ERRATUM

Diffusion and Double Diffusion Convection in the Isothermal BaCl$_2$-KCl-H$_2$O System at 25°C

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Table I. Diffusion Data for the Isothermal Ternary System BaCl$_2$ - KCl - H$_2$O at 25°C

ΔC through the diffusion boundary		Gouy Fringe No.	Apparent Diff. Coeff.	Area under the deviation graph
ΔC_1 mol-L^{-1}	ΔC_2 mol-L^{-1}	J_m	$10^5 D_a$ cm^2-s^{-1}	$10^4 Q_o$
0.04	0.00	43.60	1.1535	9.08
0.001	0.116	39.03	1.7340	-22.25
0.0229	0.0778	50.03	1.4163	30.3

$C_1 = 0.9521$ mol-L^{-1}: Average concentration of BaCl$_2$
$C_2 = 0.4747$ mol-L^{-1}: Average concentration of KCl
$d_o = 1.18622$: Density of the solution at the average concentration
$H_1 = 0.1793$: Density increment of BaCl$_2$
$H_2 = 0.0494$: Density increment of KCl
$R_1 = 1090.5$: Refractivity increment of BaCl$_2$ in terms of J_m
$R_2 = 321.6$: Refractivity increment of KCl in terms of J_m

$$10^5 D_{11} \text{ (cm}^2\text{-s}^{-1}) = 1.109 \pm 0.024 \quad \text{(Leaist 1.09)}$$
$$10^5 D_{12} \text{ (cm}^2\text{-s}^{-1}) = 0.033 \pm 0.010 \quad \text{(Leaist 0.02)}$$
$$10^5 D_{21} \text{ (cm}^2\text{-s}^{-1}) = 0.212 \pm 0.116 \quad \text{(Leaist 0.26)}$$
$$10^5 D_{22} \text{ (cm}^2\text{-s}^{-1}) = 1.618 \pm 0.045 \quad \text{(Leaist 1.63)}$$

We feel it our duty to apologize to the readers of the J. Solution Chemistry for an unpleasant error.

Last year we published in this Journal a set of accurate diffusion data, obtained with the Gouy interferometric technique, on a ternary system that we assumed was BaCl$_2$ - KCl - H$_2$O at one concentration[1]. Recently Leaist[2] repeated our measurements using different techniques

and obtained completely different results. We repeated our measurements and realized that the Leaist data are correct. Our new set of data completely agree with Leaist's data, see Table I. We did a critical analysis of our previous set of data but the only conclusion we reached was that we measured diffusion coefficients using material taken from a bottle with an incorrect label!

References

1. L. Paduano, V. Vitagliano, C. DellaVolpe, and L. Costantino, *J. Solution Chem.* **21**, 623 (1992).
2. D. G. Leaist and L. Hao, *J. Phys. Chem.* **97**, 1464 (1993).