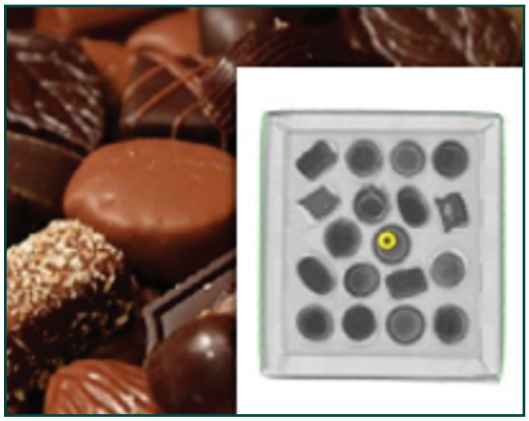
FOOD Forum

PORT PLASTICS

HOW X-RAY DETECTABLE MATERIALS HELP FOOD MANUFACTURERS



Quality and safety expectations come from today's consumers and food safety regulatory bodies. As global trade has expanded, Food Processors had to raise their standards. **In-line X-ray inspection has become a common practice to detect contamination during food processing operations.**

Food Grade Plastics were historically difficult to detect but offered a wide range of benefits such as lightweight, exceptional wear characteristics, visual detection, and improved efficiency. By Incorporating food-safe additives into plastics during manufacturing, broken pieces or fragments of plastic materials as small as 3mm (.120") can now be detected by an x-ray inspection system and separated, preventing contaminated products from reaching the market.

KEY FACTORS TO CONSIDER WHEN SELECTING A DETECTABLE X-RAY PLASTIC:

- X-ray detectability depends on the density of a material. (Additives such as barium sulfate dispersed in the plastics help to improve X-ray detection.) Plastics are generally less dense than metal and rubber, two common materials that plastics often replace.
- The density of the food at the time of inspection directly impacts materials X-ray detection. For example, ground beef has a density of .881 kg/cm3, but frozen beef at .561 kg/cm3. *(SEE CHART 1)*. It is important to choose a material that is dissimilar in density allowing it to be detected *(SEE CHART 2)*.

CHART 1 BY DS

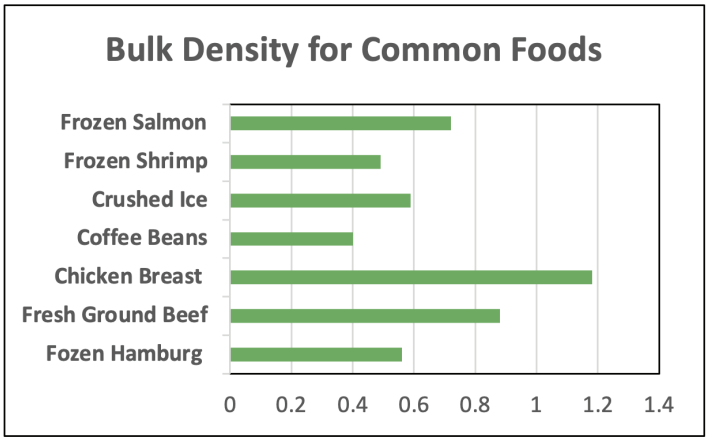
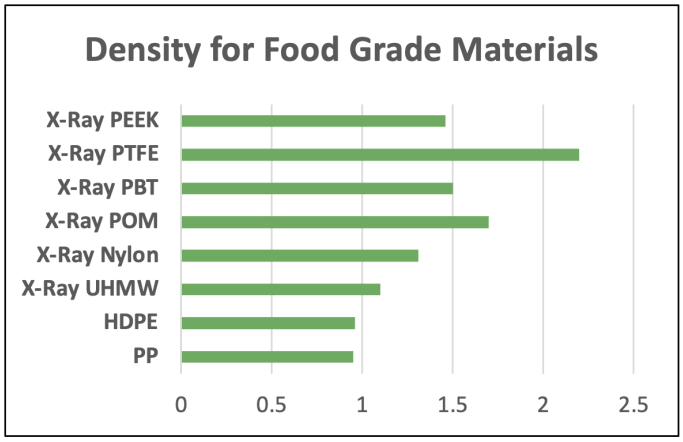


CHART 2 BY DS



WHEN CHOOSING THE OPTIMAL MATERIAL FOR YOUR FOOD PROCESSING APPLICATION, CONTACT YOUR LOCAL PORT PLASTICS SALES OFFICE FOR ALL YOUR PLASTICS NEEDS! PORT PLASTICS IS THE ONE SOURCE TO BRING TOGETHER THE WIDE RANGE OF CRITICAL PHYSICAL PROPERTIES NEEDED ENABLING ENGINEERS TO MAKE OPTIMAL MATERIAL CHOICES AND DESIGN DECISIONS FOR THEIR APPLICATIONS.