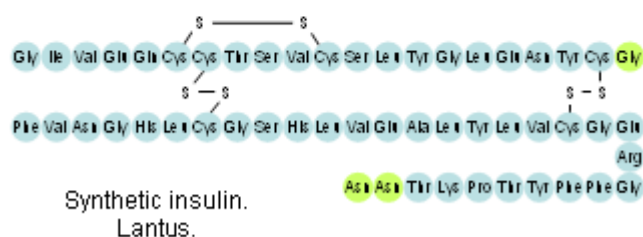
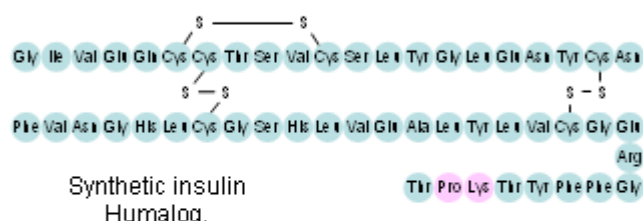
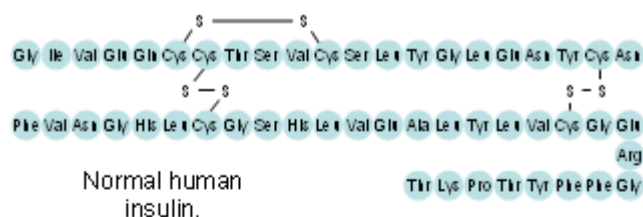


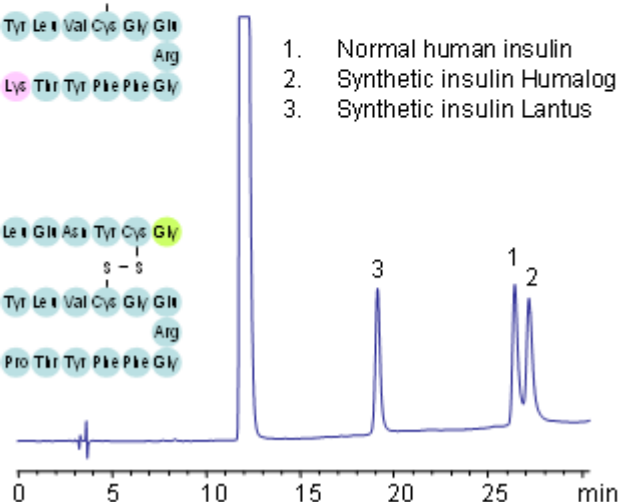
HPLC Separation of Human and Synthetic Insulins on Promix Column

<https://sielc.com/Application-HPLC-Separation-of-Human-and-Synthetic-Insulins-on-Promix-Column>

Chromatogram



Column: Promix™ MP
Column size: 4.6 x 250 mm
Flow rate: 1.0 ml/min
MeCN: gradient 20% to 40 %
in 30 min
Buffer: AmAc pH 3.5 25 mM
Detector: UV 270 nm
Injection: 5 µL
Sample: 30 cc/mL each
protein in water 1 mL



Description

Insulin is a protein that regulates carbohydrates and fat metabolism. Insulin is a peptide hormone consisting of 51 amino acids and has molecular weight of 5808 Da. Bovine insulin differs from human in only three amino acid residues, and porcine insulin in one. Difference in structures is very minimal and the insulin cannot be resolved on reversed-phase column. Mixed-mode approach allows to use small difference in hydrophobic and ionic properties and separate insulins with close structures. Normal human insulin, synthetic insulin Humalog, and synthetic insulin Lantus are separated on a Promix MP mixed-mode HPLC column with LC/MS-compatible conditions. Method does not require use of ion-pairing reagent. Method is also compatible with preparative chromatography and can be used for isolation of insulin on a large scale.