

Getinge Clean

Renuzyme Plus Plastics Compatibility

Background

Renuzyme Plus is a dual-enzyme formula specifically designed to provide extra cleaning in variable water temperatures, or when shorter contact/soak times are required. Renuzyme Plus is excellent in washer-disinfectors, cart washers, sinks and ultrasonic baths using a robust, dual-enzyme formula. Its optimal dilution range is between 0.2 to 2.0 oz./gal of water (2.0 to 16 mL/L). Its optimal temperature range is from 70°F to 140°F (21°C to 60°C), but is functional below this range if the product is above freezing.

The data compiled in these experiments show the substrate compatibility between Renuzyme Plus and a wide variety of plastics and polymers used in the composition of medical devices. The objective was to expose a number of different substrates to conditions that are representative of instrument processing, and at the same time over exposing the substrates to Renuzyme Plus to determine if there was any change in weight gain of the sample materials.

Experimental Method

For the experimental design, the maximum optimal concentration of (2.0 oz./gal), an elevated temperature of 120°F and a contact time of 48 hours were used. Each individual substrate was first weighed on an analytical balance, and its mass recorded to the nearest 0.1 mg. Each substrate was then placed in a clean flint glass jar, and covered completely with the Renuzyme Plus solution. Prepared jars were then placed in a temperature-controlled oven at 120°F for 48 hours. After 48 hours, the jars were removed, each individual substrate removed, rinsed with deionized water, and allowed to dry for 24 hours. After the drying time was complete, each substrate was weighed on an analytical balance. Each substrate was also visually inspected for any adverse effects (cracks, pits, crazing). All data were recorded and analyzed for verification.

Results

All substrates listed below exhibited less than 1% change in weight, after being subjected to the conditions above with Renuzyme Plus. Visual inspection showed no unusual effects, and no cracks, crazing, or pitting of any of the substrates.

Borosilicate Glass
Ethyl Vinyl Acetate (EVA)
High Density Polyethylene
Nylon
Polystyrene
Polyurethane
PTFE Fluoropolymer (Teflon)

Polyethersulfone (Radel)
Polyoxymethylene (Delrin)
Polyphenylene oxide (Noryl)
Poly (methylmethacrylate) (PMMA)
Polycarbonate (Lexan)
Polychloroprene (Neoprene)
Silicone Rubber

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