What is Claimed:

1. A system, comprising:

a container comprising a surface that forms a cup that holds the saline solution;

an ultrasonic sensor that directs acoustic energy at the surface, and detects a return reflection of the acoustic energy.

2. The system of claim 1, further comprising a mounting structure that positions the ultrasonic sensor substantially opposite the surface.

3. The system of claim 1, further comprising a shroud secured to the ultrasonic sensor.

4. The system of claim 3, wherein the shroud is substantially tubular.

5. The system of claim 1, wherein the ultrasonic sensor is spaced from the container by a predetermined distance.

6. The system of claim 2, wherein the mounting structure comprises a plate member having the ultrasonic sensor mounted thereon, an upper bracket secured to the plate member, a base member, and a lower bracket mounted on the base member and coupled to the upper bracket.

7. The system of claim 6, wherein the lower bracket is coupled to the upper bracket by a fastener that extends through a slot formed in one of the upper and lower brackets.

8. The system of claim 1, wherein the ultrasonic sensor generates a pulse of the acoustic energy.

9. The system of claim 8, wherein the pulse of the acoustic energy has a frequency of approximately 500 kHz.

10. The system of claim 1, further comprising a processor communicatively coupled to the ultrasonic sensor.

11. The system of claim 1, wherein the ultrasonic sensor comprises a vibrating element that generates the acoustic energy, and a processor communicatively coupled to the vibrating element.

12. The system of claim 11, wherein the vibrating element is a piezoelectric crystal.

13. The system of claim 11, wherein the vibrating element vibrates and generates an electrical output in response to the return reflection.

14. The system of claim 6, wherein the system comprises ten of the ultrasonic sensors mounted on the plate member.

15. The system of claim 14, further comprising a pallet that holds ten of the containers while the ultrasonic sensors direct the acoustic energy at the containers, wherein the ultrasonic sensors are mounted on the plate member so that each of the ultrasonic sensors substantially aligns with a respective one of the containers.

16. The system of claim 3, wherein the shroud defines an internal passage and the acoustic energy and the return reflection propagate through the internal passage.

17. The system of claim 16, wherein the shroud is secured to a lower end of the ultrasonic sensor and the internal passage has a diameter approximately equal to a diameter of the lower end of the ultrasonic sensor.

18. The system of claim 3, wherein the shroud is secured to the ultrasonic sensor by complementary threads on the shroud and the ultrasonic sensor.

19. The system of claim 10, wherein the ultrasonic sensor is communicatively coupled to the controller, and the ultrasonic sensor provides an output to the controller only when the saline solution is present in the container above a predetermined level.

20. A method, comprising:

directing acoustic energy at a surface of a container, the surface forming a cup that holds saline solution;

detecting a return reflection of the acoustic energy; and

determining a distance between a point of origin of the acoustic energy and a point of reflection of the acoustic energy based on an elapsed time between directing the acoustic energy at the surface and detecting the reflection of the acoustic energy.

21. The method of claim 20, wherein directing acoustic energy at a surface of a container comprises directing the acoustic energy though a shroud that substantially isolates the acoustic energy from air currents.

22. The method of claim 20, further comprising generating the acoustic energy using an ultrasonic sensor.

23. The method of claim 22, further comprising receiving the return reflection using the ultrasonic sensor, and determining the distance between the point of origin of the acoustic energy and the point of reflection of the acoustic pulse using the ultrasonic sensor.

24. The method of claim 20, further comprising aligning the container with an ultrasonic sensor that generates the acoustic energy.

25. The method of claim 20, wherein directing acoustic energy at the surface of a container comprises directing a pulse of the acoustic energy at the surface.

26. The method of claim 25, wherein the pulse of the acoustic energy has a frequency of approximately 500 kHz.

27. The method of claim 20, further comprising spacing the ultrasonic sensor from a pallet that holds the container so that the ultrasonic sensor generates an output only when a distance between the ultrasonic sensor and a level of the saline solution is less than a predetermined value.

28. A system, comprising:

a container having a surface that defines a cup, and a fluid disposed in the cup;

an ultrasonic sensor that directs acoustic energy at the surface, detects a return reflection generated by contact between the acoustic energy and the fluid, and generates an output based on an elapsed time between directing the acoustic energy at the surface of the container and detecting the return reflection; and

a shroud coupled to the ultrasonic sensor.

29. The system of claim 28, wherein the shroud is substantially tubular.

30. The system of claim 28, wherein the ultrasonic sensor directs a pulse of the acoustic energy at the surface of the container.

31. The system of claim 28, further comprising a mounting structure for positioning the ultrasonic sensor proximate the container.

32. The system of claim 31, wherein the mounting structure comprises a plate member having the ultrasonic sensor mounted thereon, an upper bracket secured to the plate member, a base member, and a lower bracket mounted on the base member and coupled to the upper bracket so that a distance between the ultrasonic sensor and the container can be adjusted.

33. A process, comprising:

placing a contact lens in a cup of a container;

conveying the package to a first position proximate a pump;

introducing saline solution into the cup using the pump;

determining whether the pump was activated while the package was in the first position;

conveying the package to a second position proximate an ultrasonic sensor; and

directing acoustic energy at the cup and measuring a reflection of the acoustic energy while the container is in the second position using the ultrasonic sensor.

What is Claimed:

1. A container comprising a surface that forms a cup that holds the saline solution having an ultrasonic sensor that directs acoustic energy at the surface, and detects a return reflection of the acoustic energy; comprising a mounting structure that positions the ultrasonic sensor substantially opposite the surface, wherein the mounting structure comprises a plate member having the ultrasonic sensor mounted thereon, an upper bracket secured to the plate member, a base member, and a lower bracket mounted on the base member and coupled to the upper bracket.

2. The system of claim 1, wherein the lower bracket is coupled to the upper bracket by a fastener that extends through a slot formed in one of the upper and lower brackets.

3. The system of claim 1, wherein the system comprises ten of the ultrasonic sensors mounted on the plate member.

4. The system of claim 3, further comprising a pallet that holds ten of the containers while the ultrasonic sensors direct the acoustic energy at the containers, wherein the ultrasonic sensors are mounted on the plate member so that each of the ultrasonic sensors substantially aligns with a respective one of the containers.

5. A system, comprising:

a container having a surface that defines a cup, and a fluid disposed in the cup;

an ultrasonic sensor that directs acoustic energy at the surface, detects a return reflection generated by contact between the acoustic energy and the fluid, and generates an output based on an elapsed time between directing the acoustic energy at the surface of the container and detecting the return reflection; and

a shroud coupled to the ultrasonic sensor,

wherein the mounting structure comprises a plate member having the ultrasonic sensor mounted thereon, an upper bracket secured to the plate member, a base member, and a lower bracket mounted on the base member and coupled to the upper bracket so that a distance between the ultrasonic sensor and the container can be adjusted.