

Sensors, Safeguards, and Safety

A socio-technical approach to compliance and monitoring

Socio-Technical Matrix





A compliance & assurance company dedicated to cannabis industry **MM**

People

-Employee Training



Process

-Standards & Uniform Process

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Technology

•-Biosecurity

•-Safety

Verification

Visual Diagnosis Model



Case Study: Moldy Truffle

- What happened?
- Timeline of events- Examining response
- Exploring assumptions of causality
- Compliance and prevention
- Worse case scenario- What could have happened?
- Best case scenario- What should have been done?
- Statistical Life Value- Liability & responsibility of manufactures, processors, and distributors
- Regulatory reaction



What Happened?







Manufacturing

Cultivation

Consumer Purchase

Dispensary

Cannabis' Journey

Finding the probable source

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Cultivation

Growing Harvesting

Manufacturing

Dry/Cure

Extraction

• Method

Products

Flower

Oils

Edibles

Challenges in: Cultivation, Curing, & Drying

- Complex environmental conditions
- Highly variable
- Ideal growth system and environment for plants (Cannabis), subsequently fungi.
- Hard to clean and disinfect
- Limited tools and commercial training for staff



Source

In over 100 third-party tests, Aspergillus and Penicillin were the top fungi found in cultivation through air quality assessments

Compliance & Prevention

- State law and regulation
- Internal policy
- Technology
- Accredited Lab testing
- Testing practices
- Third-party regulators
- Certifications (FOCUS)

- Uniform Standards
- Standard Operating Procedures
- Quality Assurance
- Safety (Consumer and Employee)
- LOG Reduction/Risk Reduction
- Consistency in Action

Sensors

- Detects Mold and Bacteria
- AI & Automated
- Wireless
- Physical Record

Sensors

- Detects Nearly any gas
- Primary Safety Device
- Secondary recording device
- AI & Automated

• Wireless

Worse-Case Scenario



Hospitalization

Allergic Reaction



The cost of safety is high, the cost of anything else is so much higher...

"...basing a food safety decision - a decision that would potentially prevent foodborne illness and save lives - on business ROI, is ridiculous... The cost is someone dies."

> -Sean Leighton of Cargill Global Vice President of

> Food Safety, Quality and Regulatory Affairs

Best-Case Scenario





Recall Response

By definition, the word "recall" means "to call back" or "return."

In the United States, a product recall indicates that a potential safety hazard or violation was discovered, and some form of corrective action must be taken to rectify the problem.

That action, also known as a remedy, may or may not involve returning the product.

Recall Response

- Full Recall on any and all products containing source material specific to batch number.
- Regulatory notification, where required
- Public Disclosure
- Notify all sellers of product
- Call all individuals that purchased these items
- Follow-up
- Notify insurance company of potential liability

USDA- By the numbers, SLV



Value of statistical life year (VSL) in the United States

VSL in current dollars Low estimate VSL in current dollars Mean estimate VSL in current dollars High estimate

2)

Regulatory Reaction and Followup

Questions?

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