Tofware 3 for TOF-ACSM

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Tofware 3

• Please upgrade!
  • Aerodyne is not supporting Tofware 2.5.13.
  • Tofware 2 has known bugs.
• Download Tofware 3.2.40208 from the Knowledge Base (support.aerodyne.com). Send an email to cacc-support@aerodyne.com if you need access.
  • Search for KA-01180
• Runs under Igor 7 or Igor 8 (but not Igor 6).
  • Windows or Macintosh operating system, except Catalina!
• Igor Licenses: We deliver the TOF-ACSM with a 1-seat license to run Acquility on the instrument computer and a 3-seat for data analysis by up to 3 people. If you need more licenses, go to www.wavemetrics.com.
• Tofware is proprietary and encrypted.
  • Tofwarelicense*.ibw in C:\Users\Documents\Wavemetrics\Igor Pro X User Files
What is New in Tofware 3? 2 Parts!

- Big change in indexing between Tofware 2 and Tofware 3 → 2 part analysis
- Part 1 indexes and analyzes 1 sec mass spec data
  - Acquility 2.3.9 – 20 s filter/20 s sample
  - Integrate MS peaks to unit mass resolution (UMR)
  - Calculate diff data
Part 2

- Part 2 indexes and analyzes on sampling time base (40 s, 10 minutes, etc.)
  - Check IE, RIEs and CE (including CDCE), apply AB correction
  - Calculate mass loading in $\mu g/m^3$
  - Plot mass spectra
  - Calculate MS and err matrices for PMF

- Concept of Workflows
  - Set of steps for data analysis
Workflow 1

- Yellow buttons are required actions, grey buttons are optional
- Saves _dif files for loading into Workflow 2.
Workflow 2

- Yellow buttons are required actions, grey buttons are optional
- Left: Analysis Panels
- Right: Plot time series and mass spectra
- Some analysis options not available for capture vaporizer
Workflow 2: AB Correction Panel

- Loads calibration data from first datafile. Can change if needed.
- Quick access to instrument diagnostics.
Workflow 2: Species and Frag Panel
Workflow 2: CDCE Panel (Standard Vaporizer)

- Graph of which factor is controlling CDCE.
- Minimum detectable NH4.
- Smooth the species mass loading data.
Workflow 2: Standard Analysis Plots

![Workflow 2: Standard Analysis Plots](image-url)
Workflow 2: PMF Export

- Improvements to error calculation.
- Using non-baseline subtracted signals for ion counting statistics.
- Electronic noise typically small, and set = 0 as default, but new panel to investigate.
- Please give us feedback!