

# NIST Peptide Mass Spectral Libraries: *Freely Available*



## Human and Chinese Hamster

### LC-ESI-MS/MS Libraries of Annotated Spectra

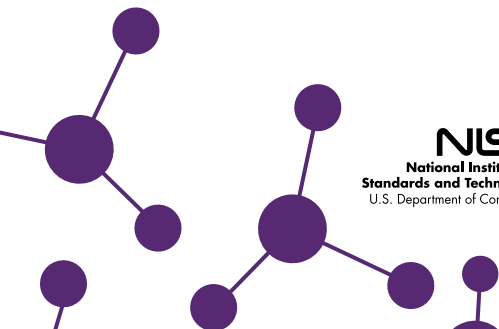
- 4.4 million spectra
- 912,182 tryptic peptides

### Tryptic Peptide Libraries

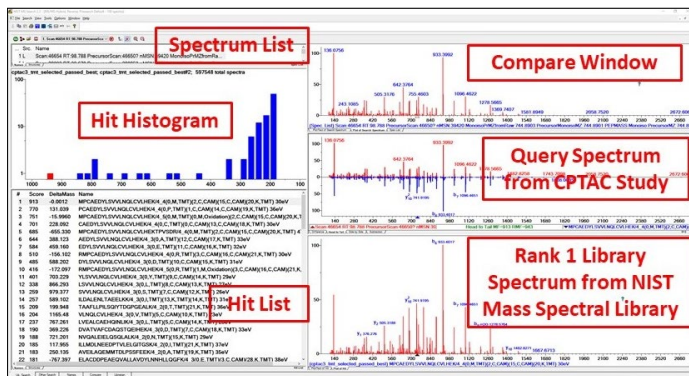
- Human (from CPTAC and ProteomeXchange, and ProteomeTools )
  - Label-free, iTRAQ and TMT
  - Hair label-free (NIST, forensics use)
  - Phosphopeptides
  - Synthetic peptides
- Chinese hamster (from Johns Hopkins University and NIST)

#### NIST Human Peptide Mass Spectral Library Statistics

Spectra	4 260 741	Proteins	33 019
Size	33 GB	Variants	17 GVPs (hair)
Peptides	837 673	Modifications	8



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## How to use libraries

- Formats: (1) ASCII text format (*MSP*) and (2) *MS Search* binary format spectra
- Library searching with major proteomics workflows, including *Mascot* (Matrix Science) and *Proteome Discoverer* (Thermo Fisher Scientific)
- Compatible with *Skyline*
- Individual spectrum search with the full-featured user-interface program: *NIST MS Search*
- Batch peptide identification with the *NIST MS PepSearch* software

## Library Downloads

Peptide.nist.gov

Web [chemdata.nist.gov](http://chemdata.nist.gov)

Email [massspec@nist.gov](mailto:massspec@nist.gov)



*NIST does not endorse any commercial products.*

