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ภาคผนวก

ค่าคงที่ต่าง ๆ ที่ใช้ในการคำนวณ

สัญญลักษณ์		ค่า
F		96487 คูลอมบ์/สมมูลย์
R		8.31436 จูล/โมล/ดีกรี
A	(10% เอธานอล, 6.583% ไดออกเซน น้ำหนักโดยน้ำหนัก)	0.5625826, 0.5674474 ตามลำดับ
B	(10% เอธานอล, 6.583% ไดออกเซน น้ำหนักโดยน้ำหนัก)	33866337, 34159191 ตามลำดับ
2k		0.1183
a_o	(HCl,HBr ในตัวทำละลายต่าง ๆ)	4.3, 5 A^o
G_o	(10% เอธานอล, 6.583% ไดออกเซน น้ำหนักโดยน้ำหนัก)	19.19, 19.011 ตามลำดับ
ρ_o	(10% เอธานอล, 6.583% ไดออกเซน น้ำหนักโดยน้ำหนัก ตามลำดับ)	0.98391 (46), 1.001 (47) ตามลำดับ
N		6.02253×10^{23}
e		4.80298×10^{-10} esu
γ_+	(H_3^+O)	2.76 A^o
γ_-	(Cl^-, Br^-)	1.81, 1.95 A^o ตามลำดับ

สูตรต่าง ๆที่ใช้ในการคำนวณ

1. $E+2\frac{RT}{F}\ln C = E^{o}-2\frac{RT}{F}\ln \gamma_{\pm}$

2. $E^{o'} = E+2k \log m - \frac{2k\ AC^{\frac{1}{2}}}{1+Ba_{o}C^{\frac{1}{2}}} - 2k \log(1+0.002G_{o}m) = E^{o}_{m}-2k\ \beta\ m$

3. $\log^{s}_{w}\ \gamma^{o}_{\pm} = ({}^{w}E^{o}_{m} - {}^{s}E^{o}_{m})/2k$

4. $E^{o}_{C} = E^{o}_{m} + 2k \log \rho_{o}$

5. $E^{o}_{N} = E^{o}_{m} - 2k \log (1000/G_{o})$

6. $A = 1.8123 \times 10^{6}\ \rho^{\frac{1}{2}}/(\epsilon T)^{\frac{3}{2}}$ (48)

7. $B = 50.288 \times 10^{8}\ \rho^{\frac{1}{2}}/(\epsilon T)^{\frac{1}{2}}$ (48)

8. $G_{o} = 100/\left[x/M_{x} + (100-x)/M_{y}\right]$ (1)

9. $\Delta G^{o}_{t} = -nF\ ({}^{s}E^{o}_{N} - {}^{w}E^{o}_{N})$

10. $\Delta G^{o}_{t,el} = \frac{Ne^{2}}{2}\left[\frac{1}{\epsilon_{s}} - \frac{1}{\epsilon_{w}}\right]\left[\frac{1}{\gamma_{+}} + \frac{1}{\gamma_{-}}\right]$

11. $\Delta G^{o'}_{t} = \Delta G^{o}_{t}(HCl) - \Delta G^{o}_{t}(HBr) = \Delta G^{o}_{t}(Cl^{-}) - \Delta G^{o}_{t}(Br^{-})$

ประวัติผู้เขียน

นางสาว ภาวนา ปริยวาทกุล เกิดเมื่อวันที่ 1 พฤษภาคม 2501 ที่กรุงเทพมหานคร ได้เข้าศึกษาที่มหาวิทยาลัยรามคำแหง เมื่อปี 2519 และจบการศึกษาทางวิทยาศาสตร์บัณฑิต สาขาวิชาเคมี เมื่อปี 2524