

Analysis of Sugars in Honey Samples by Capillary Zone Electrophoresis  
Using Fluorescent Detection

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Table S1: The comparison of resolution using different BGE.

(A) 25 mM ammonium acetate (pH 4.5), (B) 25 mM ammonium acetate-0.3 % PEO 90000 (pH 4.5), (C) 40 mM EACA (pH 4.5), (D) 40 mM EACA-0.02 % HPMC (pH 4.5)

The analysis conditions were the same as stated at Figure 2.

|                    | Resolution |       |       |       |
|--------------------|------------|-------|-------|-------|
|                    | A          | B     | C     | D     |
| Fructose - Glucose | 0          | 1.562 | 1.371 | 1.716 |
| Glucose - Mannose  | 0.293      | 1.015 | 0.537 | 0.674 |
| Mannose- Maltose   | 2.290      | 4.387 | 2.760 | 3.885 |

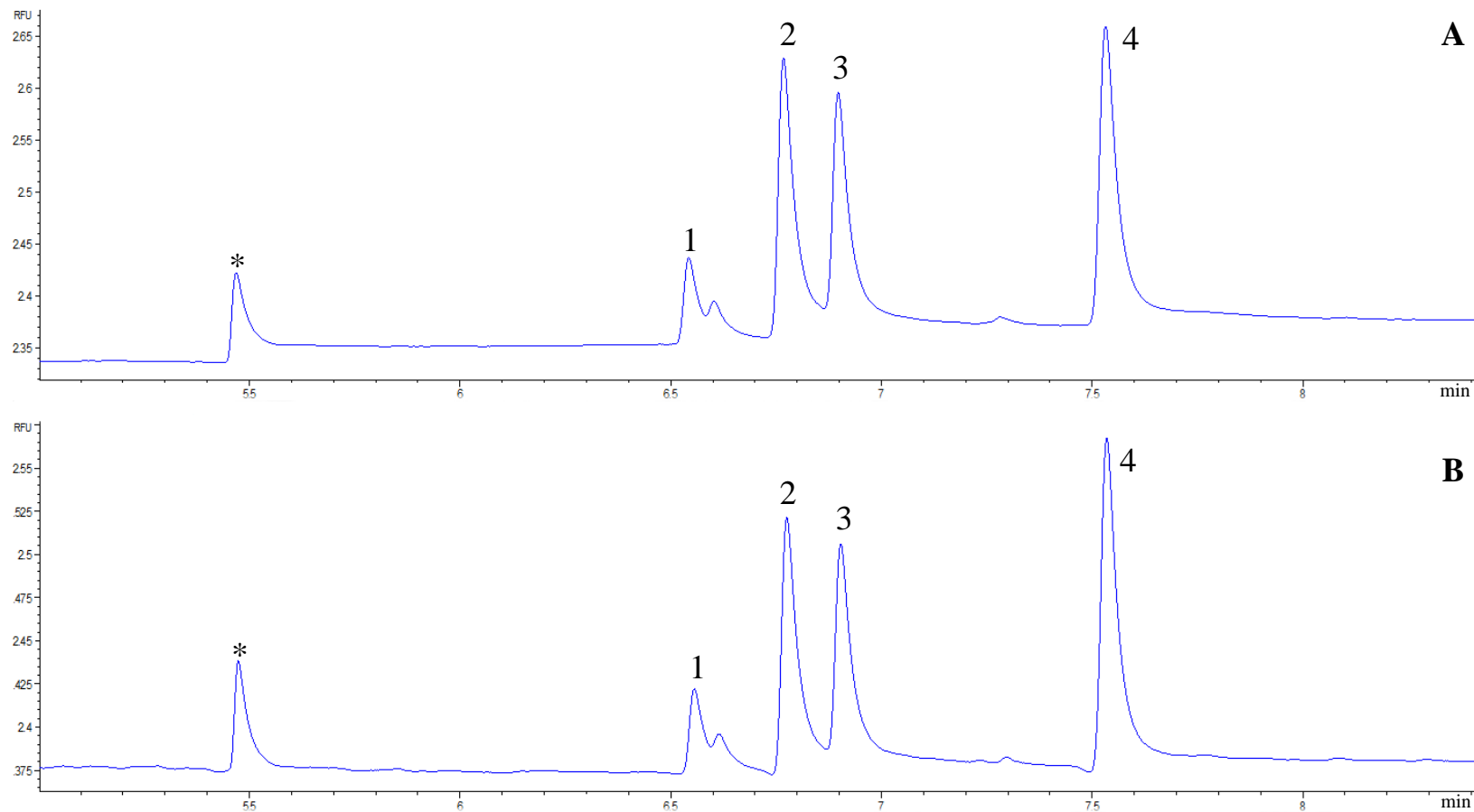


Figure S1: The CZE-LEDIF determinations of a mixture of four carbohydrates using hydrodynamic (A) and electrokinetic injection (B). The analysis conditions were the same as stated at Figure 2B, injection: +5 kV x 5 s (B), samples: 1: fructose, 2: glucose, 3: mannose, 4: maltose, (\*): APTS

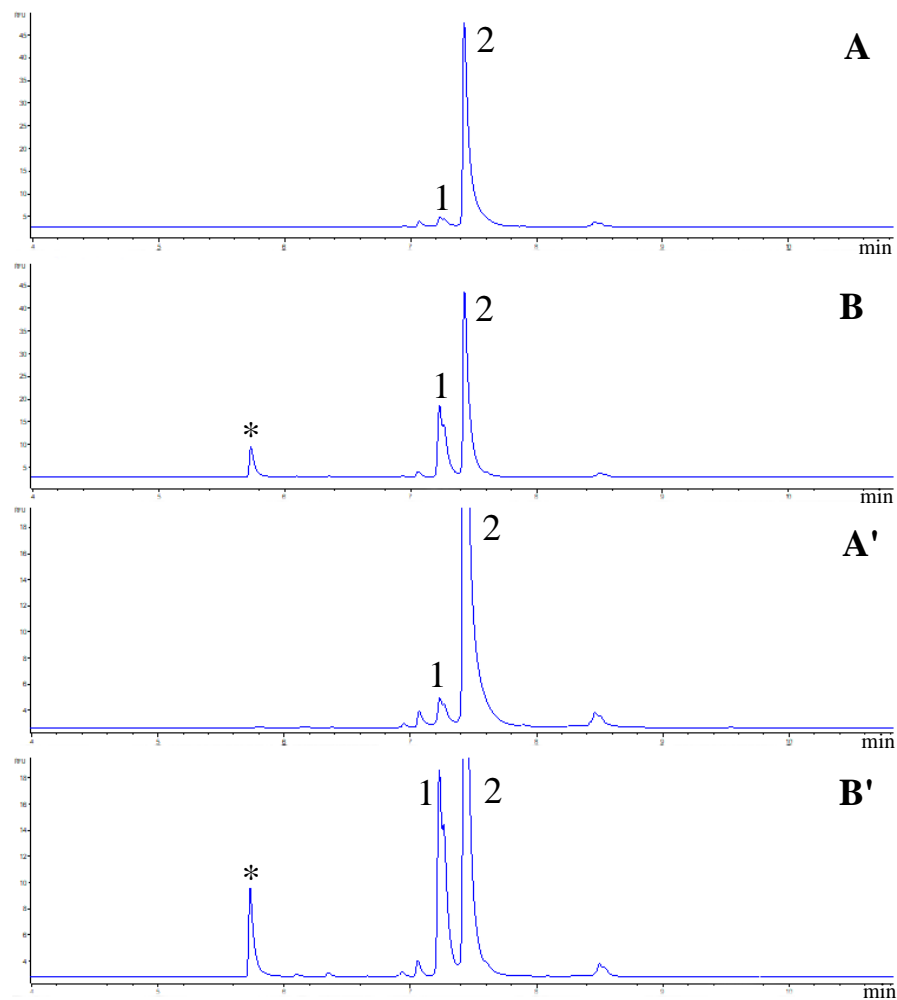
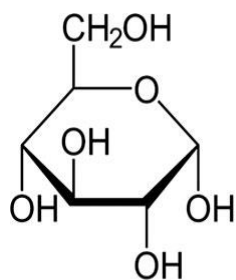
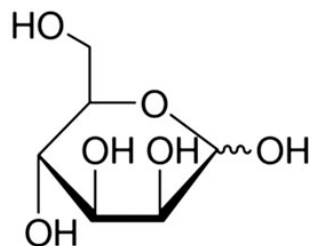


Figure S2: Identification of fructose peak in honey using standard addition. The analysis conditions were the same as stated at Figure 2B. Sample: 1: fructose, 2: glucose, (\*): APTS, (A) Phacelia honey, (B) Phacelia honey spiked with fructose, (A', B') narrow scale of electropherograms of (A, B).

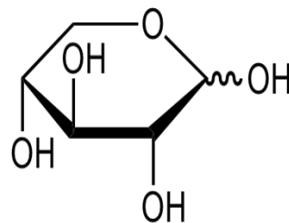
## Chemical structures of analyzed sugars and labeling agent



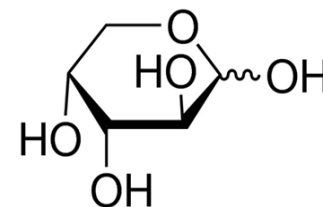
D-glucose



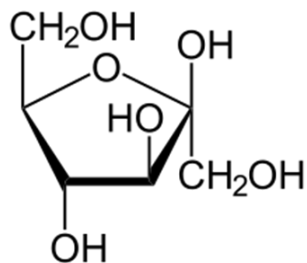
D-mannose



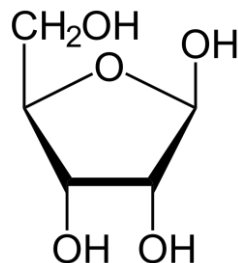
D-xylose



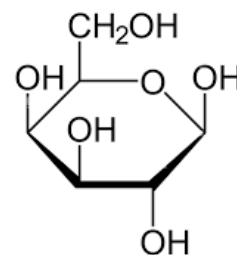
D-arabinose



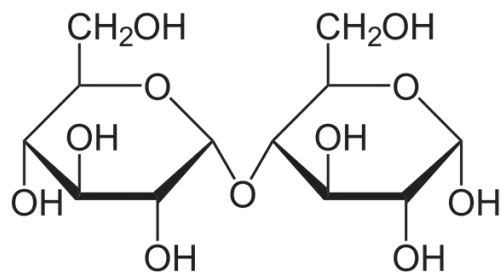
D-fructose



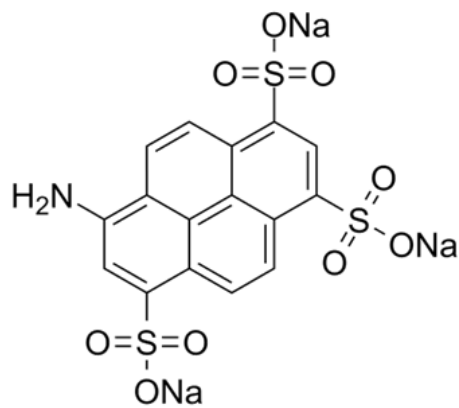
D-ribose



D-galactose

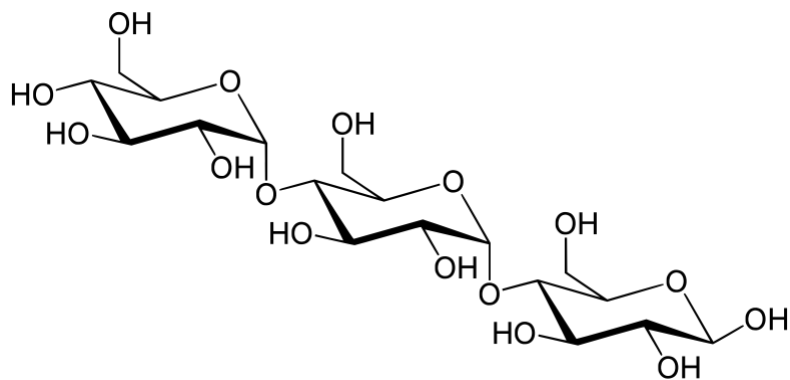


maltose

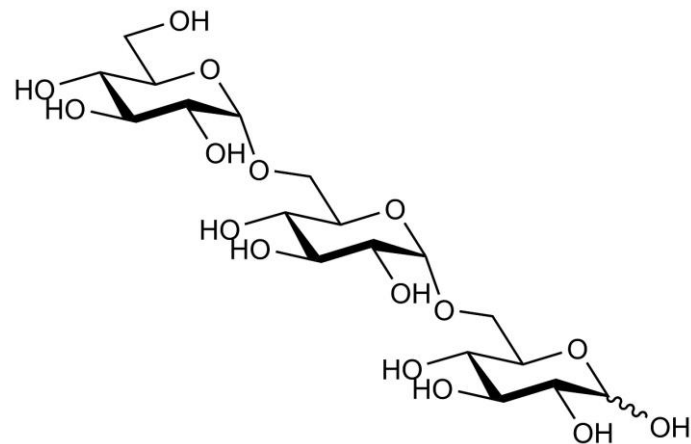


8-aminopyrene-1,3,6-trisulfonic acid sodium salt (APTS)

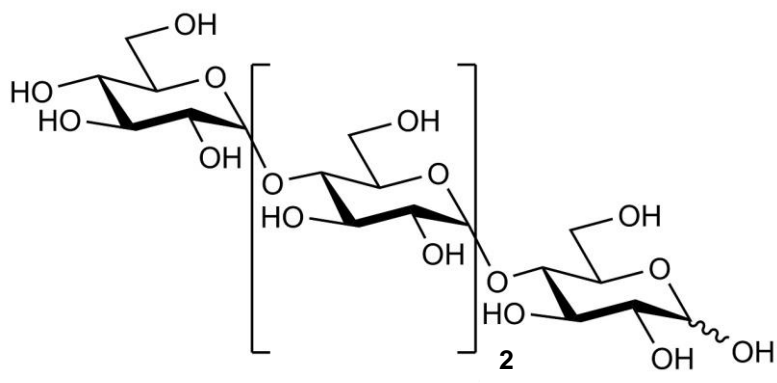
## Chemical structures of analysed sugars



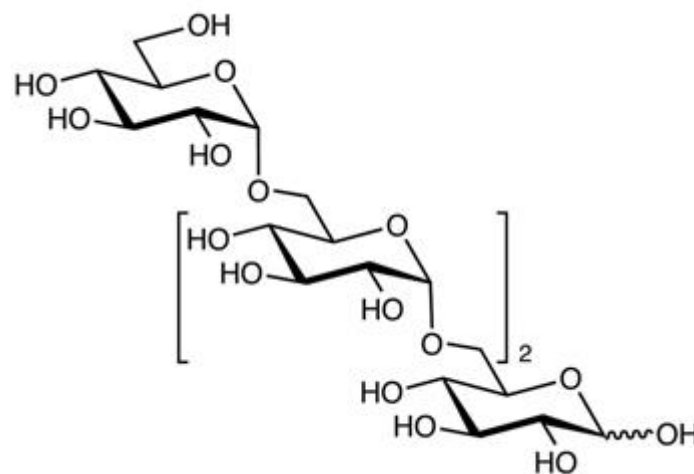
Maltotriose



Isomaltotriose



maltotetraose



isomaltotetraose