

The logo for ELYTE, featuring a stylized 'E' with a circular element on the left side, followed by the letters 'LYTE' in a bold, sans-serif font.

ELYTE

A futuristic scene with a transparent car chassis. Inside the car, a battery pack is visible, overlaid with a grid of data points. Above the car, a white ECG line is projected against a dark blue background with vertical light streaks.

**Empowering battery
innovations through
proven benchmarking**

Insights that deliver

E-Lyte operates at the forefront of one of the world's fastest-growing markets. Providing comprehensive benchmarking solutions that illuminate technological progress across lithium-ion, sodium-ion, supercapacitor and next-generation battery systems.

Our market-oriented benchmarking covers the full spectrum of battery-relevant components. From the full electrolyte to electrolyte salts, solvents and additives to active, or inactive materials and electrodes. Delivering a truly comprehensive picture of performance and compatibility across the industry.

By combining deep technological expertise with a clear view of market dynamics, E-Lyte's benchmarking studies empower companies to spot innovation opportunities early, make confident development decisions and accelerate their path to market.

Battery market worldwide in 2025

2,3 TWh

Battery cells ¹

~300 Bn

Battery market value ¹

12%

Volume CAGR
15-25 battery
market ¹

Battery market Europe

6%

share expected increase
to 12% of the world wide
battery market by 2030 ¹

Benchmarking across the battery value chain

E-Lyte provides independent, data-driven benchmarking analyses for electrolytes and battery components, from raw materials and additives to finished solutions. Our insights empower companies across the entire battery value chain to make objective comparisons, drive strategic innovation, optimize performance and safety and gain a clear competitive advantage.

- Machinery & Equipment Manufacturer
- Adhesive and Sealants Industry
- Recycling & Disposal Company
- Raw Material Supplier
- Chemical Industry
- Cell Manufacturer
- OEM

Proven expertise and partnerships

E-Lyte's track record speaks for itself. With numerous successfully delivered benchmarking projects, long-term collaborations and repeated follow-ups, we have earned the trust of leading companies across the battery value chain. Our extensive network of partners and the volume of projects we execute highlight the confidence the industry places in our expertise.



100+

successful benchmarking projects

80%

of the top 10 European OEMs trust E-Lyte for cell component benchmarking

85%

of all projects led to follow-up projects due to their success

The perfect solution for your specific challenge

1 System-specific optimization

Leverage our deep expertise and rich electrolyte database to define KPIs and fine-tune formulations.

2 Actionable insights

Receive detailed analytics, in-depth interpretation and a comprehensive final report with clear recommendations.

3 Ready-to-use solutions

Get optimized electrolyte formulations in your desired volume, fully aligned with your development roadmap.

4 Component benchmarking

Test electrodes, separators and other battery materials under real-world conditions to validate performance and accelerate market entry.

5 Technology & IP support

Benefit from our experts' guidance on patent surveys and IP landscape analysis.



Overview of our
comprehensive studies

Cell component benchmarking process



1. Understanding your cell technology

Cell component benchmarking starts with an expert workshop to gain a detailed understanding of the cell setup and components. Including chemistry, format, application requirements and performance challenges such as capacity retention, internal resistance growth, gassing and high-temperature stability. These insights provide the foundation for the customized benchmarking strategy.

2. Cell assembly

For each new cell component, at least three cells are assembled (e.g. coin cells, Swagelok cells, prototype pouch cells). Prototype pouch cells are produced in collaboration with an experienced cell manufacturer, enabling the integration of new active or inactive materials into the electrodes. This results in dry pouch cells with nominal capacities of 200 mAh or higher, ensuring reliable testing under realistic pouch cell conditions.

3. Electrochemical testing

Electrochemical performance is evaluated under defined cycling protocols and temperature conditions using professional battery testing equipment and climatic chambers. This provides robust, comparable and application-relevant data.

4. In-depth post-mortem analysis (optional)

For deeper insights into degradation pathways and internal interactions, tested cells can be disassembled following standardized protocols. Failure mechanisms and mechanisms of action of individual cell components are analyzed using e.g. advanced surface sensitive characterization techniques. Additionally, half-cells in a three-electrode setup can be employed to investigate degradation mechanisms of aged single electrodes.

Overview of our
comprehensive studies

Electrolyte benchmarking process

1. Understanding your cell technology

Each benchmarking project starts with an expert workshop tailored to the electrolyte components. Key factors, from chemistry and format to application requirements and performance challenges such as capacity retention, internal resistance growth, gassing, or high-temperature stability, are carefully assessed. This detailed understanding forms the foundation for the following customized benchmarking strategy.

2. Pre-evaluation and formulation design

Based on these insights, at least three tailored electrolyte formulations are pre-evaluated and designed to meet the specific requirements. These customized electrolytes are then produced in small-scale batches, ready for testing and validation under the specified target conditions.

3. Cell assembly and electrochemical evaluation

These cells are for each tailored electrolyte, a minimum of three cells is assembled and subjected to comprehensive electrochemical testing. All tests follow harmonized procedures and are conducted at your specified operating temperatures to ensure reliable, application-relevant results.

Additional benefits collaborating with E-Lyte

Direct access to relevant partners

With a strong network in the battery sector, E-Lyte can establish the right networking links for you with regard to relevant suppliers and customers.

From research to business

Partnering with E-Lyte means benefiting from full-cycle expertise. We integrate your active material into cells, conduct lifetime electrochemical, and analytical testing and perform detailed post-mortem analyses. Our expert R&D team ensure scientific depth and reliability.

Prototype cell production

Through our collaboration with experienced cell manufacturers, E-Lyte can help integrating your battery component (separator, anode or cathode active materials) into prototype cells providing a reliable platform for your material into their real-world performance.

Comprehensive support

E-Lyte assists you with the logistics of your active materials and coordinate the full process of incorporating them into prototype cell manufacturing.



Let's get started

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