CASE STUDY

SOLID WASTE TREATMENT

Focus:

Solid waste treatment modul will illustrate some of the research activities running at the Institute of Chemical Technology in the field of waste processing, analysis and assessment. The modul will demonstrate analytical instrumentation for identification of hazardeous wastes, technological processes used for treatment of solid wastes and contaminated soils as well as the procedures applicable within waste products assessment.

Course organization:

The students will be devided in three groups (about five people each), where each group will participate in approximately one-hour practical excercise illustrating the problems studied within the solid waste management.

Course topics:

Main topics of this course are:

1. Identification of hazardeous wastes:
   Progressive instrumentation will be presented, which can be used to identify hazardeous wastes and their toxic components. The main emphasize will be put to rapid identification of chemical individuals using portable instrumentation.

2. Waste processing:
   Technological principles applicable to treatment of waste and remediation of contaminated soil will be simulated through the laboratory scale arrangements.

3. Waste and contaminated soil assessment:
   The methods useful for waste and polluted soil assessment will be demonstrated, such as for example ecotoxicological investigation and the evaluation by means of the life cycle assessment.