

Native SDS PAGE

OTT ID #1313

APPLICATIONS

There is a great need for a robust method that combines the electrophoretic resolution of proteins with retention of their functional behavior.

TARGET PROBLEM

In traditional SDS-PAGE the proteins are well separated but are denatured such that the structure and function are no longer adequately maintained for carrying out further functional assays.

FEATURES/BENEFITS

- **Better Resolution:** Electrophoretic resolution is superior to Native PAGE methods
- **Activity Maintained:** Researchers can conduct further experiments with the electrophoresis products unlike with standard SDS-PAGE
- **Quick to Market:** Only small adjustments to sample buffer and run buffers and SDS-PAGE kits currently in production will be required for the new product
- **Inexpensive Development:** Minimal costs would be necessary to develop the “kit” for distribution
- **Numerous Applications:** Useful for proteomics works, drug discovery, diagnostics, personalized medicine, protein-based therapeutics, and toxicology

TECHNOLOGY

A new method of sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) in which proteins can be well separated during electrophoresis as well as maintain their native 3-dimensional conformations and functional activity. This native SDS-PAGE method will allow for important new experiments to be conducted in the proteomic field and a better understanding of proteins such as isolation from the gel of native proteins for further analysis, direct in-gel assay of enzymatic activity, direct in-gel survey of binding activity of proteins with small molecules (e.g. drugs, toxic agents) and macromolecules (e.g. protein binding partners including antibodies, cognate DNA binding sites), and isolation of protein for subsequent mass spectral identification.

Our easy to implement Native SDS-PAGE method has retained the enzymatic activity of a number of enzymes tested, and has also maintained protein complexes in a bound state.

INTELLECTUAL PROPERTY

[U.S. Patent 9,709,526](#)

INVENTORS

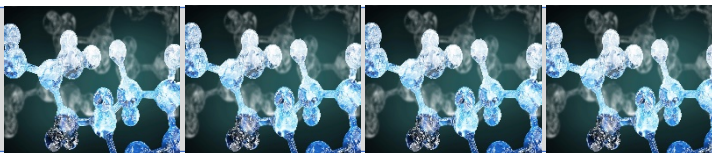
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This technology is part of an active and ongoing research program and is seeking partners for development of the final product. It is available for developmental research support/licensing under either exclusive or non-exclusive terms.

[Dr. David Petering](#) is a University Distinguished Professor at the University of Wisconsin-Milwaukee in the Department of Chemistry and Biochemistry.



Technology Overview



[Dr. David Petering](#) is a major figure in research into the modes of action of metallodrugs.

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Please reference: OTT ID. 1313