



ALDO-URONIC ACIDS

11/03

PREPARATION:

Aldo-uronic acids are prepared by the controlled acid hydrolysis of glucurono-xylan, followed by chromatographic separation of the oligomers.

PURITY:

The aldo-uronic acids are devoid of xylosaccharides, but each individual oligomer contains some of the higher and lower homologue. These charged oligosaccharides are difficult to completely separate chromatographically.

The thin layer chromatographic pattern of the oligomers is shown below. Chromatography is in ethyl acetate: acetic acid: water (2:1:1, once). The chromatographic pattern of a mixture of borohydride reduced aldo-uronic acids is also shown. This mixture is a potential substrate for

-glucuronidase. The ^{13}C -n.m.r patterns for aldotriouronic acid is as described by Cavagna, F., Deger, H. and Puls, J. (1984) **Carbohydrate Research**, **129**, 1-8.

PRODUCT AS SUPPLIED:

Aldo-uronic acids are quite unstable at neutral pH. Consequently, they are supplied in solution in 10 mM ammonium formate (pH 3.0) or in 100mM acetic acid. These should be stored frozen on receipt. The borohydride reduced aldo-uronic acids are more stable. These are supplied in a freeze-dried form (as a hygroscopic syrup). This should also be stored at -20°C on receipt.

THIN LAYER CHROMATOGRAPHY OF ALDO-URONIC ACIDS:

1. Aldo-biouronic acid standard (O-ABIO)
2. Aldo-triouronic acid (~85% pure)
3. Aldo-tetraouronic acid (~80% pure)
4. Reduced aldo-uronic acids.
Lot 80601. (tri:tetra:penta = 40:40:20) (OAMXR).
A potential substrate for the assay of
-glucuronidase.
5. Aldo-uronic acid mixture. Lot 10801.

Contaminants in the oligosaccharides are higher and lower dp homologues.

