

## Meat and Poultry Q&A



### 1. What types of technology can be used to detect foreign material contamination in meat and poultry products? How do they work?

Are there limitations? Metal detection equipment is used to detect metal fragments, X-ray identifies metallic and non-metallic contaminants that are of sufficient density to create an x-ray image. When using metal detection, the detectable particle size is adversely affected by the signal of the meat and poultry. This is commonly known as product effect. The x-ray image is dependent on the density of the contaminant, being different than the product density. As a result, calcified bone is easier to detect than soft bone.

### 2. Are there any new technologies?

The latest development in metal detection is the use of simultaneous, multiple-frequency units that have been designed to reduce the adverse impact of product effect thus improving detection levels.

### 3. What kind of materials can your metal detectors find? What metals?

Metal detectors are used to detect ferrous, non-ferrous (aluminum, brass and copper) and stainless steel metal contaminants.

### 4. How does metal detection work?

As metal passes through the oscillator transmitting and receiving coil, the current induced in the coil changes. This causes an imbalance, which is amplified and detected in the electronic control unit.

### 5. Does meat make it harder to find contamination?

Yes, fresh meat presents more product effect to the metal detector than dry product. The product effect is accommodated by reducing the detection level that is achieved.

### 6. Is there soft foreign material contamination?

Very objectionable non-conductive contaminants such as hair, fingernails and other soft, light-weight contaminants that float are difficult to detect with X-ray and are typically avoided with enforcement of in plant food safety policies.

### 7. Product control software? What is that?

Metal detector product controls are used to adjust the metal detector settings to achieve the best possible detection levels given the product effect of the food being processed. Product controls can be used to group product settings for several products or store separate product settings for specific products if need be.

### 8. Why is there so much foreign material contamination in the last few years? Is it increasing?

We are not sure there is more foreign material contamination. But we imagine technology enhancements have improved our ability to detect contamination and improved food safety practices and documentation may have increased the reporting of contamination incidents.

### 9. Is the USDA guideline foreign matter contamination helping at all?

Stringent food safety regulations have improved the reporting of contamination when it occurs.

### 10. Is bone detection hard?

X-ray technology is used to create a detectable image enhanced by density. Dense, calcified bone casts a better image and is easier to detect than soft bone.

### 11. Is there pressure on meat and poultry suppliers from their customers?

Yes, as retailing has become consolidated among fewer, larger companies they have more leverage in forcing the use of foreign contaminant detection and the documentation of its use.

### 12. Do different type meat and poultry processors have different plans?

Yes, those who have high risk for bone contamination readily adopt x-ray technology. Meat processors with high risk associated with metal knives and processing equipment tend to focus on metal detection usage.

### 13. Other information added?

Increased scrutiny has led to the need for meat and poultry suppliers to improve the documentation of their metal detector usage. Advanced Detection Systems' ProScan Max® III metal detector offers easy to use data logging of metal detector events and user specific pass codes.



# ADVANCED DETECTION SYSTEMS

## Aftermarket Support with Customer Service Focus

Advanced Detection Systems outstanding metal detector service is a team effort. Our sales, engineering and service staff experts coordinate our support to meet your specific service needs.

### Provide Customer Focused Service

Over the years, Advanced Detection Systems has developed a variety of services and training programs. These are designed to help our customers stay current in the best practice methods of use for their metal detectors, optimizing the value of their metal detection investment. Your purchase of a metal detector from Advanced Detection Systems includes expert technical support for the life of the equipment. This includes installation, start-up and the testing needs for your metal detection system. Some of the services we offer are: Verification Services for any make/model metal detector, On-site Field Service, Metal Detector Training, Software Upgrades and FREE Product Testing with guaranteed detection levels. Service is provided from our service technicians, factory sales and local representatives that are HACCP (Hazard Analysis Critical Control Point) certified. Our engineering, factory sales staff and local manufacturer's reps are also on standby to assist our customers.

### Free Product Testing

Use our free product testing service to ensure that you are investing in the best possible metal detector for your application. Advanced Detection Systems product testing service is conducted promptly at our factory lab in Milwaukee, WI - USA. Our up front product testing leads to trouble free start-up of the metal detection system at your facility. This service allows us to build the metal detector for optimum performance and reliability for your specific products. When you utilize our product testing service, you will receive a factory Sensitivity Guarantee indicating the optimal ferrous, non-ferrous and stainless-steel detection levels for your specific products.

### Metal Detector Verification & Services

Advanced Detection Systems HACCP (Hazard Analysis Critical Control Point) certified factory service technicians and certified local representatives conduct verification and calibration services on-site and are compliant with most QA programs, audits, HACCP and GMP (Good Manufacturing Practices) standards.

As your metal detector usage comes under scrutiny applied by government regulations, auditors and your customers; there is an opportunity to meet expectations and improve your competitive advantage by being proactive in verifying your metal detectors on an annual basis. These services are offered on any make/model metal detection system or equipment.

### Metal Detector Training

We recognize the importance of quality training for our customers to ensure optimal use of their metal detector. Our training programs are conducted by certified factory service technicians and local representatives on-site or if preferred, online for our customer's convenience. Advanced Detection Systems can also customize any training program to meet your specific needs. Our training programs can include information on: Metal Detector 101 - How They Work, Security Features - Protection from Unauthorized Tampering, supervisory personnel setup and clearances, electrical power supply and operation of the metal detector, accessing and managing data settings/change, Product Monitor, use of reject devices and settings, touchscreen calibration and menu options and any specific topic per your application or industry.

### Replacement Parts

Advanced Detection Systems offers replacement parts and spare parts lists for your equipment. Our factory trained service technicians, engineers and sales staff are experts on our metal detection systems. Metal detectors are a Critical Control Point and therefore must remain in service. Ask us about developing a spares part list for your specific metal detection system to prevent downtime that can be expensive and disastrous. Our staff is available to assist in identifying parts needed for your metal detector and we can easily look up the information in our system. Many parts are currently in stock and available for same day shipment, including electronic replacement parts that are unique to your specific metal detection system.

### Field Service

We have responsive HACCP (Hazard Analysis Critical Control Point) certified service technicians and local representatives at your service. We offer a variety of plant level metal detector services that will ensure consistent metal detector performance and employee familiarity with the operation of your metal detection systems, such as: on-site trouble shooting for metal detectors, conveyors and reject devices, metal detector start-up and employee training, verification services, metal detector software upgrades and metal detector testing.



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