

IUPAC Project Progress Report

Project number: 2002-044-1-500

Project Title: Solubility data related to industrial processes.
Carbon dioxide in aqueous non-electrolyte solutions.

Task Group Leader: Pirketta Scharlin

Report:

1. Current status of project:

Ongoing project. Search for the very present literature (2003-2004) is continuously under way. Altogether about 360 data pages have now been compiled and updated to the format required for the Journal of Physical and Chemical Reference Data. At the moment, the compiled data consist of 60 different solvent systems, including aqueous solutions of alcohols, ethers, ketones, carboxylic acids, sugars, and nitrogen containing organic compounds. Compilation of new data is in progress along with the search for the most recent literature. Among the solvent systems consisting of aqueous solutions nitrogen containing organic compounds, the aqueous alkanolamine systems form an important section. Compiled data on the CO₂ + aqueous alkanolamine systems (107 compilations on 36 different solvent systems, about 250 pages altogether) have been sent to Professor Alan E. Mather (in November 2003) for preparation of critical evaluation of these systems.

2. Progress relative to 'milestones':

Relative to 'milestones' given in the original project submission form, the project is about nine months late.

3. Difficulties encountered (or concerns):

Lack of time continues to be a problem and the biggest obstacle to a rapid progress: The work within this project cannot be done during the office hours because people working for the project are still active in their normal working life and their responsibilities for their university must take the priority.

4. Projected completion date (documents ready for external review):

Completion date depends on the progress in the critical evaluation of the CO₂ + aqueous alkanolamine systems. Supposing the evaluation will be completed in the next 4-6 months, the documents could be ready for external review by the end of 2005.

5. Intended outputs and the dissemination plan for this project:

Intended outputs: *Journal of Physical and Chemical Reference Data* and *IUPAC-NIST Solubility Database*.
Dissemination plan (as given in the original project submission form): Access to the information of the Solubility Data Series is provided to chemists through the specialist abstracting journals, principally Chemical Abstracts and to potential non-chemist users via the IUPAC and SSED web sites which are catalogued by various commercial search engines. Furthermore, the abstracts of the respective *JPCRD* article will be published in *CI* and/or *PAC*, whatever the ACD prefers.