



NQAC

Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** Residual Intact Protein by LDS-PAGE

**Method Number:** LI-08.012 WI

**Scope of Application:** An in-house LDS-PAGE (lithium dodecyl sulphate - polyacrylamide gel electrophoresis) method for the detection whey-based moderately or partially hydrolysed products.

**Description:** Samples are resuspended in water (if needed), cleaned by filtration or centrifugation, denatured with lithium dodecyl sulphate (LDS) at 95 °C, reduced by dithiothreitol (DTT), and run on a discontinuous NuPAGE™ 4 % to 12 % Bis-Tris gel using MES buffer near neutral pH. Proteins are concentrated in the stacking gel and separated according to their molecular weight in the separating gel. Following separation, gels are fixed and proteins bands are visualised by silver staining.

**Sample Weight Required:** Original finished product container, or 50g if your raw material is in bulk. Sample must be stored in a sealed container. Portion received for analysis must be representative of entire sample

**Method Reference:** In-house method

**Analytical Platform:** Electrophoresis Gel

**Special Information:** Results delivered by this method are expressed as a binary result (detected/not detected). This method can also provide supplementary information related to the relative concentrations of residual intact proteins, but this is only meant to guide discussions and not to be reported as a result.

| Analyte Reported | Alias | Unit of Measure       | Limit of Quantification | Reproducibility |
|------------------|-------|-----------------------|-------------------------|-----------------|
| Protein Bands    |       | Not Detected/Detected | STC <200 mg/kg          | N/A             |