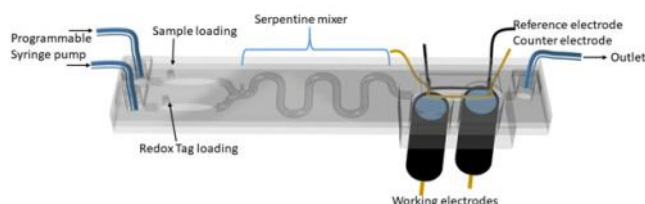


Electrochemical method of sensing target protein molecules

Electrochemical method of sensing target protein molecules.

Applications: Protein detection, protein quantification, protein assaying



Features	Benefits
A method of electrochemical protein quantification involving shotgun redox tagging a protein mixture then specifically recruiting the target protein at an antibody-modified electrode surface	The method is able to discriminate between the target protein and other non-specific proteins with minimal background interference and a high signal-to-noise ratio
The method can be integrated into a microfluidic setup (see image) which could be automated to allow the method to be highly scalable	Integration of a sample protein into the microfluidic system decreased the limit of detection (0.1pg/mL) and required a very small sample (25µg/mL)
Work done on this assay method demonstrates that it can be used for simple and sensitive detection of protein biomarkers	This approach is able to achieve a very low limit of detection while still being applicable across a dynamic range which spans 6 order of magnitude

Features

This assay is generic and can be used to analyse several proteins simultaneously by using an array of electrodes

Benefits

The method, particularly when integrated into a microfluidic system, is rapid and scalable, leading to a huge reduction in costs and labour requirements

Patented and Available for

- Co-development
- Consulting
- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

The above information is provided 'as is' without conditions or warranties. Oxford University Innovation makes no representation and gives no warranty that it is the owner of the intellectual property rights in the technology described. © Oxford University Innovation Ltd 2026, Buxton Court, 3 West Way, Oxford, OX2 0JB.