ROCKXTRACT®

ULTRA-LOW-CARBON CEMENT MATERIALS

Cement & Materials Development Engineer

Help build the next generation of low-carbon cement
More than 80% lower carbon than Portland cement
Ambient-temperature chemistry. No conventional kiln. No calcination.

About RockXtract

Concrete is the most widely used building material on Earth. Its key ingredient, cement, is responsible for roughly 8% of global CO_2 emissions.

RockXtract is changing how cement is made.

We have developed a fundamentally different route to cement production that eliminates the conventional kiln. No calcination. No fossil fuel combustion. No 1,400°C furnace. Instead, we use rock, a proprietary activator and ambient-temperature chemistry to produce a cementitious binder with more than 80% lower carbon emissions than Portland cement.

We are a small, venture-backed deep-tech company entering the next stage of our journey: turning a breakthrough chemistry into products, intellectual property, certification and ultimately commercial-scale manufacturing.

We are building our founding technical team in Christchurch. The people who join us now will have an unusually large influence on what RockXtract becomes, from the materials we develop and the data we generate, to the facilities we build and the products we take to market.

How we work

We move quickly and learn by doing. We take ideas from the bench into increasingly realistic conditions, test them rigorously, learn from the results and iterate. The goal is not research for its own sake, it is to develop materials that can meet customer requirements, pass certification and work at commercial scale.

We are building a zero-harm culture from day one. Every experiment, process and decision starts with identifying and controlling risk.

The role

As a **Cement & Materials Development Engineer**, you will help develop, understand and prove RockXtract's novel binders and cementitious materials.

This is a hands-on technical role spanning formulation, experimental design, materials characterisation, performance testing and data analysis. You will help build the testing capability and technical evidence needed to take our materials from early-stage development towards certification, customer validation and commercial deployment.

You will have significant scope to shape both the science and the way we work as the company grows.

What you'll do

- Champion safe ways of working, planning every experiment and activity with safety as the first priority.
- Develop, formulate and optimise novel binders, mortars and cementitious materials.
- Design and execute experiments to understand material behaviour and identify the variables that matter.
- Build and run performance and durability testing programmes supporting certification and customer validation.
- Investigate setting, curing, strength development, dimensional stability, durability and other performance characteristics.
- Prepare, cast and cure specimens, operate laboratory equipment and maintain rigorous experimental records.
- Analyse and interpret experimental data, identify trends and anomalies, and turn results into clear technical conclusions.
- Use techniques such as XRD, XRF, SEM, and particle-size analysis to understand material composition and behaviour.
- Apply statistical analysis and design of experiments (DOE) to make experimental programmes more efficient and informative.
- Help design and build out RockXtract's Christchurch laboratory and testing capability as our needs evolve.
- Work closely with our scientific team to solve challenging materials problems and translate laboratory results into practical development decisions.
- Contribute to technical documentation, intellectual property, certification and customer-facing technical work as the company progresses.
- Take increasing ownership of technical programmes as RockXtract scales.

What you'll bring

We are looking for someone who is technically rigorous, hands-on and motivated by difficult materials problems. You will ideally have:

Essential

- A PhD or equivalent advanced technical experience in materials science, civil engineering, cement/concrete science, or a closely related R&D field.
- Experience in developing, formulating or testing novel binders, cementitious materials, concrete or related materials.
- Experience with statistical analysis and design of experiments (DOE).
- Excellent experimental discipline, including careful sample preparation, documentation, data management and interpretation.
- Curiosity and the ability to work through ambiguous technical problems rather than waiting for a predefined answer.
- The temperament for a deep-tech startup: self-directed, resourceful, pragmatic and comfortable moving quickly from hypothesis to experiment to decision.
- A commercial mindset, an understanding that the purpose of the technical programme is ultimately to produce materials that customers can use at scale.

A strong plus: experience using AI or machine learning to design or optimise experiments, analyse experimental data, optimise material formulations or processes, or support AI-assisted research workflows.

Whether you are relatively early in your career or already have substantial experience in binder development, we care most about technical capability, curiosity, judgement and care. Your scope and responsibility will grow with the company.

Why join us

- Founding-team impact. Join at a stage where your work can materially influence the technology, team and direction of the company.
- Meaningful ownership. Take responsibility for a technical programme that will directly contribute to commercialising a new approach to cement.
- Skin in the game. As an early employee, you will be eligible to participate in our employee share option plan (ESOP).
- Technical depth. Work on a genuinely difficult materials problem at the intersection of chemistry, materials science, engineering and industrial scale-up.
- Exceptional mentorship. Work alongside a world-class technical team, including advisors with R&D leadership experience at major global cement producers.
- Room to grow. We are building the technical organisation for the long term. The people who join now will have the opportunity to take on significantly greater responsibility as we scale.
- Real-world impact. Every experiment contributes to the development of a radically lower-carbon route to one of the world's most important industrial materials.

The details

- Full-time, two-year fixed term. The role is funded for two years, with the potential to extend subject to securing our next funding round, which we are actively pursuing.
- Based at our Christchurch facility.
- Starting as soon as possible.
- Reporting to our scientific leadership.
- NZD **100,000–130,000**, depending on experience.

How to apply

If you're excited by the challenge of developing a fundamentally new approach to cement, send your CV and a few lines about why this role interests you to **info@rockxtract.com**. We review applications as they arrive, so it pays to be early.

RockXtract is an equal opportunity employer. We welcome applicants of all backgrounds, genders, ages, ethnicities and abilities, and we encourage you to apply even if you don't meet every requirement.