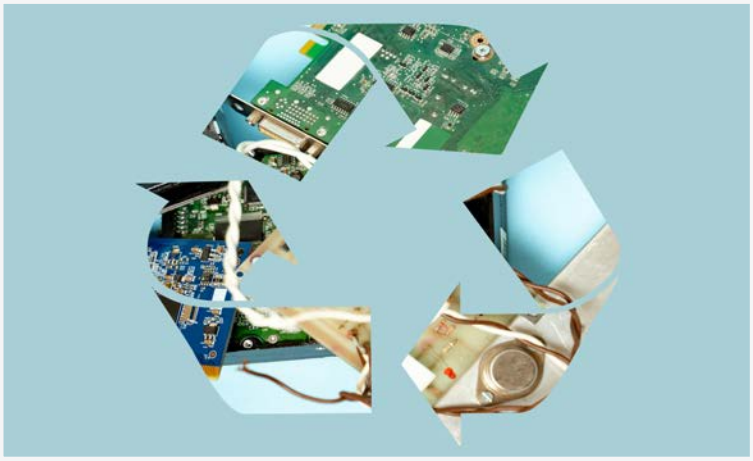


HIGH-QUALITY MATERIAL INSIGHTS FOR

ELECTRONIC WASTE RECYCLING

eurofins | EAG Laboratories

Unlocking Value from E-Waste

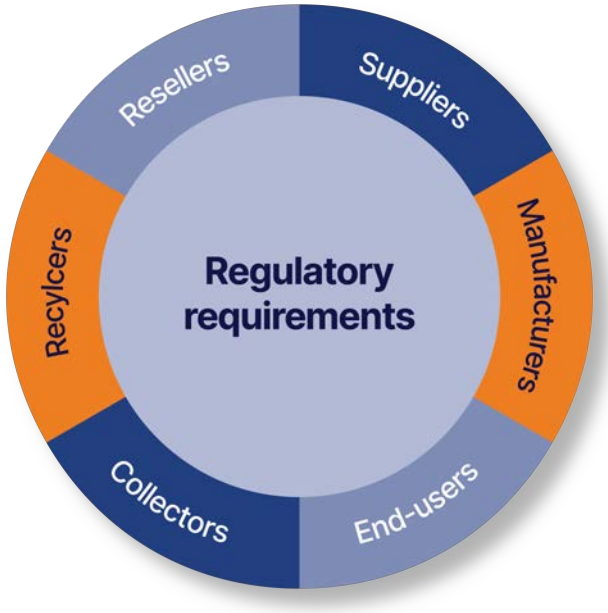
Reliable Analytical Support for Smarter Electronic Waste Recycling

Recovering critical raw materials from electronic waste (e-waste) is essential for Europe's strategic autonomy and the transition to a truly circular economy. High-quality recycling reduces dependency on imported resources, strengthens resilient supply chains, and minimizes environmental impact by securing the resources required for advanced electronics, energy infrastructure, and electrification technologies.

At Eurofins EAG Laboratories, we are committed to advancing responsible recycling by delivering reliable material characterization services that recyclers, technology developers, and researchers can trust. As illustrated in the e-waste ecosystem below, effective recycling depends on collaboration across the entire value chain, from suppliers and manufacturers to end-users, collectors, recyclers, and resellers with regulatory requirements governing compliance at each stage.

Testing for Life is more than our motto – it reflects our commitment to scientific excellence, sustainable innovation and protecting the planet for future generations.

The e-waste ecosystem



EU Recovery Targets Demand Action — High Quality Material Insights make it possible

The European Union is setting increasingly ambitious recovery and recycling targets for e-waste to secure valuable resources and accelerate the shift to a circular economy. With nearly 50% of Europe's e-waste still uncollected, the pressure is on: new legislation requires recyclers and manufacturers to increase recovery performance and maximize the extraction of valuable elements. Meeting these targets requires more than effort, it requires certainty.

Advanced laboratory analysis provides accurate material insight needed to:

- Precisely determine material composition
- Verify purity and specification compliance of recovered fractions
- Optimize recovery and processing efficiency
- Maintain compliance with evolving EU regulations

High-quality analytical data transforms recycling from a regulatory obligation into a strategic advantage – empowering you to recover more, waste less and stay ahead of compliance demands.

Real Value From E Waste — Unlocked through Material Recovery

Electronic waste is a strategic secondary resource. Depending on the waste stream, e-waste contains precious metals (e.g. Ag, Au, Pd, Pt), rare earth elements (e.g. Nd, Dy, Pr, Y, Eu, Ce, Tb), tantalum (Ta) and base metals including Cu, Al, Fe and Sn, often present in economically significant concentrations.

Eurofins EAG Laboratories turns e-waste into measurable value through high-precision laboratory analysis, revealing its true composition and unlocking hidden potential. Our insights help you:

- Accurately value materials
- Strengthen pricing and maximize financial returns
- Reduce technical and commercial risk
- Optimize recovery strategies and process design

In a landscape of increasingly complex e-waste streams, Eurofins EAG Laboratories converts complexity into clarity — delivering the insights required for both commercial success and sustainable growth.

+31 6 55874122
WWW.EAG.COM

Empowering the Circular E Waste Economy through Advanced Materials Insight

Achieving circularity in e-waste requires knowledge, not assumptions. It demands precise, reliable insight into the materials flowing through every stage of the recycling value chain.

At Eurofins EAG Laboratories, we provide the scientific foundation that makes this possible. We apply advanced physical and chemical characterization to deliver in-depth insight into material composition, purity, morphology and performance, and to understand and control feedstock variability.

By combining high-quality analytical data with expert advice, we develop tailored testing strategies that support process optimization, improve material recovery and ensure consistent quality. This enables organizations to make informed decisions that drive innovation, regulatory compliance and sustainable commercial success.

From complexity to clarity

E-waste streams are inherently complex, combining metals, polymers, ceramics and critical raw materials in highly variable compositions. This complexity directly affects downstream processing and recovery efficiency. Our analytical capabilities bring clarity, enabling better understanding and control of input streams, resulting in more predictable outputs.

Across the e-waste recycling value chain

We support every stage of the e-waste recycling chain, from collection and pre-processing to refining and material reuse. Our expertise also covers R&D, process development, quality control and failure analysis, ensuring that materials are characterized accurately and consistently at each stage.

Stay ahead of evolving regulations

As regulatory requirements continue to evolve and demands on material performance and recovery increase, reliable data becomes essential. Our expertise helps you meet current requirements, anticipate future challenges, and maintain consistent material quality and process performance.

Drive smarter decisions with data you can trust.

Validation of recovered metals, alloys and mineral fractions to support quality control, customer specifications and safe re-entry into manufacturing and refining cycles.

Identification and quantification of valuable metals and critical raw materials, enabling accurate feedstock valuation, material acceptance decisions and assessment of process suitability across diverse e-waste streams.

Process optimization and variability control through advanced data interpretation, expert advice and targeted R&D support.

Verification of purity, homogeneity and feedstock integrity to confirm correct valuation and viability for processing, recovery, and reuse.

Detection and quantification of impurities, hazardous substances and contaminants that impact recovery efficiency, downstream processing, product quality, reuse, or regulatory compliance.

+31 6 55874122
WWW.EAG.COM

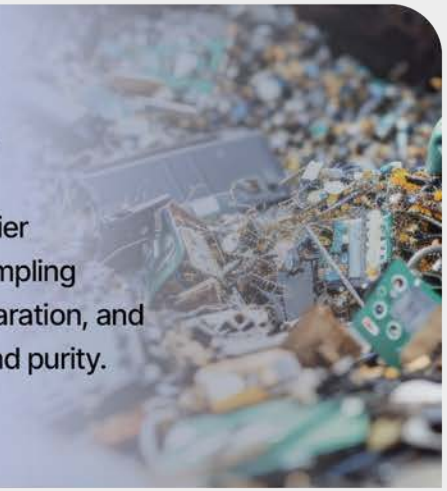
Unlock value with science. Partner with Eurofins EAG Laboratories.

We deliver accurate, and reliable analytical results – helping you recover more value, meet quality standards, and build stronger, more sustainable supply chains.

Feedstock

Sampling • Quality Control • Valuation

Eurofins EAG Laboratories enables supplier quality control through representative sampling methodologies, customized sample preparation, and fast evaluation of material composition and purity.



R&D Support

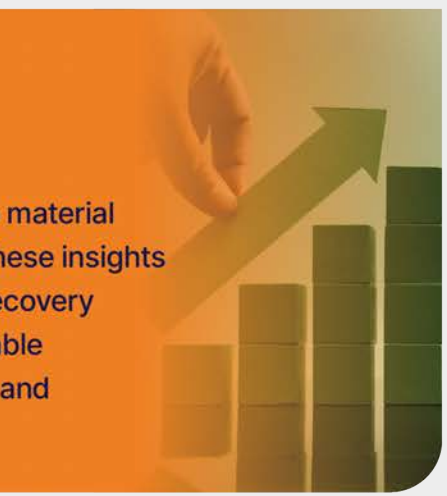
Test design • Experiments • Expert interpretation

Advanced analytical methodologies to evaluate alternative separation and purification strategies. We turn complex data into actionable insight through expert data interpretation and materials consultancy.

Process optimization

Yield • Process variability • Purity

Our analytical data provides insight into material losses, process variability and purity. These insights enable optimized process design and recovery strategies, resulting in higher yields, stable performance, reduced operational risk, and improved product quality.

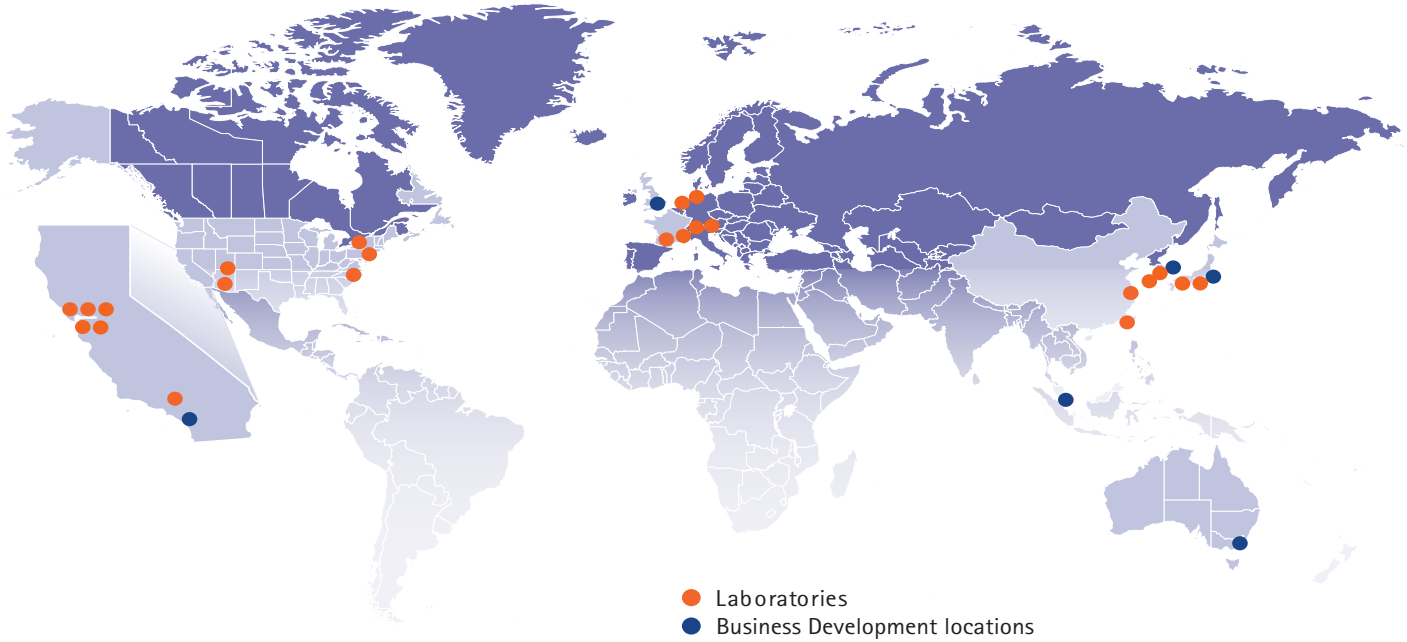


Secondary Raw Materials

Quality • ROI • Ready to use

Verified quality and purity, compliant with EU regulations, enable confident pricing, higher financial return and market-ready reuse.

Available Techniques for Characterization and Testing in Europe		
AFM (SPM-AFM)	BET & BJH	Climate testing (T, RH, (P)TC)
Conductometry	Contact angle	CPC
CT	CV-AAS	Densitometry
Dilatometry	DSC	Dual Beam/FIB
DMA	EBSD	Electrochemical testing
Ellipsometry	Emissivity	FTIR
GC / GC-MS / GC-MS/MS	GD-MS	GD-OES
GF-AAS	GPC	Gravimetry
HALT & MEOST	HAST	HLT
HPLC	IC / C-IC / IC-MS	ICP-MS
ICP-OES	IGA	IK-testing
IP-testing	LA-ICP-MS	Laser diffractometry
LC-MS / LC-MS/MS	LIBS	LPC
Mechanical testing	MS	OPC
Optical interferometry	pH	Profilometry (OP / SP)
PTw	Raman	Refractometry
RGA	Rheology	Salt mist
SEM (EDX)	Solar / UV testing	Surface affection
Surface tension	TEM / STEM / EDS / EELS	TGA
Titrimetry	TMA	TOCw
TOF-SIMS	UV / Vis / NIR	Viscometry
XPS-ESCA	XRD	XRF / µ-XRF
XRR		



About Eurofins EAG Laboratories

When it comes to understanding the physical structure, performance, identity, chemical properties and composition of materials, no other scientific services company offers the breadth of experience, diversity of analytical techniques or technical ingenuity of Eurofins EAG Laboratories. We don't just perform testing, we drive commercial success—through thoughtfully designed investigations, technically superior analyses, and expert interpretation of data.

We deliver multi-disciplinary, problem-solving expertise to help our customers accelerate innovation, ensure quality and safety, and protect intellectual property. Whether you are seeking to reduce time-to-market, solve manufacturing problems or ensure regulatory compliance, turn to Eurofins EAG Laboratories. We know how to bring the power of science to every phase of your product lifecycle.

- 20+ facilities located in the US, Europe, and Asia
- 2,500+ instruments
- 1000+ highly-educated employees
- Serving more than 5,000 clients worldwide
- Global presence and customers in more than 50 countries

Complete Lifecycle of Services

- PRODUCT INNOVATION & IMPROVEMENT
- INVESTIGATION & TROUBLESHOOTING
- QUALITY ASSURANCE
- MANUFACTURING SUPPORT
- FAILURE ANALYSIS
- REGULATORY COMPLIANCE
- MANUFACTURING & SUPPLY CHAIN SUPPORT
- CONSULTING & LITIGATION

eurofins | EAG Laboratories

+1 800-366-3867
WWW.EAG.COM

+33 6 74513346
recycling@me.eurofinseu.com

+31 6 55874122
contact.nl@eurofinseag.com