

Lumo

AI-powered response factor prediction for extractables & leachables (E&L), so you can move faster with clear, defensible results.



The Challenge We're Solving

In E&L, the response factor (how strongly a chemical shows up on the instrument) can be highly varied. That variability slows teams down, adds cost, and creates uncertainty — especially when no reference standard exists or the chemistry is new. Predictive modeling helps estimate response factors in silico, **so you spend less time chasing calibrations.**

“We built Lumo to remove guesswork from response factors. You get defensible numbers up front and clear flags when expert review is needed. It is a smarter path that allows our chemists to know the results are accurate.”

— **Kevin Rowland**
Executive Vice President and
General Manager, Lab Services

What Is Lumo?

Lumo is a smart AI technology that predicts advanced lab testing methods response factors from molecular descriptors, reducing the need for empirical standards while keeping results within accepted accuracy ranges for semi-quantitative work.

Why It Matters

- When you can predict response factors up front, you cut calibration workload, accelerate reporting, and focus lab time on what matters
- Tiered sub-models and expert “human-in-the-loop” checks to automatically flag low-confidence cases so scientists can verify anything unusual
- Works with LC-MS today and extends to GC-MS use cases



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What You Get



Speed: Predicted response factors to shorten turnaround time



Confidence: Predictions that meet agreed acceptance criteria for most compounds tested



Focus: Automatic flagging of low-confidence cases for targeted follow-up



Efficiency: Fewer standards and less instrument time

How It Works

We train MLP models on diverse chemical descriptors and route compounds through specialized sub-models by chemistry class (e.g., phenols, esters, N/O systems). Built-in checks prevent impossible results, while flags prompt targeted confirmation when needed. Results and uncertainty are captured in a report your team can use with regulators.

Where Lumo Fits in Your Workflow

Use Lumo during non-targeted screening and semi-quantitative phases to **quickly manage unknowns**, plan follow-up testing, and support toxicology assessments. Save full calibrations for the few compounds that truly need them. This aligns with risk-based approaches in ISO 10993-18.

Getting Started

Save time and money with accurate predictions. Ask about early access and see how predictive response-factor modeling can **streamline your next E&L study**. *Pilot projects available.*

