Salmonella is one of the primary target pathogens of concern at all stages of production and handling. The Pathogen Environmental Monitoring (PEM) Go-to Guide provides insight to where Salmonella outbreaks can occur when you’re handling and processing almonds, peanuts and other tree nuts. History has shown Salmonella to be one of the most likely food safety hazards to occur within the production environment, making it critical for your facility to control and lessen the risk. Salmonella outbreaks at any stage will have financial implications, resulting in product recalls and public backlash against the industry. So follow these simple guidelines to minimize the chance of a Salmonella outbreak and reap the benefits of a trusted product.
If you follow this simple go-to-control equation, records keep Salmonella control effective cleaning equation you will minimize the risk of Salmonella contamination and pasteurized (personnel and traffic control) contamination. Dust control equipment includes a facility map with sampling locations. You should consider the long-term corrective actions outlined at right.

**Salmonella positive?**

Your facility action plan should outline immediate and long-term corrective actions and be specific for each of the four zones.

**Immediate Corrective Actions**

1. Limit access to area. Re-direct traffic if necessary. Break down and inspect area and equipment.
2. Perform vector swabbing of the positive sample site. Swab immediate/surrounding area to determine if contamination has spread.
3. Clean and sanitize all equipment, surfaces and tools in the area.
4. Conduct pre-operational inspection. Perform additional vector swabbing. Don’t start operations until all tests come back negative.
5. Document corrective actions.
6. Increase frequency of sampling from weekly to daily. After 3 consecutive days of negatives, resume normal sampling.

**Long-Term Corrective Actions**

1. Eliminate sources of water/water accumulation.
2. Repair structural damage. Eliminate potential niche areas.
3. Review GMPs. Update/Revise cleaning and sanitation procedures.
4. Audit production and maintenance practices.
5. Reinforce personnel hygiene practices.

If you continue to see problem areas, or hot spots, this may be an indication that the Salmonella has established itself and is multiplying. It is important to take aggressive corrective actions to eliminate the problem. If the hot spot cannot be eliminated, you should consider physically restricting or removing the equipment from your facility.

**Salmonella positive?**

**Elevated indicator counts?**

Elevated indicator organisms can mean Salmonella is present. In the event that indicator counts come back high, consult your facility’s action plan to implement corrective actions.

**Corrective Actions**

1. Break down and inspect equipment.
2. Thoroughly clean and sanitize all equipment, surfaces and tools in the area.
3. Re-swap surfaces and equipment where elevated background levels were found.
4. Re-clean, re-sanitize, and re-swap as needed.

If elevated indicator background levels/indicators persist, you may consider the long-term corrective actions outlined at right.