

will pave the way for its regional extension. Participants in the program will need to take the following consideration into account:

- A question bank will need to be designed and developed, and the questions categorized. Each question should test conceptual ability, application ability, numerical ability, or another specified skill.
- Participants' performance will be analyzed for each question on a five-point scale. The analysis will be made available to all the schools with comments and suggestions for follow-up. It is hoped that this step will motivate many schools to begin a capacity-building program in chemical education.
- The analysis will also be used to validate the items in the question bank. This will permit labeling of questions in the bank by the so-called discrimination index, which indicates the efficacy of an item for assessing student performance.
- To attract large student turnout, Rasayanika 2005 will be held under the IUPAC CCE banner, and all quiz certificates will be signed by the IUPAC president, the CCE chairman, and the chairman of the IUPAC Subcommittee on Chemistry Education for Development.
- To facilitate the participation of students from non-English medium schools, the quiz will also be conducted in local languages. Because India shares some languages with some of its neighbors, the geographical scope of the quiz could be extended, helping to foster regional cooperation in chemical education.
- The program should establish a platform for bringing together specialists (for creating the Question Bank and for validating the items in the bank), school teachers (for providing feedback), industry and government agencies (for instituting awards), and university teachers (for initiating capacity-building programs for schools and teachers).



In summary, the task group envisages the online quiz as a catalyst for enhancing student appreciation of chemical science as a creative and a dynamic field. Although India is the focus of the current project, once an online tool is created, the quiz can be expanded into other geographic regions.

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 [www.iupac.org/projects/2005/2005-003-2-050.html](http://www.iupac.org/projects/2005/2005-003-2-050.html)

### Solubility Data Series: Transition and 12 to 14 Main Group Metals, Lanthanide, Actinide, and Ammonium Halates

A volume of the *Solubility Data Series* will include compilations and critical evaluations for the solubility of transition metal, lanthanide, and actinide halates. The solubility data for the halates of metallic elements in groups 12 to 14 will also be included. Whereas the solubility of ammonium iodate has been compiled and evaluated previously, data on ammonium chlorate (and bromate) have been lacking. Data related to ammonium chlorate are now available and are included in this volume.

Compilations for the solubilities of the title halates in water and organic solvents (such as methanol, ethanol, and dimethyl sulfoxide) and those in aqueous-organic solvent mixtures, aqueous electrolytes, and buffer solutions are included in this volume. The critical evaluations and compilations of the halate solubilities deal only with the simple salts of a type of  $MX_y$  ( $M$  = metal;  $X$  = halate) and do not treat complex compounds such as hexaamminecobalt(III) halates,  $[\text{Co}(\text{NH}_3)_6]\text{X}_3$ .

The halates of these metals are related to industrial processes. For example, some halates are essential as catalysts, heat stabilizers, and bleaching reagents for manufacturing polymer products such as textiles and resins. Some halates are used in pyrotechnic compounds for weather modification and colored smoke generation. The nonlinear halate crystals are important for the construction of optical devices.

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 [www.iupac.org/projects/2005/2005-033-1-500.html](http://www.iupac.org/projects/2005/2005-033-1-500.html)