# Journal of Chemical Education

## Checklist, Lab-Experiment Submissions

Lab-experiment submissions should follow the ***JCE* Guide to Submissions** *(www.jce.divched.org/Contributors/Authors/Submissions/guideTo.pdf)* first and these guidelines second. There should be three parts:

**Abstract/Keywords  Lab Summary  Lab Documentation**

Each part should begin on a fresh sheet of paper and should be labeled Abstract, Lab Summary, or Lab Documentation.

For a new manuscript or a revised manuscript that has *not* been accepted for publication, submit **four** copies of each part. Submit four copies of any software on four disks. Do not send the *manuscript* on disk until the editor specifically requests it.

If you have been notified that your manuscript will be published, either "as is" or with minor revision, and we have requested a version on disk, then send **three printed copies** along with the disk containing the electronic version. **The printed copies should match the electronic version *exactly*.** Two copies will be used by Project Chemlab annotators.

Please check that each item listed below has been satisfied by your submission.

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__ **Follow the *JCE* Guide to Submissions** regarding manuscript format (spacing, page margins and numbering, style for citing references, etc.) for the Abstract/Keywords, Lab Summary, and all Lab Documentation except materials handed out to students, which can be provided in the same format that the students receive.

__ **Send four copies** of Abstract/Keywords, Lab Summary, Lab Documentation, and necessary software.

__ **Include Abstract/Keywords** as for any nonlab manuscript (abstract of no more than 200 words). Include "Laboratory Instruction" as one of the keywords.

__ **Include Lab Summary** for publication in print (approximately 1500 words). The Lab Summary should:

- __ Explain why, based on your experience using this lab with your students, others would find it useful.
- __ Indicate the course or level where the experiment fits into the curriculum and how long it would take to do.
- __ State clearly and briefly the procedures, techniques, facts, and concepts students will learn; for synthetic experiments include the reactions and synthetic methods involved but not detailed reaction conditions.
- __ Explain how and why the experiment helps the students learn.
- __ Include results (tables, graphs, percent yields, etc.) typical of those obtained by students who have done the experiment (use appropriate significant figures).
- __ Summarize evaluation studies or personal reflections that indicate whether the experiment achieved its goals.
- __ List equipment, chemicals, and/or instruments used in the experiment that are not expected to be available in a typical chemistry department; give manufacturer's or supplier's name.
- __ Include a section headed "Hazards" that lists each hazardous substance or procedure and states the hazards involved, or that states that there are no significant hazards.
- __ Cite references to related experiments that have appeared in *JCE,* other journals, or commercial lab manuals, and explain how this experiment differs from them.
- __ Summarize other information that would help a person considering adopting the experiment to decide whether or not to expend the effort needed to adapt the experiment for use at his or her institution.

__ **Include Lab Documentation** for *JCE Online* in computer-readable form. Lab Documentation should include

- __ Written material used by students (with appropriate warnings of hazards), such as,
  - __ Directions and experimental procedures
  - __ Report forms, or examples of student assessment tasks
  - __ Handouts containing supplemental or background information, or pre- or post-lab questions
- __ Instructor notes (with appropriate warnings of hazards), such as,
  - __ Background information
  - __ Lab preparation and equipment needs
  - __ Directions for preparing solutions, instruments, and other apparatus
  - __ Tips for success and/or troubleshooting notes
  - __ Answers to any questions asked of students
- __ CAS registry numbers for all chemicals. (CAS numbers are on MSDS sheets in Section 2—Composition/Information on Ingredient, listed in chemical catalogs e.g. Sigma-Aldrich at *http://www.sigmaaldrich.com/*, at *ChemBioFinder.com*, etc.)
- __ Complete information about *safety and hazards* of the experiment
- __ Author-produced, technology-based materials needed for students to carry out the experiment, in computer-readable form, e.g.
  - __ Computer software, spreadsheet templates
  - __ Mathcad, Mathematica, MATLAB, or Maple documents
  - __ Information needed to carry out molecular modeling or other exercises
- __ Amplification of any items in the Lab Summary where additional information would help a user
- __ Any references or citations that were not included in the Lab Summary but are needed by students or those who are implementing the experiment
- __ Any other information needed to implement the experiment

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**This form may be found at *http://www.jce.divched.org/Contributors/Authors/Submissions/suppGuideLab.pdf***