HALO®

BIOPHARMACEUTICALS

Separation of Insulin Variants Using the HALO 160 Å PCS C18

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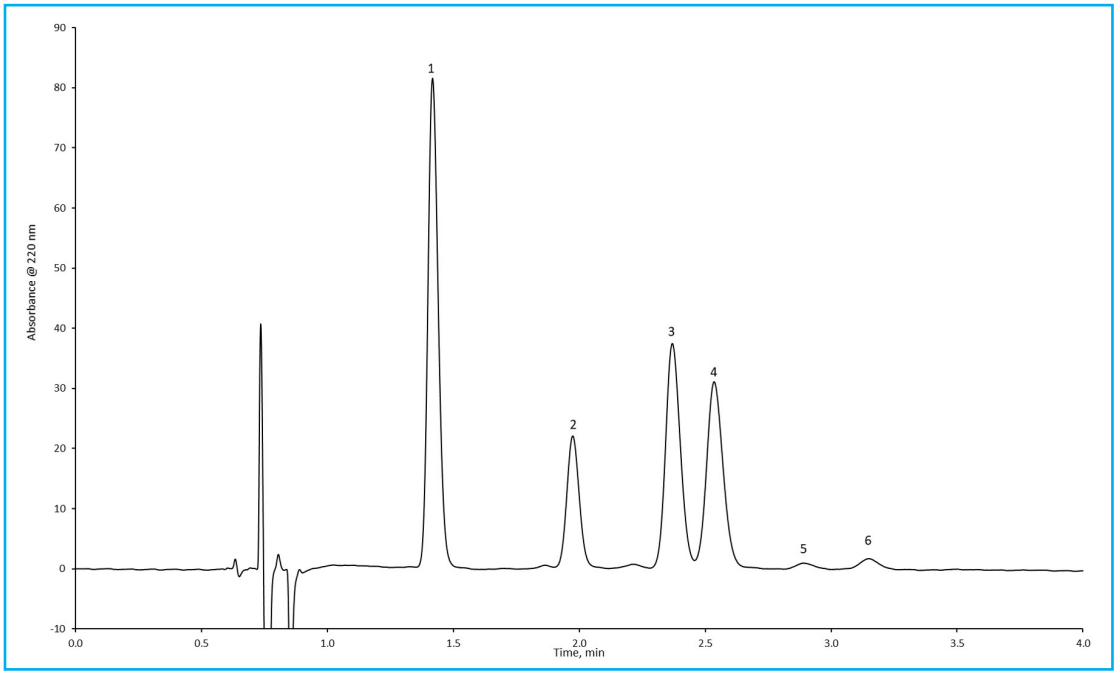

PEAK IDENTITIES

1. Insulin-Glargine
2. Insulin-Bovine
3. Insulin-Asp
4. Insulin-LisPro
5. Insulin-Human
6. Insulin-Porcine

TEST CONDITIONS:

Column: HALO 160 Å PCS C18 , 2.7 µm, 2.1 x 150 mm
Part Number: 92112-717
Mobile Phase A: Water + 0.1% DFA
Mobile Phase B: Acetonitrile + 0.1% DFA
Isocratic: 27 %B
Flow Rate: 0.4 mL/min
Pressure: 225 bar
Temperature: 75 °C
Injection Volume: 1.0 µL
Sample: 166 µg/mL
Sample Solvent: 90/10 Water/ACN
Wavelength: PDA, 220 nm
Flow Cell: 1 µL
Data Rate: 100 Hz
Response Time: 0.025 sec.
LC System: Shimadzu Nexera X2

A separation of 6 different insulins, both natural and recombinant, is performed on the HALO 160 Å PCS C18 column. Each insulin is very similar in chemical makeup with only slight changes in each peptide. With the use of the positively charged surface stationary phase and the 160 Å pore size, each insulin form can be separated under isocratic conditions. This is important for insulin manufacturers to confirm their quality control of the product. If small changes in the formulations are not monitored correctly, then there is a chance of severe allergic reaction to the drug. The HALO 160 Å PCS C18 column can help monitor these drugs through the quality control process and help deliver safe drugs to a patient.