kg2}}\right]-\frac{\delta}{2} \qquad M01 := find(x01)$$

$$\beta01 := \frac{1}{(1-(M01))^2}\cdot\ln\left[\frac{(\alpha01\cdot C1201)^{1+Kg1}}{M01\cdot C1^{1+Kg1}}\right]+\frac{\delta}{2}-\delta\cdot(1-M01)$$

Given

$$\frac{1}{(1-x02)^2}\cdot\ln\left[\frac{(\alpha02\cdot C1202)^{1+Kg1}}{x02\cdot C1^{1+Kg1}}\right]=\frac{1}{x02^2}\cdot\ln\left[\frac{((1-\alpha02)\cdot C1202)^{1+Kg2}}{(1-x02)\cdot C2^{1+Kg2}}\right]-\frac{\delta}{2} \qquad M02 := find(x02)$$

$$\beta02 := \frac{1}{(1-(M02))^2}\cdot\ln\left[\frac{(\alpha02\cdot C1202)^{1+Kg1}}{M02\cdot C1^{1+Kg1}}\right]+\frac{\delta}{2}-\delta\cdot(1-M02)$$

Given

$$\frac{1}{(1-x03)^2}\cdot\ln\left[\frac{(\alpha03\cdot C1203)^{1+Kg1}}{x03\cdot C1^{1+Kg1}}\right]=\frac{1}{x03^2}\cdot\ln\left[\frac{((1-\alpha03)\cdot C1203)^{1+Kg2}}{(1-x03)\cdot C2^{1+Kg2}}\right]-\frac{\delta}{2} \qquad M03 := find(x03)$$

$$\beta03 := \frac{1}{(1-(M03))^2}\cdot\ln\left[\frac{(\alpha03\cdot C1203)^{1+Kg1}}{M03\cdot C1^{1+Kg1}}\right]+\frac{\delta}{2}-\delta\cdot(1-M03)$$

Given

$$\frac{1}{(1-x04)^2}\cdot\ln\left[\frac{(\alpha04\cdot C1204)^{1+Kg1}}{x04\cdot C1^{1+Kg1}}\right]=\frac{1}{x04^2}\cdot\ln\left[\frac{((1-\alpha04)\cdot C1204)^{1+Kg2}}{(1-x04)\cdot C2^{1+Kg2}}\right]-\frac{\delta}{2} \qquad M04 := find(x04)$$

$$\beta04 := \frac{1}{(1-(M04))^2}\cdot\ln\left[\frac{(\alpha04\cdot C1204)^{1+Kg1}}{M04\cdot C1^{1+Kg1}}\right]+\frac{\delta}{2}-\delta\cdot(1-M04)$$

$M01 = 0.488 \qquad \beta01 = -22.0374$

$M02 = 0.557 \qquad \beta02 = -20.7639$

$M03 = 0.6076 \qquad \beta03 = -20.0104$

$M04 = 0.6608 \qquad \beta04 = -20.9584$

$$avg\beta := \frac{\beta01+\beta02+\beta03+\beta04}{4} \qquad avg\beta = -20.9425$$

Given

$$\left[\frac{y01\cdot C1^{1+Kg1}\cdot\exp\left[(1-y01)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot y01\right)\right]}{\alpha01^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-y01)\cdot C2^{1+Kg2}\cdot\exp\left[y01^2\cdot(avg\beta+\delta\cdot y01)\right]}{(1-\alpha01)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1201cal := \left[\frac{N01\cdot C1^{1+Kg1}\cdot\exp\left[(1-N01)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot N01\right)\right]}{\alpha01^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$N01 := find(y01)$

$f01 := C1201 - C1201cal$

$F01 := f01^2$

Given

$$\left[\frac{y02\cdot C1^{1+Kg1}\cdot\exp\left[(1-y02)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot y02\right)\right]}{\alpha02^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-y02)\cdot C2^{1+Kg2}\cdot\exp\left[y02^2\cdot(avg\beta+\delta\cdot y02)\right]}{(1-\alpha02)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1202cal := \left[\frac{N02\cdot C1^{1+Kg1}\cdot\exp\left[(1-N02)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot N02\right)\right]}{\alpha02^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$N02 := find(y02)$

$f02 := C1202 - C1202cal$

$F02 := f02^2$

Given

$$\left[\frac{y03\cdot C1^{1+Kg1}\cdot\exp\left[(1-y03)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot y03\right)\right]}{\alpha03^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-y03)\cdot C2^{1+Kg2}\cdot\exp\left[y03^2\cdot(avg\beta+\delta\cdot y03)\right]}{(1-\alpha03)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1203cal := \left[\frac{N03\cdot C1^{1+Kg1}\cdot\exp\left[(1-N03)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot N03\right)\right]}{\alpha03^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$N03 := find(y03)$

$f03 := C1203 - C1203cal$

$F03 := f03^2$

Given

$$\left[\frac{y04\cdot C1^{1+Kg1}\cdot\exp\left[(1-y04)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot y04\right)\right]}{\alpha04^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-y04)\cdot C2^{1+Kg2}\cdot\exp\left[y04^2\cdot(avg\beta+\delta\cdot y04)\right]}{(1-\alpha04)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1204cal := \left[\frac{N04\cdot C1^{1+Kg1}\cdot\exp\left[(1-N04)^2\cdot\left(avg\beta-\frac{\delta}{2}+\delta\cdot N04\right)\right]}{\alpha04^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$N04 := find(y04)$

$f04 := C1204 - C1204cal$

$F04 := f04^2$

$N01 = 0.4873$ $C1201cal = 5.287 \cdot 10^{-5}$ $f01 = -7.6432 \cdot 10^{-6}$ $F01 = 5.8419 \cdot 10^{-11}$

$N02 = 0.5568$ $C1202cal = 3.0525 \cdot 10^{-5}$ $f02 = 4.8639 \cdot 10^{-7}$ $F02 = 2.3658 \cdot 10^{-13}$

$N03 = 0.6039$ $C1203cal = 2.9182 \cdot 10^{-5}$ $f03 = 3.4551 \cdot 10^{-6}$ $F03 = 1.1938 \cdot 10^{-11}$

$N04 = 0.6623$ $C1204cal = 3.9029 \cdot 10^{-5}$ $f04 = -1.0549 \cdot 10^{-6}$ $F04 = 1.1128 \cdot 10^{-12}$

$SumF := F01 + F02 + F03 + F04$

$SumF = 7.1706 \cdot 10^{-11}$

Filename : fdelta.mcd

Program AP-07 : Calculation of βopt

Input guess value of optβ to obtain minimum SumG

$Kg1 := 0.71 \quad Kg2 := 0.744 \qquad C1 := 1.8109\cdot 10^{-4} \qquad C2 := 1.1739\cdot 10^{-3}$

$\alpha01 := 0.0898 \qquad C1201 := 4.5227\cdot 10^{-5} \quad z01 := 0.02$

$\alpha02 := 0.3814 \qquad C1202 := 3.1011\cdot 10^{-5} \quad z02 := 0.02$

$\alpha03 := 0.6801 \qquad C1203 := 3.2637\cdot 10^{-5} \quad z03 := 0.02$

$\alpha04 := 0.9080 \qquad C1204 := 3.7974\cdot 10^{-5} \quad z04 := 0.02$

$\delta := 0.6$ Input guess value -> $opt\beta := -21.348$

Given

$$\left[\frac{z01\cdot C1^{1+Kg1}\cdot\exp\left[(1-z01)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot z01\right)\right]}{\alpha01^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-z01)\cdot C2^{1+Kg2}\cdot\exp\left[z01^2\cdot(opt\beta+\delta\cdot z01)\right]}{(1-\alpha01)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1201calc := \left[\frac{O01\cdot C1^{1+Kg1}\cdot\exp\left[(1-O01)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot O01\right)\right]}{\alpha01^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$O01 := find(z01)$

$g01 := C1201 - C1201calc$

$G01 := g01^2$

Given

$$\left[\frac{z02\cdot C1^{1+Kg1}\cdot\exp\left[(1-z02)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot z02\right)\right]}{\alpha02^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-z02)\cdot C2^{1+Kg2}\cdot\exp\left[z02^2\cdot(opt\beta+\delta\cdot z02)\right]}{(1-\alpha02)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1202calc := \left[\frac{O02\cdot C1^{1+Kg1}\cdot\exp\left[(1-O02)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot O02\right)\right]}{\alpha02^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$O02 := find(z02)$

$g02 := C1202 - C1202calc$

$G02 := g02^2$

Given

$$\left[\frac{z03\cdot C1^{1+Kg1}\cdot\exp\left[(1-z03)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot z03\right)\right]}{\alpha03^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-z03)\cdot C2^{1+Kg2}\cdot\exp\left[z03^2\cdot(opt\beta+\delta\cdot z03)\right]}{(1-\alpha03)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1203calc := \left[\frac{O03\cdot C1^{1+Kg1}\cdot\exp\left[(1-O03)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot O03\right)\right]}{\alpha03^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$O03 := find(z03)$

$g03 := C1203 - C1203calc$

$G03 := g03^2$

Given

$$\left[\frac{z04\cdot C1^{1+Kg1}\cdot \exp\left[(1-z04)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot z04\right)\right]}{\alpha04^{1+Kg1}}\right]^{\frac{1}{1+Kg1}} = \left[\frac{(1-z04)\cdot C2^{1+Kg2}\cdot \exp\left[z04^2\cdot(opt\beta+\delta\cdot z04)\right]}{(1-\alpha04)^{1+Kg2}}\right]^{\frac{1}{1+Kg2}}$$

$$C1204calc := \left[\frac{O04\cdot C1^{1+Kg1}\cdot \exp\left[(1-O04)^2\cdot\left(opt\beta-\frac{\delta}{2}+\delta\cdot O04\right)\right]}{\alpha04^{1+Kg1}}\right]^{\frac{1}{1+Kg1}}$$

$O04 := find(z04)$

$g04 := C1204 - C1204calc$

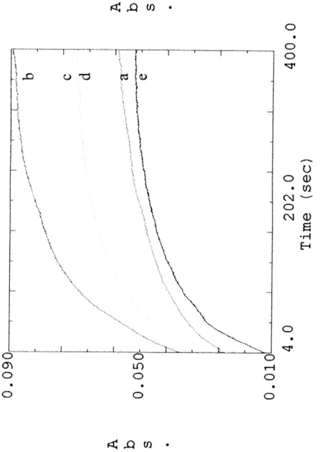
$G04 := g04^2$

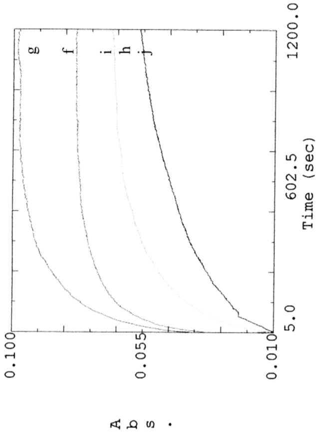
$O01 = 0.4875$	$C1201calc = 4.9861\cdot10^{-5}$	$g01 = -4.6341\cdot10^{-6}$	$G01 = 2.1475\cdot10^{-11}$
$O02 = 0.5558$	$C1202calc = 2.8799\cdot10^{-5}$	$g02 = 2.2117\cdot10^{-6}$	$G02 = 4.8915\cdot10^{-12}$
$O03 = 0.6021$	$C1203calc = 2.7576\cdot10^{-5}$	$g03 = 5.0614\cdot10^{-6}$	$G03 = 2.5618\cdot10^{-11}$
$O04 = 0.6595$	$C1204calc = 3.7006\cdot10^{-5}$	$g04 = 9.6808\cdot10^{-7}$	$G04 = 9.3718\cdot10^{-13}$

$SumG := G01 + G02 + G03 + G04$

$SumG = 5.2921\cdot10^{-11}$

Appendix V : Time Course Spectra of the autooxidation of 3,5-di-*tert*-butylcatechol

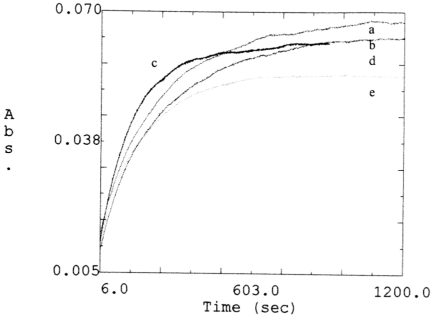


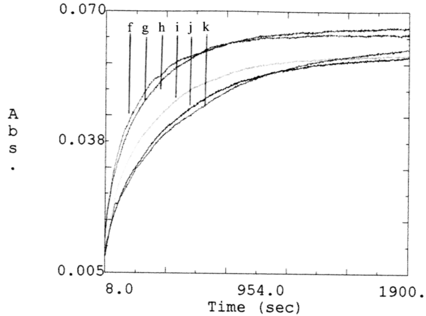


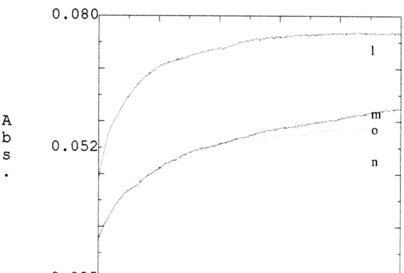
Autooxidation of 3,5-DTBC

	$Cu(C_{12}tmed)(acac)Cl$ / mM	SDS / mM
a	0.50	1.99
b	0.50	1.16
c	0.50	0.22
d	0.51	0.12
e	0.50	-

	$Cu(C_{16}tmed)(acac)Cl$ / mM	SDS / mM
f	0.52	2.03
g	0.52	1.20
h	0.53	0.23
i	0.50	0.13
j	0.50	-





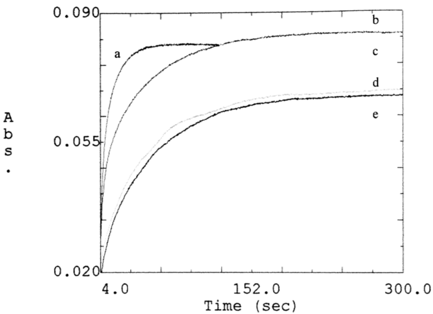


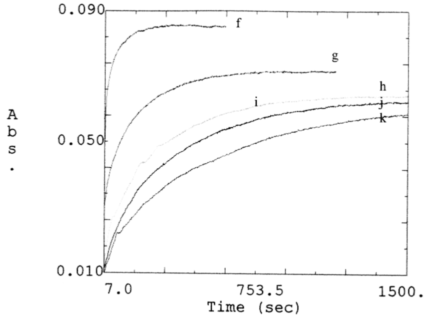
Autooxidation of 3,5-DTBC

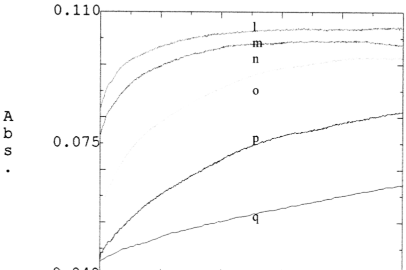
	$Cu(C_{12}tmed)(acac)Cl$ / mM	CTAB / mM
a	0.50	1.99
b	0.50	1.17
c	0.50	0.49
d	0.50	0.21
e	0.51	0.12

	$Cu(C_{16}tmed)(acac)Cl$ / mM	CTAB / mM
f	0.51	1.99
g	0.54	1.15
h	0.53	0.51
i	0.52	0.22
j	0.51	0.13
k	0.50	-

	$Cu(C_{12}tmed)Br_2$ / mM	CTAB / mM
l	0.50	1.18
m	0.51	0.51
n	0.51	0.22
o	0.52	0.14







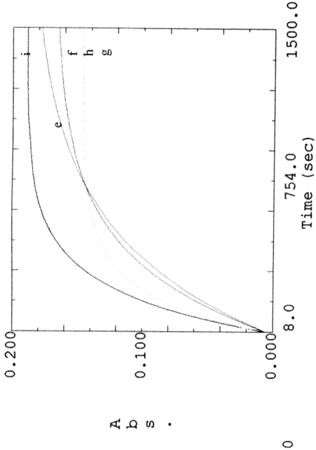
Autooxidation of 3,5-DTBC

	$Cu(C_{12}tmed)(acac)Cl$ / mM	$C_{12}E_8$ / mM
a	0.50	2.00
b	0.51	1.16
c	0.51	0.51
d	0.50	0.21
e	0.50	0.12

	$Cu(C_{16}tmed)(acac)Cl$ / mM	$C_{12}E_8$ / mM
f	0.52	2.02
g	0.53	1.18
h	0.51	0.48
i	0.51	0.22
j	0.53	0.13
k	0.50	-

	$Cu(C_{12}tmed)Br_2$ / mM	$C_{12}E_8$ / mM
l	0.53	2.02
m	0.50	1.16
n	0.52	0.49
o	0.51	0.22

Appendix VI : Time Course Spectra of the hydrolysis of *p*-nitrophenyl diphenyl phosphate

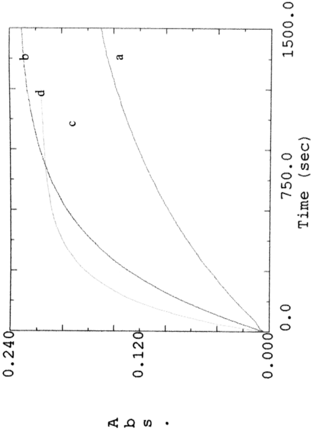


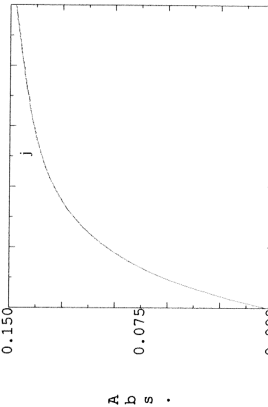
Hydrolysis of PNPDPP

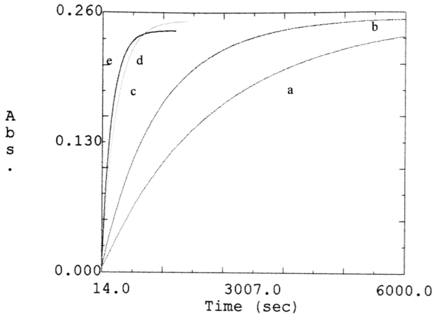
	$Cu(C_{12}tmed)(acac)Cl$ / mM	SDS / mM
a	0.99	4.09
b	0.99	2.34
c	1.03	0.46
d	0.99	0.25

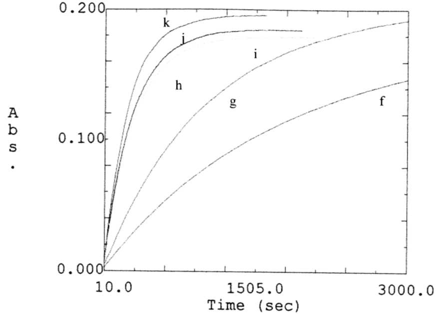
	$Cu(C_{16}tmed)(acac)Cl$ / mM	SDS / mM
e	0.99	3.89
f	0.99	2.37
g	1.03	0.42
h	1.03	0.26
i	1.05	-

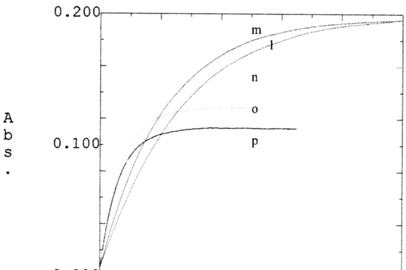
	$Cu(C_{12}tmed)Br_2$ / mM	SDS / mM
j	1.01	4.06









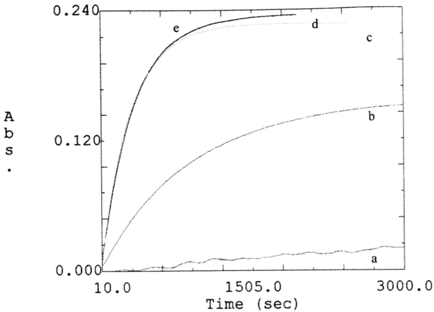


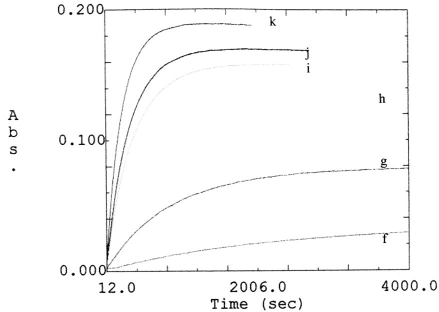
Hydrolysis of PNPDPP

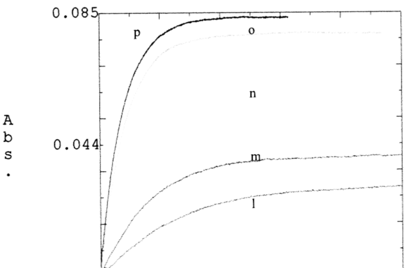
	$Cu(C_{12}tmed)(acac)Cl$ / mM	CTAB / mM
a	1.01	3.99
b	1.00	2.37
c	0.99	1.00
d	0.99	0.40
e	1.01	0.26

	$Cu(C_{16}tmed)(acac)Cl$ / mM	CTAB / mM
f	1.02	4.03
g	1.02	2.34
h	1.01	1.03
i	0.99	0.44
j	0.99	0.26
k	1.05	-

	$Cu(C_{12}tmed)Br_2$ / mM	CTAB / mM
l	1.02	3.99
m	1.00	2.37
n	1.02	1.03
o	1.02	0.44







Hydrolysis of PNPDPP

	$Cu(C_{12}tmed)(acac)Cl$ / mM	$C_{12}E_8$ / mM
a	1.02	4.02
b	0.99	2.32
c	1.01	1.02
d	0.99	0.44
e	1.02	0.26

	$Cu(C_{16}tmed)(acac)Cl$ / mM	$C_{12}E_8$ / mM
f	1.01	4.05
g	1.01	2.34
h	0.99	1.04
i	1.05	0.48
j	1.01	0.25
k	1.05	-

	$Cu(C_{12}tmed)Br_2$ / mM	$C_{12}E_8$ / mM
l	1.00	3.99
m	1.03	2.35
n	1.00	0.97
o	1.00	0.42