

ASX Announcement ([ASX: AXE](#))

30 January 2026

## Archer develops early Biochip prototype

### Highlights

- Archer has built an alpha-prototype and laboratory demonstration of its blood potassium sensor.
- The prototype combines the Biochip, test cartridge, and readout electronics, confirming stable system-level operation across repeated measurements while maintaining clinical-grade accuracy.
- Qualified microfluidics using only 10 $\mu$ L of blood, enabling finger-prick testing and supporting future clinical workflows for point of care potassium in blood monitoring.
- Archer is now progressing toward the development of a full, beta-prototype, expected in 2026.
- The beta prototype will form the basis of negotiations with large MedTech companies regarding potential licensing deals as well as engagement with contract medical device manufacturers.

Archer Materials Limited (“Archer”, the “Company”, “ASX: AXE”), a quantum company developing technologies in computing, sensing, and medical diagnostics, has completed its alpha prototype and laboratory demonstration of its blood potassium sensor with integrated Biochip. This milestone represents the first major step in translating Archer’s Biochip technology from individual laboratory devices into a product suitable for clinical workflows and, ultimately, point of care and at-home potassium monitoring.

The alpha prototype delivers further validation of Archer’s Biochip technology for potassium sensing. This prototype technically derisks the integration of the Biochip into the full system and verifies critical diagnostic parameters for patients with potassium monitoring, including those with chronic kidney disease and heart failure, where rapid detection of elevated blood potassium levels is essential.

The Company has commenced development of the beta prototype which should be completed later this year. The beta prototype will form the basis of negotiations with large MedTech companies regarding potential licensing deals as well as engagement with contract medical device manufacturers and initiation of clinical trials.

**Commenting on the Biochip progress, Dr Simon Ruffell, CEO of Archer, said,**

“For the first time, we have integrated our potassium sensing Biochip with fluidics and electronics into a single packaged system, while maintaining clinical-grade accuracy using patient-derived samples. This represents a major technical milestone for Archer’s Biochip program. The achievement significantly derisks the technology paving the way for developing a full (beta) prototype in 2026.”

"Archer's testing of the early prototype shows that the Biochip technology meets clinical accuracy requirements when integrated into a prototype cartridge capable of handling a drop of blood and the product-ready electronic readout system."

### Alpha prototype features and clinical verification

The Biochip prototype demonstrated potassium measurement accuracy within  $\pm 0.3$  mM in blood samples. This is in alignment with Clinical Laboratory Improvement Amendments (CLIA) requirements for equivalent testing in a pathology lab and matches the previous laboratory experimental system results (ASX announcement 1 September 2025).

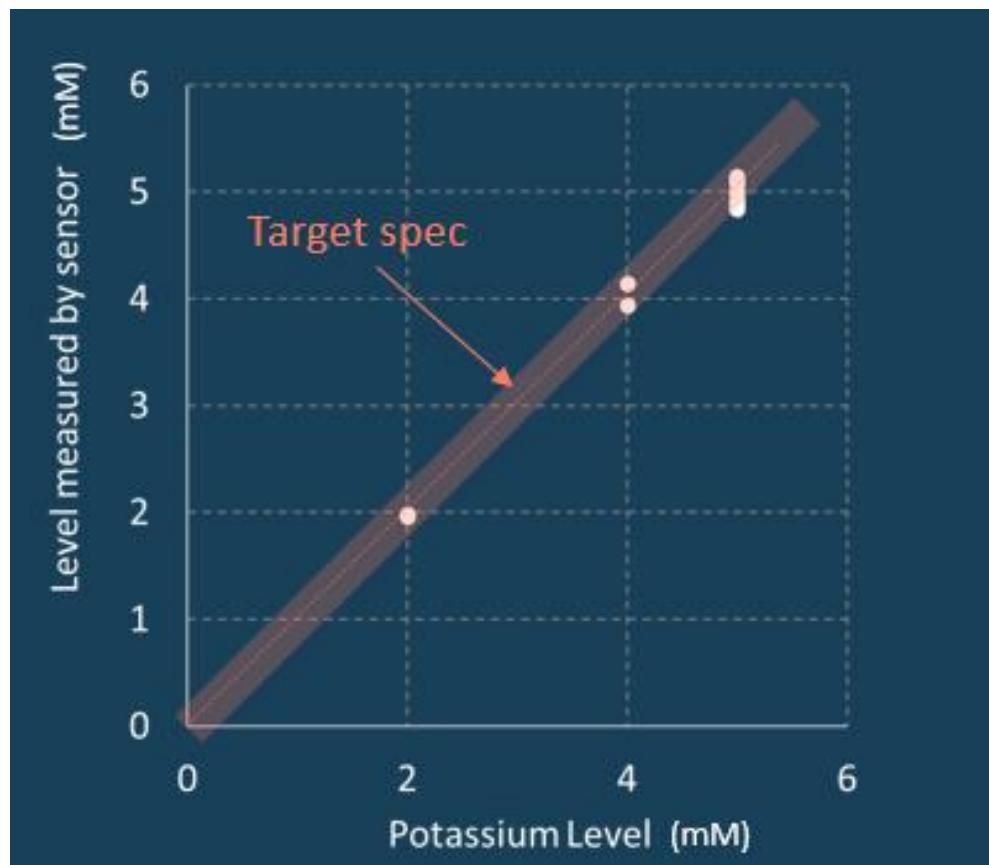


Image 1: Results from Archer's sensor potassium measurements against known test levels. Target accuracy needs to be within the orange band (CLIA requirements) and is achieved using our alpha-prototype Biosensor.

Archer's first integrated alpha prototype incorporates the Biochip, fluidics, and electronics into a single test system and delivers the following outcomes:

- Clinical-grade potassium measurement accuracy is maintained while operating in a fully prototype environment.
- Qualified micro-fluidics capable of performing accurate potassium testing using only 10 $\mu$ L of blood, a volume consistent with standard finger-prick tests and eliminating the need for finger "milking," a key requirement for patient usability and eventual at-home adoption.

- Verified prototype electronics, confirming system-level functionality and stable performance across repeated measurements – ready for integration into final product (ASX announcement 28 July 2025).

Readout electronics  
(ready for integration  
into handheld reader)

Prototype cartridge  
(integrated biochip and  
drop of blood delivery)

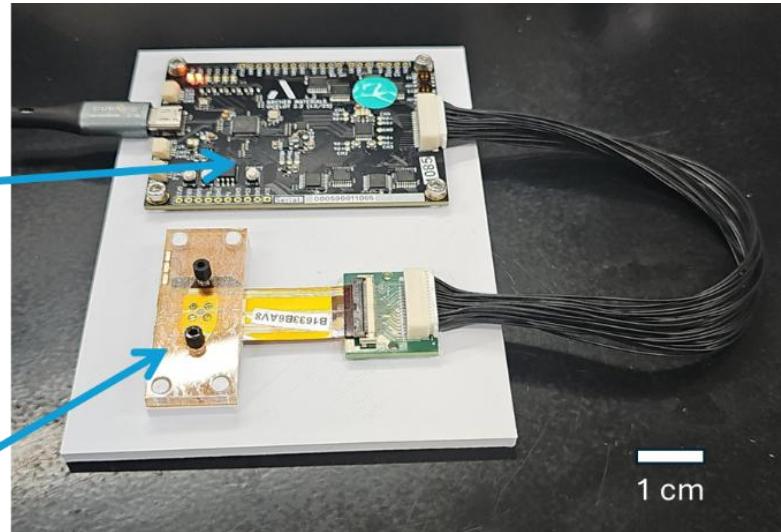


Image 2: Alpha prototype – cartridge accepts micro litres of blood and delivers to the Biochip. Readout electronics readout results and are ready to be integrated into a handheld reader.

The Board of Archer authorised this announcement to be given to ASX.

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**About Archer**

Archer is a quantum technology company that operates within the semiconductor industry. The Company is developing advanced semiconductor devices, including chips relevant to quantum computing, sensing, and medical diagnostics. Archer utilises its global partnerships to develop these technologies for potential deployment and use across multiple industries.  
[www.archerx.com.au](http://www.archerx.com.au)