



DAY 4 – Thursday

Theme: *In the Laboratory*

09:00 – 11:00 | Lectures

In the laboratory. General precautions for sample collection. Contamination control. Clean rooms. “Metal free” materials and reagents. Standard solutions and certified reference materials. Quality control (QC)/control samples. Internal QC. External quality assessment. Basics of Laboratory Accreditation.

11:00 – 13:00 – At the Laboratory / Practical Demo: Sample analysis. The concept of analytical run. QC practices.

13:00 – 14:00 | Lunch break

14:00 – 16:00 – Lecture | Basics on analytical method validation.

At the Laboratory / Practical Demo: Sample analysis. Practical aspects of analytical method validation.

16:00 – ... Socio-cultural program

DAY 5 – Friday

Theme: *Post-analysis*

09:00 – 13:00 | Lectures

Reference values (“biological reference intervals” and “critical values”). How to define “reference values”. Interpreting laboratory results. Clinical case presentations.

13:00 – 14:00 | Lunch break

14:00 – 16:00 | Key messages to retain. Assessment of learning outcomes. Parting words.

(END of formal in-person BIP)

Selected provisional “HOT TOPICS” for virtual (on-line) component

- Trace elements and neurocognitive disorders
- Manganese and acquired hepatocerebral degeneration (AHD)
- Trace element and COVID + supplementation in long COVID
- Trace elements in human milk
- An elemental mapping of human brain
- Role of trace elements in microbiome modulation
- The natural exposure to lithium and suicide rate in general population
- Trace elements imbalances in hemodialysis patients
- Single particle/ single cell metal analysis
- Chelatotherapy – practices and controversies
- Trace elements and inflammatory bowel disease (IBD)
- The EU “health claims” of macrominerals and trace elements

ⁱⁱ “During these BIP, groups of students or staff as learners will undertake a **short-term physical mobility abroad combined with a compulsory virtual component** facilitating collaborative online learning exchange and teamwork. The virtual component must bring the learners together online to work collectively and simultaneously on specific assignments that are integrated in the blended intensive programme and count towards the overall learning outcomes”.

[<https://wikis.ec.europa.eu/spaces/NAITDOC/pages/95553249/Blended+Intensive+Programmes>]