



**FIGURE** Representation of PCR and detection protocols. The principle of PCR is illustrated in the top part of the figure. On the bottom are detection techniques. These include gel electrophoresis after traditional PCR. Real-time PCR with nonspecific fluorescent dye is shown where the dye only fluoresces when associated with double stranded DNA. Real-time PCR with probe-based detection with TaqMan and Molecular Beacon technologies is illustrated where the fluorescent reporter must be physically separated from the quencher in order to fluoresce.

Reference: Dongyou Liu (2010). *Molecular Detection of Foodborne Pathogens*. CRC Press.