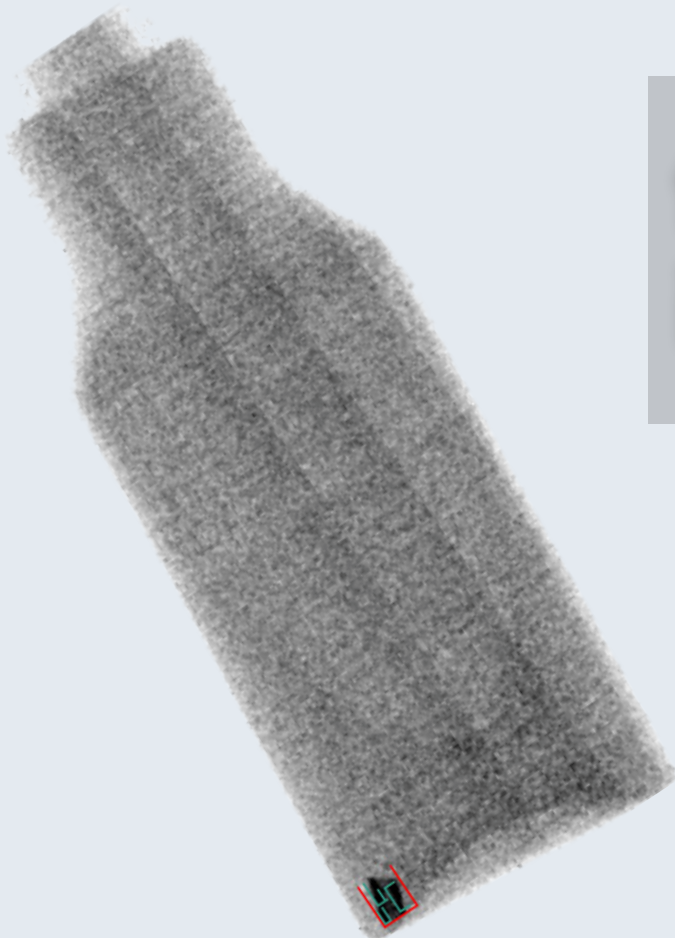


UNDERSTANDING - POD

Probability of Detection X-RAY inspection

finished production
inspection & rework



test here





POD Probability of Detection

Inspecting & clearing finished goods

POD stands for Probability of Detection.

It's a statistically calculated measure used to quantify how consistently an x-ray will detect a particular type and size of contaminant in your package.

Considering x-ray inspection to clear on-hold production is a serious matter, POD is vital in delivering assurances to your organization that cleared product is safe for release to market.

Accepting a POD without validating the methods in how it was produced is a bad as moving forward with no POD at all.

- 1. require a POD**
- 2. validate methodology**

100% POD Isn't Possible

Even if testing produces 100% detection, a score of 100% POD isn't possible due to changing variables, even if testing was done using +10,000 samples including all the possible variables.

Be wary of anyone promising this.

Some of the Variables that Affect POD

- Chemical composition (atomic mass number)
- Product texture or uniformity
- Contaminant placement in the package



Accepting a POD that is above 95% must be empirically provable.

Blindly accepting statements on POD can lead to a failed inspection effort and contaminated finished goods being released to market

Improving POD

When inspecting and clearing on-hold Inventory, the quality of POD is greatly improved by reducing the inspected package size and dealing with blind spots.

This is achieved by:

- not inspecting in case, but alternatively inspecting the unique primary package
- use of 2-xray passes inverting package orientation between each



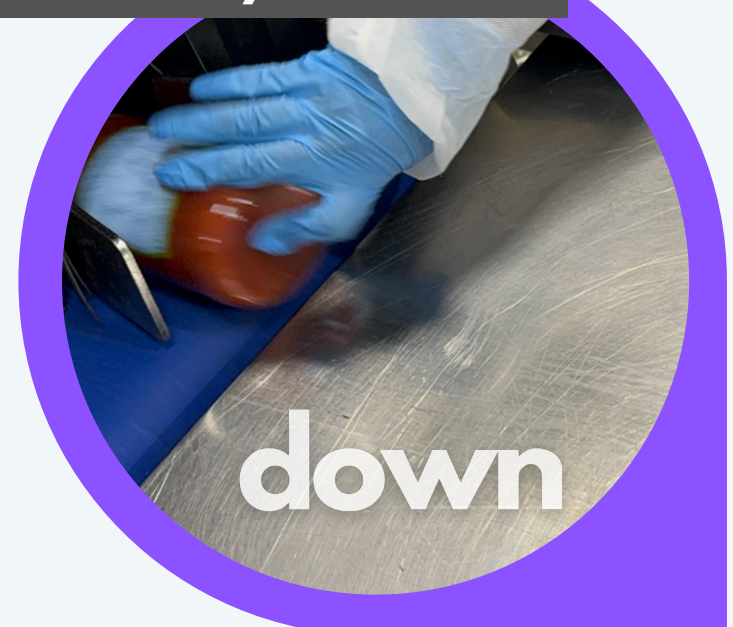
**2-Passes and inverting
can improve POD
from 95% to 99.7%**



**first pass presentation
to x-ray #1**



**second pass re-
orienting package
x-ray #2**



ACCEPTED POD what's next?



Once your organization has empirically proven the promised POD and method, performing a successful x-ray inspection for rework requires:

1. Calibration & Certification vs. POD (before commencing)
2. Validation vs. POD (performed once for each inspected pallet)

Performing Calibration & Certification and then ongoing Validation is scientifically questionable when using human operators as the image inspection point vs. automated X-Ray





POD in X-Ray Production Inspection and Rework

Summary

Understanding POD is critical. When dealing with on-hold suspect foreign material finished goods inventory, selecting an inspection partner carefully is an imperative. There are many factors to consider such as time and costs required to inspect and clear, but critical is >>>

1. understanding their POD Guarantee
2. approving their science/method in POD development

Inspection solution providers that provide 100% POD or have questionable methods in developing POD should be avoided.

Questions?

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