EVALUATION OF IMMUNOLOGICAL DETECTION METHODS

1. *Bacillus cereus* toxin detection
2. *Escherichia coli* 0157 detection - Reveal®
3. *Salmonella* detection (Neogen)
   - Reveal®
   - GENE TRAK®
   - 96-well plate
   - dipstick

Evaluate these five methods for the detection of three different organisms. For each method answer the following questions: (This may be done in table format or you might make diagrams with careful labels that address the questions or another way that works for you.)

- What is the “target” molecule in each test? (i.e. What is being detected?)
- What is immobilized (stationary) in each of these methods. What is the purpose of immobilization?
- What role(s) do antibodies play in each test?
- What is the means of visualization in each test? (i.e. What do we see?)
- Comment on the application of each test. For example – which test is most suitable to automation (being performed by a robot)?

“Design” an immunological detection system that will routinely test for the presence of botulinum toxin in canned peaches. This would be for quality control purposes in the largest peach-canning factory in the world.