

# General Workflow For Confident Identification of Unknown Compounds in Forensic, Petroleum, Food, Environmental, and Biological Materials: The GC-HRT Advantage

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## Introduction

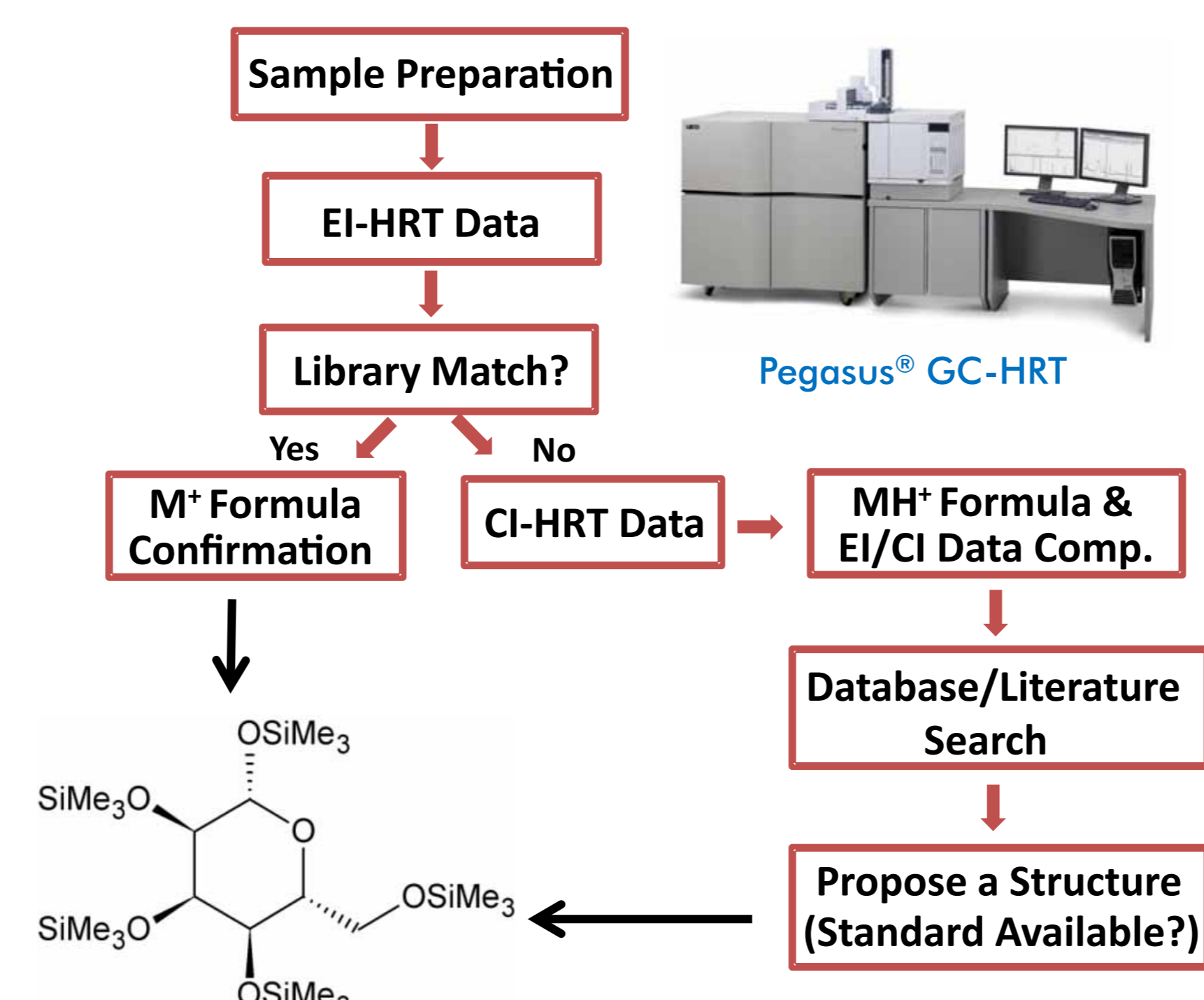
Pegasus GC-HRT is an ideal tool for the analysis of a wide variety of samples.

### Advantages:

- Fast Acquisition Rates (up to 200 spectra/s)
- Chromatographic Resolution
- High Resolving Power (Up to  $R = 50k$ )
- High Resolution Deconvolution™ (HRD™)
- High Quality Spectral Data
- Superior Mass Accuracy ( $<1$  ppm)
  - Fragment Ions
  - Molecular Ions
  - Adducts

• **One Injection → Rich Data**

## Workflow

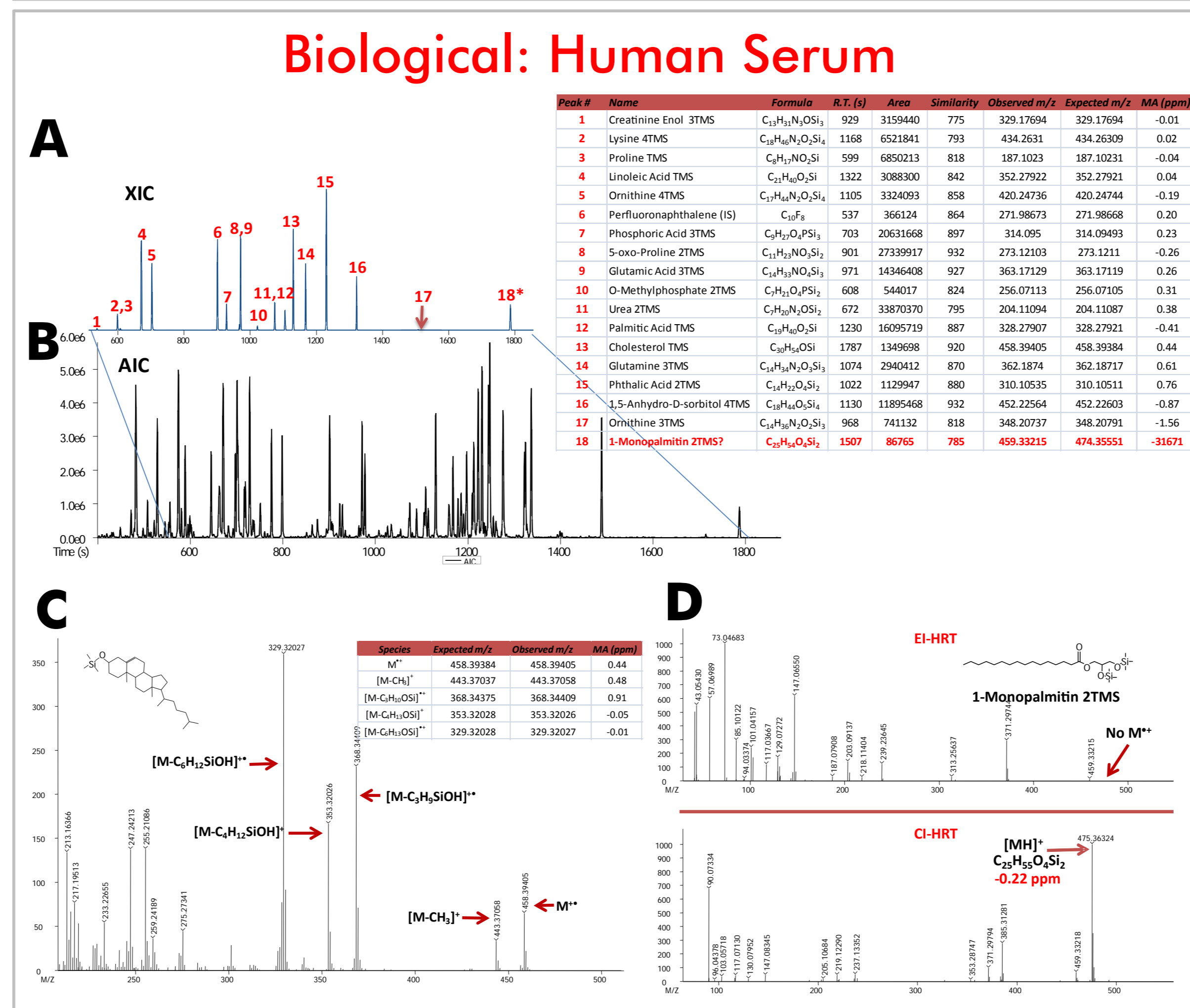
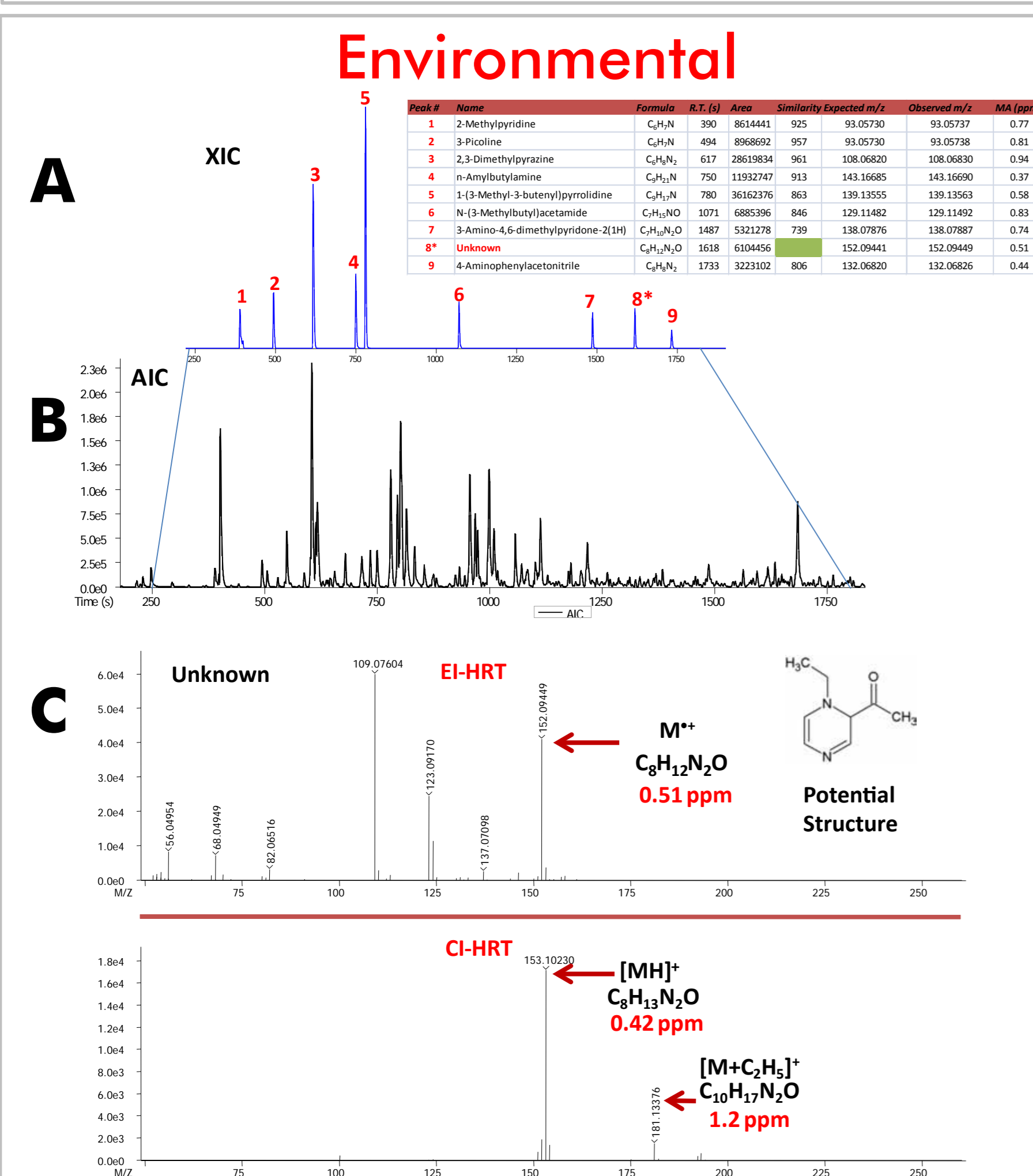
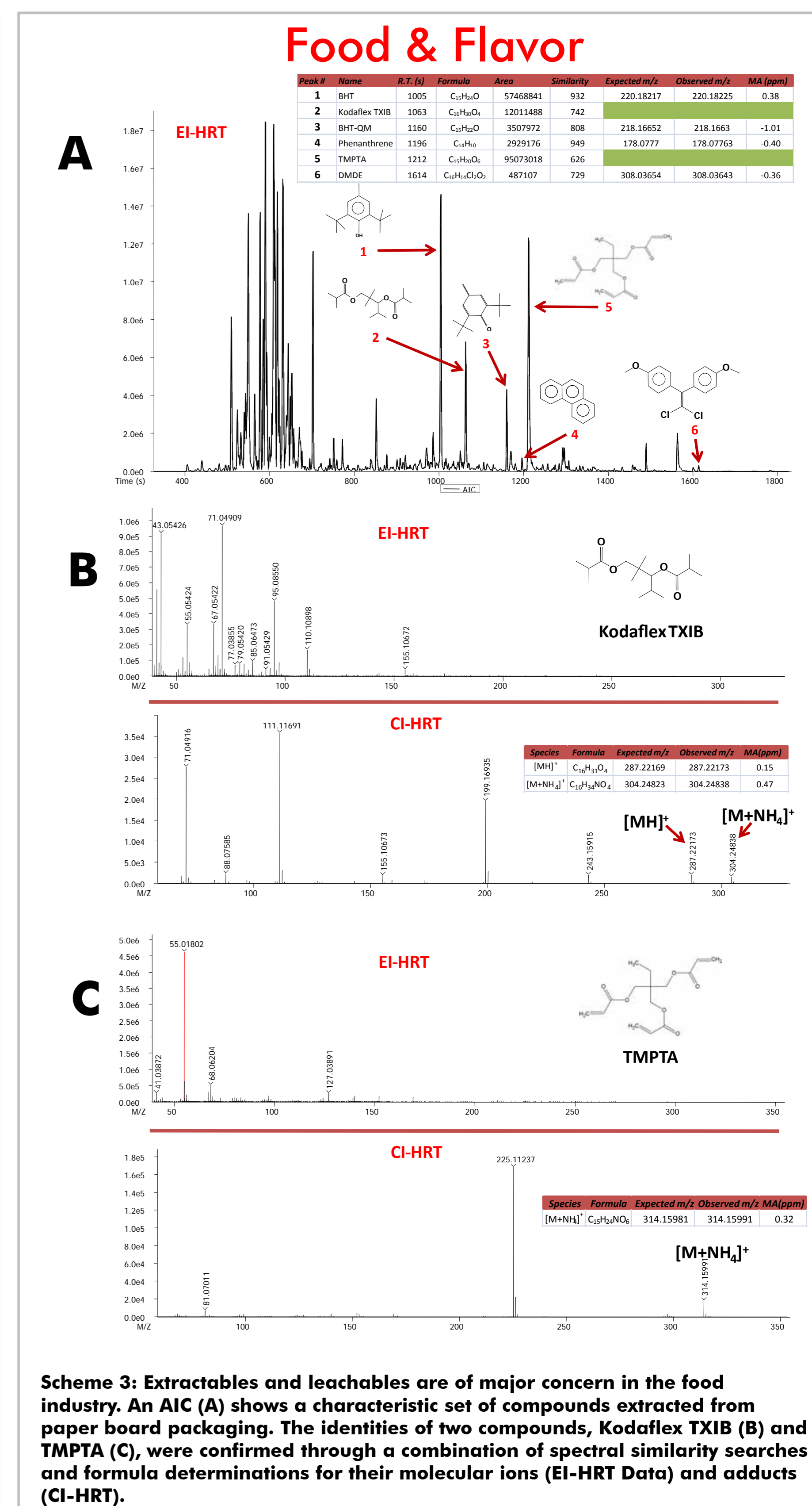
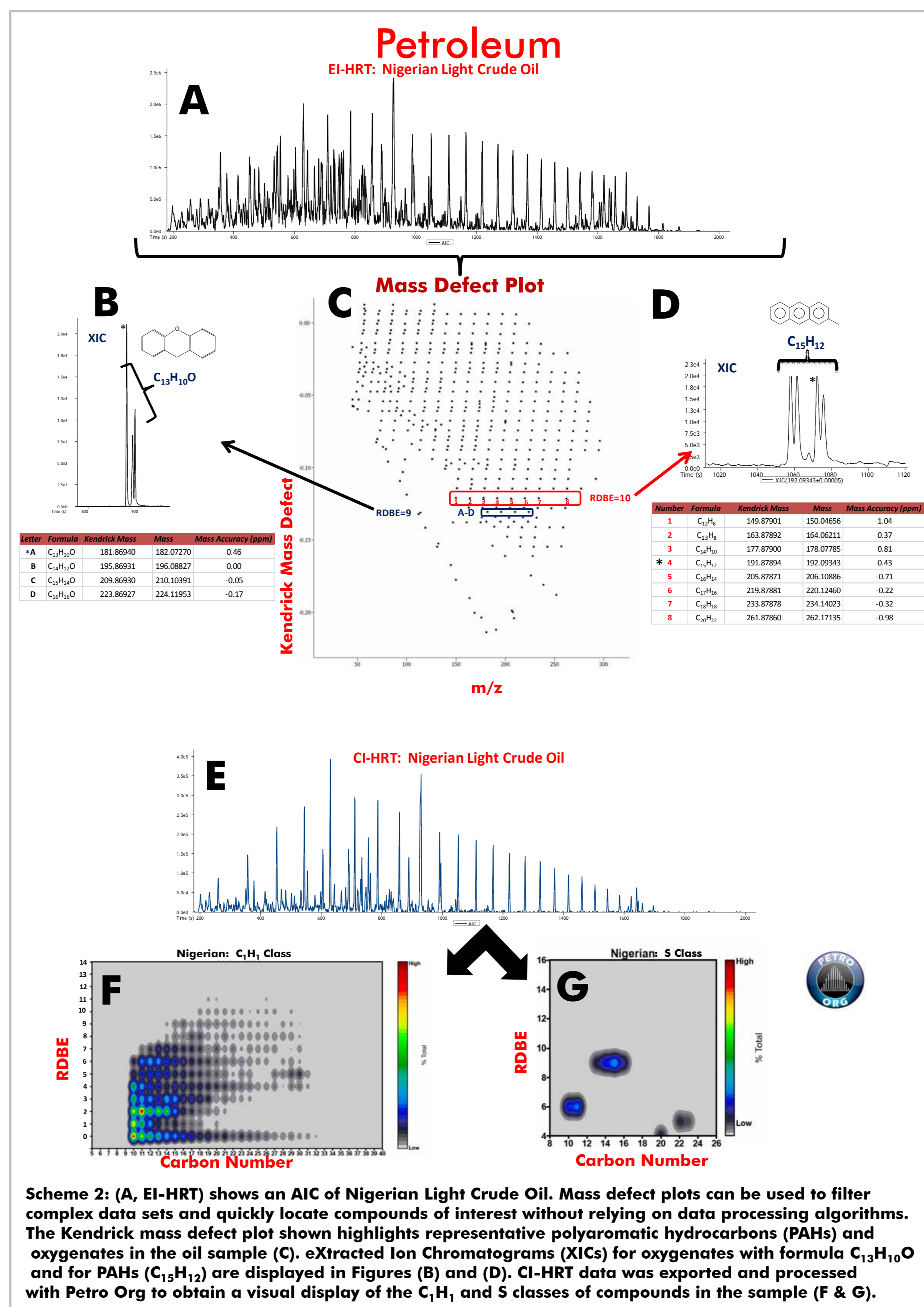
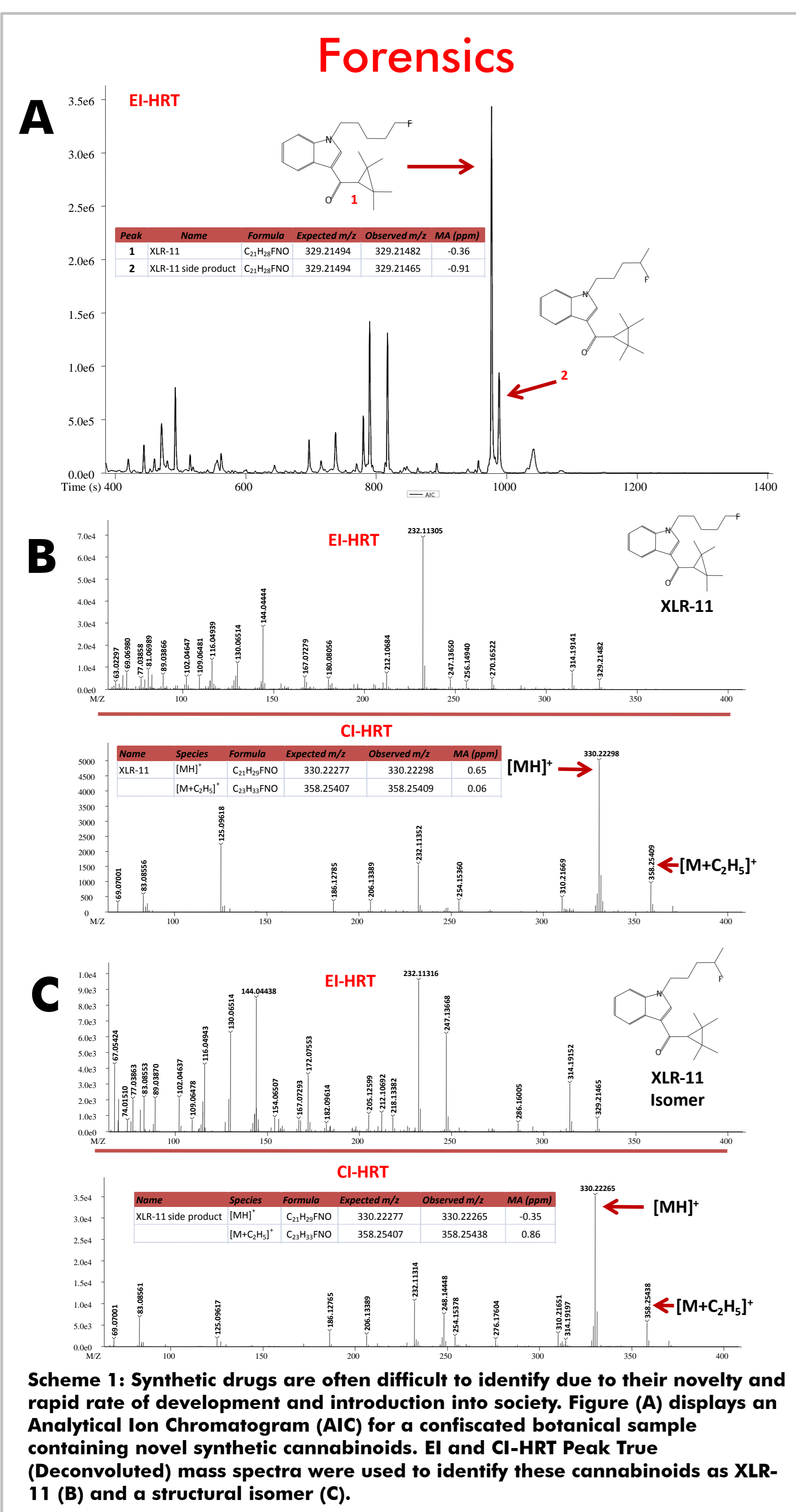


## Discussion

Complementary ionization methods and high resolution time of flight mass spectrometry facilitate compound identification:

- EI-HRT**
- Database searching (e.g., NIST, Wiley)
  - Formulae determination—fragment and molecular ions
  - Retention Indices
- CI-HRT**
- Formulae determination—molecular adducts
- ChromaTOF-HRT® Software Tools**
- Kendrick plots for quick analysis of complex samples
  - Launch ChemSpider database searches

## Data



## Summary

GC-HRT is an indispensable tool for complex sample analysis.

