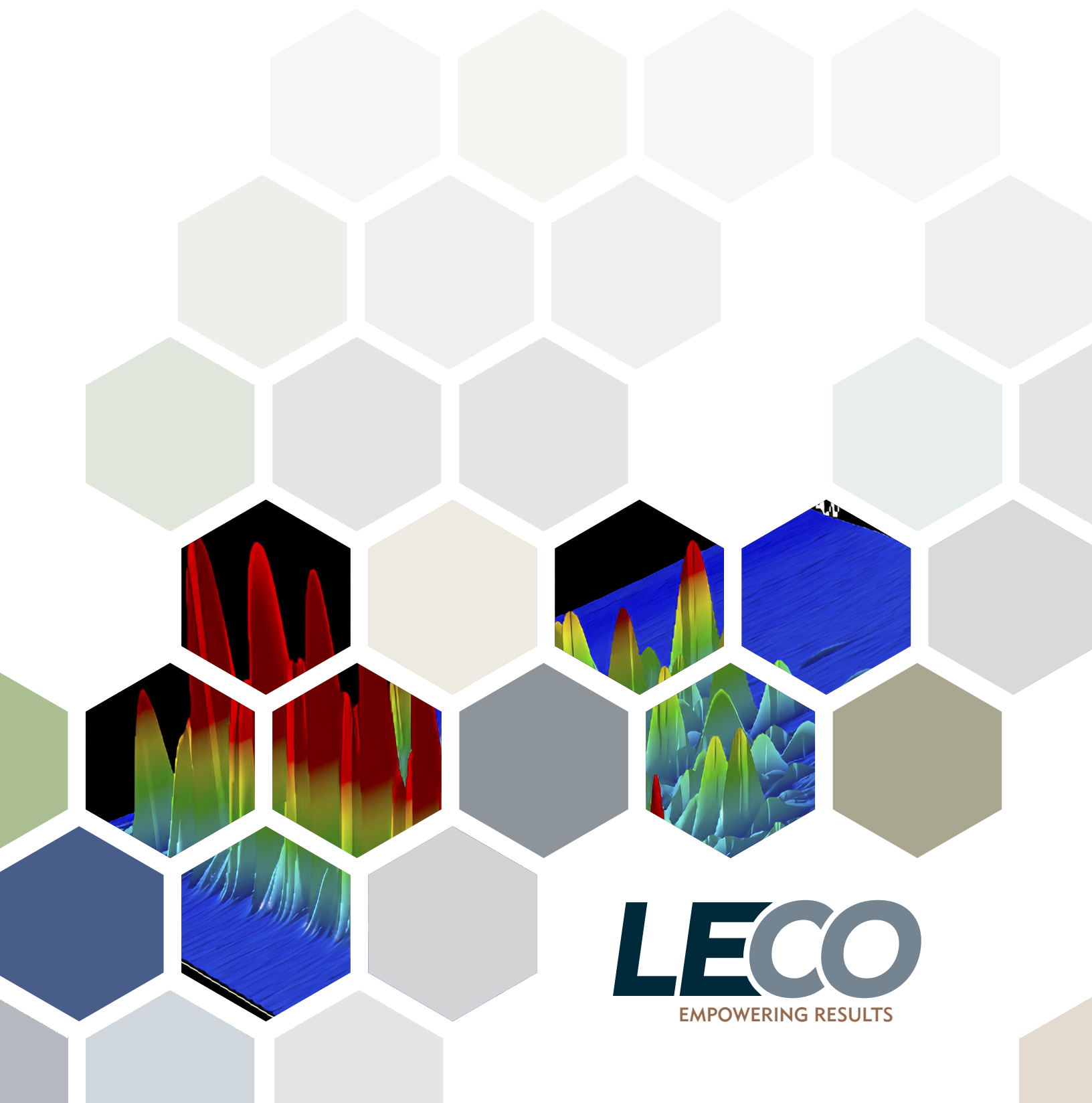# ChromaTOF® Tile
Turning GCxGC Data into Chemistry

LECO
EMPOWERING RESULTS

LECO's ChromaTOF Tile

The volume of GCxGC data can quickly become overwhelming. Multiple tables of thousands of analytes can require months of data-mining at a pixel level to find the minute differences between data sets, and even those results are plagued with false positives from normal chromatographic variation.

ChromaTOF Tile revolutionizes how GCxGC data is analyzed. This software compares GCxGC data files quickly and easily. Statistically significant differences rise to the top so you can spend less time finding the differences and more time finding out what they mean.

"ChromaTOF Tile is an enabling technology that has reduced our peak picking time from 10 days to 10 minutes. We are now comparing groups of peak-rich samples from complex studies that would have previously required complicated, custom-built solutions."
-Customer Testimonial

Designed for Sample Group Differentiation

ChromaTOF Tile finds differences between two or more classes of samples.
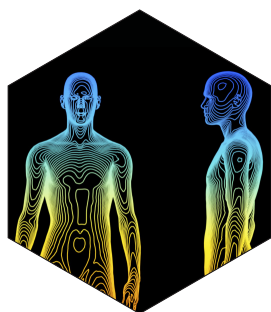
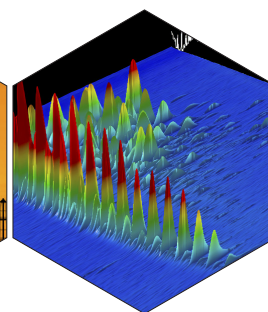
Biomarkers distinguishing healthy from not...

Off-odor detection in food samples that passed or failed quality control...

Water samples up- and down-stream from an outflow source...

Petroleum samples from various geographical origins...

And anything else you can imagine

Features

- *ChromaTOF Tile* is a separate, stand-alone product to be used in conjunction with *ChromaTOF* brand software.
- All of the tables and plots throughout the interface are exportable for more efficient reporting and to allow you to do more with your data.
- Clean library-searchable spectra is generated from the tiling process.
- Areas of the tiles are used to approximately quantify trends across the samples.

Fisher Ratio Hits Pane

Immediate feedback on class distinctions

Automated curation of tiles to chemical features

List of all significant tile hits and masses for each hit

Quickly compare tiles for visual evaluation of significant differences as detailed level 1 images

Heat map on calculated intensities

Chemical Features Pane

View the trends across classes

Confirm identifications with spectral matching

Use Principle Component Analysis (PCA) loadings and scores plots

- **PCA loadings plots show how strongly each component influences the principle component**

- **PCA scores plots show clusters of samples based on their similarities**

Review assigned tentative identifications by chemical feature

Optional heatmap tables are incorporated throughout the interface to give instant feedback on relative intensities.

ChromaTOF Tile

An industry first, *ChromaTOF Tile* applies a retention window tile grid across every data set and then compares the Fisher ratios of every mass for each tile. This revolutionary software also understands how GCxGC chromatograms work, accommodates retention time variation by using an appropriate tile size, and checks for redundant hits between tiles.

"With state-of-the-art analytical methods like comprehensive 2D GC-TOFMS it is simple to generate lots of data, but it is only with the ChromaTOF Tile software that we can translate these into meaningful information and knowledge."

Hans-Gerd Janssen, Science Leader Unilever Research,
Professor Recognition-based Analytic Chemistry
at Wageningen University & Research and **Ed Rosing**
Analytical Flavour Scientist at Unilever R&D

The uncluttered user interface is simple to understand. *ChromaTOF Tile* is a stand-alone tool with no other software baggage to confuse or hinder the statistical processing speed. All *LECO* GCxGC TOF instruments are supported by *ChromaTOF Tile.*

"What I really like in ChromaTOF Tile is the high processing speed… The speed allows me to check data structured at the end of, or even during, a large scale study without requiring a complete data processing. It allows me to take required actions if batch effects or deviations appear."

Pierre-Hugues Stefanuto, PhD Lead Scientist and Lecturer,
University of Liège, Molecular System Biological Analytical Group

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