



FIGURE 20-12 (a) Gas chromatogram of a student sample from Reaction 20-8. The detector is the mass spectrometer set to record the total current from all ions of all masses. Dichloromethane solvent eluted prior to 2 min is not shown. (b) Mass spectrum of peak 1, which is identical to the spectrum of 1-butanol. (c) Mass spectrum of peak 2, which is identical to the spectrum of 1-bromobutane. In (b) and (c), M stands for the parent ion. [From A. Illies, P. B. Shevlin, G. Childers, M. Peschke, and J. Tsai, *J. Chem. Ed.* 1995, 72, 717.]