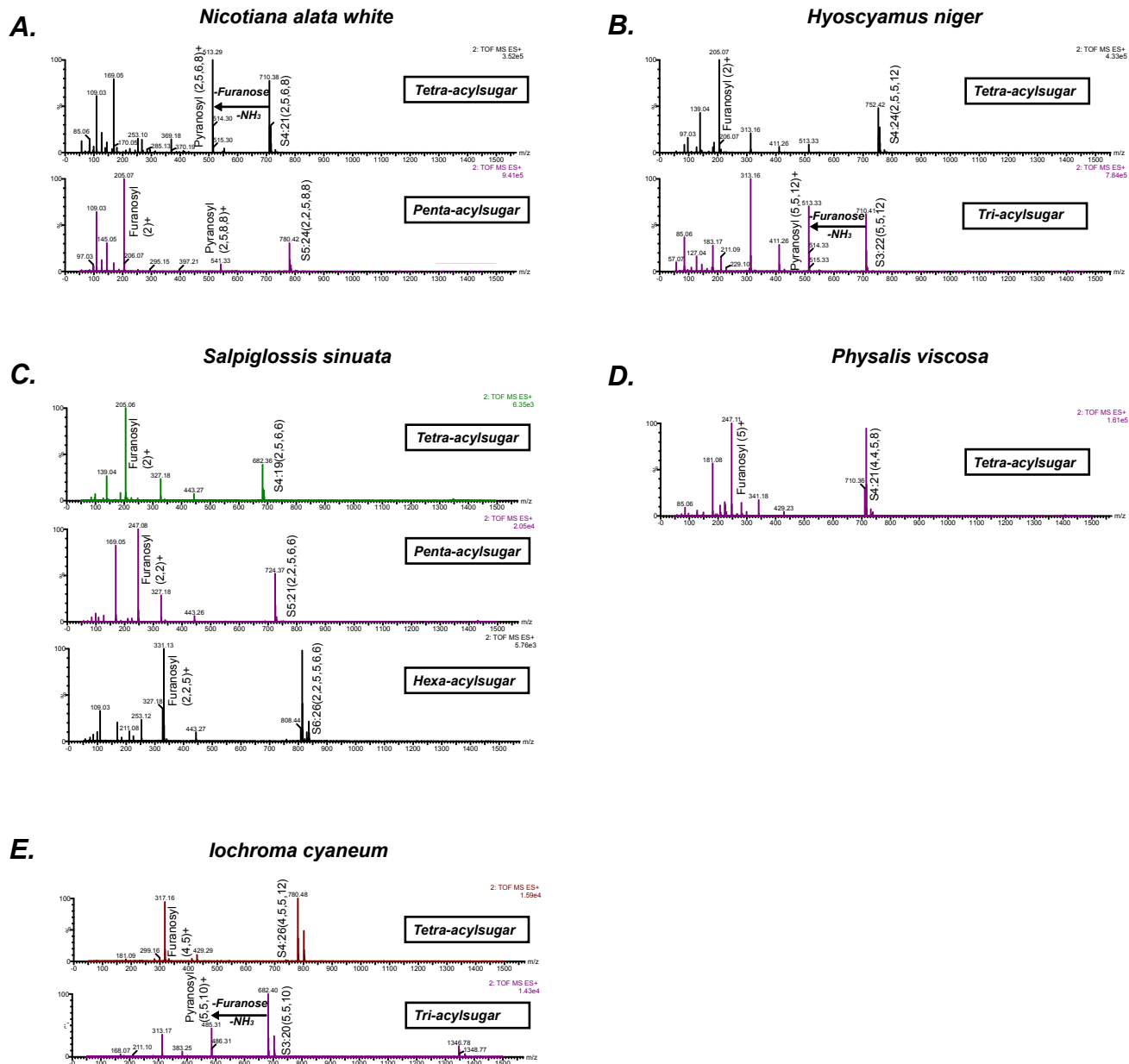


**Figure 1-Figure Supplement 4**



**Figure 1-Figure Supplement 4: Positive mode CID mass spectra of select representative acylsugars from five species.** (A-E) Each spectrum was generated at elevated collision energy to generate fragment ions. Selected fragment ions obtained at the same retention time as the assigned pseudomolecular ion of the acylsugar are annotated. The pseudomolecular ion masses are masses of the adducts of the depicted acylsugars ( $[M+NH_4]^+$ ). The mass difference between the pseudomolecular ion (intact acylsugar) and the fragment ion provides information about the number of acyl carbon atoms on each of the pyranose and furanose rings. We interpreted the losses and the fragment ions as involving the pyranose vs. furanose ring based on knowledge about their fragmentation patterns derived from previous studies.