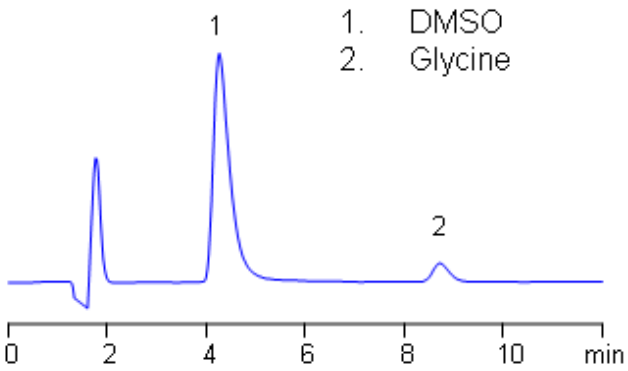
HPLC Separation of DMSO and Glycine by Mixed-Mode Chromatography



Column: **Primesep 100**
Size: 4.6 x 150 mm
Mobile phase:
100% H_2O with 0.05% TFA for 10 min,
then step gradient to 15% MeCN
with 0.15% TFA for 5 min
with total run of 27 min
Flow: 1.0 mL/min
Detection: UV 210 nm
Sample: DMSO 5 mg/ml
Glycine 1 mg/ml both dissolved in PBS

Dimethyl sulfoxide is important polar aprotic solvent, which is frequently used in pharmaceutical drug manufacturing, desolution, etc. DMSO is used as one of the solvents on protein chemistry due to universal ability to dissolve small molecules like amino acids. Amino acids and DMSO are very polar and have no retention on reversed-phase columns. In this HPLC application DMSO and glycine are separated on Primesep 100 mixed-mode column. DMSO is retained by weak reversed-phase mechanism and very low organic concentration is required in order to achieve any retention. Glycine, like any other underivatized amino acid, is retained by weak reversed-phase and moderate cation-exchange mechanism. Method uses acetonitrile/water/TFA gradient and UV detection.

Method Parameters

Column	Primesep 100, 4.6×150 mm, 5 µm, 100 Å
Mobile Phase	MeCN/H2O
Buffer	TFA
Flow Rate	1.0 mL/min
Detection	UV, 210 nm

Quelle: https://sielc.com/Application-HPLC-Separation-of-DMSO-and-Glycine-By-Mixed-Mode-Chromatography