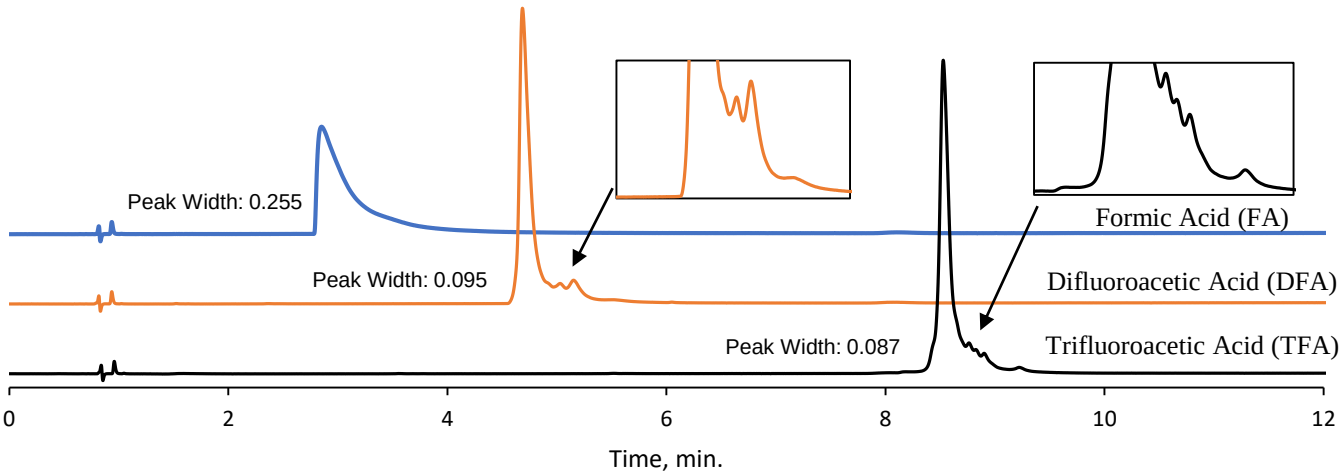
UHPLC Analysis of Trastuzumab on BIOshell™ IgG 1000 Å C4, 2.7 µm



Conditions:

column: BIOshell™ IgG 1000 Å C4, 15 cm x 2.1 mm I.D., 2.7 µm

mobile phase: [A] Water (0.1% v/v formic acid, difluoroacetic acid, or trifluoroacetic acid, as indicated)

[B] 20:80 Water:Acetonitrile (0.1% v/v formic acid, difluoroacetic acid, or trifluoroacetic acid, as indicated

gradient: 35% B to 47.5% B in 12 min

flow rate: 0.4 mL/min

column temp.: 80 °C

detector: UV, 280 nm

injection: 2 µL

sample: Trastuzumab, varied concentration, 70:30 Water:Acetonitrile

Description:

Formic acid, difluoroacetic acid, and trifluoroacetic acid are common mobile phase additives. As seen in this analysis of the breast cancer drug trastuzumab, peak shape improves going from formic acid to difluoroacetic acid, and even further improves with trifluoroacetic acid. With this improvement also comes the ability to separate more minor peaks from the monoclonal antibody, as seen in the enlarged insets. The use of trifluoroacetic acid over other additives with the BIOshell™ IgG 1000 Å C4 gives an optimized separation of this monoclonal antibody.

Materials:

Product Part Number	Description
63289-U	BIOshell™ IgG 1000 Å C4, 15 cm x 2.1 mm I.D., 2.7 µm
270733	Water
34851	Acetonitrile
5.33002	Formic acid
00922	Difluoroacetic acid
302031	Trifluoroacetic acid

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