White Paper

BRC Global Standard for Food Safety

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EAGLE
BRC Global Standard for Food Safety

The safety and quality of food have always been important, but recent contamination crises such as the 2011 EHEC outbreak in Europe, along with well-publicised product recalls, have heightened public scrutiny of food manufacturers and awareness of product safety. Consumers and the retailers that serve them are demanding manufacturers make their manufacturing processes as safe and transparent as possible.

Food processors face unprecedented pressure and manufacturers and industry organisations have been forced to take even greater ownership of food safety processes to strengthen consumer trust through a safer supply chain. As a result, the food manufacturing and retailing world has seen the appearance of several food safety and quality standards, with the biggest being:

- The British Retail Consortium’s (BRC) Global Standard for Food Safety
- International Food Standard (IFS)
- Safe Quality Food (SQF) 2000 Code
- The Foundation for Food Safety Certification (FSSC) 22000

This white paper takes an in-depth look at the BRC Global Standard for Food Safety (issue 6) and its latest requirements which came into effect in January 2012. Focusing in particular on traceability; quality control; foreign body detection; hygienically-designed equipment and equipment calibration, it explores how the implementation of a product inspection programme that incorporates x-ray inspection equipment helps food manufacturers meet these requirements in order to achieve compliance.

1. The BRC Global Standard for Food Safety

The BRC Global Standards cover the supply chain with four related standards that specify requirements to be met by companies supplying retailer-branded food products to enable the production, packaging, storage and distribution of safe food and consumer products.

Originally developed in response to the needs of UK members of the British Retail Consortium (BRC) to avoid the confusion and duplication of data which previously existed with various individual retailers’ schemes, the BRC Standards have gained usage worldwide and are accepted by growing numbers of retailers and branded manufacturers in the EU, North America and further afield.

First published in 1998, the BRC Global Standard for Food Safety was developed to specify the safety, quality and operational criteria required within a food manufacturing organisation to fulfill obligations with regard to legal compliance and consumer protection. Today it’s been adopted by more than 8,000 food businesses in more than 80 countries as a framework to help retailers guarantee the quality and safety of the food products they sell by helping them select reliable suppliers.

The BRC Standard was the first standard recognised by the Global Food Safety Initiative (GFSI) - an organisation founded in 2000 to harmonise food safety standards by benchmarking existing food standards against guidelines established by retailers, food manufacturers and food safety experts in order to
increase the transparency and efficiency of supply chains, minimise costs by reducing audit duplication and provide assurance of safe food for consumers.

The BRC Standard requires the adoption and implementation of Hazard Analysis and Critical Control Point (HACCP) principles.

2. HACCP

HACCP is a systematic preventive approach to food safety used by manufacturers to identify where hazards might occur during the production process and establish procedures to mitigate the risk of them occurring. It’s based on seven core principles:

- Conduct a food safety hazard analysis
- Identify the critical control points (CCPs) – points at which a hazard is optimally controlled
- Establish critical limits for each CCP
- Establish CCP monitoring requirements
- Establish corrective actions when monitoring indicates that a particular CCP is not under control
- Establish record-keeping procedures
- Establish procedures to verify system is working as intended

These principles form the basis of most GFSI-recognised food quality and safety assurance systems.

3. GFSI-recognised Standards

With the safety standards of food manufacturers continuing to come under increasing scrutiny across the globe, certification to a food specific, GFSI-recognised standard is becoming increasingly important.

Benefits for manufacturers include:
- Improved retailer and consumer confidence
- Enhanced brand protection
- Improved product safety and quality
- Fewer customer complaints and legal issues
- Process consistency across countries and continents facilitating cross border trade
- Minimised costs through not having to “clean up” after distribution of non-conforming products i.e. product recalls and disposal of non-conforming products

In addition, GFSI-recognised standards like the BRC Standard help retailers ensure that due diligence is being exercised by their suppliers.

4. Due Diligence

Due diligence refers to the degree of care and caution that an organisation should take when entering into an agreement with another party. In food manufacturing, manufacturers must take all necessary measures to ensure the safety and quality of the food they are supplying to a retailer and, through them, to the public.

With the threat of product recall, and hard-earned brand reputations on the line, supermarkets will not risk doing business with suppliers who fail to demonstrate the requisite level of precaution in their manufacturing plants.

In the event of a legal challenge, BRC certification can provide the basis for a robust due diligence defence by demonstrating that a manufacturer took all reasonable practicable steps to avoid the breach of food safety regulations.

5. BRC certification

The requirements of Issue 6 of the BRC Global Standard for Food Safety are an evolution from previous issues, with a continued emphasis on management commitment, a HACCP-based food safety programme and supporting quality management system.

The Standard provides retailers with a common basis for the audit of their suppliers by an accredited third party and, in order to gain certification, it’s essential food manufacturers are able to meet the Standard’s latest requirements.

This white paper will now explore how implementing an x-ray inspection programme that incorporates stand alone and/or fully-integrated x-ray inspection solutions on the market today can help food manufacturers meet the Standard’s requirements for traceability, quality control, foreign body detection, hygienically-designed equipment and equipment calibration.
5.1 X-ray inspection

X-ray inspection systems detect ferrous, non-ferrous and stainless-steel, as well as other foreign bodies, including glass, mineral stone, bone and high-density plastics and rubber compounds. In addition they can simultaneously perform a wide range of in-line quality checks such as measuring mass, counting components, identifying missing or broken products, monitoring fill levels, inspecting seal integrity and checking for damaged product and packaging.

6. The BRC’s Requirements:

6.1 Traceability

Under EU law, traceability is defined as the ability to track any food, feed, food-producing animal or substance that will be used for consumption, through all stages of production, processing and distribution.

Past food crises, such as dioxin contamination and BSE illustrate the importance of being able to swiftly identify and isolate unsafe food in order to prevent it reaching consumers.

Traceability is crucial to the establishment and operation of an effective food safety programme.

BRC (Version 6) requires:

3.9 Traceability
The company shall be able to trace all raw material product lots (including packaging) from their supplier through all stages of processing and despatch to their customer and vice versa.

3.11 Management of Incidents, Product Withdrawal and Product Recall
The company shall have a plan and system in place to effectively manage incidents and enable the effective withdrawal and recall of products should this be required.

Innovations in technology mean that, in addition to carrying out their primary function, modern x-ray inspection solutions can help fulfill the BRC’s requirements by offering previously unachievable levels of traceability and enabling quick and easy access to relevant information.

By facilitating traceability, modern x-ray inspection solutions offer:
- The ability to perform fast, precise product recalls
- Minimise the number and scope/impact of recalls
- Enhanced consumer protection and confidence
- Improved brand building and protection
- Increased production efficiency and quality control

Barcode Readers
X-ray systems are available with barcode readers which, by lifting product data directly from labels, allow products to be identified, and x-ray equipment to automatically change its inspection criteria to match individual products, enabling quick product changeovers.

Integrated Systems
Fully-integrated solutions that include scales, scanners and printers from goods-in to shipment provide the highest level of traceability. By enabling all data to be linked and processed in real-time, such solutions provide clear identification of raw materials and intermediate components, along with warehousing/storage records. Genealogy trees allow immediate upstream tracing and downstream tracking of potentially-faulty components and batches.

As well as helping to eliminate manual record keeping, saving time and eradicating the potential for errors, integrated systems improve quality control and support data integration into existing MES or ERP systems.

X-ray Image Library
Advanced x-ray systems store images of all rejected packs. These images are date-and-time stamped with the product name and can be taken off the x-ray machine and stored on a manufacturer’s computer in chronological order. In this format, they offer excellent traceability on any customer complaints/returns as the production times/codes can be immediately cross referenced.

Connectivity Solutions
In today’s highly-accountable business world, the ability to access real-time production data from process machinery and operators at shop-floor level is invaluable. With enterprise-wide
management systems, this type of data is widely available across remote departments and multiple production sites.

The benefits of installing factory management systems and integrating x-ray inspection solutions into them are clear. A well-designed system can include facilities for:

- Data collection and recording
- Recording of performance data, test routines and x-ray images
- Providing data for product traceability
- Providing proof of risk management and compliance with industry regulations

Complaints

Every contamination-related or product-integrity-related customer complaint should be investigated to determine the cause. X-ray inspection system documentation and records generated will greatly assist in the investigation and may even prove useful as evidence to defend an unjustified complaint.

In addition, a traceability system can be used to confirm that safety and quality checks have been performed and sufficient records have been retained for verification.

6.2 Quality Control

In a global economy with increasingly complicated supply chains, quality control is becoming more critical.

Dealing with quality problems on the production line causes output losses, particularly on high-volume automated lines. However, such costs can easily be overshadowed by ramifications of defective product being discovered by the customer or consumer, causing product recall, brand damage, adverse publicity, and potential legal action.

Time and money spent reducing internal waste, output losses and complaints, inevitably yields a better return on investment than money spent answering them. A correctly-implemented x-ray inspection programme will lead to reduced defective product costs and improved customer and consumer satisfaction, leading to higher profitability and brand protection.

BRC (Version 6) requires:

6.2 Quantity – Weight, Volume and Number Control

The company shall operate a quantity control system which conforms to legal requirements in the country where the product is sold and any additional industry sector codes or specified customer requirement.

Modern x-ray systems are multi-tasking defenders of product and brand quality, as well as detectors of foreign bodies. In a single pass at high line speeds, x-ray systems can perform several inspection tasks simultaneously. They can measure product mass, count components, check fill level, identify faulty products, inspect seal quality and spot missing giveaways.

X-ray systems can measure length, width, volume and surface area.

X-ray mass measurement can be particularly effective for high-speed applications where traditional in-line weighing systems may not offer the same level of accuracy. Packs can be controlled to a minimum weight, US zoned weight or EU average weight regulations, with rejects and all relevant statistics generated accordingly and electronic or hard copy reports easily produced.

Data Management

The effectiveness of x-ray inspection programmes can only be determined by efficient collection of data and trend analysis. An integrated quality data management system is an excellent way to achieve better quality control and can drive a programme of continual improvement in manufacturing efficiency and product safety.

A state-of-the-art quality data management system allows data collection for important quality attributes from x-ray inspection systems, and integrates easily with MES or ERP systems. By alerting operators to required adjustments almost immediately, it helps prevent failed production batches.

SQC

X-ray inspection solutions are available which incorporate Statistical Quality Control (SQC) and Statistical Process Control (SPC) software programmes, which capture equipment and
process level data and turn it into actionable information. SQC and SPC ensure x-ray inspection systems are operating at their full potential to produce conforming products and enable manufacturers to:

• Reduce overfill costs
• Fulfil legal fill requirements
• Standardise and simplify processes
• Protect brand integrity

Stand-alone or integrated systems give manufacturers the statistical data they need to understand, document and control their profitability, and software enables them to connect virtually any device for instant data collection, analysis and action. A wide range of data ports on advanced x-ray systems, for example, allow production data and statistical information which is tailored to manufacturers’ specific network connection requirements.

By ensuring products consistently meet manufacturers’ quality standards and specifications, x-ray inspection solutions are capable of delivering perfect product presentation every time.

6.3 Foreign Body Detection

Although no legal requirement for foreign body detection equipment, such as x-ray, yet exists, a number of HACCP-based food safety standards, including the BRC Standard, place the burden of establishing a reliable product inspection programme on manufacturers to minimise the risk of foreign body contamination within finished products.

The BRC (Version 6) requires:

4.10 Foreign Body Detection and Removal Equipment

The risk of product contamination shall be reduced or eliminated by the effective use of equipment to remove or detect foreign bodies.

4.10.1.1 A documented assessment in association with the HACCP study shall be carried out on each production process to identify the potential use of equipment to detect or remove foreign body contamination.

Typical equipment to be considered may include:

• Metal detection
• X-ray inspection equipment

4.10.1.2 The location of the equipment or any other factors influencing the sensitivity of the equipment shall be validated and justified.

A HACCP system or hazard analysis should be the starting point for implementing an effective foreign body control programme. Potential hazards, and the sources of those hazards, should be identified so that control procedures may be established to minimise the likelihood that product will be contaminated. Such information will assist manufacturers in choosing what kind of foreign body detection system to install and where to install it.

Foreign body detection systems are available which provide exceptional ferrous, non-ferrous and stainless steel detection, as well as the detection of other foreign bodies, such as glass, stone, bone, high-density plastics and rubber compounds, even when products are packaged in foil or metalized film.

When properly selected, installed and operated, they eliminate the risk of contaminated product reaching consumers.

Vibration and Mechanical Shock

As far as practically possible, x-ray inspection systems should not be installed in areas that are near or subjected to vibration and mechanical shock.

Electromagnetic Interference

Radiated electrical noise generated by surrounding electrical installations may adversely affect the performance of a system to a point where the system exhibits erratic operation, such as false rejections.

Most x-ray providers now offer comprehensive Electromagnetic Compatibility (EMC) testing certificates.

With innovative features and multiple levels of safety assurance, the latest x-ray inspection systems can help satisfy the BRC’s requirements, as well as demonstrate HACCP compliance by proving manufacturers have implemented procedures to effectively manage process risks.
BRC (Version 6) requires:

4.10.1.4 Where foreign material is detected or removed by the equipment, the source of any unexpected material shall be investigated. Information on rejected materials shall be used to identify trends and where possible instigate preventive action to reduce the occurrence of contamination by the foreign material.

PC-based x-ray systems are capable of recording large amounts of useful information, which can be used to identify trends and instigate preventive action where necessary to reduce the occurrence of contamination. Features like USB and Ethernet ports allow immediate access to statistical data and reject images, which help with quality reporting, traceability and HACCP compliance. In addition they can prove critical in demonstrating due diligence, if required, as the supporting evidence must include data such as confirmation of packs inspected and data regarding packs rejected as a result of potential contamination events.

BRC (Version 6) requires:

4.10.3 Metal Detectors and X-ray Equipment

4.10.3.3. The metal detector or x-ray equipment shall incorporate

- An automatic rejection device, for continuous in-line systems, which shall either divert contaminated product out of the product flow or to a secure unit accessible only to authorised personnel

Poor design and ineffective reject systems are the weakest part in most detection systems and result in foreign bodies not being effectively and reliably removed from the production line. A correctly-specified x-ray system should be foolproof and capable of rejecting contaminated product, under all circumstances, independent of the frequency of occurrence or the location of the foreign body within the product.

Market-leading solutions are available with integrated failsafe design features to mitigate the risks associated with system malfunction and features include:

- An automatic reject system to effectively remove product from the production line
- A lockable reject bin to receive rejected product, to which only authorised, trained personnel will have access
- A warning device to indicate when the reject bin is full of product
- A full enclosure between the detector head and rejection bin
- An audible and visual indication of system status e.g. product has been rejected
- A photocell to detect each pack passing through the system (to facilitate the correct timing of the reject mechanism)
- An automatic belt-stop failsafe system in Response to the following conditions:
  - Reject confirmation failure
  - Bin full warning
  - Low air pressure
  - X-ray inspection fault
  - Multiple consecutive foreign body occurrences

In addition, well-built x-ray systems feature lamp stacks to signify the status of the x-ray system which must be clearly visible from 360 degrees around the machine. The lamp stack can indicate that x-rays are on/off, that x-rays are about to start up, that the system is in fault mode, and that the power is on the machine and the system is healthy. The lamp stack can also indicate activation of any of the failsafe features, namely reject confirmation, bin-full warning and low air pressure.

BRC (Version 6) requires:

4.10.3.5 Metal detector checking procedures shall be based on best practice and shall as a minimum include:

- Tests carried out using separate test pieces
- Checks that test the memory/reset function of the metal detector by passing successive test packs through the unit

4.10.3.6 The company shall establish and implement corrective action and reporting procedures in the event of the testing procedure identifying any failure of the foreign body detector.

* Although this requirement refers specifically to metal detectors, testing procedures are also relevant to x-ray inspection systems.

Regular testing of the performance of x-ray inspection systems is an essential part of any well-designed quality management system.
Any x-ray system should be periodically verified to demonstrate that:

- It continues to operate in accordance with the specified sensitivity standard
- It continues to reject contaminated product on detection of foreign bodies
- All additional warning/signalling devices are effective i.e. reject confirmation
- Installed failsafe systems are functioning correctly

Market-leading x-ray systems offer prompted test options to provide a visual or audible indication when routine testing is required, enhanced by automatic monitoring to ensure the test then takes place, and is successful. These options are further enhanced with automatic reporting and archiving to create a record of test activity for later verification and traceability.

A comprehensive range of certifiable test samples in a variety of materials, sizes and carriers to assist in this process are available and can be supplied with a certificate of conformance. Having the correct test pieces available to conduct testing ensures that performance verification data collected is accurate and consistent, supporting the BRC’s requirement and meeting due diligence obligations.

### 6.4 Hygienically-designed Equipment

Contaminated food processing equipment has been responsible for a number of major food poisoning outbreaks. It also accounts for innumerable instances of product spoilage and quality defects.

In some cases, these events result from a failure to maintain, clean, or operate equipment hygienically; in others, the fault is found in the design of the equipment itself. Either way, the results can be catastrophic for consumers and food producers.

**BRC (Version 6) requires:**

#### 4.6 Equipment

*All food processing equipment shall be suitable for the intended purpose and shall be used to minimise the risk of contamination of product.*

4.6.1 *All equipment shall be constructed of appropriate materials. The design and placement of equipment shall ensure it can be effectively cleaned and maintained.*

4.6.2 *Equipment which is in direct contact with food shall be suitable for food contact and meet legal requirements where applicable.*

The sanitary design of x-ray inspection systems is critical in order to meet the BRC’s requirement and prevent the growth and spread of biological contamination in food manufacturing plants.

In addition to helping with HACCP compliance, well-designed and constructed equipment reduces opportunities for bacteria to harbour by ensuring easy and thorough cleaning and maintenance.

**Sanitary Design**

Several agencies influence and regulate the sanitation procedures of food goods, including the European Hygienic Engineering and Design Group (EHEDG), National Sanitation Foundation (NSF) and 3-A Sanitary Standards Inc. (3-A SSI) and x-ray inspection solutions are available which fulfil international sanitary design guidelines.

These guidelines describe criteria for the hygienic design of equipment intended for the processing of foods and include:

- Elimination of cavities/bacterial traps
- Avoidance of, or sealing of, all hollow sections
- Avoidance of ledges and flat horizontal surfaces
- Use of open-design, continuous welded frames for easy access and cleaning
- Hygienic management of electrical cables, trunking and pneumatic services
- Avoidance of exposed threads or other elements of fixings that might be considered bacteria traps

Well-designed x-ray pipeline systems incorporate clean-in-place (CIP) procedures. CIP provides for a flush-out of the pipework with hot cleaning fluid at the end of a production run, with no need to disassemble the manifold or disconnect the pipework.

**Construction Material**

A variety of materials are used in the construction of food equipment and it’s important they are
As well as allowing manufacturers to focus on producing quality products, safe in the knowledge that the risk of bacterial contamination is kept to a minimum, the long term benefits of purchasing hygienically-designed equipment include increased life expectancy of equipment, reduced maintenance and consequently lower operating costs.

6.5 Equipment Calibration

Over time, the performance of x-ray inspection equipment may start to drift away from the specified standards laid down during initial installation and commissioning. Regular testing is therefore an essential part of an effective quality system.

BRC (Version 6) requires:

4.7 Maintenance

An effective maintenance programme shall be in operation for plant and equipment to prevent contamination and reduce the potential for breakdowns.

4.7.1 There shall be a documented planned maintenance schedule or condition monitoring system which includes all plant and processing equipment. The maintenance requirements shall be defined when commissioning new equipment.

4.7.2 In addition to any planned maintenance programme, where there is a risk of product contamination by foreign bodies arising from equipment damage, the equipment shall be inspected at predetermined intervals, inspection results documented and appropriate action taken.

Cleaning Processes and Environment

When choosing an x-ray inspection system, it’s important to ensure that it’s fit for the intended purpose. Equipment should be designed and constructed with due consideration to the industry and environment, as well as the application in which it will operate, and the cleaning regimes likely to be encountered, to allow efficient cleaning and sanitizing in order to improve quality without reducing efficiency.

Each industry has its own special set of sanitation requirements. For example, if the product is high-risk, such as meat or dairy, equipment should be constructed to withstand deep cleaning and sterilization in order to avoid expensive repairs resulting from water ingress.

X-ray inspection solutions are available with IP65 sealing as standard to cater for the majority of sanitary requirements, and IP69K as an option for equipment used in harsh wash down environments, typically in meat, fish and poultry applications, where there is a higher risk of water ingress.

Table: International Protection Ratings

<table>
<thead>
<tr>
<th>IP65</th>
<th>IP66</th>
<th>IP69k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conveyor assemblies, sorting devices, spacing devices, sensors and optional add-on components.</td>
<td>Drive motors.</td>
<td>Weighcells, control housing and cabinet containing sensitive electronic components e.g. industrial PC (IPC).</td>
</tr>
<tr>
<td>IP 65 – No ingress of dust. Protected from low pressure water jets. Water projected by a nozzle against enclosure from any direction shall have no harmful effect.</td>
<td>IP 66 – No ingress of dust. Protected from powerful water jets. Water projected in powerful jets against the enclosure from any direction shall have no harmful effect.</td>
<td>IP 69k – Standard DIN 40050-9 for high-pressure, high-temperature washdown applications. Such enclosures must be able to withstand high pressure and steam cleaning.</td>
</tr>
</tbody>
</table>

Figure 1: International Protection Ratings

Stainless steel is the preferred general-use metal for food contact surfaces due to its corrosion resistance and durability in most food applications.
Maintenance and Performance Verification

To ensure x-ray inspection systems operate at optimum performance with the maximum possible uptime, they must be correctly maintained throughout their service life. A preventive maintenance programme should be in place which aims to limit wear and tear on equipment that might otherwise result in contamination or contribute to a reduction in performance. This ensures problems can be addressed before a breakdown occurs. The verification process should typically take place every six to 12 months and ideally be carried out by a trained engineer in accordance with an agreed service contract.

Market-leading x-ray inspection system providers offer performance verification testing to keep systems in peak condition.

Documentation and Records

Records of maintenance undertaken and any subsequent corrective actions should be recorded. This information can be used to good effect when reviewing the effectiveness of the planned maintenance programme and incident resolution.

X-ray inspection systems with built-in performance verification routines promote the discipline of regular testing and associated record generation. Such routines automatically request a test after an agreed preset time interval.

An approved test operator enters a user login code to allow the test to be completed with the correct test samples and hard copy documentation which proves testing has been carried out can be provided through a local printer or downloaded to a USB or central PC using Ethernet communications or OPC connectivity, providing the x-ray system has network connectivity capabilities.

BRC (Version 6) requires:

6.1 Control of operations

The company shall operate to documented procedures and/or work instructions that ensure the production of consistently safe and legal product with the desired quality characteristics, in full compliance with the HACCP food safety plan.

6.1.1 Documented process specifications and work instructions shall be available for the key processes in the production of products to ensure product safety, legality and quality. The specifications as appropriate shall include:

• Labelling instructions
• Any additional critical control points identified in the HACCP plan

6.1.3 In circumstances where process parameters are controlled by in-line monitoring devices, these shall be linked to a suitable failure alert system that is routinely tested.

6.3 Calibration and Control of Measuring and Monitoring Devices

The company shall be able to demonstrate that measuring and monitoring equipment is sufficiently accurate and reliable to provide confidence in measurement results.

Auto Calibration and Verification

X-ray systems support manufacturers to fulfil the legal metrological requirements, based on their detection accuracy. For this reason, they should be periodically verified in order to demonstrate due diligence and ensure that:

• They continue to operate in accordance with the specified detection standard
• They continue to reliably reject contaminated products
• All additional warning/signalling devices are effective (e.g. alarm conditions, reject confirmation)
• Installed failsafe systems are functioning correctly

Service technician calibration is the only method to establish national and international standards compliance. However, routine self-testing can help manufacturers meet the BRC’s requirement and improve day-to-day operations.

Self and Remote Diagnostics

X-ray inspection solutions are available with built-in condition monitoring and validation routines. Such solutions offer a distinct advantage in providing early warning of a potential system failure, and allow preventive action to be implemented, rather than relying on reactive maintenance and frequent verification testing.
Calibration Software

Well-designed x-ray systems continually monitor signals to check for any drift in performance and a full calibration is only required every 28 days. If calibration is required for any reason, the diagnostics on the machine will flag this up immediately.

Such systems also enable a field-based service engineer to remotely dial into the machine via a manufacturer’s Ethernet network to fix the fault online or prepare parts and relevant personnel for a site visit.

7. Conclusion

With food manufacturers worldwide under mounting consumer and legislative pressure to be able to guarantee the safety and integrity of their products, certification to a GFSI-recognised standard has become increasingly important in helping manufacturers bestow confidence to their retail channels that products coming off their production lines are as safe as possible for consumers.

This white paper shows how integrating x-ray inspection systems into a company-wide x-ray inspection programme can play a pivotal role in helping manufacturers adhere to the BRC Global Standard for Food Safety version 6 and its requirements for traceability, quality control, foreign body detection, hygienically-designed equipment and equipment calibration.

By delivering the highest level of consumer and brand protection, well-designed x-ray inspection solutions enable food manufacturers to demonstrate due diligence by proving they have robust procedures and safety checks in place, which is essential in order to stay ahead in the highly-competitive and increasingly global food industry.

Additional Resources

British Retail Consortium (BRC) – www.brc.globalstandards.com

European Hygienic Equipment Design Group (EHEDG) – www.ehedg.com

3-A Sanitary Standards Inc – www.3-a.org

The National Sanitation Foundation (NSF) – www.nsf.com

Global Food Safety Initiative (GFSI) – www.mygfsi.com
FREE X-ray White Papers

How Safe is X-ray Inspection of Food?

Some of the most popular misconceptions about x-ray inspection of food are tackled in this white paper. It is an indispensable white paper for food manufacturers who consider x-ray inspection to comply with food-safety regulations and legislations.

Register today for your FREE copy: www.eaglepi.com/whitepaper

X-ray More Than Just Foreign Body Detection

X-ray inspection can detect numerous quality shortfalls that lie hidden within product packaging or deep within the product itself. This white paper explains that x-ray inspection is no longer just a technique for catching foreign bodies; its become a wide-ranging tool defending brand values and keeping customers happy.

Register today for your FREE copy: www.eaglepi.com/wp_more_than_detection

How to Select Critical Control Points

X-ray systems can be installed at any point during the production process, but choosing the most effective location/s – the critical control points (CCPs) - can prove a challenge. This white paper discusses the relevance of x-ray inspection to each stage of the production process, from raw ingredients to packaged products. It includes real-life examples to illustrate how cost-effectiveness and the efficiency of foreign body detection help determine the optimal location.

Register today for your FREE copy: www.eaglepi.com/wp_ccp