

Battery Recycling

Cover Regulations, Recover Resources

Closing the gap in the battery lifecycle

Battery recycling is one of the major environmental challenges of our time. Different treatment stages during the recycling process use water to cool, wash, and dissolve components, resulting in wastewater that



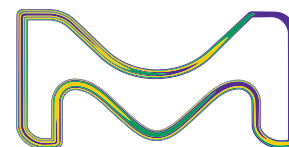
contains hazardous substances. The discharge poses a significant risk for the ecosystem and must undergo treatment in accordance with local regulations. But it also holds valuable raw materials, which could be reused in the production of new batteries, thus reducing extraction of new materials. Detecting both risks and resources requires accurate wastewater testing.

Spectroquant® wastewater monitoring system

Whether for regulatory compliance or resource recovery, discharge water at battery recycling sites must be tested for several key parameters. While complex methods like AAS and GC-MS are sometimes used, the Spectroquant® system presents a convenient, all-in-one solution with every component required for swift, secure photometric analysis of wastewater.

- **Prove plus spectrophotometers** offer intuitive controls and pre-programmed methods for analysis of over 200 test kits
- **Ready-to-use test kits for key parameters** in reagent or cell formats are supplied or pre-filled with all reagents needed
- **Start-to-finish analytical quality assurance (AQA)** supported by detailed certificates of analysis (CoA)

Learn more about Spectroquant® instruments and test kits
SigmaAldrich.com/photometry



Test kits for key parameters

Parameter	Spectroquant® test kit	Measurement range	Cat. No.
Lead	Spectroquant® Lead Test	0.010-5.00 mg/L Pb	1.09717
	Spectroquant® Lead Test	0.10-5.00 mg/L Pb	1.14833
Cadmium	Spectroquant® Cadmium Test	0.002-1.000 mg/L Cd	1.14834
	Spectroquant® Cadmium Test	0.002-5.000 mg/L Cd	1.14835
Nickel	Spectroquant® Nickel Test	0.10-6.00 mg/L Ni	1.14785
	Spectroquant® Nickel Test	0.025-5.00 mg/L Ni	1.14784
Cobalt	Spectroquant® Cobalt Test	0.05-2.00 mg/L Co	1.17244
Manganese	Spectroquant® Manganese Test	0.005-2.00 mg/L Mn	1.14846
	Spectroquant® Manganese Test	0.10-10.00 mg/L Mn	1.14770
	Spectroquant® Manganese Test	0.010-5.00 mg/L Mn	1.00816
Aluminum	Spectroquant® Aluminum Test	0.02-0.50 mg/L Al	1.14825
	Spectroquant® Aluminum Test	0.02-5.00 mg/L Al	1.00894
Copper	Spectroquant® Copper Test	0.02-6.00 mg/L Cu	1.14767
	Spectroquant® Copper Test	0.05-8.00 mg/L Cu	1.14553
BOD	Spectroquant® BOD Test	0.5-3000 mg/L BOD	1.00687

Parameter	Spectroquant® test kit	Measurement range	Cat. No.
COD	Spectroquant® COD Cell Test	4.0-40 mg/L COD	1.14560
	Spectroquant® COD Cell Test	5.0-80.0 mg/L COD	1.01796
	Spectroquant® COD Cell Test	10-150 mg/L COD	1.14540
	Spectroquant® COD Cell Test	15-300 mg/L COD	1.14849
	Spectroquant® COD Cell Test	25-1500 mg/L COD	1.14541
	Spectroquant® COD Cell Test	50-500 mg/L COD	1.14690
	Spectroquant® COD Cell Test	300-3500 mg/L COD	1.14691
	Spectroquant® COD Cell Test	500-10000 mg/L COD	1.14555
	Spectroquant® COD Cell Test	5000-90000 mg/L COD	1.01797
	Fluoride	Spectroquant® Fluoride Test	0.02-2.00 mg/L F
Spectroquant® Fluoride Test		0.10-1.80 mg/L F	1.00809
Spectroquant® Fluoride Test		0.10-20.0 mg/L F	1.14598
Chloride	Spectroquant® Chloride Test	0.10-5.00 mg/L Cl	1.01807
	Spectroquant® Chloride Cell Test	0.5-15.0 mg/L Cl	1.01804
	Spectroquant® Chloride Test	2.5-250 mg/L Cl	1.14897
	Spectroquant® Chloride Cell Test	5-125 mg/L Cl	1.14730

Related products

Our extensive portfolio offers further high-quality solutions to support reliable wastewater analysis and confident quality control.

- Acids & bases
- Sample Prep reagents
- Buffers & salts
- Test strips & colorimetric tests for rapid chemical testing
- Diluted & analytical standards
- Certified reference materials

Learn more

Contact us for dedicated application support or to request a free demo of the Spectroquant® system.
[SigmaAldrich.com/contact-sq-system](https://www.sigmaaldrich.com/contact-sq-system)

Explore our comprehensive solutions for battery research, production, and recycling.
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Merck KGaA
 Frankfurter Strasse 250
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