

Clase 8 13 noviembre 2020

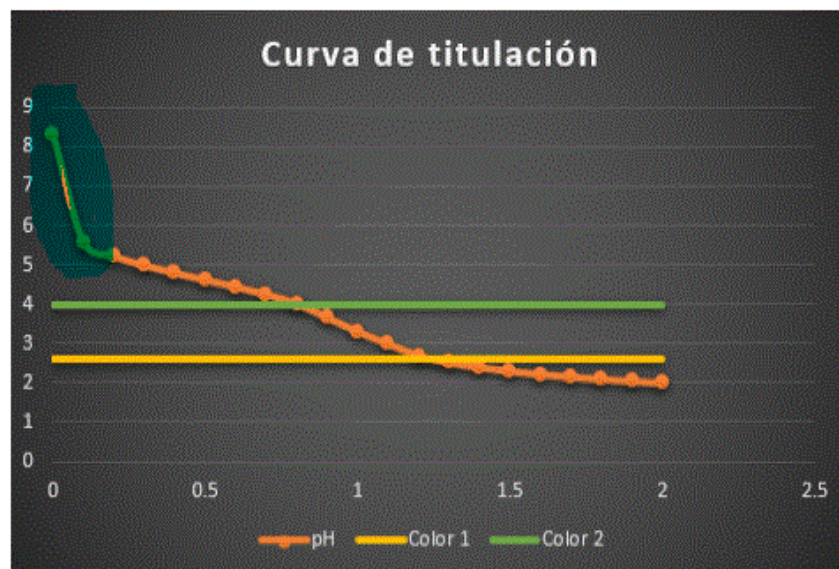
Título de la nota

13/11/2020

INDICADOR	pK_a				
	H ₂ O	MeOH	EtOH	DMSO	DMA
Anaranjado de metilo	3.5	3.8	3.4	10.6	
Azul de bromofenol	4.1	8.9	9.5		
Azul de timol	9.2	14.0	5.2	15.3	
2,4 dinitrofenol	4.0	7.9	8.2	5.0	6.3
2,6 dinitrofenol	3.6			4.9	5.9
o. nitrofenol	7.2			11.0	12.2
p. nitrofenol	7.2	11.2	11.0	11.0	12.5
púrpura de bromocresol	6.4	11.3	12.0		
rojo de bromofenol	6.4	11.2			
rojo de metilo	2.3	4.1	3.5		
rojo neutro	7.4	8.2	8.2		
verde de bromocresol	4.7	9.8	10.6	7.3	8.7

Disolvente	pK	HA	BH+	B	A-	
Metanol	16.9	4.8	1.1	1.8	-2	
Etanol	19.5	5.7	1.1	4.4	-0.2	
DMFA	18	6.9	-0.7	4.7	-2.9	
DMSO	30	6	-2	-1.1	10	
AN	26	15	7.4	4.6	-3	
Agua	14	0	0	0	0	

Anilina en agua $10^{-2} M$



Disolvente	Agua
Sustancia	Anilina
Co	0.01
pkb	9.377
kb	4.2E-10
pka	4.623
ka	2.38095E-05
pk disolvente	14
k disolvente	1E-14
fuerza	0.000000042
error de indicador	1
[] con error	0.0001
pH indicador APE	2.62324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	4.20E+04
ε	0.048795004
%Q	95.12049964
No cuantitativo	

De manera general

3													
4													
5		1	B	+	1	H_2S^+	\leftrightarrow	1	HB^+	+	1	HS	X
5	INICIO		Co										0
7	AGREGADO					xCo							-
8	APE		Co(1-x)			~ 0			xCo			xCo	0.5
9	PE		εCo			εCo			Co			Co	1
0	DPE		~ 0			Co(x-1)			Co			Co	2

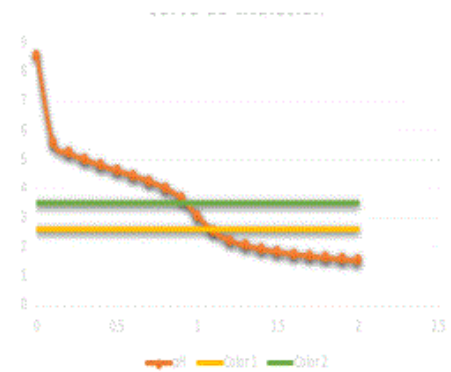
Disolvente	Agua
Sustancia	Anilina
Co	0.03
pkb	9.377
kb	4.2E-10
pka	4.623
ka	2.38095E-05
pk disolvente	14
k disolvente	1E-14
fuerza	0.000000014
error de indicador	1
[I] con error	0.0003
pH indicador APE	2.62324929
pH indicador DPE	3.52287875

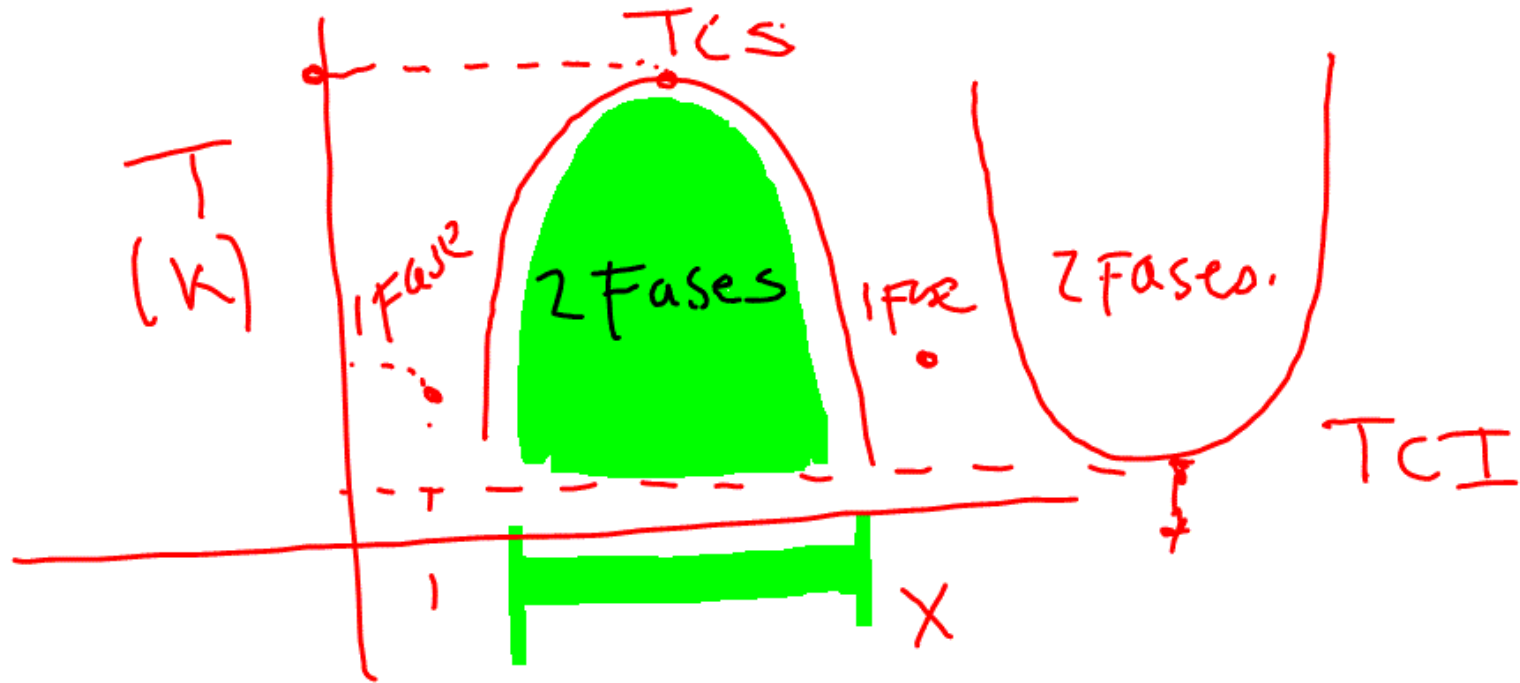


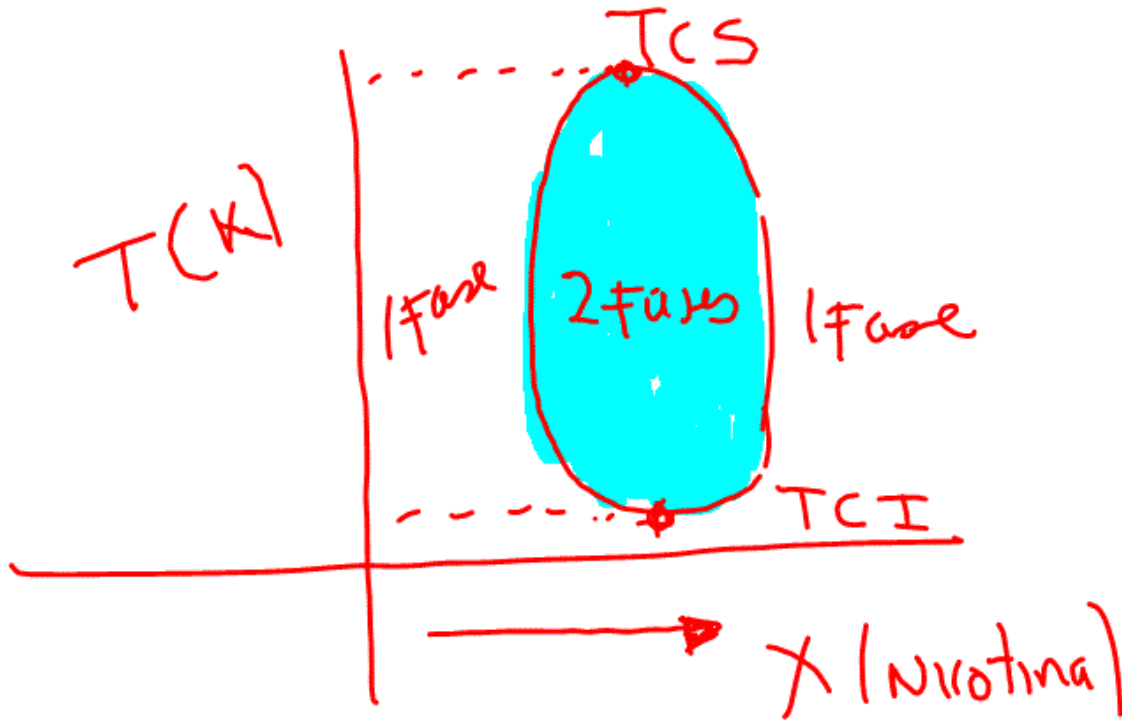
Base debil

Cuantitatividad	
Kr	4.20E+04
e	0.028171808
%Q	97.18281915
No cuantitativo	

Fracción	pH	Color 1	Color 2
0	8.55018527	2.62324929	3.52287875
0.1	5.5774918	2.62324929	3.52287875
0.2	5.22530928	2.62324929	3.52287875
0.3	4.99122608	2.62324929	3.52287875
0.4	4.79934055	2.62324929	3.52287875
0.5	4.62324929	2.62324929	3.52287875
0.6	4.44715803	2.62324929	3.52287875
0.7	4.25527251	2.62324929	3.52287875
0.8	4.0211893	2.62324929	3.52287875
0.9	3.66900678	2.62324929	3.52287875
1	3.07306402	2.62324929	3.52287875
1.1	2.52287875	2.62324929	3.52287875





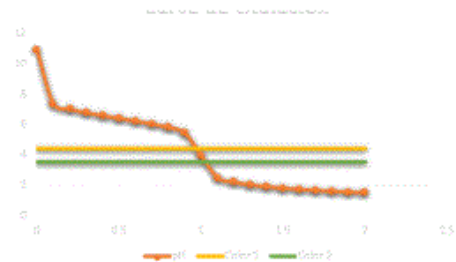


Disolvente	Metanol
Sustancia	Anilina
Co	0.03
pkb	10.477
kb	3.33618E-11
pka	6.423
ka	3.77356E-07
pk disolvente	16.9
k disolvente	1.25893E-17
fuerza	1.11206E-09
error de indicador	1
[] con error	0.0003
pH indicador APE	4.42324929
pH indicador DPE	3.522878745

base debil

Cuantitatividad	
Kr	2.05E+06
ε	0.003546621
%Q	99.64533794
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	10.9001853	4.42324929	3.52287875
0.1	7.3774918	4.42324929	3.52287875
0.2	7.02530928	4.42324929	3.52287875
0.3	6.79122608	4.42324929	3.52287875
0.4	6.59934055	4.42324929	3.52287875
0.5	6.42324929	4.42324929	3.52287875
0.6	6.24715803	4.42324929	3.52287875
0.7	6.05527251	4.42324929	3.52287875
0.8	5.8211893	4.42324929	3.52287875
0.9	5.46900678	4.42324929	3.52287875
1	3.97306402	4.42324929	3.52287875



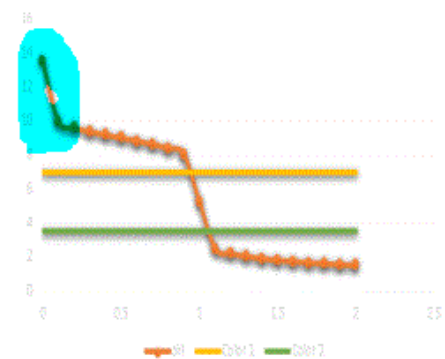
$$K_r = \frac{1}{K_a^{Hs}} = \frac{1}{10^{-6.42}} = 10^{6.42}$$

Disolvente	Etanol
Sustancia	Anilina
Co	0.03
pkb	10.477
kb	3.39618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	1.11206E-09
error de indicador	1
[] con error	0.0003
pH indicador APE	7.02324929
pH indicador DPE	3.522878745

Base debil

Cuantitatividad	
Kr	1.05E+09
e	0.000177752
%Q	99.98222479
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	13.5001853	7.02324929	3.52287875
0.1	9.9774918	7.02324929	3.52287875
0.2	9.62530928	7.02324929	3.52287875
0.3	9.39122608	7.02324929	3.52287875
0.4	9.19934055	7.02324929	3.52287875
0.5	9.02324929	7.02324929	3.52287875
0.6	8.84715803	7.02324929	3.52287875
0.7	8.65527251	7.02324929	3.52287875
0.8	8.4211893	7.02324929	3.52287875
0.9	8.06900678	7.02324929	3.52287875



Disolvente	Etolol
Sustancia	Anilina
Co	0.01
pkb	10.477
kb	3.33618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	3.33618E-09
error de indicador	1
[] con error	0.0001
pH indicador APE	7.02324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	1.05E+09
s	0.000307876
%Q	99.96921243
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	13.2616246	7.02324929	4
0.1	9.9774918	7.02324929	4
0.2	9.62530928	7.02324929	4
0.3	9.39122608	7.02324929	4
0.4	9.19934055	7.02324929	4
0.5	9.02324929	7.02324929	4
0.6	8.84715803	7.02324929	4
0.7	8.65527251	7.02324929	4
0.8	8.4211893	7.02324929	4
0.9	8.06900678	7.02324929	4
1	5.51162465	7.02324929	4



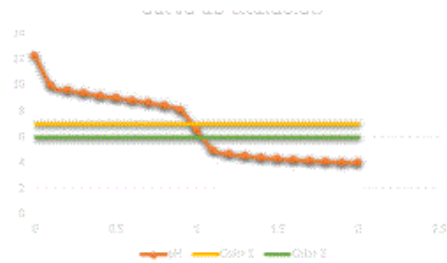
Disolvente	Etanol
Sustancia	Anilina
Co	0.0001
pkb	10.477
kb	3.33618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	3.33618E-07
error de indicador	1
[] con error	0.000001
pH indicador APE	7.02324929
pH indicador DPE	6

Base debil

Cuantitatividad	
Kr	1.05E+09
e	0.003078757
%Q	99.69212434

Cuantitativo

Fracción	pH	Color 1	Color 2
0	12.2616246	7.02324929	6
0.1	9.9774918	7.02324929	6
0.2	9.62530928	7.02324929	6
0.3	9.39122608	7.02324929	6
0.4	9.19934055	7.02324929	6
0.5	9.02324929	7.02324929	6
0.6	8.84715803	7.02324929	6
0.7	8.65527251	7.02324929	6
0.8	8.4211893	7.02324929	6
0.9	8.06900678	7.02324929	6
1	6.51162465	7.02324929	6
1.1	5	7.02324929	6



Disolvente	Etanol
Sustancia	Anilina
Co	0.0001
pkb	10.477
kb	3.33618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	3.33618E-07
error de indicador	0.1
[] con error	0.0000001
pH indicador APE	6.02324929
pH indicador DPE	7

Base debil

Cuantitatividad	
Kr	1.05E+09
e	0.003078757
%Q	99.69212434

Cuantitativo

Fracción	pH	Color 1	Color 2
0	12.2616246	6.02324929	7
0.1	9.9774918	6.02324929	7
0.2	9.62530928	6.02324929	7
0.3	9.39122608	6.02324929	7
0.4	9.19934055	6.02324929	7
0.5	9.02324929	6.02324929	7
0.6	8.84715803	6.02324929	7
0.7	8.65527251	6.02324929	7
0.8	8.4211893	6.02324929	7
0.9	8.06900678	6.02324929	7
1	6.51162465	6.02324929	7
1.1	5	6.02324929	7

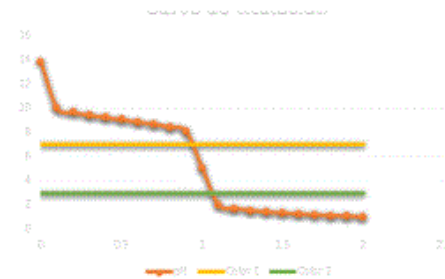


Disolvente	Etanol
Sustancia	Anilina
Co	0.103
pkb	10.477
kb	3.33618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	3.23901E-10
error de indicador	1
]] con error	0.00103
pH indicador APE	7.02324929
pH indicador DPE	2.98716278

Base debil

Cuantitatividad	
Kr	1.05E+09
ε	9.59305E-05
%Q	99.99040695
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	13.7680433	7.02324929	2.98716278
0.1	9.9774918	7.02324929	2.98716278
0.2	9.62530928	7.02324929	2.98716278
0.3	9.39122608	7.02324929	2.98716278
0.4	9.19934055	7.02324929	2.98716278
0.5	9.02324929	7.02324929	2.98716278
0.6	8.84715803	7.02324929	2.98716278
0.7	8.65527251	7.02324929	2.98716278
0.8	8.4211893	7.02324929	2.98716278
0.9	8.06900678	7.02324929	2.98716278
1	5.00520603	7.02324929	2.98716278
1.1	1.98716278	7.02324929	2.98716278

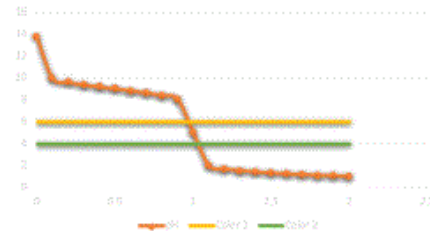


Disolvente	Etanol
Sustancia	Anilina
Co	0.103
pkb	10.477
kb	3.33618E-11
pka	9.023
ka	9.47874E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	3.23901E-10
error de indicador	0.1
]] con error	0.000103
pH indicador APE	6.02324929
pH indicador DPE	3.98716278

Base debil

Cuantitatividad	
Kr	1.05E+09
ε	9.59305E-05
%Q	99.99040695
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	13.7680433	6.02324929	3.98716278
0.1	9.9774918	6.02324929	3.98716278
0.2	9.62530928	6.02324929	3.98716278
0.3	9.39122608	6.02324929	3.98716278
0.4	9.19934055	6.02324929	3.98716278
0.5	9.02324929	6.02324929	3.98716278
0.6	8.84715803	6.02324929	3.98716278
0.7	8.65527251	6.02324929	3.98716278
0.8	8.4211893	6.02324929	3.98716278
0.9	8.06900678	6.02324929	3.98716278
1	5.00520603	6.02324929	3.98716278
1.1	1.98716278	6.02324929	3.98716278

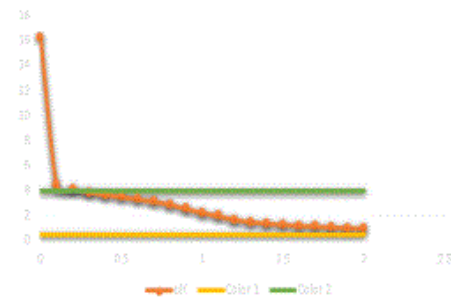


Disolvente	DMSO
Sustancia	Anilina
Co	0.1
pkb	26.477
kb	3.33618E-27
pka	3.523
ka	0.000299744
pk disolvente	30
k disolvente	1E-30
fuerza	3.33618E-27
error de indicador	0.1
[] con error	0.403
pH indicador APE	0.52324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	3.34E+03
e	0.054748895
%Q	94.52511054
No cuantitativo	

Fracción	pH	Color 1	Color 2
0	16.2616246	0.52324929	4
0.1	4.4774918	0.52324929	4
0.2	4.12530928	0.52324929	4
0.3	3.89122608	0.52324929	4
0.4	3.69934055	0.52324929	4
0.5	3.52324929	0.52324929	4
0.6	3.34715803	0.52324929	4
0.7	3.15527251	0.52324929	4
0.8	2.9211893	0.52324929	4
0.9	2.56900678	0.52324929	4
1	2.26162465	0.52324929	4

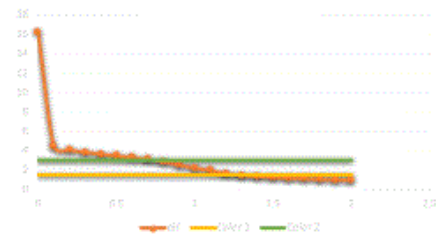


Disolvente	DMSO
Sustancia	Anilina
Co	0.1
pkb	26.477
kb	3.33618E-27
pka	3.523
ka	0.000299744
pk disolvente	30
k disolvente	1E-30
fuerza	3.33618E-27
error de indicador	0.1
[] con error	0.403
pH indicador APE	0.52324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	3.34E+03
e	0.054748895
%Q	94.52511054
No cuantitativo	

Fracción	pH	Color 1	Color 2
0	16.2616246	1.52324929	3
0.1	4.4774918	1.52324929	3
0.2	4.12530928	1.52324929	3
0.3	3.89122608	1.52324929	3
0.4	3.69934055	1.52324929	3
0.5	3.52324929	1.52324929	3
0.6	3.34715803	1.52324929	3
0.7	3.15527251	1.52324929	3
0.8	2.9211893	1.52324929	3
0.9	2.56900678	1.52324929	3
1	2.26162465	1.52324929	3
1.1	2	1.52324929	3
1.2	1.69897	1.52324929	3
1.3	1.52287875	1.52324929	3



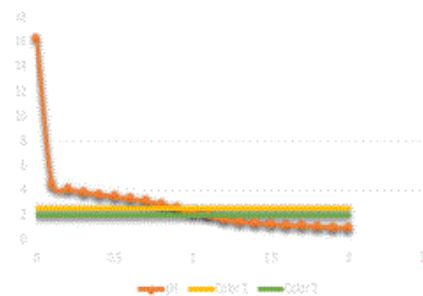
Elección del indicador	
Indicador	Indofenol

Disolvente	DMSO
Sustancia	Anilina
Co	0.1
pkb	26.477
kb	3.33618E-27
pka	3.523
ka	0.000299744
pk disolvente	30
k disolvente	1E-30
fuerza	3.33618E-26
error de indicador	10
con error	0.01
pH indicador APE	2.52324929
pH indicador DPE	2

Base debil

Cuantitatividad	
Kf	3.34E+03
s	0.054746895
%Q	94.52511054
No cuantitativo	

Fración	pH	Color 1	Color 2
0	16.2616246	2.52324929	2
0.1	4.4774918	2.52324929	2
0.2	4.12530928	2.52324929	2
0.3	3.89122608	2.52324929	2
0.4	3.69934055	2.52324929	2
0.5	3.52324929	2.52324929	2
0.6	3.34715803	2.52324929	2
0.7	3.15527251	2.52324929	2
0.8	2.9211893	2.52324929	2
0.9	2.56900678	2.52324929	2
1	2.26162465	2.52324929	2
1.1	2	2.52324929	2

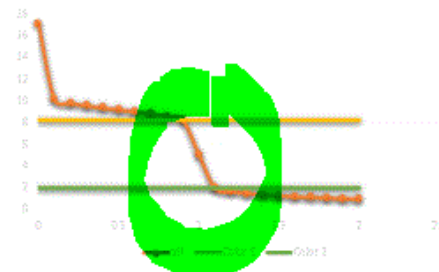


Disolvente	AN
Sustancia	Anilina
Co	0.1
pKb	16.777
k _b	1.67205E-17
pK _a	9.223
K _a	5.98068E-10
pK disolvente	26
k disolvente	1E-26
fuerza	1.67205E-16
error de indicador	10
[] con error	0.01
pH indicador APE	8.22324929
pH indicador DPE	2

Base debil

Cuantitativo	
Kr	1.67E+09
ε	7.73349E-05
%Q	99.99226651
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	17.1116246	8.22324929	2
0.1	10.1774918	8.22324929	2
0.2	9.82530928	8.22324929	2
0.3	9.59122608	8.22324929	2
0.4	9.39934055	8.22324929	2
0.5	9.22324929	8.22324929	2
0.6	9.04715803	8.22324929	2
0.7	8.85527251	8.22324929	2
0.8	8.6211893	8.22324929	2
0.9	8.26900678	8.22324929	2
1	5.11162465	8.22324929	2
1.1	2	8.22324929	2

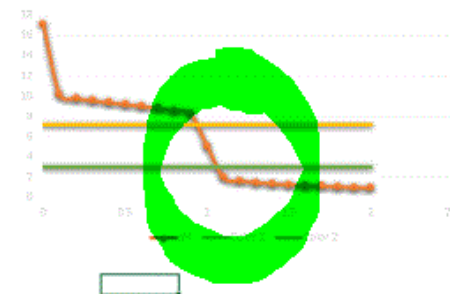


Disolvente	AN
Sustancia	Anilina
Co	0.1
pKb	16.777
k _b	1.67205E-17
pK _a	9.223
K _a	5.98068E-10
pK disolvente	26
k disolvente	1E-26
fuerza	1.67205E-16
error de indicador	1
[] con error	0.001
pH indicador APE	7.22324929
pH indicador DPE	3

Base debil

Cuantitativo	
Kr	1.67E+09
ε	7.73349E-05
%Q	99.99226651
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	17.1116246	7.22324929	3
0.1	10.1774918	7.22324929	3
0.2	9.82530928	7.22324929	3
0.3	9.59122608	7.22324929	3
0.4	9.39934055	7.22324929	3
0.5	9.22324929	7.22324929	3
0.6	9.04715803	7.22324929	3
0.7	8.85527251	7.22324929	3
0.8	8.6211893	7.22324929	3
0.9	8.26900678	7.22324929	3
1	5.11162465	7.22324929	3
1.1	2	7.22324929	3



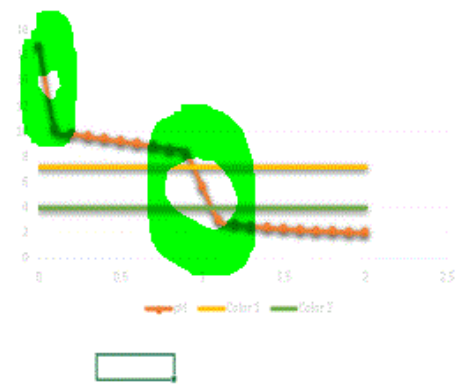
Disolvente	AN
Sustancia	Anilina
Co	0.01
pkb	16.777
kb	1.67205E-17
pka	9.223
ka	5.98068E-10
pk disolvente	26
k disolvente	1E-26
fuerza	1.67205E-15
error de indicador	1
[] con error	0.0001
pH indicador APE	7.22324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	1.67E+09
ε	0.000244554
%Q	99.97554457
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	16.6116246	7.22324929	4
0.1	10.1774918	7.22324929	4
0.2	9.82530928	7.22324929	4
0.3	9.59122608	7.22324929	4
0.4	9.39934055	7.22324929	4
0.5	9.22324929	7.22324929	4
0.6	9.04715803	7.22324929	4
0.7	8.85527251	7.22324929	4
0.8	8.6211893	7.22324929	4
0.9	8.26900678	7.22324929	4
1	5.61162465	7.22324929	4
1.1	3	7.22324929	4
1.2	2.69897	7.22324929	4

Fración del indicador



Disolvente	DMFA
Sustancia	Anilina
Co	0.01
pkb	8.677
kb	2.10499E-09
pka	9.323
ka	4.75062E-10
pk disolvente	18
k disolvente	1E-18
fuerza	2.10499E-07
error de indicador	1
[] con error	0.0001
pH indicador APE	7.32324929
pH indicador DPE	4

Base debil

Cuantitatividad	
Kr	2.10E+09
ε	0.000217959
%Q	99.97820407
Cuantitativo	

Fración	pH	Color 1	Color 2
0	12.6616246	7.32324929	4
0.1	10.2774918	7.32324929	4
0.2	9.92530928	7.32324929	4
0.3	9.69122608	7.32324929	4
0.4	9.49934055	7.32324929	4
0.5	9.32324929	7.32324929	4
0.6	9.14715803	7.32324929	4
0.7	8.95527251	7.32324929	4
0.8	8.7211893	7.32324929	4
0.9	8.36900678	7.32324929	4
1	5.66162465	7.32324929	4
1.1	3	7.32324929	4

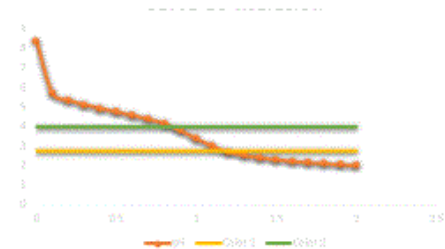


Disolvente	Agua
Sustancia	Acetato
Co	0.01
pkb	9.250
kb	5.62341E-10
pka	4.750
ka	1.77828E-05
pk disolvente	14
k disolvente	1E-14
fuerza	5.62341E-08
error de indicador	1
[] con error	0.0001
pH indicador APE	2.75
pH indicador DPI	4

Base debil

Cuantitatividad	
Kr	5.62E+04
ε	0.04216965
%Q	95.78303497
No cuantitativo	

Fracción	pH	Color 1	Color 2
0	8.375	2.75	4
0.1	5.70424251	2.75	4
0.2	5.35205999	2.75	4
0.3	5.11797679	2.75	4
0.4	4.92609126	2.75	4
0.5	4.75	2.75	4
0.6	4.57390874	2.75	4
0.7	4.38202321	2.75	4
0.8	4.14794001	2.75	4
0.9	3.79575749	2.75	4
1	3.375	2.75	4
1.1	3	2.75	4
1.2	2.69897	2.75	4
1.3	2.5287875	2.75	4
1.4	2.39794001	2.75	4
1.5	2.30103	2.75	4
1.6	2.22184875	2.75	4



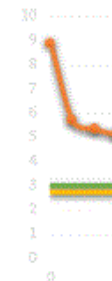
Elección del indicador	
Indicador	Indofenol
Coloración ácida	Rojo
Coloración básica	Azul
Lim. inferior (pH)	6.3

Disolvente	Agua
Sustancia	Acetato
Co	0.1
pkb	9.250
kb	5.62341E-10
pka	4.750
ka	1.77828E-05
pk disolvente	14
k disolvente	1E-14
fuerza	5.62341E-09
error de indicador	1
[] con error	0.001
pH indicador APE	2.75

Base debil

Cuantitatividad	
Kr	5.62E+04
ε	0.013335214
%Q	98.66647857
No cuantitativo	

Fracción	pH	Color 1	Color 2
0	8.875	2.75	3
0.1	5.70424251	2.75	3
0.2	5.35205999	2.75	3
0.3	5.11797679	2.75	3
0.4	4.92609126	2.75	3
0.5	4.75	2.75	3
0.6	4.57390874	2.75	3
0.7	4.38202321	2.75	3

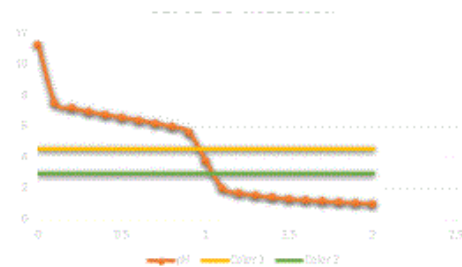


Disolvente	Metanol
Sustancia	Acetato
Co	0.1
pkb	10.350
kb	4.46684E-11
pka	6.550
ka	2.81838E-07
pk disolvente	16.9
k disolvente	1.25893E-17
fuerza	4.46684E-10
error de indicador	1
[] con error	0.001
pH indicador APE	4.55
pH indicador DPE	3

Base debil

Cuantitatividad	
Kr	3.55E+06
s	0.001678804
%Q	99.8321196
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	11.225	4.55	3
0.1	7.50424251	4.55	3
0.2	7.15205999	4.55	3
0.3	6.91797679	4.55	3
0.4	6.72609126	4.55	3
0.5	6.55	4.55	3
0.6	6.37390874	4.55	3
0.7	6.18202321	4.55	3
0.8	5.94794001	4.55	3
0.9	5.59575749	4.55	3
1	3.775	4.55	3

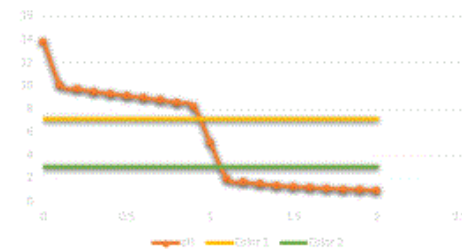


Disolvente	Etanol
Sustancia	Acetato
Co	0.1
pkb	10.350
kb	4.46684E-11
pka	9.150
ka	7.07946E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	4.46684E-10
error de indicador	1
[] con error	0.001
pH indicador APE	7.15
pH indicador DPE	3

Base debil

Cuantitatividad	
Kr	1.41E+09
s	8.41395E-05
%Q	99.99158605
Cuantitativo	

Fracción	pH	Color 1	Color 2
0	13.825	7.15	3
0.1	10.1042425	7.15	3
0.2	9.75205999	7.15	3
0.3	9.51797679	7.15	3
0.4	9.32609126	7.15	3
0.5	9.15	7.15	3
0.6	8.97390874	7.15	3
0.7	8.78202321	7.15	3
0.8	8.54794001	7.15	3
0.9	8.19575749	7.15	3
1	5.075	7.15	3
1.1	2	7.15	3



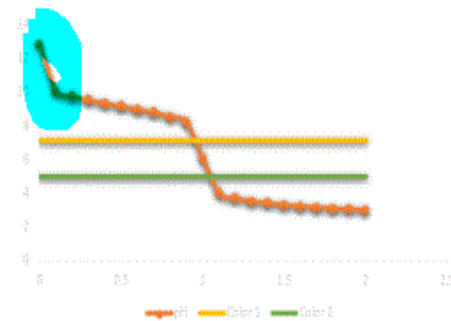
Disolvente	Etanol
Sustancia	Acetato
Co	0.001
pkb	10.350
kb	4.46684E-11
pka	9.150
ka	7.07946E-10
pk disolvente	19.5
k disolvente	3.16228E-20
fuerza	4.46684E-08
error de indicador	1
[] con error	0.00001
pH indicador APE	7.15
pH indicador DPE	5

Base debil

Cuantitatividad	
Kr	1.41E+09
ε	0.000841395
%Q	99.91586049

Cuantitativo

Fración	pH	Color 1	Color 2
0	12.825	7.15	5
0.1	10.1042425	7.15	5
0.2	9.75205999	7.15	5
0.3	9.51797679	7.15	5
0.4	9.32609126	7.15	5
0.5	9.15	7.15	5
0.6	8.97390874	7.15	5
0.7	8.78202321	7.15	5
0.8	8.54794001	7.15	5
0.9	8.19575749	7.15	5
1	6.075	7.15	5
1.1	4	7.15	5



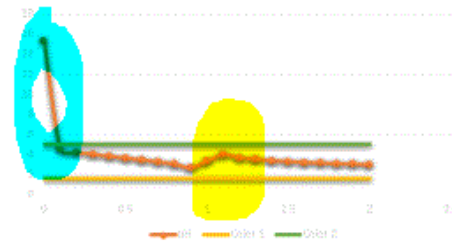
Disolvente	DMSO
Sustancia	Acetato
Co	0.001
pkb	26.350
kb	4.46684E-27
pka	3.630
ka	0.000223872
pk disolvente	30
k disolvente	1E-30
fuerza	4.46684E-24
error de indicador	1
[] con error	0.00001
pH indicador APE	1.65
pH indicador DPE	5

Base debil

Cuantitatividad	
Kr	4.47E+09
ε	0.473151259
%Q	52.6848741

No cuantitativo

Fración	pH	Color 1	Color 2
0	15.325	1.65	5
0.1	4.60424251	1.65	5
0.2	4.25205999	1.65	5
0.3	4.01797679	1.65	5
0.4	3.82609126	1.65	5
0.5	3.65	1.65	5
0.6	3.47390874	1.65	5
0.7	3.28202321	1.65	5
0.8	3.04794001	1.65	5
0.9	2.69575749	1.65	5
1	3.325	1.65	5
1.1	-	-	-

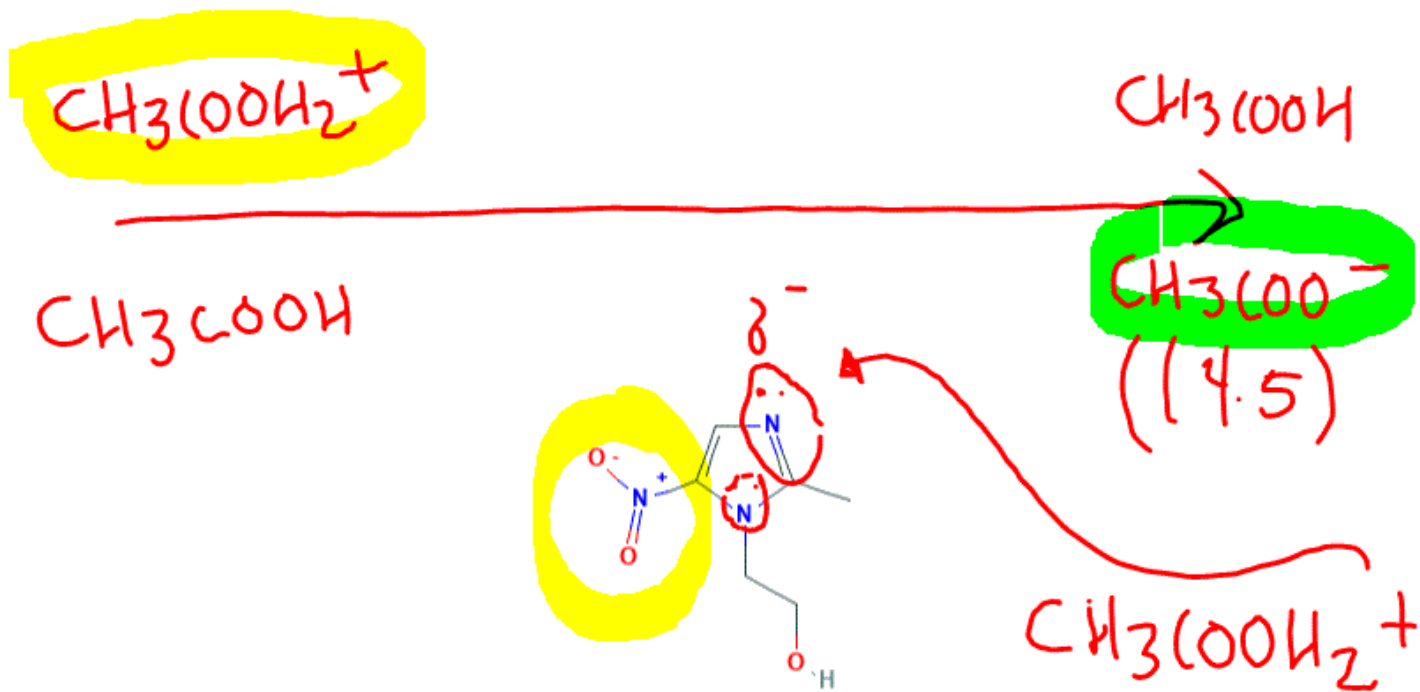


Bases débiles

CH₃COOH glacial.

Metronidazol

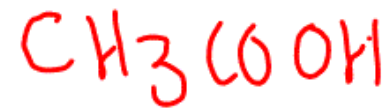
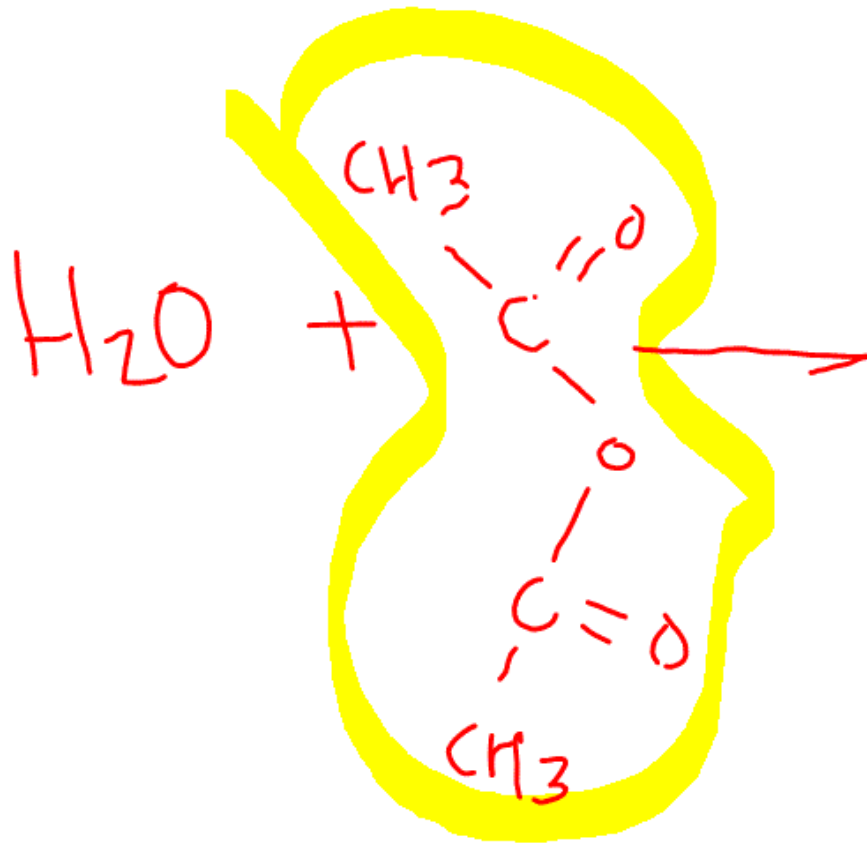
-

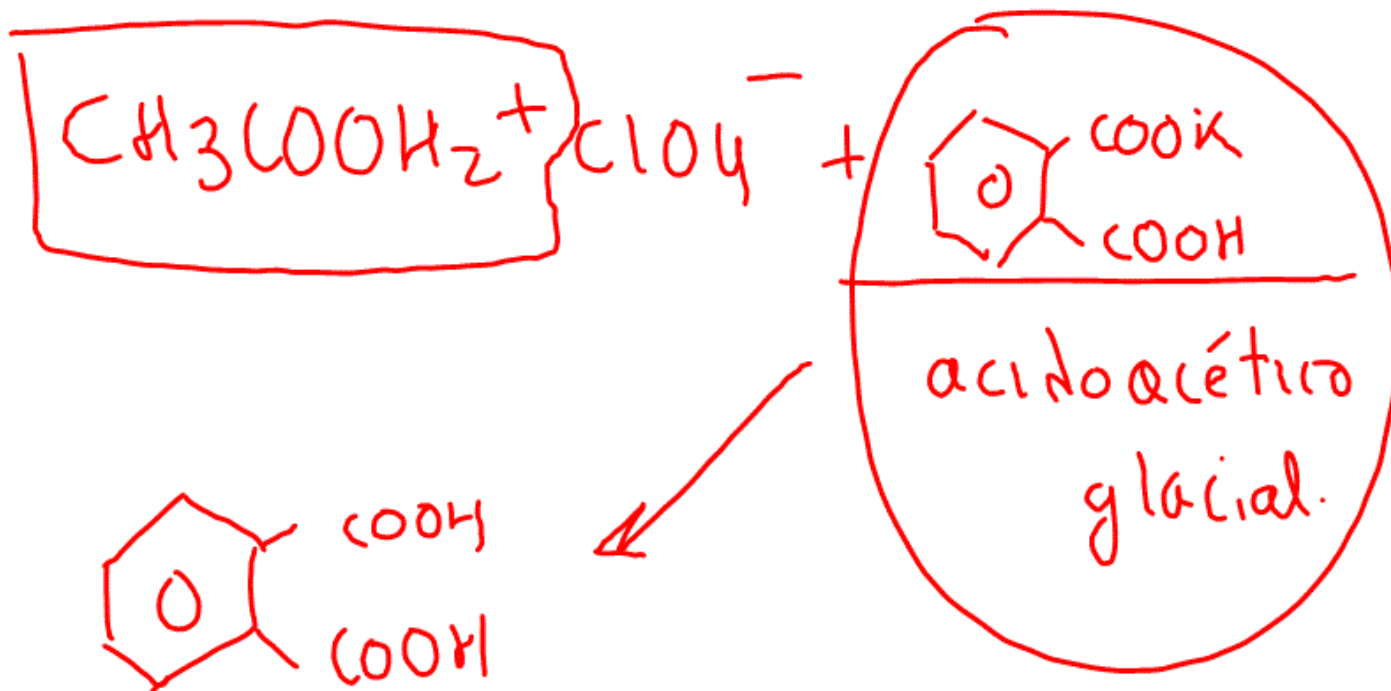


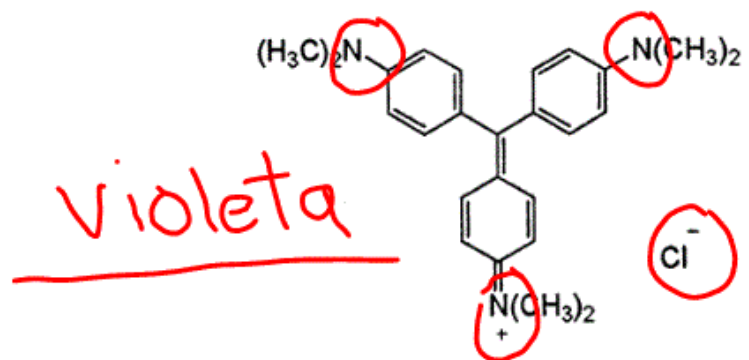


perclorato de
acetonio

Titulante







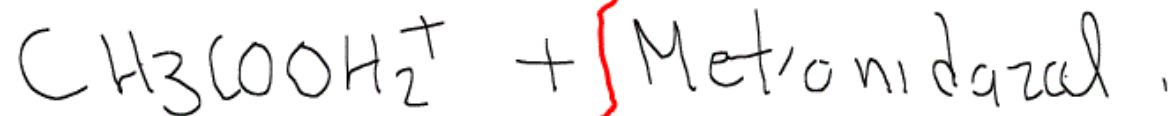
crystal violet

3 pKas

Indicador para estandarización

$K_{v \text{ analito}} > K_{v \text{ indicador}}$

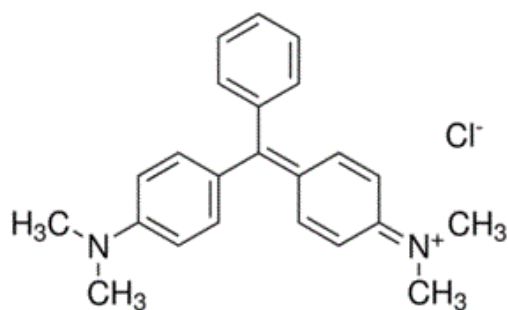
Violeta, azulverdosa - amarillo



Anhidrido
acético

Verde de malaquita

Verde esmeralda
↓
Amarillo

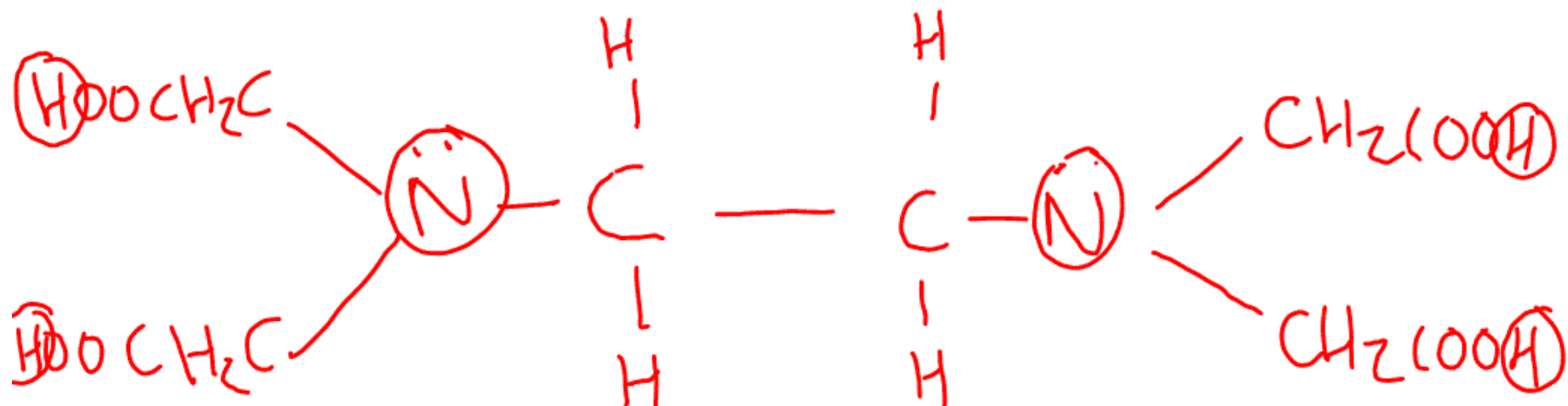


Indicador
2 colores.

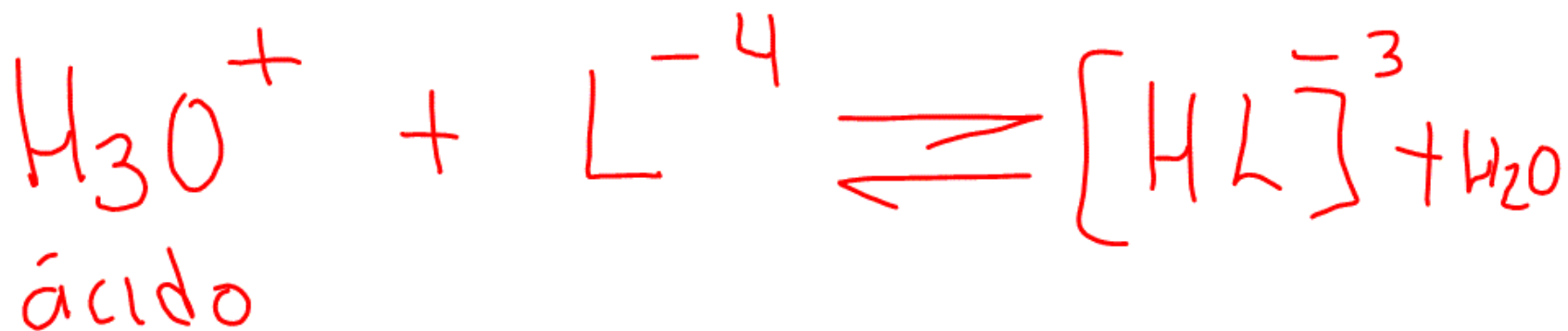
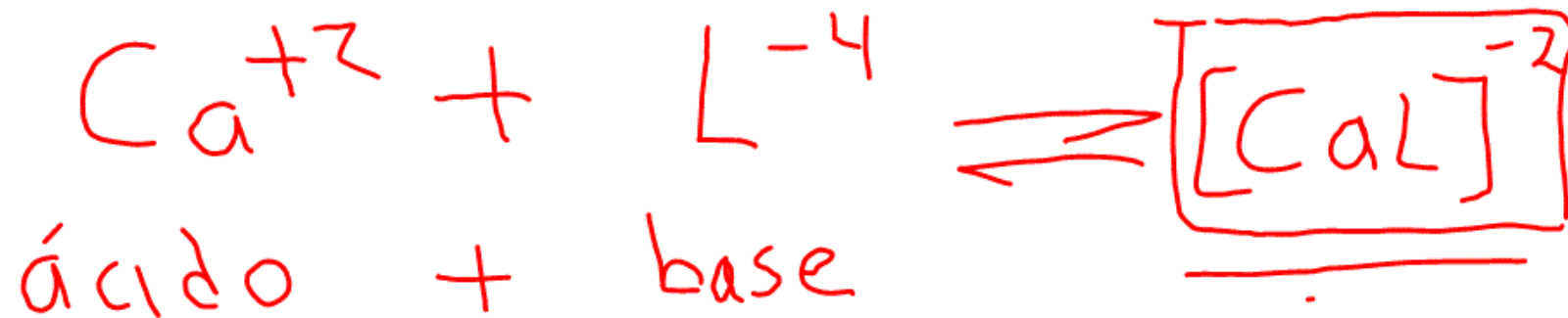
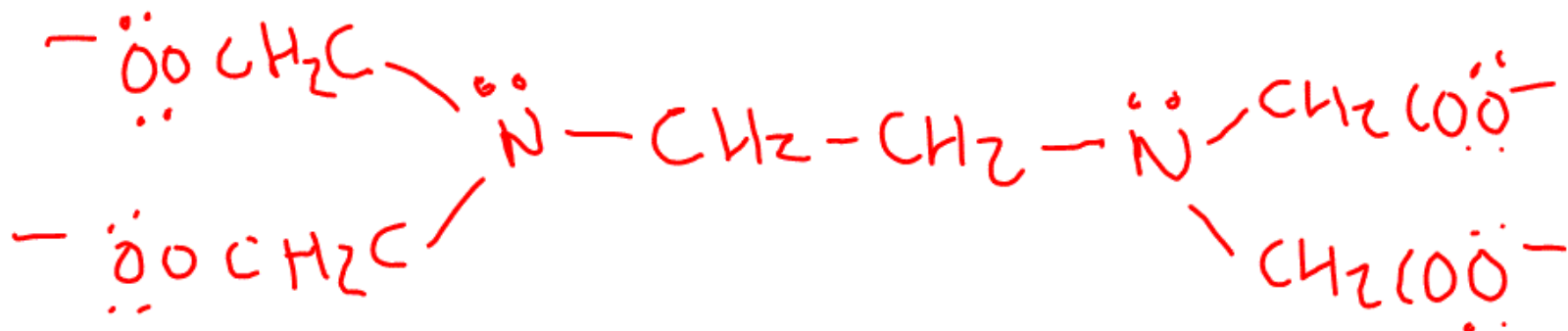
Complejos solubles
ácido-base

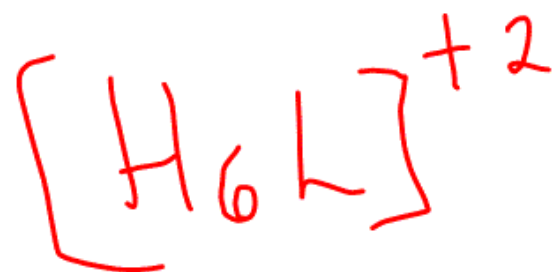
EDTA

AEDTA
6 0 1 0 0



6 pKas





AEDTA

sal disódica

Soluble
en agua.

