**IdentyPy – Preprocessing**

Spectrum Preprocessing. IdentiPy accepts centroided spectra in MGF and mzML formats. Spectrum preprocessing procedures include peak filtering and deisotoping. Peak filtering eliminates low-intensity fragment ion peaks from MS/MS spectra prior to matching and is governed by parameters that behave identically to X!Tandem’s “dynamic range” and “maximum peaks”. The deisotoping algorithm is straightforward and follows the principles described by Coon et al.12 When a peak distance of 1/z is found in the MS/MS spectrum, where z is a possible value of fragment charge, the extra peaks are eliminated as long as they are less intense than the monoisotopic peak candidate, and the fragment m/z is recalculated to correspond to a singly charged fragment.