In arithmetic these conventions would give on the one hand, $10^3 \equiv 1000$, $0.9^357 \equiv 0.99957$; and on the other hand,[2] for example, $c = 2_{10}9986$. In chemical symbols the suggested use of subscripts and superscript exponents would give $H^2O \equiv HHO$, and would make Li_6 and Li_7 represent two different atomic species of the element lithium, the subscripts being, in this case, the atomic weights of the two known isotopes of lithium. The first usage is that of French chemists, and of the German "Chemiker Kalendar," while the second has already been used to a considerable extent in spite of the obvious danger of confusion with the present subscript exponents.

As an example of the notation proposed, consider a molecule of phosphorus pentachloride containing three atoms of the chlorine isotope of atomic weight 35 and two of the isotope of atomic weight 37. Its formula would be $PCl^3_{35}Cl^2_{37}$. It is becoming increasingly apparent that formulas for such compounds must be written, and the sooner the convention is established the less confusion there will be.

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The Activity Coefficients of Several Types of Electrolytes Calculated from Freezing-Point Data.—The freezing-point data obtained by Hovorka[1] enable us to calculate the activity coefficients of several salts of different types in dilute solution. The calculation is made by a graphical integration of the equation:

$$d\, ln\, \gamma = \frac{d\theta}{1.8582\gamma m} - d\, ln\, m^{(2)}$$

The values at three molalities obtained are tabulated herewith.

ACTIVITY COEFFICIENTS

M	KCl	$CsNO_3$	K_2SO_4	$Ba(NO_3)_2$	$MgSO_4$	$CuSO_4$	$La_2(SO_4)_3$
0.001	0.966	0.966	0.889	0.889	0.765	0.762	0.477
.005	.928	.928	.781	.778	.572	.560	.232
.01	.902	.902	.715	.710	.471	.444	.150

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[2] For an example of this notation see E. Q. Adams, *J. Phys. Chem.*, **26**, 644 (1922).

[1] Hovorka with Rodebush, THIS JOURNAL, **47**, 614 (1925).

[2] Lewis and Randall, "Thermodynamics," McGraw-Hill Book Co., New York, **1923**, p. 342.