

Gel Electrophoresis Separation for Protein Identification

A user should choose the correct type and format of the gel-- which can result in a good separation of all the proteins in a sample. If there is no prior information about the sizes of proteins present in a sample, commercially available, pre-cast gradient gel may become the first choice, since it can separate proteins in a large MWt range. For SDS-PAGE, many type of polyacrylamide gels are compatible with MS analysis, including traditional Tris-Glycine gel, or many brand commercially available pre-cast gels such as Novax NuPAGE Bis-Tris, Tris-Acetate gel and Tris-HCl gel are acceptable for protein identification. For protein identification, we have not observed any significant effect resulted from different percentage of a gel or a gradient gel, or different thickness of a gel.

However, we suggest not using Tricine gel for protein identification purpose based on our experience. This type of gel is often used to separate polypeptides and very small proteins.