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GUIDE FOR AUTHORS AND REVIEWERS

TO AUTHORS: The following list is taken from SP 811, *Guide for the Use of the International System of Units*, available at <http://www.physics.nist.gov/Pubs>. This is a partial list (numbered as in the original) that contains errors frequently encountered in WERB review, and is provided here to help NIST authors review the conformity of their manuscripts with proper SI usage and the basic principles concerning quantities and units. (The chapter or section numbers in parentheses indicate where additional information may be found in SP 811.)

1. Only units of the SI and those units recognized for use with the SI are used to express the values of quantities. Equivalent values in other units are given in parentheses following values in acceptable units *only* when deemed necessary for the intended audience. (See [Chapter 2](#).)
2. Abbreviations such as sec (for either s or second), cc (for either cm³ or cubic centimeter), or mps (for either m/s or meter per second) are avoided and only standard unit symbols, SI prefix symbols, unit names, and SI prefix names are used. (See [Sec. 6.1.8](#).)
4. Unit symbols (or names) are not modified by the addition of subscripts or other information. The following forms, for example, are used instead. (See [Sec. 7.4](#) and [Sec. 7.10.2](#).)

$$V_{\max} = 1000 \text{ V}$$

but not:

$$V = 1000 \text{ V}_{\text{max}}$$

a mass fraction of 10 %

but not:

10 % (*m/m*) or 10 % (by weight)

6. Information is not mixed with unit symbols (or names). For example, the form "the water content is 20 mL/kg" is used and not "20 mL H₂O/kg" or "20 mL of water/kg." (See [Sec. 7.5.](#))

7. It is clear to which unit symbol a numerical value belongs and which mathematical operation applies to the value of a quantity because forms such as the following are used. (See [Sec. 7.7](#).)

35 cm \times 48 cm

but not:

35 × 48 cm

1 MHz to 10 MHz or (1 to 10) MHz

but not:

1 MHz-10 MHz or 1 to 10 MHz

- 10 There is a space between the numerical value and unit symbol, even when the value is used in an adjectival sense, except in the case of superscript units for plane angle. (See [Sec. 7.2](#).)

a 25 kg sphere

but not:

a 25-kg sphere

- 11 The digits of numerical values having more than four digits on either side of the decimal marker are separated into groups of three using a thin, fixed space counting from both the left and right of the decimal marker. For example, 15 739.012 53 is highly preferred to 15739.01253. Commas are not used to separate digits into groups of three. (See [Sec. 10.5.3.](#))

- 18 The obsolete terms normality and the symbol N , and the obsolete term molarity and the symbol M , are not used, but the quantity amount-of-substance concentration of B (more commonly called concentration of B), and its symbol c_B and SI unit mol/m^3 (or a related acceptable unit), are used instead. Similarly, the obsolete term molal and the symbol m are not used, but the quantity molality of solute B, and its symbol b_B or m_B and SI unit mol/kg (or a related unit of the SI), are used instead. (See [Sec. 8.6.5](#) and [Sec. 8.6.8](#).)

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2. Figures and tables are correct, clear, useful, necessary, relevant, and properly labeled.
3. The manuscript is organized efficiently and appropriately and contains proper syntax, grammar, and spelling. Acronyms are used sparingly and defined properly the first time that they are used.
4. SI units are used correctly. For guidance on this matter, see NIST SP 811 - *Guide for the Use of the International System of Units* by B. N. Taylor available at <http://www.physics.nist.gov/Pubs>. (Portions of the Check List for Reviewing Manuscripts (pp. v and vi) are reproduced above for convenience.)
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