

# Ion Exchange

The Minerals business unit undertakes a wide variety of bench top and pilot plant scale ion exchange programs on uranium, lithium, base metals and specialty elements. Our facilities include a dedicated ion exchange laboratory as well as several modular pilot plant areas, and associated equipment to conduct batch and continuous test work.

Our team has considerable experience in resin in leach (RIL) and resin in pulp (RIP) processing. Our RIP piloting facilities include carousels with 1 and 5 L contactors. Requests for larger circuits including external screening can also be accommodated. Additional services in support of RIP process development include resin attrition testing (ball mill) or chemical stress testing (microscope bead counting).

We have considerable experience in both fixed and fluidised bed piloting. We have designed, constructed and installed ion exchange pilot plants at remote sites alongside field leach trials and existing operations. In support of development of fluidised bed plants, we can perform resin bed expansion measurement at bench, pilot and demonstration scale.



In support of our ion exchange programs, we can provide dynamic modelling for optimisation of ion exchange operating conditions. Our modelling results have been used in the choice of piloting conditions as well as to support scoping level engineering studies for process evaluation.



## About ANSTO's minerals experience

ANSTO has a 40-year track record of providing practical solutions and innovative technology to the mining and minerals processing industries. We have a team of 60+ dedicated professionals and technicians with expertise covering chemical engineering, metallurgy, mineralogy, chemistry, geology and radiation safety working within the Minerals business unit.

We provide process development services, technical review and consulting services, as well as collaborative and contract research on uranium, rare earth and specialty metals processing, radioactivity control and management, novel flowsheet design and modelling, and scoping level engineering / cost estimates.

## Contact

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