

# Nature Gloves

by MED-COMFORT

## Cress test (agricultural test) Nature Glove

For the biodegradability of plastics, the origin of the raw material, i.e. whether fossil or renewable raw materials were used in the manufacture of the product, is irrelevant. The only thing that determines whether a material is biodegradable is its chemical structure. Only if microorganisms and fungi, or their enzymes, can break down and completely metabolise the molecules that make up the plastic, is it also biodegradable. Biodegradable plastics are completely decomposed by microorganisms to carbon dioxide (CO<sub>2</sub>), water (H<sub>2</sub>O), mineral salts and biomass. In the fermentation process, methane (CH<sub>4</sub>) can also be produced during decomposition.



Fig.1: Total samples without and with test specimen after 5 days



Fig. 2. total samples without and with test specimen Biodegradable after 30 days



Origin sample after 11 days



Test specimen 1 after 11 days



Test specimen 2 after 11 days

The tests can be carried out either under defined laboratory conditions or under field conditions relevant to practice. The evaluation of the tests is carried out after a specified test period on the degradation rate of products as well as the environmental compatibility or environmental impact of decaying products (via ecotoxicological tests or chemical analysis). Standardised procedures are used for these end parameters.

Do you have any questions? Please feel free to contact us:

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# A LITTLE MOVE FOR YOU – A GREAT STEP FOR THE ENVIRONMENT.

The innovation in hand protection:

**Nature Gloves** – biodegradable disposable protective gloves!

by MED-COMFORT

- Biodegradable
- Nitrile contains no allergenic latex proteins
- Comfortable design for ergonomic work
- Excellent fit
- Polymer coated
- Unique formulation
- Food certified
- PPE category III according to PPE Regulation (EU) 2016/425
- Class I medical device according to Regulation (EU) 2017/745

The innovation for food handling, medicine, care and more.  
Be good to the environment.



Biodegradable



Thanks to the Nature Glove, you can do both:

## Hand protection and environmental protection!

Biodegradable protective gloves should dissolve in the soil. Residues from additives and dyes must not have a negative impact on the environment. That's why we at AMPri take a very close look at what happens to the various glove samples when they decompose in the soil. How quickly or how slowly a decomposition process takes place, what remains of the glove at the end. We carry out all this in our own bio-degradation laboratory.



Picture: AMPri degradation laboratory

After use, the biodegradable nitrile glove alternative can be easily disposed of via compost waste. In the event of biological or chemical contamination, the glove must, of course, be disposed of via hazardous waste

(with proof of chemical or hospital hazardous waste) and must not be disposed of via normal household or compost waste.

### What is biodegradation?

Biodegradation is a process by which microbial organisms, metabolically or by enzymatic action, transform or change organic matter introduced into the environment. This is done by a selection of bacteria, fungi, insects, worms and other organisms that break down biodegradable material back into natural elements.

### How does the Nature Glove degradation work?

Biodegradation begins as soon as the disposable gloves are disposed of in low-oxygen conditions, such as landfills. Normally, nitrile is less degradable because anaerobic soil microbes have little natural affinity for the polymer. However, **Nature Glove** uses Enviro Technology (MET), which accelerates the biodegradation of nitrile in active landfills under low-oxygen conditions through naturally occurring microbial activity as well as suitably similar circumstances. MET has been tested by independent laboratories using

internationally recognised testing standards (ASTM D5511, ASTM D5526). As glove experts, testing to ASTM D5526 procedures is not enough for us. We strive for knowledge, we are curious, we test and research in our in-house laboratory and as a result we have developed our own standard for bio-degradation. The tests are carried out under defined outdoor conditions. The evaluation of the tests is carried out after a predefined test period (long-term tests are currently running and are planned to last 4 years) on the degradation rate of products as well as the environmental compatibility through rotting gloves. In this case, we carry out an ecotoxicological assessment. The gloves have the same properties as conventional nitrile disposable gloves until disposal.

### Why should you choose the Nature Glove?

The **Nature Glove** is the perfect glove for users who want to use sustainable products. Products that are disposed of in modern landfills are also renewable energy sources. The CO<sub>2</sub> and methane released can also be used as a source of energy and thus be of benefit to the community. Energy produced from biologically recycled products in modern land-

fills is cost-effective and a reliable form of renewable energy.

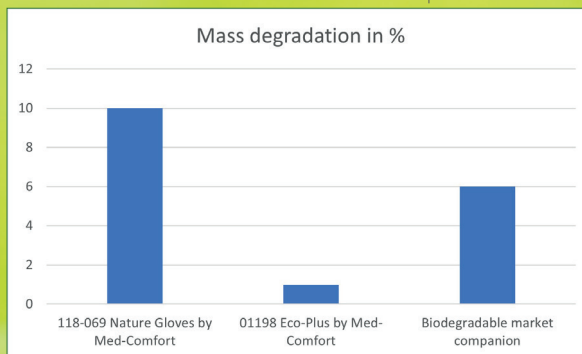
The polymer-coated **Nature Glove** is food-certified, making it the ideal glove for use in food processing and handling, the food industry, commercial kitchens, canteens and catering and vegan kitchens.

Quality features:

- AQL 1,5
- DIN EN ISO 21420: 2020
- DIN EN 455 (series)
- DIN EN ISO 374 (series)
- Suitable for foodstuffs according to regulation (EC) 1935/2004
- PPE category III according to PPE regulation (EU) 2016/425
- Class I medical device according to Regulation (EU) 2017/745

Nature Gloves laboratory test for mass degradation and Degradation in percent after 90 days

Glove designation	Mass degradation in %
118-069 Nature Gloves by Med-Comfort	10
01198 Eco-Plus by Med-Comfort	1
Biodegradable market companion	6



Glove designation	Degradation in %
118-069 Nature Gloves by Med-Comfort	60
01198 Eco-Plus by Med-Comfort	6
Biodegradable market companion	45

