

DIVISIONE: **FOOD PACKAGING MATERIALS** LABORATORIO: **FOOD CONTACTS**
 DIVISION: **FOOD PACKAGING MATERIALS** LABORATORY:

RAPPORTO DI PROVA <i>(Test Report)</i>		Pag. 1
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N°	1265\FPM\FDC\15	Data: 12/11/2015
		Date:

IDENTIFICAZIONE E DESCRIZIONE DEL CAMPIONE:
SPECIMEN DESCRIPTION:

Pan cm 24 art. OL6324 Olivilla green

DATI IDENTIFICATIVI DEL CLIENTE:
CLIENT:

ILLA SpA
VIA GHISOLFI GUARESCHI, 17
43015 NOCETO (PR)

NORMA DI RIFERIMENTO:
REFERENCE STANDARD:
 D.P.R. 777 dated 23/08/1982, D.L. 108 dated 25/01/1992, D.M.34 dated 21/3/73
 European Directives: 82/711/EEC GUCEE L 297 dated 23/10/82, 85/572/EEC GUCEE L 372 dated 31/12/1985, 93/8/EEC GU L90 dated 14/04/1993, 97/48/EC GUCE L 222 dated 12/8/97. Regulations 1935/2004/EC GUCE L 338 dated 13/11/04 and 1895/2005/EC GUCE L 302 dated 19/11/2005. Regulation 10/2011/EU, GUUE L 12 del 15/01/2011, and subsequent updatings.
 UNI EN 1186 1+15:2003 (see the overall migration test description for the identification of the technical standard part)

DISTRIBUZIONE ESTERNA: <i>OUTSIDE DISTRIBUTION:</i> ILLA SpA Sig. Nicola Ferrari	DISTRIBUZIONE INTERNA: <i>INSIDE DISTRIBUTION:</i> Copy to Division Head
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ENTE DI ACCREDITAMENTO:
ACCREDITATION BODY:

GENERALITIES

- Sample receiving date: 14/10/2015
- Analysis start date: 19/10/2015
- Analysis end date: 10/11/2015
- Deviation from test methods: NO

SAMPLE DESCRIPTION

Pan cm 24 art. OL6324 Olivilla green

SAMPLING

The initial sampling has been done by the customer.
The sampling for the test has been done drawing casually part of the sample in our possession.

DECLARATION

The test results of the present report are related exclusively to the tested sample.
The present test report cannot be partially reproduced without the authorization of CSI 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.

PERFORMED DETERMINATIONS

1) DETERMINATION OF THE OVERALL MIGRATION

UNI EN 1186-1:2003 + UNI EN 1186-9:2003 + UNI EN 1186-14:2003

D.P.R. 777 dated 23/08/1982, D.L. 108 dated 25/01/1992, D.M.34 dated 21/3/73
European Directives: 82/711/EEC GUCEE L 297 dated 23/10/82, 85/572/EEC GUCEE L 372 dated 31/12/1985, 93/8/EEC GU L90 dated 14/04/1993, 97/48/EC GUCE L 222 dated 12/8/97.
Regulations 1935/2004/EC GUCE L 338 dated 13/11/04 and 1895/2005/EC GUCE L 302 dated 19/11/2005.

Food simulant	Contact condition
Acetic acid in aqueous solution 3% w/V	2 hours at 100°C – repeated contact
Isoctane	4 hours at 60°C – repeated contact
Ethanol 95% V/V in aqueous solution	6 ore a 60 °C – repeated contact

Migration test was carried out by **Article Filling**.
LOD (limit of detection): 5 mg/kg. Volume: 15 dL. Surface: 5.5 dm².

2) QUANTITATIVE DETERMINATION OF PRIMARY AROMATIC AMINES: METHOD L.00.00-6 (LMBG § 35)

METODO L.00.00-6 (LMBG § 35)

The procedure used to quantify the primary aromatic amines was a spectrophotometer method, based on the colour complex formed by a diazotization and a coupling reaction. The solution was further concentrated and eluted on a solid phase column. The final solution was photometrically detected at 550 nm (Method Amtliche Sammiung von Untersuchungsverfahren method L.00.00-6 LMBG § 35, del 1995 agg. 2002)

An external calibration curve detected at 550 nm was used to quantify the primary aromatic amines. An aniline standard solution 0, 0.5, 1.0, 1.5, 2.0, 3.0, 4.0, 6.0 g in acetic acid 3% was detected.

LOD: 0.2 µg /100 ml or LOD: 0.002 mg/kg or LOD: 0.0003 mg/dmq (the limit is originally expressed in mg/kg it is possible to convert the measure unit by dividend for the factor 6 to express them in mg/dmq.)

3) SPECIFIC MIGRATION OF METALS FOR COOKWARE WITH NON-STICK COATING

MI_789200760_2015_Rev.0

Quantification of specific migration of chromium, cadmium, lithium, nickel and lead by ICP Plasma analysis technique, performed on each sample and simulant that the steel is usually for acetic acid 3% w/v resulting from the third contact brought to 100°C.

LMS: 0.05 mg/kg/each.

Li LOD:0.05mg/kg, LOD Cr: 0.05 mg/kg, LOD Pb: 0.05 mg/kg, LOD Cd: 0.05 mg/kg, Ni: 0.05 mg/kg

4) DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS (PAH)

MI_789200485_2015_Rev.0

A note amount of sample was extracted with solvent with internal standard in ultrasonic bath at 60°C for 30 min. The solution was concentrated and analysed by gas-cromatography technique (SIM acquisition of ion of 18 compounds) for the determination of polycyclic aromatic hydrocarbons.

This test has been carried out in accordance with the analysis method described in the document GS mark - Specification as per § 21 Para. 1 No. 3 ProdSG.

Limit Category 1: 0.2 mg/kg (ND)

5) SPECIFIC MIGRATION OF TETRAFLUOROETHYLENE

MI_789200796_2015_Rev.0

Determination of the specific migration of tetrafluoroethylene (CAS No. 000116-14-3 - Ref No. 25120) made simulants arising from the release test by HS-GC/MS technique. The quantification is performed by an external calibration of tetrafluoroethylene in the same simulants

LMS: 0.05 mg/kg

LOD: 0.05 mg/kg.

RESULTS

1) DETERMINATION OF THE OVERALL MIGRATION

Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Acetic acid in aqueous solution 3% w/v			
Contact condition: 2 hours at 100°C –rep. cont.			
Measured unit: mg/kg			
Measured value	Average value	Extended uncertainty	Limit value (according to DM 21/03/73)
< 5	< 5	---	60(+12)
< 5			
< 5			

Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Isoctane			
Contact condition: 4 hours at 60°C–rep. cont.			
Measured unit: mg/kg			
Measured value	Average value	Extended uncertainty	Limit value (according to DM 21/03/73)
< 5	< 5	---	60(+20)
< 5			
< 5			

Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Ethanol 95% v/v			
Contact condition: 6 ore a 60 °C–rep. cont.			
Measured unit: mg/kg			
Measured value	Average value	Extended uncertainty	Limit value (according to DM 21/03/73)
< 5	< 5	---	60(+20)
< 5			
< 5			

2) QUANTITATIVE DETERMINATION OF PRIMARY AROMATIC AMINES: METHOD L.00.00-6 (LMBG § 35)

Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Acetic acid in aqueous solution 3% w/v			
Contact condition: 2 hours at 100°C –rep. cont.			
Measured unit: mg/Kg			
measured value	average value	standard deviation	limit value (according to 10/2011)
< 0.002	< 0.002	--	0.010 mg/kg
< 0.002			

3) SPECIFIC MIGRATION OF METALS FOR COOKWARE WITH NON-STICK COATING

Pan cm 24 art. OL6324 Olivilla green		
Food simulant: Acetic acid 3% w/v		
Contact conditions: 2 hours at 100°C repeated contact		
Measured unit: mg/kg		
Element	Measured value	LMS: 0.05 mg/kg each
Cadmium	< 0.05	< 0.05
Chromium	< 0.05	< 0.05
Lead	< 0.05	< 0.05
Lithium	< 0.05	< 0.05
Nickel	< 0.05	< 0.05

4) DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS (PAH) (*)

The results are reported in these table, the concentration is in ppm (mg/kg).

Pan cm 24 art. OL6324 Olivilla green			
Compound	Unit	Measured value	Category 1
			Materials which are intended to be put in the mouth or materials contained in toys with intended and long-term skin contact (longer than 30 s)
Benzo[a]pyrene	mg/kg	< 0.1	< 0.2
Benzo[e]pyrene		< 0.1	< 0.2
Benzo[a]anthracene		< 0.1	< 0.2
Benzo[b]fluoranthene		< 0.1	< 0.2
Benzo[j]fluoranthene		< 0.1	< 0.2
Benzo[k]fluoranthene		< 0.1	< 0.2
Chrysene		< 0.1	< 0.2
Dibenzo[a,h]anthracene		< 0.1	< 0.2
Benzo[ghi]perylene		< 0.1	< 0.2
Indeno[1,2,3-cd]pyrene		< 0.1	< 0.2
Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene		< 0.1	< 1 Total
Naphthalene		< 0.1	< 1
Total 18 PAH		< 0.1	< 1

5) SPECIFIC MIGRATION OF TETRAFLUOROETHYLENE

Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Acetic acid in aqueous solution 3% w/v			
Contact condition: 2 hours at 100°C – rep. contact			
Measured unit: mg/kg			
measured value	average value	Extended uncertainty	limit value (according to DM 21/03/73)
< 0.05	< 0.05	---	0.05
< 0.05			



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Pan cm 24 art. OL6324 Olivilla green			
Food simulant: Rectified olive oil			
Contact condition: 2 hours at 175°C – rep. contact			
Measured unit: mg/kg			
measured value	average value	Extended uncertainty	limit value (according to DM 21/03/73)
< 0.05	< 0.05	---	0.05
< 0.05			

CONCLUSIONS

In the chosen test condition the samples **Pan cm 24 art. OL6324 Olivilla green** are suitable to be used in contact with aqueous, acidic, alcoholic and oily or fatty foodstuffs for which simulants A, B, C and D are used.

The sample tested by this Laboratory are therefore suitable to come in contact with foodstuff mentioned above on condition that they have been produced employing the monomers, additives and technical support agents according to in force legislation, specific migrations are respected and they do not induce any organoleptic modification on foodstuff.

Date
12/11/2015

Division Head
Alberto Taffurelli

Managing Director
Raoul Gatti