**Ultraviolet Photodissociation at 355 nm of Fluorescently-Labeled Oligosaccharides**

**Methods**

**Purpose**

- Obtain complementary oligosaccharide fragmentation sequence information through efficient ultraviolet photodissociation (UVPD) facilitated by reductive amination to append fluorescent labels.
- Explore electron photodetachment dissociation for oligosaccharide characterization.

**Introduction**

In contrast, multiple pulse UVPD produces more non-reducing fragment ions which is attributed to the reducing or non-reducing end fragments, respectively. This control is advantageous for structural elucidation of these complex biomolecules.

**Results**

- Fluorescently-labeled oligosaccharides undergo efficient UVPD to yield complementary fragmentation to CID for improved element differentiations.
- Energy-variable CID and pulsed-variable UVPD show desirable non-reducing or reducing fragments, respectively. This context is congruence for structural elucidation of these complex biomolecules.

**Conclusions**

- Fluorescently-labeled oligosaccharides under UVPD in 355 nm UV above the electronic photodissociation spectra reveals efficient and variable fragmentation pathways within different isomeric oligosaccharides. The unambiguous precursor ion of the radical anions directly produces the CID fragmentation ions in Figure 6A. The CID spectra of the conventional deprotonation in Figure 6C display mainly Y type fragment ions. These evolving differences in the fragmentation patterns of the radicals in UVPD with CID-UVPD for these complex oligosaccharides are useful for structural elucidation.

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**References**