

# RAPID GAS-PHASE ISOTOPIC LABELING FOR ENHANCED DETECTION OF PROTEIN CONFORMATIONS

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## Description

Several prior-art techniques such as ion mobility spectrometry and gas-phase HDX measurements have been used for assessing the conformational properties of gaseous protein ions. Most of these approaches comprise the use of ion traps or ICR cells where a gas is introduced and the ions are incubated with the gas. However, such approaches are associated with potential limitations such as extended gas-phase labeling time, complex exchange kinetics, and comparatively low gas pressure. **This novel approach enables a rapid gas-phase isotopic labeling of protein ions for enhanced detection of protein conformations.**

## Value Proposition

The approach:

- Involves use of a curtain labeling technique wherein the protein ions are allowed to pass through a cloud of deuterated gas for labeling
- Allows for an effective control over gas-phase labeling time along with obtaining higher operational gas pressure as compared to conventional techniques
- Offers unique advantages and flexibility for analytical measurements over prior-art approaches
- Would be commercially useful for determination of protein stoichiometry along with architecturing of large functional protein assemblies

## Intellectual Property Status

Pending Utility Application 13/264,574

Pending Canada National Application 2,758,917

Pending European National Application 10765098.8

## License Status

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