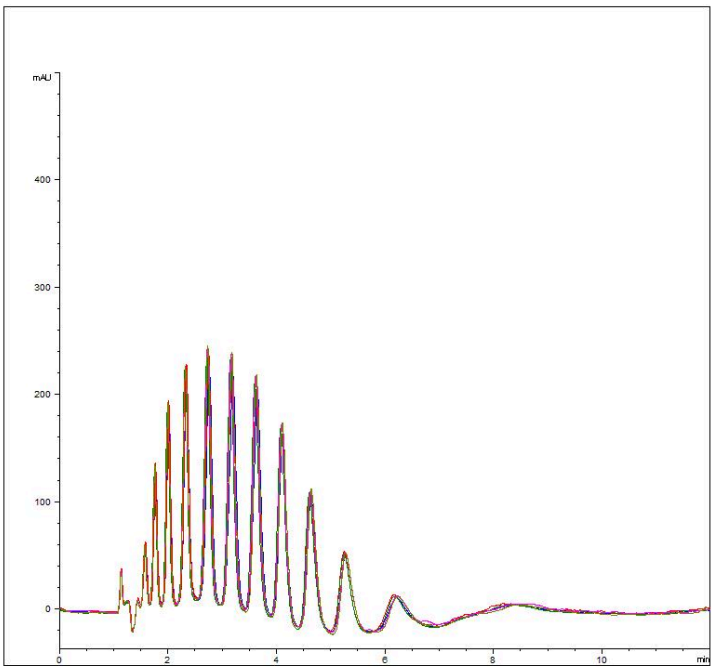
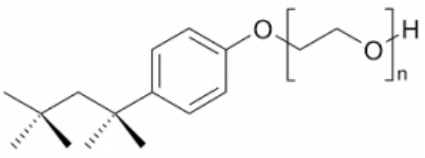
Triton X-100 gradient assay by HPLC- AppNote

A reproducible assay for d etection of a non-ionic surfactant.

Triton X-100 is used in the sample purification steps of various materials as well as for cleaning apparatus in pharmaceutical manufacturing. Detection and quantification are very important to identify any residual amounts of this compound.

The overlay of 5 injections (below) demonstrates reproducibility in separating the polyoxyethylene mixture.





Peak:

Triton X-100

Met hod Conditions:

Column: Cogent Bidentate C8™, 4µm, 100Å
Catalog No.: 40008-10P
Dimensions: 4.6 x 100mm

Mobile Phase:

A: DI water with 0.1% formic acid

B: Acetonitrile with 0.1% formic acid

Time (*minutes*)	%B
0	98
2	95
3	95
5	95
10	98

Injection vol.: 1µL

Flow rate: 1.0mL / minute

Detection: UV @ 230nm

Sample Preparation: Triton X-100, 10uL / mL in DI water

Note: *Triton X-100 is one of the most widely used nonionic surfactants for lysing cells to extract protein and other cellular organelles. Triton X-100 ($C_{14}H_{22}O(C_2H_4O)_n$) has a hydrophilic polyethylene oxide chain and an aromatic hydrocarbon lipophilic or hydrophobic group. The hydrocarbon group is a 4-phenyl group.*

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