

FOREIGN MATERIAL

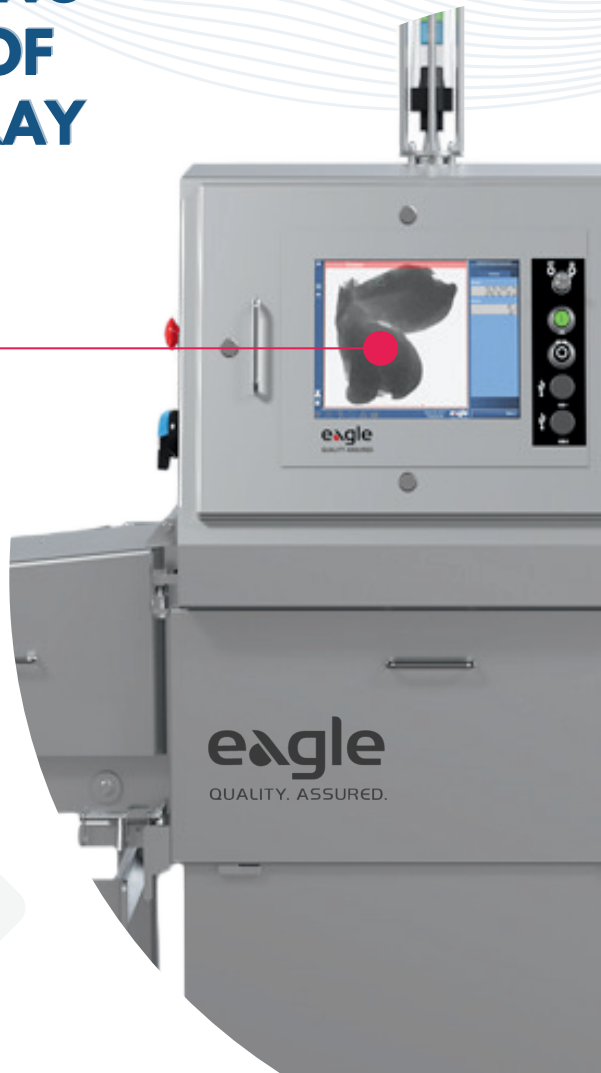
X-RAY INSPECTION
PRODUCTION REWORK



POD UNDERSTANDING PROBABILITY OF DETECTION X-RAY

Probability Of Detection

When using X-rays to inspect and clear your on-hand finished goods, it's essential to ensure that the inspection process guarantees reliable results and adheres to food safety standards. This will help maintain confidence in the quality of your inspections and compliance with safety regulations.



X-RAY INSPECTION GUARANTEES



(POD) Probability of Detection

X-Ray Inspection: This statistically calculated measurement assesses how reliably an X-ray system detects specific types and sizes of foreign material contaminants in your products.

When using X-ray inspection to clear on-hold production, it's crucial to understand that POD plays a key role in ensuring the safety of products before they are released to the market. Accepting a POD figure without validating the methods used to produce it is as risky as proceeding with no POD data at all.



$$n = \frac{1}{(1 - \text{POD})^2}$$

where $\text{POD} = 95\%$ (2-sigma)
 $n = 400$ trials

where $\text{POD} = 99.7\%$ (3-sigma)
 $n = 111,111$ trials

where $\text{POD} = 99.9\%$
 $n = 1,000,000$ trials

(POD) KEY VARIABLES IN X-RAY DETECTION



Inspecting Finished Cases vs Packages



X-ray inspection of full cases may appear efficient for detecting contaminants, but it can negatively affect the Probability of Detection (POD). Inspecting cases involves X-ray imaging from the top of the containers or through several layers of packaging, which can create shadows that obscure foreign material contaminants. For optimal results, inspecting individual packages in their best orientation will always provide clearer images and more reliable detection.

Achieving the best Probability of Detection (POD) depends on creating the highest quality X-ray images, whether for human operators or automated systems to identify foreign materials. It's also important to recognize that automated image inspections can often detect contaminants that might not be visible to the human eye..

Other Variables Affecting POD

- size, shape and orientation of foreign material
- product chemical composition and uniformity



OUR PROCESS



A-B-C

A. All inspection & production rework projects begin with an inspection validation test performed at one of our 3 testing facilities. Testing results validate the necessary x-ray algorithm set-up to provide your inspection statistical Probability of Detection (POD).

B. Team and x-rays are scheduled to perform inspection within 24-72 hours and are deployed from an inventory of over 20 x-rays located throughout the U.S and Canada. U.S State x-ray safety certifications are established by Xray Reclaim with no involvement from the client necessary.

C. Inspections are conducted within food safety standards, calibrating and validating the x-ray throughout the effort at prescribed intervals. And when complete, a full traceability inspection report is generated for the client.

MANAGEMENT TEAM

Mat Bedard



Chief Operations Officer

Over 20 years in x-ray implementation and food safety inspection

Casey Toothman



Director Applications

Over 10 years of x-ray inspection technical applications management

JP Perreault



President

Over 30 years experience in food & beverage food safety inspection industry

Marcello LaGotta



CFO

Over 30 years finance and accounting in the industrial and service sector