The Journal of Chemical Thermodynamics Style Notes

This is intended to act as a guideline to help us to maintain common nomenclature and standards of presentation amongst authors from various disciplines, thereby preventing ambiguity, please consult recent issues of JCT to check any further style or scientific points. N B Please also see the JCT ***Guide for Authors****. Both these* ***Style Notes*** *and the* ***Guide for Authors*** *can be found on the Internet at http://authors.elsevier.com/journal/jct.*

Symbols and Equations

1. The algebra of quantities must be followed. Accordingly, the symbol for a physical quantity represents a pure number multiplied by a unit or combination of units

2 Each physical quantity must be represented by a single symbol which may be decorated with subscript or superscript characters

3. The symbol for a physical quantity must appear in italic or sloping type, even when the symbol appears in a subscript or a superscript. Conversely, symbols not designating a physical quantity should appear in Roman or upright type: e.g. $C^{pg}_{p,m}$ represents the perfect-gas molar heat capacity (italic 'p' for pressure, Roman 'm' for molar).

4. Symbols should be defined in the text when they are first used, and also in figure and table legends.

5 Equations must always be dimensionally consistent. Equations used to correlate experimental data may be best in a dimensionless form

Example

Correct: The results are represented by

$$C^{pg}_{p,m}/R = \sum_{i=0}^{3} a_i\{T/K) - 300\}^i, \quad (1)$$

where the coefficients a_i are given in table 1

Incorrect: The results are represented by

$$C^{pg}_{p,m} = \sum_{i=0}^{3} a_i(T - 300)^i, \quad (1)$$

where T is the temperature in K, $C^{pg}_{p,m}$ is the isobaric molar heat capacity in J K^{-1} mol^{-1}, and the coefficients a_i are given in table 1.

6. The arguments of logarithmic, exponential and trigonometric functions must be dimensionless: e.g. $\ln(p/\text{MPa})$ or $\ln(p/p_0)$ but not $\ln(p)$

7. Equations, when displayed, should be centred and numbered, flush right, in parenthesis e.g.

$$C^{pg}_{p,m}/R = \sum_{i=0}^{3} a_i\{T/K) - 300\}^i, \quad (1)$$

8 Always puncture after an equation to place it correctly within the sentence that contains it (see example above)

9 Wherever possible set equation and expressions on a single line: e.g : dp/dT not

$$\frac{dp}{dT}$$

Figures

10. Plot each figure in a full rectangular (or triangular) frame.

11. Tick marks should be shown on the lower abscissa and the left ordinate and must project into the plotting area.

12 All lettering to be in 12-point Times Roman or similar typeface.

13 Lettering should be used to specify the scale and axis labels only. All legend material should be provided in a separate figure caption and not shown on the figure itself. Exceptionally, multi-part figures may be labelled (a), (b) etc

14 Only dimensionless quantities should be plotted. Axis labels must therefore be dimensionless expressions presented in correctly-formatted symbols: e.g. T/K; not T (K) or Temperature/K All symbols must be defined in the accompanying caption

15. Fractional deviations and similar quantities should be plotted as, e g , $10^2(X - X_c)/X_c$; do not use 'ppm', 'per cent', '%' or similar abbreviations.

16 Plotting symbols only should be used to represent experimental data or discretely computed quantities. Smooth lines or curves only should be used to represent values computed from formulae or other continuous data (e.g. g.l.c. trace)

17. Avoid the use of colour in graphs; data sets should be distinguished by symbol or line styles only. Exceptionally, essential colour illustrations may be included (see the Guide to Authors)

18. Similar figures should be plotted in identically-sized frames.

19. Triangular diagrams must be equilateral and must have correctly ticked, scaled and labelled axes on all three sides.

20 Include error bars where appropriate but only when they exceed the size of the plotting symbols.

Tables

21. Tables must be completely self contained with column headings defined fully in the accompanying table legend.

22. Tabulated quantities must be dimensionless. Row and column headings must therefore be dimensionless expressions presented in correctly-formatted symbols: e.g. T/K; not T (K) or Temperature/K. All symbols must be defined in the accompanying legend.

23 Where experimental values of heat capacities are reported, tabulate the values as, e.g., $C_{p,m}/R$. In addition (but not as an alternative), a column of heat capacity values with units may be given: e.g , $C_p/(\mathrm{J\ K^{-1}\ mol^{-1}})$

24. Fractional deviations and similar quantities should be tabulated as, e g., $10^2(X - X_c)/X_c$; do not use 'ppm', 'per cent', '%' or similar abbreviations.

25. Missing entries in a table should be shown as blanks.

26 Footnotes may be cited using lower-case Roman superscripts (e.g. [a] [b]). Define the footnotes at the base of the table.

Example figure and legend text

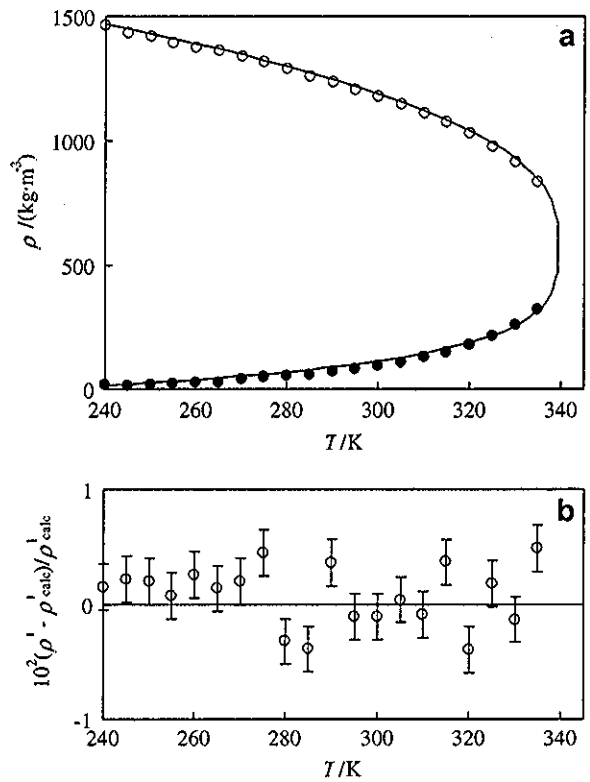

Figure 1. (a) Densities ρ of pentafluoroethane at temperatures T: ○, saturated liquid; ●, saturated vapour; _____, saturated vapour and liquid calculated from Eq (4). (b) Deviations of experimental saturated liquid densities ρ^l from values ρ^l_{calc} calculates from Eq (4)

Example table and legend text

Table 1 Experimentally determined dew pressure p^d at temperature T^d for {0.4026CH_4 + 0.5974C_3H_8}

T^d/K	p^d/MPa
340.38 ± 0.27	6.826 ± 0.036
337.06 ± 0.23	5.5734 ± 0.027
335.69 ± 0.24	5.2683 ± 0.028
333.83 ± 0.23	4.8922 ± 0.026
331.38 ± 0.23	4.5205 ± 0.026
329.11 ± 0.24	4.2136 ± 0.028
325.99 ± 0.25	3.8563 ± 0.030
324.16 ± 0.24	3.6424 ± 0.028
320.95 ± 0.24	3.3322 ± 0.029
315.53 ± 0.23	2.8709 ± 0.026

Miscellaneous

27 Use p° for the standard pressure and specify its value at first usage

28 Always insert the name of a quantity or its symbol (but not both) before the value of a quantity: e.g. between the temperatures 298.15 K and 340 K; or between T = 298.15 K and T = 340 K.

29 Give lists of values as, e.g., T/K = (300, 400 and 500) or T = (300, 400 or 500) K but not T = 300, 400 and 500 K

30. Purities should be given as mass fractions, e.g. mass fraction 0.99, not 99 mass per cent

31. Chemical depictions of electrochemical cells should be displayed and numbered with upper case roman numerals