

5 Reasons to Choose NitriDerm® Biodegradable Exam Gloves



- 1** Global waste production is expected to increase 70 percent to 3.4 billion tons by 2050.¹ This increase in waste will require new waste management facilities and communities are running out of space for additional landfills.
- 2** Incineration, a common alternative to landfill disposal, emits toxins and pollutants that cause substantial negative impacts on local air quality.²
- 3** Due to the costly infrastructure that is required for incineration, landfill disposal is a far less expensive means of waste management.
- 4** Conventional, non-biodegradable nitrile gloves decompose very slowly in landfills - this process can take hundreds of years, depending on the conditions.³
- 5** NitriDerm® Biodegradable gloves contain an organic additive which makes the glove a desirable food source for microbes that are present in landfills. These microbes digest the glove material and leave behind only biogas, water, and inert soil.

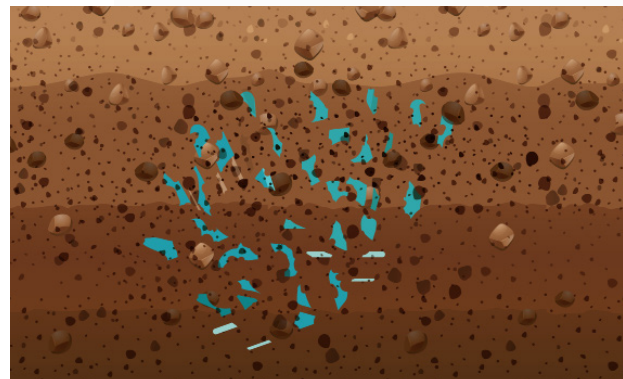
NitriDerm® Biodegradable Nitrile Exam Gloves are a clear eco-friendly choice for the future of your community.

What is this biodegradation technology and how does it work?

NitriDerm® Biodegradable nitrile exam gloves are manufactured with an organic additive which creates a food source for landfill microbes in anaerobic conditions - precisely the conditions present in today's industrial landfills where medical waste ends up.

This organic additive allows the glove to become a polymerized food source, specifically formulated to attract microbes found in landfills. When the bacteria consume the glove, they excrete an enzyme that dissolves and de-polymerizes the gloves' nitrile polymer chain.

This process, called mineralization, allows the microbes to break down the remaining polymer naturally. When this breakdown is complete, only biogas, water, and inert soil are left behind!



81% degradation rate, 490 Days (ASTM D5511)

References:

1. ClientEarth, *The Environment Impacts of Waste Incineration*
2. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development Series. Washington, DC: World Bank
3. ScienceDirect, *COVID-19 discarded disposable gloves as a source and a vector of pollutants in the environment.*



Validated Biodegradation Rate

NitriDerm® Biodegradable gloves biodegradation rates have been verified by an independent lab using ASTM D5526 and ASTM D5511 methods.¹

Test Method	Purpose of Testing	Result Summary
ASTM D5526	To determine the degree and rate of anaerobic biodegradation of materials in accelerated landfill conditions. This is a long term test that replicates the landfill environment of low heat, high pressure, limited oxygen, no light and low moisture.	63% biodegradation in 609 days.*
ASTM D5511	To determine the degree and rate of anaerobic biodegradation of materials in high-solids anaerobic-digestion conditions, which replicates the anaerobic digester or landfill bioreactor environment.	81% biodegradation in 490 days.*

References: 1. Eden Research Laboratory, Biodegradation test results based on ASTM D5526 & ASTM 5511

*The actual biodegradation rates will vary depending on the landfill conditions and the biological activity of microorganisms surrounding the nitrile gloves.

Validated Glove Physical Properties

NitriDerm® Biodegradable gloves cannot biodegrade prior to disposal. The unique formulation only allows the biodegradation process to begin when surrounded by microbes present in an anaerobic landfill environment.

Real-time shelf life testing proves that the physical properties of NitriDerm® Biodegradable gloves remain unchanged for up to 5 years.*

*Physical Properties tested in accordance with ASTM D6319: Standard Specification for Nitrile Examination Gloves for Medical Application

Average Length	9.5 in ♦ 240 mm
Average Palm Thickness	2.0 mil ♦ 0.05 mm
Average Finger Thickness	3.1 mil ♦ 0.08 mm

Tensile Strength & Elongation	Before Aging	After Accelerated Aging
Tensile Strength (Mpa)	31	33
ASTM Requirement Min. (Mpa)	14	14
Elongation (%)	565	475
ASTM Requirement Min. (%)	500	400



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**Tested for use with Chemotherapy
Drugs & Fentanyl Citrate**



**This Product Is Made From 100% Nitrile Synthetic Polymer
And Is Not Made With Natural Rubber Latex**

