



# Eyes on **iisME**

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## IISME Fellow and Mentor co-author an article in the Journal of Chemical Education

Kathryn Davis and her mentor Dr. Linda S. Brunauer, of Santa Clara University, have co-authored an article published in the May edition of the Journal of Chemical Education. The article is based on the Education Transfer Plan (ETP) developed during Kathryn's 2007 IISME Summer Fellowship. The article title is, "Size Exclusion Chromatography: An Experiment for High School and Community College Chemistry and Biotechnology Laboratory Programs." The article outlines a column chromatography experiment designed and fine tuned during the Fellowship and is complete with student handouts, instructor notes, reagent chemical catalog numbers and preparations, equipment needs, cost analysis, and suggestions for potential experimental variations. The process of developing and fine-tuning the lab, publishing it, and using it with her students was one that Kathryn highly values and will not soon forget.

Teachers don't often have time to develop a lab or activity and then work to refine it to perfection. This experiment was conducted over and over with small modifications until the highest level of repeatability was achieved while being realistically conducted during a series of standard 1-hour class periods. Kathryn's completed IISME ETP was 25 pages in length. Dr. Brunauer suggested they condense

the information and submit it to a couple of different journals for publication. The ETP was condensed into three pages and sent out for

review. A five member panel from the Journal of Chemical Education reviewed the article and posed questions to Ms. Davis and Dr. Brunauer; the article was subsequently approved. Next came the editing process, and though the lab did not change significantly, many drafts followed until Dr. Brunauer, Kathryn, and the Journal were all satisfied.

The opportunity to utilize the lab with her students was a thrill for Kathryn. Column chromatography is a very useful technique with highly visual components that make it very understandable for students. The process separates and allows for the characterization of biomolecules including hemoglobin. (Paper chromatography and thin-layer chromatography are much more commonly used in labs for students this age.) Kathryn's students visited Dr. Brunauer's lab at Santa Clara University; this was an inspiring experience for her students, many of whom had never been on a college campus before, much less in a college science lab. The students were proud to see that they were



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doing college level work. Kathryn noted, "Dr. Brunauer was very committed to both the IISME program and my students. She was gracious enough to share her laboratory with the high school students, making college level science exciting as well as accessible."

It is an honor to be published in a scientific journal and Kathryn was excited to receive a copy of the May edition of the Journal of Chemical Education directly from JCE. Summer 2007 was Kathryn's first year at IISME and what an experience it was. "I want to do this every year!"

Source: Abstract and Supplement which are available at <http://jchemed.chem.wisc.edu/journal/Issues/2008/May/abs683.html>

Subscribers can view the full article at the same site.