

IUPAC Project Progress Report

Date: July 2007

Task Group Leader: Pirketta Scharlin

Project number: 2002-044-1-500

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

Report:

1. Current status of project: Ongoing project.

Data up to 1988: around 300 data sheets were put into electronic form manually from the old paper versions and updated to meet the requirements of the *Journal of Physical and Chemical Reference Data*.

Literature survey was carried out for years 1989-2004. These data have been tabulated into electronic form.

Literature survey was carried out for year 2005. Tabulation of these data into electronic form is in progress.

About 380 data pages altogether are now in the required electronic format. The compiled data consist of 60 different solvent systems, including aqueous solutions of alcohols, ethers, ketones, carboxylic acids, sugars, and nitrogen containing organic compounds.

Evaluation of aqueous alkanolamine systems is now in progress. Two evaluations (*CO₂ in aqueous monoethanolamine* and *CO₂ in aqueous triethanolamine*) are in draft form and two more (*CO₂ in aqueous diethanolamine* and *CO₂ in aqueous methyl-diethanolamine*) have been initiated.

Update for years 2006-2007 is being carried out.

2. Progress relative to 'milestones': Relative to 'milestones' given in the original project submission form, the project is late. (See # 3.)

3. Difficulties encountered (or concerns): Evaluations and some data collections have been delayed. However, we are making slow progress now. Lack of time continues to be the biggest obstacle to a more rapid progress.

4. Projected completion date (documents ready for external review): It is really very difficult to foretell completion date. (See # 3.)

5. Please list all of the intended outputs and the dissemination plan for this project (viz. articles, CD, conference presentations; etc.). These may have been expanded since project approval:

Intended outputs: *Journal of Physical and Chemical Reference Data* and *IUPAC- NIST Solubility Database*.

Dissemination plan: 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 abstract of the respective *JPCRD* article will be published in *CI*, as recommended by the ACD officers.

6. If your project is within 6 months of completion, how do you plan to utilise any remaining budget for this project? -

7. Work on this project may have identified new problems, issues, challenges, emerging topics, opportunities for related projects, etc. Please indicate these here so that the Division can follow up on them: -