



RAPPORTO DI PROVA / TEST REPORT

NUMBER

0958\FPM\FOOD\23_2

ISSUE DATE

22/09/2023

BUSINESS AREA

BA Food Packaging Materials

LABORATORY

Food

SPECIMEN DESCRIPTION

Samples named "Life-Blend"

(English translation – ref. Test report 0680_FPM_FOOD_23_2)

CUSTOMER

STYLA S.r.l.
VIA ENRICO FERMI, 52/O
24035 CURNO (BG)

REFERENCE STANDARD

ISO 846:2019

GENERALITIES

- Sample receiving date: 28/06/2023
- Analysis start date: 14/07/2023
- Analysis end date: 16/08/2023
- Laboratory site: Viale Lombardia, 20/B – 20021 Bollate (MI)
- Test site: Viale Lombardia, 20/B – 20021 Bollate (MI)
- Deviation from test methods: NO

SAMPLE DESCRIPTION

- Samples named “Life-Blend”

SAMPLING AND PICKING

The sampling for the test has been done drawing casually part of the sample in our possession. Sampling was carried out according to the following procedures.

Subject that performed the sampling

Sampling report

Notified Body

Reference number
Date of issue

TAB

Reference number
Date of issue

CSI-CERT

Reference number
Date of issue

Customer

Reference number --
Date of issue --

Other

Reference number
Date of issue

Transport carried out by: CSI Technician Courier Customer

DECLARATION

The test results of the present report are related exclusively to the tested sample, as received. The data relating to the sample are provided by the customer and not verified by the laboratory, unless expressly indicated. The laboratory declines all responsibility.

The present test report cannot be partially reproduced without the authorization of laboratory managing Director.

The uncertainties are estimated as extended uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor = 2. In all cases of declarations of conformity, the compliance will be evaluated by adding the extended uncertainty to the obtained value (except different occurrences that, in case, will be properly described).

PERFORMED DETERMINATIONS

Evaluation of the action of microorganisms on plastics according to UNI EN ISO 846:2019.

Determining the characteristics of the material about the activity biological organisms, according to UNI EN ISO 846:2019, was made by visual inspection of the plates of the samples subjected to the action of microorganisms.

For the test were prepared three batches of samples, each composed of 3 units:

- **Batch "0"**, control specimens, preserved in the laboratory under normal conditions of temperature and humidity;
- **Batch "I"**, specimens subjected to biological attack, which is inoculated with microorganisms (molds or bacteria) and incubated;
- **Batch "S"**, sterile specimens (negative control) subjected to the same conditions of incubation of the lot "I".

Resistance to bacteria (method C)

The evaluation of the resistance to bacteria has been carried out using the strain *Pseudomonas aeruginosa* ATCC 25668.

The specimens have been placed on Petri dishes containing a solidified layer, about 5 mm thick, of mineral-agar medium inoculated with a bacteria suspension of about $5,0 \times 10^4$ cfu/ml. Specimens were completely covered with a second layer of the same inoculated and melted agar and it was left to solidify.

The Petri dishes so treated have been incubated at $29 \text{ °C} \pm 1 \text{ °C}$ for 4 weeks.

This is the batch "I".

In parallel was treated a control group of specimens (batch "S"); these have been placed on Petri dishes containing not inoculated agar and the surface of specimens have been disinfected with ethanol-water mixture 70:30 as microbicide.

The Petri dishes have been incubated as batch "I", at $29 \text{ °C} \pm 1 \text{ °C}$ for 4 weeks.

RESULTS

Evaluation of the action of microorganisms on plastics according to UNI EN ISO 846:2019.

Resistance to bacteria (method C)

At week intervals the presence of bacteria growth over or surrounding the material under test has been monitored.

The results obtained at the end of the test are summarized in the following table:

Legend:

- + heavy growth
- +/- isolated colonies
- no growth

Sample batch	Evaluation of colony growth
Batch I (SAMPLE as is, on incomplete inoculated medium)	+/-
Batch S (SAMPLE on incomplete NOT inoculated medium)	-
<i>Incomplete inoculated medium (without sample)</i>	+
<i>Incomplete sterile medium (without sample)</i>	-
<i>Positive control (P. aeruginosa suspension on BHI medium 48h at 29±1°C)</i>	+

The evaluation test of the weight variation was not significant between the average weight of the samples at time 0 and the final average weight (Student's t test, p <0.01).

OPINIONS AND INTERPRETATIONS

Based on the data obtained, the sample examined name "Life-Blend" shows limited resistance to bacterial growth according to UNI EN ISO 846:2019 - method C.

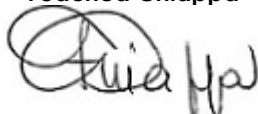
In fact, growth of isolated colonies is observed on the incompletely inoculated medium plates containing the sample tested.

DATA
Date

22/09/2023

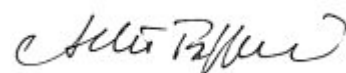
Operating Sector Food

Federica Chiappa



BA Food Packaging Materials

Alberto Taffurelli



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