There is an ever-increasing demand placed on today’s manufacturers to design and implement good manufacturing and safety practices in order to meet various compliance requirements. Programs recognized by FSMA (Food Safety Modernization Act), GFSI (Global Food safety Initiative) and other customer-specific requirements often have HACCP (hazard analysis critical control point) or similar approaches as a core requirement. As part of the assessment, facilities must consider foreign material as a potential hazard, then design, implement and document process and programs in order to control foreign objects.

Control methods such as filtering, sieving, metal detection systems and X-ray systems, in combination with good prerequisite programs and procedures, are recognized methods to reduce the likelihood of foreign material contamination. Each of these methods has advantages and disadvantages. Using a combination of methods while following best practices (such as root-cause analysis and corrective action practices) provides the best protection from foreign material contamination occurrences.

PHYSICAL REMOVAL
Magnets, Sieves and Filters
Magnets placed into the product flow will pull magnetic materials from the product, but will not attract nonmagnetic foreign materials (Figure 1). Magnets for industrial use can be made of various materials and can utilize various designs, including some custom solutions designed for specific applications, so that the effectiveness would be maximized. Magnets will lose strength after time and should be regularly tested either by a pull-strength test or with the use of an

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**Figure 1**

**Magnets**

- Magnetic Products, Inc.
- Ningbo Souwest MagnetoTech