Protein and Peptide Analysis by Electrospray (ESI) Mass Spectrometry

Sample Preparation for molecular weight determination of intact proteins

General sample handling

To minimize protein losses from adsorption to walls of tubes, use polypropylene tubes or silicanized polypropylene tubes. Avoid polystyrene (clear plastic) and glass.
Use freshly prepared, high purity reagents and water. Contaminants from buffers, detergents, lipids can prevent a good mass spectrometry result.

Sample submission

- In solution, as concentrated as possible
- Minimum volume 20-50 microliter
- Minimum Concentrations:

Peptides/ (500-5000 Da):	1 pmol/ microliter
Proteins 5- 20kD :	5 pmol/ microliter
Proteins 20- 66kD:	20 pmol /microliter
Proteins 67-100kD:	40 pmol/microliter

Evidence of concentration determination must be provided upon submission.

The sample should NOT contain at all

Azide	SDS
Brij 35	Tris base
CHAPS	Triton X-100, reduced Triton X-100
DMSO	Trifluoroacetic acid
DMF	Tween
Glycerol	Zwittergent
Phosphate buffers	any other detergent
Salts and buffers >100 mM	

The following components and solvents are ACCEPTABLE

Acetic acid
Formic acid
Aqueous ammonium hydroxide
Acetonitrile
Methanol, Ethanol or Isopropanol
Guanidine/HCl up to 4M
Salts and non-phosphate buffers < 100 mM

Director: Henriette Remmer, Ph.D.
Phone: 734.763.6285 Email: hremmer@umich.edu
Web: https://brcf.medicine.umich.edu/cores/proteomics-peptide-synthesis/
C570C MSRB II SPC 5613
1150 W. Medical Center Drive
Ann Arbor, MI 48109