

Polysaccharides analysis

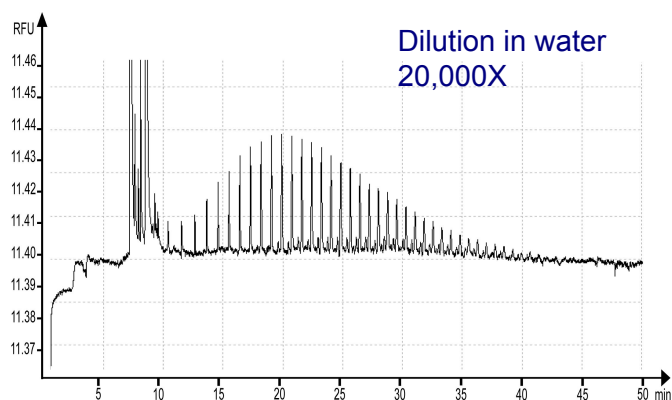
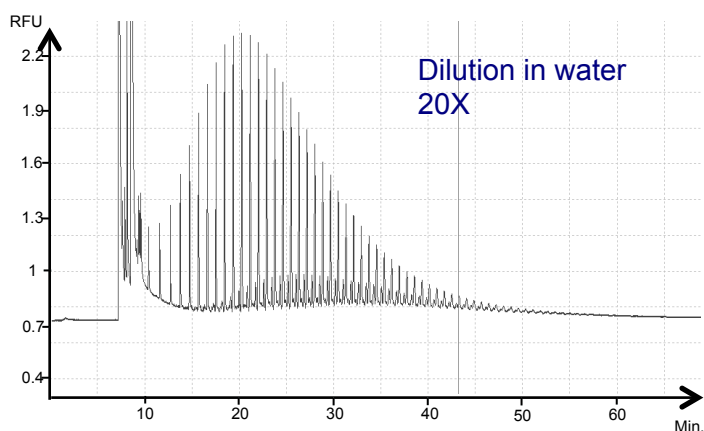


Application note Ref : AN 2.003-V2

9-Aminopyrene-1,4,6-trisulfonate (APTS) is dye that is frequently used for the analysis of mono or oligosaccharides. The labeling of sugars involves a reductive amination of the reductive function of the mono or oligosaccharides followed by reaction with the dye.

APTS is routinely used in Capillary Electrophoresis separation. In this note, we analyze oligosaccharides labeled with APTS with a 480nm LED.

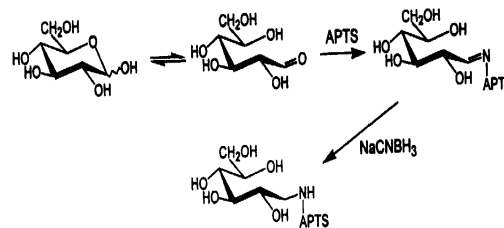
CE-L(ed)IF analysis



Instruments: Capillary electrophoresis: Agilent Technologies CE7100 Detector: Picometrics ZETALIF LED with LED 480nm/30nm

Sample: Dextran 5000 labeled with APTS

Labeling: 500µg dextran 5000 + 15µL APTS solution (5mg in 75µL acetic acid and 425µL water) + 5µL cyanoborohydride 1M, heated at 55°C, 2 hours. After the reaction, the solution was diluted in water to get a final volume of 50µL. This solution was diluted in water 20x and 20,000x prior to CE/LIF analysis.



Method:

- PVA coated capillary: 65 cm x 50 µm ID
- buffer 40mM ε-aminocaproic acid pH 4.5 adjusted with pure acetic acid glacial + 0.02 % hydroxypropylmethylcellulose
- voltage : -20kV
- injection : 0.5psi, 10s
- temperature : 20°C.

References:

- [i] Frayse N, Jabbouri S, Treilhou M, Couderc F, Poinsot V, *Glycobiology* 2002, 12, 741-8.
- [ii] Guttman A, Chen FT, Evangelista RA, *Electrophoresis* 1996, 17, 412-7.