The importance of contamination control in screening applications

Katherine Langford

NIVA

Target v Suspect / Retrospective

- Target

- Example:

  Simvastatin in Cod from Oslofjord

- Suspect

- Example:

  Everything in Oslofjord

  Recipe = Suspect List

  = Retrospective Analysis

Example – Arctic Char, Bjørnøya

Røye i Ellasjøen, Bjørnøya. Foto: Guttorm C.

NIVA:

- Merete Grung, Ian Allan, Amanda Poste, Anders Ruus, Alfhild Kringstad, Thomas Rundberget, Kathy Langford, Kine Bæk, Bert van Bavel. Elisabeth Lie

Akvaplan-niva:

- Anita Evenset, Guttorm Christensen, Jenny Bytingsvik

Example – Arctic Char, Bjørnøya

ESI-ve MS: > 9000 peaks

Library Search – approx. 1700 compounds
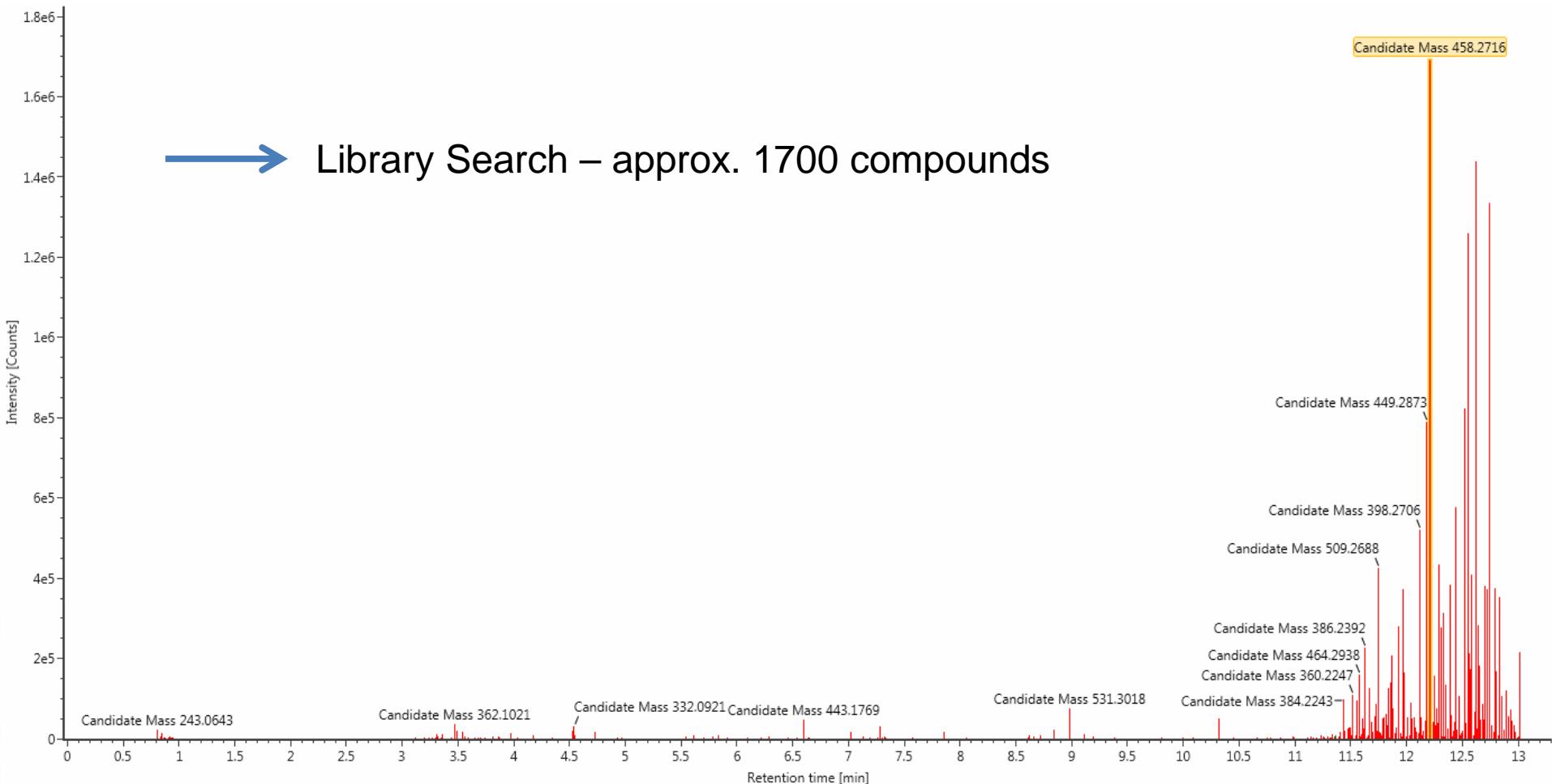
Example – Arctic Char, Bjørnøya

ESI-ve MS: < 10 identified compounds
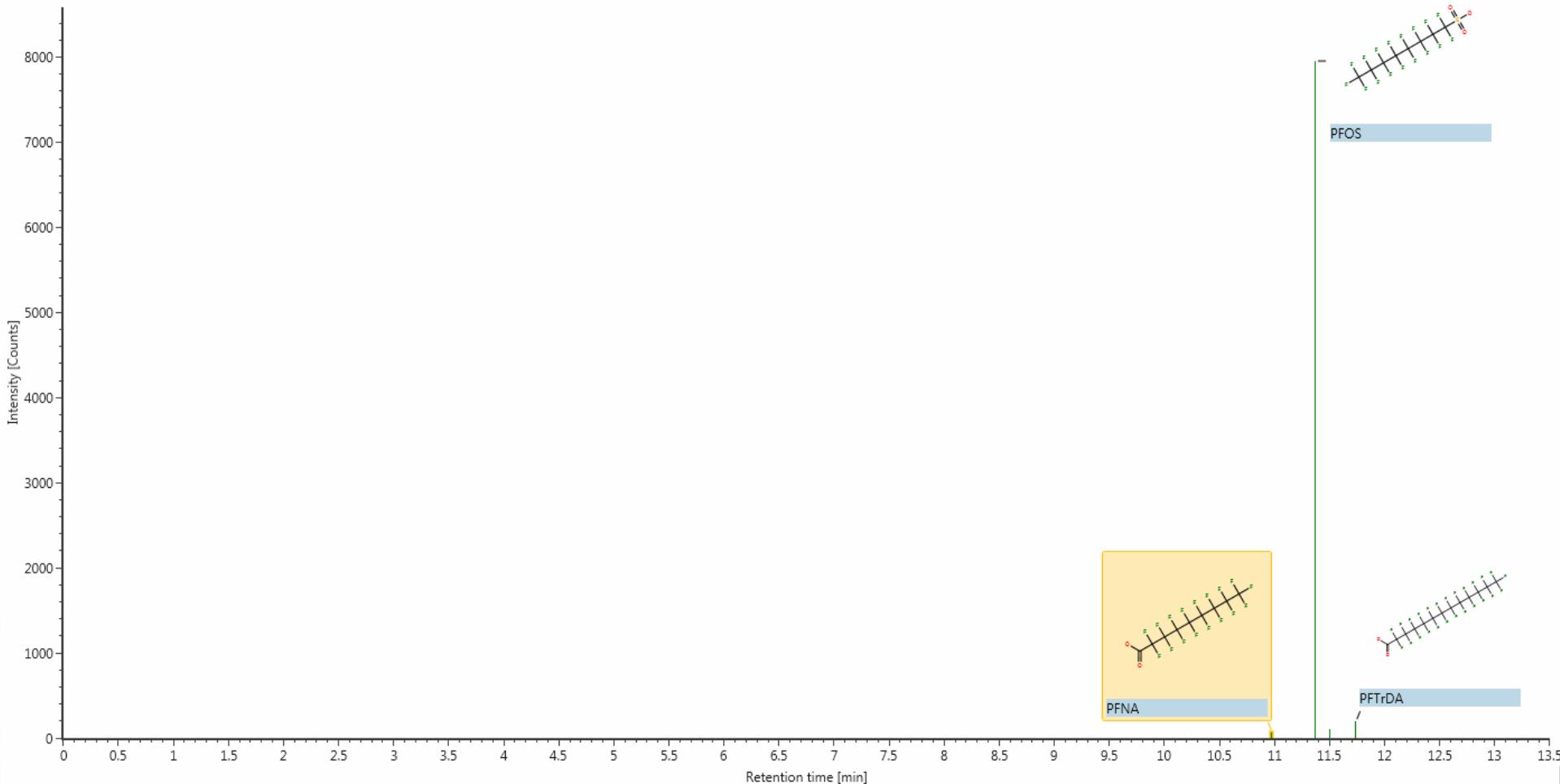
Example – Arctic Char, Bjørnøya

ESI+ve MS: > 8000 peaks

Library Search – approx. 1700 compounds
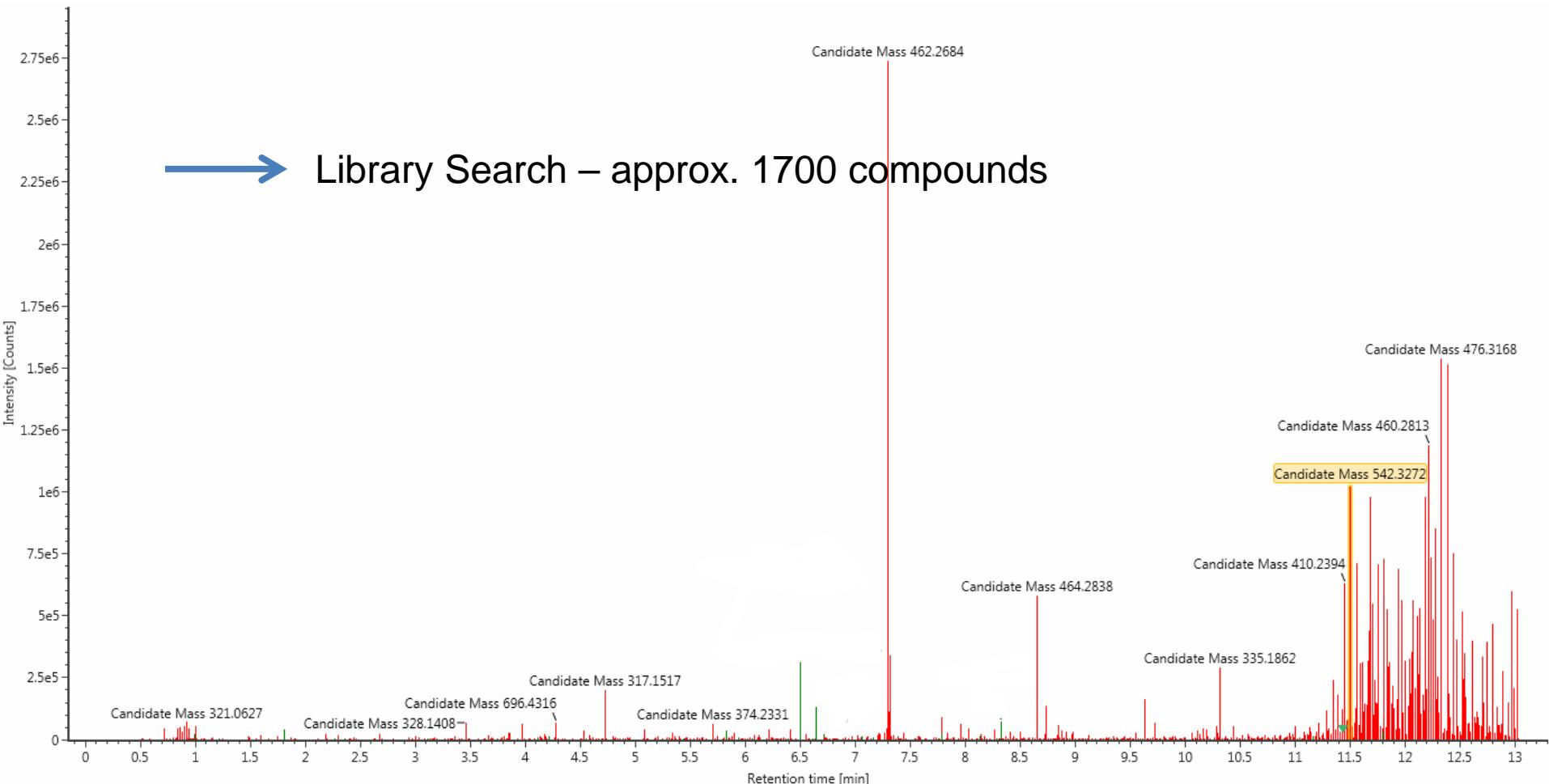
Example – Arctic Char, Bjørnøya

ESI+ve MS: 3 identified compounds

Anesthetic

Nicotine Metabolite

Asthma Medication
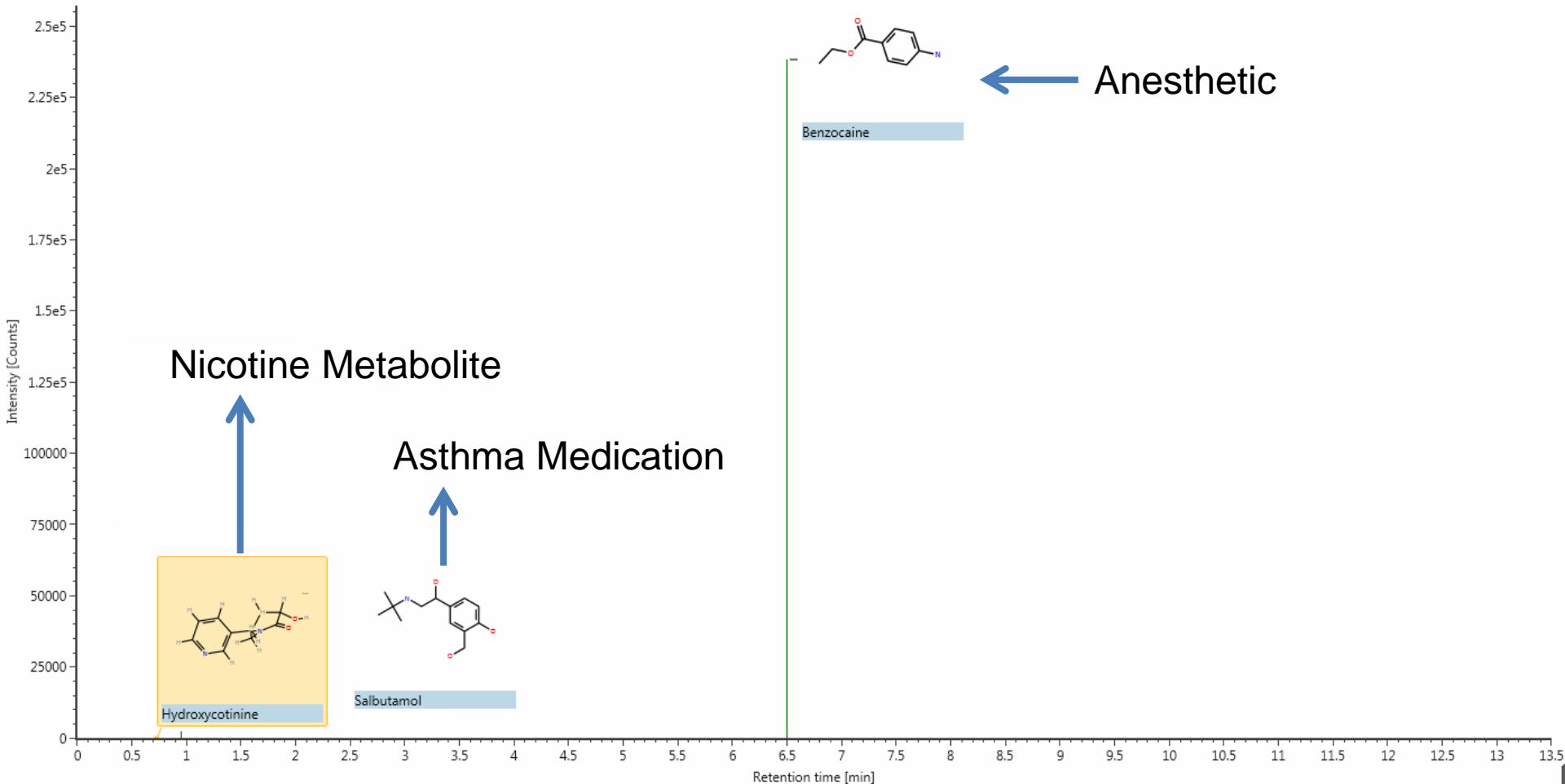
List of Essentials

- "Blank" Samples – Field and Laboratory

- Complete record of sample history

  - Names of all who have been in contact

  - Detail of sample collection procedures

  - Storage and transport conditions (plastic etc)

  - Gloves... what type?

  - Rain jackets... what type?

  - ...

- Thank you

NIVA