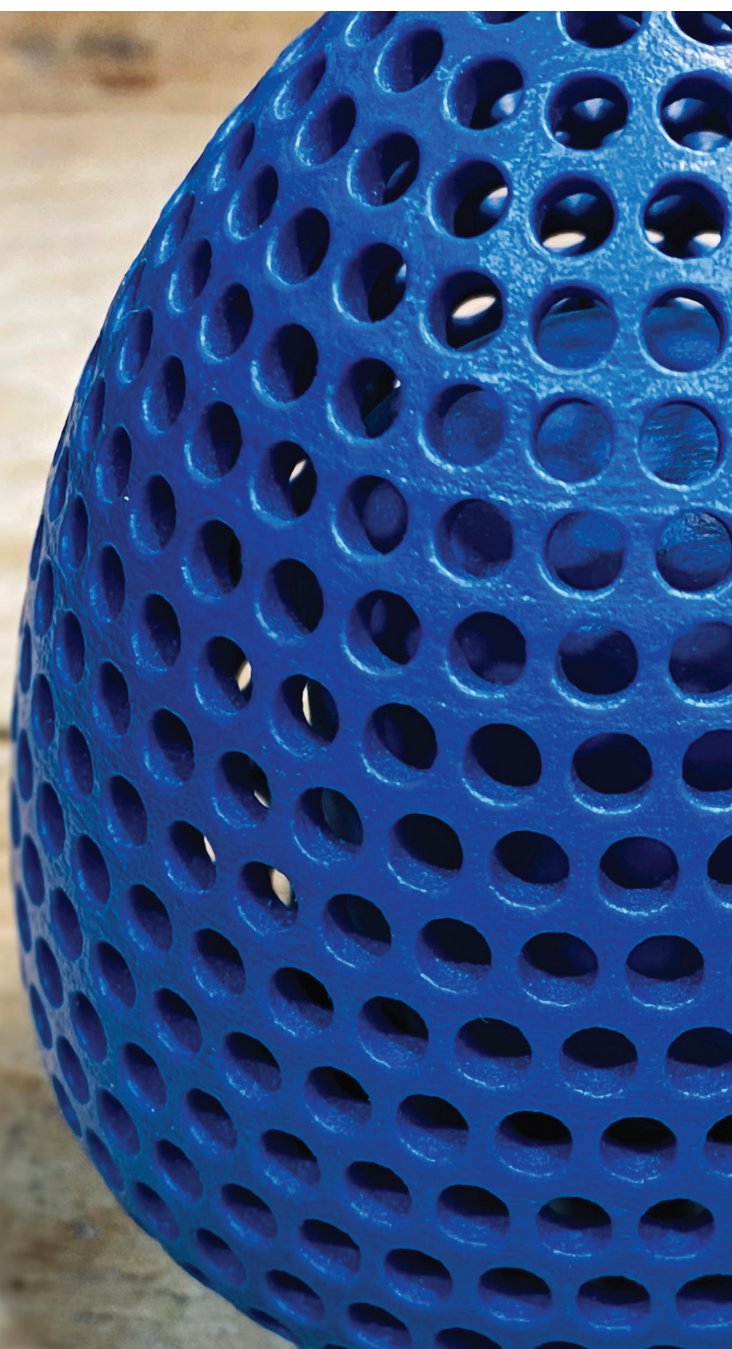




FABULOUS
INNOVATIVE MATERIALS + 3D APPLICATIONS

A close-up photograph of a blue, spherical object with a dense grid of circular perforations, resembling a sports ball or a specialized filter component. The object is positioned on the right side of the frame, with a blurred background of light-colored, textured material.

CASE STUDY

Advancing Food Safety with Cutting-Edge Filtration Solutions

Industry: Food & Pharmaceutical

amtechnologies.com

fabulous.com.co

Background:

In the stringent sectors of food and pharmaceuticals, all production line components, such as strainers, grippers, scrapers, and nozzles, must adhere to rigorous safety standards. Specifically, these components require the integration of blue detectable materials, which facilitate the visual and optical detection of foreign bodies or plastic fragments within food products, enhancing safety measures.

Challenge:

A major challenge involved sealing and improving the surface roughness (Ra) of filtration strainers used in food production lines to minimize the risk of bacterial growth and ensure easy-to-clean surfaces.

Solution:

AMT's PostPro Chemical Vapor Smoothing technology was selected to tackle this issue. This technology effectively seals and removes porosity in 3D printed thermoplastics, significantly reducing contamination risks. Additionally, it enhances the intensity of the blue color in the components, critical for optimal detection of particulates.

Material and Technology:

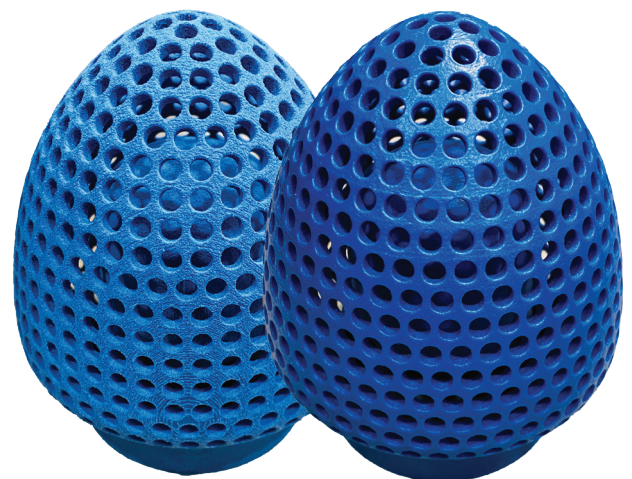
The filtration strainers were manufactured using Bluecare material from Fabulous, a blue detectable and food contact certified polymer (PA11), processed through Selective Laser Sintering (SLS) technology. This material is compliant with EU regulations (10/2011, 1935/2004) and the US FDA CFR21, ensuring it meets the highest standards for food safety.

Benefits:

- **Certified Food Safety:** Utilization of Bluecare material ensures adherence to EU and FDA standards for food contact materials when used in conjunction with AMT PostPro technology.
- **Enhanced Detection:** The enhanced blue color improves the detectability of the strainers, thus increasing overall production safety.
- **Risk Reduction:** The improved surface quality significantly lowers the risk of bacteria culture, a critical factor in food production environments.

Conclusion:

Employing AMT's PostPro SF series for post-processing 3D printed Bluecare components substantially enhances food safety and quality assurance across production lines.



BEFORE ————— AFTER