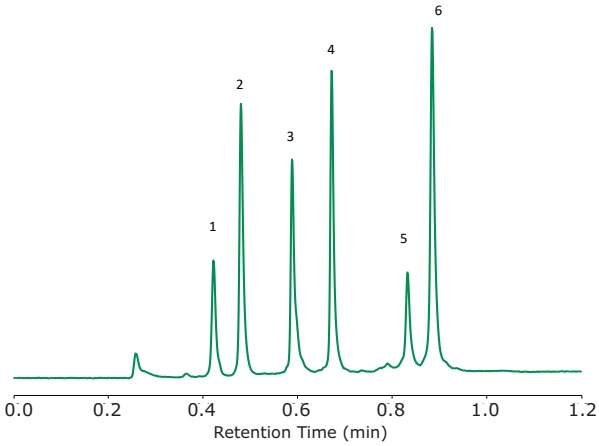
Rapid Protein Separations on BIOshell™ A400

column:	BIOshell™ A400 Protein C4, 5 cm x 2.1 mm I.D., 3.4 µm
mobile phase:	[A] 75:25 (0.1% TFA in water):(0.1% TFA in acetonitrile); [B] 25:75 (0.1% TFA in water):(0.1% TFA in acetonitrile)
gradient:	12 to 100% B in 1 min; held at 100% B for 1 min
flow rate:	0.4 mL/min
column temp.:	90 °C
detector:	UV, 215 nm
injection:	1 µL
sample:	Protein mix, varied concentration, water (0.1% TFA)

Due to the shallow, porous shell, protein separations can be performed in less than one minute with the BIOshell™ A400 column.

Peak Name	kDa (native)
1. lysozyme; chicken	14.3
2. haptoglobulin, phenotype 1-1; human	96
3. glutamate dehydrogenase; bovine	332
4. ß-galactosidase; *E. coli*	465
5. lactate dehydrogenase contaminant	
6. lactate dehydrogenase; rabbit	140



Protein Stability Can be Measured with BIOshell™ A400

column:	BIOshell™ A400 Protein C4, 10 cm x 2.1 mm I.D., 3.4 µm
mobile phase:	[A] 0.1% TFA in water; [B] 0.1% TFA in acetonitrile
gradient:	55 to 70% B in 5 min
flow rate:	0.2 mL/min
column temp.:	60 °C
detector:	UV, 215 nm
injection:	1 µL
sample:	Oxidized filgrastim, 98 µg/mL, 0.1% aqueous hydrogen peroxide

Proteins can be oxidized overtime if not stored properly.
Oxidized proteins can lead to lower efficacy or toxicity.
The BIOshell™ A400 Protein C4 resolved the oxidation products of Filgrastim in under five minutes..

1. Hydrogen Peroxide
2. Oxidized Product 1
3. Oxidized Product 2
4. Oxidized Product 3
5. Oxidized Product 4
6. Native Filgrastim