



**Figure 8.5.** A “solids”  $^{13}\text{C}$  NMR spectrum, in this case for a marine plankton tow sample (from Hedges *et al.* 2002). Although NMR only gives a general overview, one can use this spectrum to estimate that this sample contains approximately 65 wt% protein, 29 wt% lipid and 15 wt% carbohydrate, and has an elemental composition (in Redfield format) of  $\text{C}_{106}\text{H}_{177}\text{O}_{37}\text{N}_{17}$ .