

HITEC Lab

Title: Quantification of elements, of element traces and molecules

Date: 17./18.10.2012

Time: 9:00 – 16:00 o'clock

Location: Forschungszentrum ► **Jülich, ZCH, Build. 04.8, 2nd floor, Room 343**

Quantification of elements or element traces and molecules are general processes for the evaluation of materials, degradation, process changes or similar. Analytical results therefore need to be as accurate as necessary for the process or material to be investigated.

The goal of this two day training is to get a basic knowledge of the possibilities but also on the limitations of the quantification of analytical technologies in practical hand on laboratory work. Strategies and different analytical techniques will be introduced for best possible quantification.

You will learn:

- A basic understanding of the different analytical technologies in the quantification of elements and molecules
- the influence of sampling and sample preparation on quality
- limitations of various techniques, procedures and challenges

Methods introduced will be:

- 1) Calibration strategies
- 2) Matrix-effects
- 3) Interferences
- 4) Detection Technologies

Number of Participants: 5

Responsible Scientists: H. Lippert

The HITEC Labs are hands-on periods of practical training lasting 2 to 3 days, in which small groups of students from various institutes concentrate on one method that is applied in various fields. The aim of the HITEC Labs is to enable the PhD students to appreciate that a method originating from an unrelated field may also be applied in their own work. If students should discover that they require more intensive instruction in applying the method than can be imparted during the HITEC Lab, then they can make arrangements with PhD students at the institute in question to work at the institute for a limited period.