

Test report n°: **16LA19121** of

Spett.  
**Parx Plastics Europe BV**  
 Westblaak 189  
 3012KJ Rotterdam ()

**Sample Information**

Test subject: **Polymers**  
 Description: **TPU + Saniconcentrate 3%**  
 Batch: **Cod. 33**  
 Registration date: **20/12/2016**  
 Date of arrival: **20/12/2016** Hour of arrival: **13.00.00**  
 Date analysis commenced: **20/12/2016** Date analysis completed: **02/01/2017**



**Sampling data**

Date: **20/12/2016**  
 Sample supplied by: **client**  
 Transport: **client**

| Parameter - Note<br><i>Method - Note</i>   | U.M. | Result<br>Note                     | LoQ |
|--|------|------------------------------------|-----|
| Determination of antibacterial activity (R) - $R=(U_t-U_o)-(A_t-U_o)$<br><i>ISO 22196:2011</i> |      | <b>4,5</b><br>Reduction of 99.997% | 0.1 |
| Size of test specimens (H x L)   | mm   | <b>50x50</b>                       |     |
| Thickness of test specimens  | mm   | <b>2,0</b>                         |     |
| Type of polymer used for the cover film  |      | <b>Polipropilene</b>               |     |
| Size of the cover film (H x L)   | mm   | <b>40x40</b>                       |     |
| Thickness of the cover film  | mm   | <b>0,10</b>                        |     |
| Type of Gram-negative strain   |      | <b>E.coli - ATCC 25922</b>         |     |
| Volume of test inoculum  | ml   | <b>0,4</b>                         |     |
| Number of viable bacteria in the test inoculum   | n°   | <b>350000</b>                      |     |
| Uo - N° of viable bacteria recovered from the untreated test specimens after                   | log  | <b>4,3</b>                         | 0.4 |
| Ut - N° of viable bacteria recovered from the untreated test specimens after 24                | log  | <b>5,1</b>                         | 0.4 |
| At - Count bacteria recovered from the treated samples 24 hours post                           | log  | <b>0,6</b>                         | 0.4 |

The analytical results are exclusively referred to the sample.  
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Laboratory management system certified UNI EN ISO 9001:2008 by CSQA with the No. 14270. Inclusion in the list of regional laboratories carrying out analysis in the context of self-control procedures for Food Industries No. 52. Recommended by AIC for the analysis of quantification of gluten in food matrices. Registered laboratory for the analysis of food contact materials intended for export to Japan.

follows Test report n°: **16LA19121** of

| <b>16LA19121/01 TPU + Saniconcentrate 3%</b>   |      |                                    |     |
|--|------|------------------------------------|-----|
| Parameter - Note<br><i>Method - Note</i>   | U.M. | Result<br>Note                     | LoQ |
| Determination of antibacterial activity (R) - $R=(U_t-U_o)-(A_t-U_o)$<br><i>ISO 22196:2011</i> |      | <b>3,4</b><br>Reduction of 99.962% |     |
| Size of test specimens (H x L)   | mm   | <b>50x50</b>                       |     |
| Thickness of test specimens  | mm   | <b>2,0</b>                         |     |
| Type of polymer used for the cover film  |      | <b>Polipropilene</b>               |     |
| Size of the cover film (H x L)   | mm   | <b>40x40</b>                       |     |
| Thickness of the cover film  | mm   | <b>0,10</b>                        |     |
| Type of Gram-positive strain   |      | <b>S.aureus - ATCC 25923</b>       |     |
| Volume of test inoculum  | ml   | <b>0,4</b>                         |     |
| Number of viable bacteria in the test inoculum   | n°   | <b>140000</b>                      |     |
| U <sub>o</sub> - N° of viable bacteria recovered from the untreated test specimens after       | log  | <b>3,9</b>                         | 0.4 |
| U <sub>t</sub> - N° of viable bacteria recovered from the untreated test specimens after 24    | log  | <b>4,7</b>                         | 0.4 |
| A <sub>t</sub> - Count bacteria recovered from the treated samples 24 hours post               | log  | <b>1,3</b>                         | 0.4 |

LEGEND: **U.M.** = Unit of measurement; (**Sup**) = upper limit; (**Inf**) = Lower Limit ;  $x \div y$  = acceptable range; **LoQ** = limit of quantification, the threshold value below which you choose not to bring any numerical result for the parameter in question; this limit is provided directly by the method, or is chosen on the basis of the experimental detection limits (LoQ or LoD) so as not to be changed over time or according to the chemical-physical or microbiological single sample. **LOD** = limit of detection; **NQ** = unquantifiable, indicates a value less than LoQ

"<x" or ">x" respectively indicate a value lower or higher than the measuring range of the test

**UNLESS OTHERWISE SPECIFIED:** Quantitative microbiological tests are performed on single replica and two consecutive dilutions in accordance with UNI EN ISO 7218: 2013 (with the exception of the analysis of water and MPN); the results of this test report are not correct for recovery factors (R) as the values of recovery are in the tolerance specified in the test method; summations are calculated using the criterion of the lower bound (LB)

The results marked in red indicate a exceeding the defined limits.

If the sampling isn't the responsibility of 3ALaboratori Ltd., the test results were obtained on the basis of the data declared.

Technical Director

 Dr. Giovanni Mitaritonna  
Chemist

Ordine Interprov. Chimici del Veneto - Padova n° 910 SEZ. A

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