BD and Envetec Demonstrate Closed-Loop Recycling Solution for Laboratory Plastics in Health Care

Study Opens Door to Sustainable Path for Polystyrene Petri Dishes, PET Tubes, Medical Tubing, and Polypropylene Syringes Across Healthcare Supply Chains

FRANKLIN LAKES, N.J. and BIRDHILL, Colo. and TIPPERARY, Ireland, Jan. 29, 2026 /PRNewswire/ -- BD (Becton, Dickinson and Company) (NYSE: BDX), a leading global medical technology company, and Envetec Sustainable Technologies ("Envetec"), announced today the successful completion of a joint feasibility study to test the ability to recycle polystyrene Petri dishes into new, high-quality manufacturing feedstock.

The results of the pilot study suggest that similar high-quality polymers, including polystyrene, polyester (PET), polypropylene, and polyethylene, could be reused in the manufacturing supply chain after being safely disinfected and processed. These polymers find extensive use in medical devices, such as those made by BD.

Envetec's GENERATIONS® technology converts regulated waste into recyclable polymer flakes through a validated, low-energy chemical disinfection process. In the BD pilot, unused BD BBL™ prepared plated media were processed as post-industrial material. The plates and their contents were shredded, separated, chemically disinfected, and transformed into recycled, clean polymer flakes. These flakes were extruded into polystyrene pellets and molded into new Petri dish prototypes. Material property testing and molding feasibility were successfully completed.

"This pilot marks the first step in a broader effort to demonstrate the feasibility of recovering and recycling multiple types of plastic products across healthcare supply chains," said Malcolm Bell, CEO of Envetec Sustainable Technologies. "By creating a proof of concept for a pathway that allows regulated plastics to be safely treated and returned to productive use, we are opening the door to sustainable solutions that can help the industry avoid landfill and keep valuable materials in circulation."

Envetec and BD see clear opportunities to expand the pilot, cut reliance on virgin plastic, and keep high-value polymers in circulation.

"Single-use devices made of high-quality plastics play a critical role in modern health care due to safety, ease of use and scalability, but we recognize the long-term impact that these materials can have on the environment," said Nikos Pavlidis, worldwide president, Diagnostic Solutions at BD. "This pilot, conducted by BD's Sustainable Medical Technologies Institute, represents an important step toward enabling circular economy solutions for other high-volume healthcare consumables made from commonly used plastics, such as blood collection tubes, syringes and packaging."

Envetec's GENERATIONS technology is currently being deployed in biopharma and life science facilities, hospitals, and food and beverage sectors across the United States and Europe. This technology processes regulated medical and biohazardous waste, transforming it into clean polymer flake suitable for recycling.

In collaboration with customers and recycling partners, Envetec is developing sustainable circular pathways for treated laboratory plastics. This process involves converting clean flake into recycled pellets and, where possible, into new plastic products.

About BD

BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its more than 70,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com or connect with us on LinkedIn at www.linkedin.com/company/bd1/, X (formerly Twitter) @BDandCo or Instagram @becton_dickinson.

About Envetec Sustainable Technologies
Envetec Sustainable Technologies is an Irish cleantech company pioneering safe, non-thermal, on-site treatment of regulated medical and laboratory plastics. Its patented GENERATIONS® process enables facilities to disinfect and shred biohazardous plastic waste at the point of generation, producing clean polymer flake suitable for recycling into new products. By replacing incineration and landfill with circular recovery, Envetec helps healthcare organizations meet sustainability goals, reduce

emissions, and comply with emerging waste regulations.

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