LAB N° 1165 L

Test report n°: **20LA06234** of **14/05/2020**

Dear
Parx Plastics Europe BV
Westblaak 189
3012KJ Rotterdam ()

Acceptance Data

Subject of the test: **Polymers**

Transport: **Customer**

Date of arrival: **05/05/2020** Time of arrival: **11.27**

Acceptance date: **05/05/2020**

Sample data

Description: **Metal keys**

Sampling data

Sampling by: **Customer**

Place: **Customer location**

The analytical results are exclusively referred to the sample.
Representation of a Test Report signed electronically in accordance with current legislation.

Laboratory management system certified UNI EN ISO 9001: 2015 by CSQA with the No. 14270. Recommended by AIC for the analysis of quantification of gluten in food matrices. Registrated laboratory for the analysis of food contact materials intended for export to Japan.
Laboratory registered in the list of regional laboratories carrying out analysis in the context of self-control procedures for Food Industries No. 52. It is the responsibility of the OSA to communicate the warnings to the bodies in charge

3A Laboratori SRL - The tests are performed at the registered office
Via A.Volta 1/d Maserà di Padova - 35020 (PD) Email info@3alaboratori.it Tel. 049 0994658-0994671 Fax. 049 8868430
Cap. Soc. €100000,00 I.V. - REA di PD 378402 - Codice Fiscale, Iscriz. Reg .Imprese di Padova e Partita Iva 04296730288

Test report n°: **20LA06234** of **14/05/2020**

Parameter - Specification *Method - Notes*	M.U.	Results Notes	LoQ	LoD	Test start Test end
Determination of antibacterial activity (R) - R=(Ut-Uo)-(At-Uo) ISO 22196:2011		**> 2.2**	0,3		11/05/2020 13/05/2020
Determination of antibacterial activity (R) ISO 22196:2011	%	**> 99.369**	50		11/05/2020 13/05/2020
Size of test specimens (H x L)	mm	**19 x 12**			11/05/2020 13/05/2020
Thickness of test specimens	mm	**4,0**			11/05/2020 13/05/2020
Type of polymer used for the cover film		**Polypropylene**			11/05/2020 13/05/2020
Size of the cover film (H x L)	mm	**10 x 10**			11/05/2020 13/05/2020
Thickness of the cover film	mm	**0,10**			11/05/2020 13/05/2020
Type of Gram-negative strain		**Escherichia coli ATCC 8739**			11/05/2020 13/05/2020
Method of conditioning		**UV-C radiation (30 min per side)**			11/05/2020 13/05/2020
Reference used		**Untreated sample**			11/05/2020 13/05/2020
Volume of test inoculum	ml	**0,1**			11/05/2020 13/05/2020
Number of viable bacteria in the test inoculum	n°	**20000**			11/05/2020 13/05/2020
Uo - N° of viable bacteria recovered from the untreated test specimens after inoculation	log	**4,3**	0,4		11/05/2020 13/05/2020
Ut - N° of viable bacteria recovered from the untreated test specimens after 24 h	log	**2,2**	0,4		11/05/2020 13/05/2020
At - Count bacteria recovered from the treated samples 24 hours post inoculation	log	**NQ**	0,4		11/05/2020 13/05/2020

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20LA06234/01 Metal keys

Parameter - Specification *Method - Notes*	M.U.	Results Notes	LoQ	LoD	Test start Test end
Determination of antibacterial activity (R) - R=(Ut-Uo)-(At-Uo) ISO 22196:2011		**> 3.7**	0,3		06/05/2020 08/05/2020
Determination of antibacterial activity (R) ISO 22196:2011	%	**> 99.980**	50		06/05/2020 08/05/2020
Size of test specimens (H x L)	mm	**19 x 12**			06/05/2020 08/05/2020
Thickness of test specimens	mm	**4,0**			06/05/2020 08/05/2020
Type of polymer used for the cover film		**Polypropylene**			06/05/2020 08/05/2020
Size of the cover film (H x L)	mm	**10 x 10**			06/05/2020 08/05/2020
Thickness of the cover film	mm	**0,10**			06/05/2020 08/05/2020
Type of Gram-positive strain		**Staphylococcus aureus - ATCC 6538**			06/05/2020 08/05/2020
Method of conditioning		**UV-C radiation (30 min per side)**			06/05/2020 08/05/2020
Reference used		**Untreated sample**			06/05/2020 08/05/2020
Volume of test inoculum	ml	**0,1**			06/05/2020 08/05/2020
Number of viable bacteria in the test inoculum	n°	**6300**			06/05/2020 08/05/2020
Uo - N° of viable bacteria recovered from the untreated test specimens after inoculation	log	**3,8**	0,4		06/05/2020 08/05/2020
Ut - N° of viable bacteria recovered from the untreated test specimens after 24 h	log	**3,7**	0,4		06/05/2020 08/05/2020
At - Count bacteria recovered from the treated samples 24 hours post inoculation	log	**NQ**	0,4		06/05/2020 08/05/2020

If the sampling is not the responsibility of 3ALaboratori srl, the latter declines all responsibility with regard to sampling information as provided by the Customer; the test results refer only to the sample as received. When these data include measurements that affect the measurement unit, the results expressed are obtained by processing them. The Acceptance Data is the responsibility of the Laboratory while the sample data are the responsibility of the Customer. If the sample is not suitable but the Customer chooses to continue anyway, the laboratory declines all responsibility for the results that could be influenced by the deviation

LEGEND: **U.M.** = Unit of measurement; **(Sup)** = upper limit; **(Inf)** = Lower Limit ; **LoQ** = limit of quantification, it is the lower limit of concentration above which it is possible to obtain a quantitative measurement instrumentally; in microbiology the LoQ is of a theoretical nature; **LoD** = limit of detectability, is the lower limit of concentration below which the sample cannot be detected; in qualitative analyzes it represents the minimum concentration at which an analyte can be determined or not; **NQ** = unquantifiable, indicates a value less than LoQ; **NR** = not detectable, indicates a value lower than LoD;"**<x**" or "**>x**" respectively indicate a value lower or higher than the measuring range of the test, where x is the result

(§): Indicates a change from the previous version of the Test Report.

(Ie): Indicates that the parameters/activities are performed in subcontracting.

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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 corrected 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)

(*): Test/activity not accredited by ACCREDIA

Technical Director

Dr. Giovanni Mitaritonna
Chemist
Ordine Interprov. Chimici del Veneto - Padova n° 910 SEZ. A

---------- End of Test Report ----------

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