



## Method for quantifying proteins and isoforms thereof

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### Summary

The University of North Dakota has patented a method for quantifying proteins. The method can be used to test quantities of metallothionein protein isomers, which can then be used to detect diseases. The method starts with isolating total protein from a test sample and alkylating the proteins with an alkylating agent. The alkylated proteins are then cleaved to generate alkylated peptides. In the final step, metallothionein isomer peptide is quantified relative to an amount of labeled standard metallothionein peptide.

### Advantages

- Uses protein quantification to detect and monitor disease
- Effective for diseases relating to heavy metal exposure and cancer
- More accurate - protein quantification is a more accurate measure of metallothionein induction than is mRNA quantification

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