# Discovery® Commodity Quality Verification

#### EACTSHEET

#### **MUON TOMOGRAPHY**

#### SUPERIOR PENETRATION

Muon Tomography offers unparalleled penetration of dense materials — water, ice, steel, lead, concrete — allowing inspection of cargo beyond the reach of other technologies.

#### 100% RADIATION SAFE

Leveraging naturally occurring muons and electrons, the Discovery<sup>®</sup> system produces *ZERO* harmful radiation, making the system *completely safe* for officers and cargo.

#### **3D IMAGERY**

Imaging algorithms deliver true 3D imagery that can be rotated, cropped, and sliced. Operators use Discovery<sup>®</sup> to perform thorough inspections without unloading the container, saving time and money.

#### **GAMMA DETECTION**

In addition to penetrative imaging,
Discovery<sup>®</sup> detects the presence of
harmful gamma radiation and
provides an estimate of the activity
level of the source.

#### **ALWAYS AVAILABLE**

Discovery<sup>®</sup> relies on drift tube technology. With no moving parts, the system requires *very little maintenance*, and provides over 98% Operational Availability.

# Verifying the purity/quality of your commodities! Sugar / Grains / Minerals and much more......







## 100% passive = 100% safe

an ideal tool in Quality Validation of bulk commodoties

The **Discovery®** system by **Decision Sciences** translates *naturally occurring* charged particle data into accurate, informative, 3D visualizations to verify purity.



**Contaminated Pallets** 

## What Discovery® delivers to you:

- Standardize the quality of commodities into the Supply Chain.
- Al.-enabled algorithms automatically detect material quality deviations.
- Quantitative validation of material purity and level of contamination.

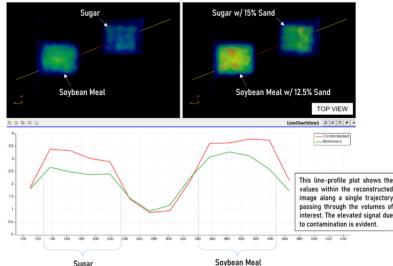
### Test Scene - Results

Reference Pallets



Material	Reference	Contaminated	% Increase
Sugar	1.77	2.27	28%
Soybean	2.16	2.96	37%

The table above shows the average image values in each of the material volumes analyzed. Sand contamination at the level of -15% shows an increase in reconstructed image values of -30%.



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