

CUSTOMER  
**INDUSTRIE PLASTICHE LOMBARDE SPA**  
**Via Leonardo Da Vinci, 13C**  
**21023 BESOZZO VA**

Modena (Italy), li 14/05/2012

Analysis beginning date  
29/03/2012

**TEST REPORT nr. 12C16020-In-0**

**SAMPLE 12C16020**

Description provided by Customer: TUBE "ARIANNA BIO B1 01" - SAMPLE ARRIVED ON 29/03/2012 - THE SAMPLE HAS BEEN TAKEN BY THE CUSTOMER. THE TRANSPORT HAS BEEN MADE BY NEOTRON.  
Sample Condition on Receipt: Room temperature

ANALYSIS DESCRIPTION	RESULT	U	REC. %	UNIT OF MEASURE	LQ	LD	METHOD	ANALYTICAL TECHNIQUE	ANALYSES ENDING DATE	
<b>MIGRATION TESTS IN ACID SIMULANT</b>										
Test conditions	The migration test was carried out filling the sample with the simulant under these conditions: contact time: t= 10 days contact temperature: T= 40°C						DM 21/03/1973GUn°104 20/04/1973;DMn°220 26/04/1993GUn°162 13/07/1993;DMn°735 28/10/1994GUn°1 02/01/1995;DMn°338 22/07/1998GUn°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DMn°299 22/12/2005GUn°37 14/02/2006;DMn°174 24/09/2008GUn°261 07/11/2008			16/04/2012
- Surface/volume ratio	2,2/0,09			dm2 / dm3			DM 21/03/1973GUn°104 20/04/1973;DMn°220 26/04/1993GUn°162 13/07/1993;DMn°735 28/10/1994GUn°1 02/01/1995;DMn°338 22/07/1998GUn°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DMn°299 22/12/2005GUn°37 14/02/2006;DMn°174 24/09/2008GUn°261 07/11/2008			16/04/2012
Overall migration in Acetic Acid 3% (SIM B)	< LQ			mg/dm2	1,0		DM 21/03/1973GUn°104 20/04/1973;DMn°220 26/04/1993GUn°162 13/07/1993;DMn°735 28/10/1994GUn°1 02/01/1995;DMn°338 22/07/1998GUn°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DMn°299 22/12/2005GUn°37 14/02/2006;DMn°174 24/09/2008GUn°261 07/11/2008			16/04/2012
- LAW LIMIT 10										
Specific migration of Di-2-ethylhexyl adipate (DEHA) in acetic acid 3% (Sim B)	< LQ			mg/kg	0,030		* MIG-Adip-ATC	GC-MS	16/04/2012	
Specific migration of vinyl chloride monomer in acetic acid 3% (Simulant B)	< LQ			mg/kg	0,006		* MIG-CVM	GC-FID	09/05/2012	
Specific migration of Epoxidized Soya Bean Oil (ESBO) in acetic acid 3% (SIM B)	< LQ			mg/kg	0,60		* MIG-ESBO	GC-MS/MS	04/05/2012	
<b>Specific Migration Metals in Acetic Acid (SIM B)</b>										
Specific migration of Zinc in acetic acid 3% (SIM B)	0,290			mg/kg	0,005		* MS1-metalli		18/04/2012	
Specific migration of Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate in acetic acid 3% (simulant B)	< LQ			mg/kg	0,60		* MIG-HPPOR	HPLC	17/04/2012	

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ANALYSIS DESCRIPTION	RESULT	U	REC. %	UNIT OF MEASURE	LQ	LD	METHOD	ANALYTICAL TECHNIQUE	ANALYSES ENDING DATE	
<b>MIGRATION TESTS IN ALCOHOLIC SIMULANT (Sim C) at 20%</b> Test conditions	The migration test was carried out filling the sample with the simulant under these conditions: contact time: t= 10 days contact temperature: T= 40°C						DM 21/03/1973GU n°104 20/04/1973;DM n°220 26/04/1993GU n°162 13/07/1993;DM n°735 28/10/1994GU n°1 02/01/1995;DM n°338 22/07/1998GU n°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DM n°299 22/12/2005GU n°37 14/02/2006;DM n°174 24/09/2008GU n°261 07/11/2008			16/04/2012
- Surface/volume ratio	2,2/0,09			dm2 / dm3			DM 21/03/1973GU n°104 20/04/1973;DM n°220 26/04/1993GU n°162 13/07/1993;DM n°735 28/10/1994GU n°1 02/01/1995;DM n°338 22/07/1998GU n°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DM n°299 22/12/2005GU n°37 14/02/2006;DM n°174 24/09/2008GU n°261 07/11/2008			16/04/2012
Overall migration in ethanol 20% (SIM C)	1,2			mg/dm2	1,0		DM 21/03/1973GU n°104 20/04/1973;DM n°220 26/04/1993GU n°162 13/07/1993;DM n°735 28/10/1994GU n°1 02/01/1995;DM n°338 22/07/1998GU n°228 30/09/1998;DM n°123 28/03/2003 GU n°125 31/05/2003;DM n°299 22/12/2005GU n°37 14/02/2006;DM n°174 24/09/2008GU n°261 07/11/2008			16/04/2012
- LAW LIMIT 10										
<b>Migrazione specifica metalli in Etanolo 20% (v/v) (Sim C)</b> Migrazione specifica di Zinco in Etanolo 20% (v/v) SIM C	0,614			mg/kg	0,005		* MS1-metalli		18/04/2012	
Specific migration of Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate in ethanol 20%	< LQ			mg/kg	0,60		* MIG-HPPO-r	HPLC	17/04/2012	
Specific migration of vinyl chloride monomer in Ethanol 20%	< LQ			mg/kg	0,006		* MIG-CVM	GC-FID	09/05/2012	
Specific migration of Di-2-ethylhexyl adipate (DEHA) in ethanol at 20%	< LQ			mg/kg	0,030		* MIG-Adip-ATC	GC-MS	16/04/2012	

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**NEOTRON SPA**

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Laboratorio Qualificato D.M. 26-2-87 Art. 4 - Legge 46/82 per la Ricerca Applicata e Innovazione Tecnologica.  
Regione Emilia Romagna - AUTORIZZAZIONE Autocontrollo N° 008/MO/008  
BNN-Monitoring Fruit and Vegetables Approved Laboratory  
I-Monitoring EDEKA AG Fruit and Vegetables Registered Laboratory

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ANALYSIS DESCRIPTION	RESULT	U	REC. %	UNIT OF MEASURE	LQ	LD	METHOD	ANALYTICAL TECHNIQUE	ANALYSES ENDING DATE
Specific migration of Epoxidized Soyabean Oil (ESBO) in ethanol 20%	< LQ			mg/kg	0,60		* MIG-ESBO	GC-MS/MS	04/05/2012

**END TEST REPORT**

The original document is a PDF file with Digital Signature: 12C16020-In-0-DigitalSignature.pdf

Opinions and Interpretations - Not included in ACCREDIA accreditation.

**EVALUATION OF RESULTS**

Considering the subdivision of food products as reported in Encl. II of the Ministry Decree of 26 april 1993 n. 220 (implementing Directives 82/711/CEE, 85/572/CEE, 90/128/CEE e 92/39/CEE), under the applied test conditions (contact time and temperature) the analysed sample complies with the migration limits set for the following foodstuff classes:

All food products for which no migration tests are required and migration tests with the following simulants are required:

- A (moist food products with pH > 4.5)
- B (acid food products with pH<4,5)
- C (food products containing alcohol up to 20%)

For the packaging to be suitable for food contact it is also mandatory that the starting materials are included in the positive lists of regulation enforce and, in case special restrictions are provided for, the compliance with specific limits has to be checked.

Legislative references: D.M. (Ministry Decree) 21-03-73 and following updating - D.M. (Ministry Decree) 220 of 26-04-93 and following updating - Regulation UE n.10/2011 and following updating.

Test temperature uncertainty = ± 1°C

**Notes:**

- < LQ: = lower than Quantification Limit. Please note that results expressed as '<LQ' may not indicate the absence of the searched parameters in the sample.
- U: the reported uncertainty is the expanded uncertainty calculated using a coverage factor equal to 2 which gives a reliability of approximately 95%. For microbiological detections it is reported either the lower and the upper bounds of the confidence interval with a probability of 95% K=2 or the confidence interval itself.
- Results coming from microbiological tests are calculated according to the Standard ISO 7218:2007. If the results are reported as <4 (CFU/ml) or <40 (CFU/g), this means that the microorganisms are present in the sample but in amounts less than 4 CFU/ml or 40 CFU/g respectively.
- LQ: Quantification Limit. It is the lowest analyte concentration which can be detected at an acceptable precision (repeatability) and accuracy, under well defined conditions.
- LD: Detection Limit. It is the lowest analyte concentration which can be detected but not necessarily quantified, under well defined conditions.
- Conformity evaluation: values not complying with laws, decrees, national and EU regulations or specifications supplied by the customer are evaluated case by case, also taking into consideration the uncertainty of measure for each single test and the regulations on rounding-off of values, and pointed out when considered as "non conform".
- Rec %: Recovery % "+" means that the recovery has been applied to the result. The numeric results between brackets (..) after the expression <LQ are purely indicative of traces that cannot be exactly quantified.
- Methods marked with an asterisk (\*) are not accredited by ACCREDIA.

TEST REPORT VALID FOR ALL LEGAL PURPOSES (Italian R.D. 1-3-1928 n°842 (article 16), - Italian Law 19-7-1957 n°679 articles 16 and 18, Italian Ministerial Decree 25-3-1986).

Test Report issued according to the 17025:2005 Standard

DATA and SAMPLE STORAGE: Raw data, chromatographic paths and instrumental reports are stored for 5 years. One control sample is stored for 2 months.

Data expressed in this test report refer only to the sample tested in the laboratory. The description or any other reference concerning the sample are declared by the customer. This Test Report cannot be reproduced except in full. Partial reproductions must be authorized in writing by our laboratory.

LABORATORY MANAGER: DR. GIAN CARLO GATTI - MEMBER OF AOAC N. VM 90231001 - EURCHEM

Approved by Analysis Manager - laboratory LMIA

Approved by Analysis Manager - laboratory LMAA-Met

Approved by Analysis Manager - laboratory PCK

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