Test report ID XXXXX

Customer Example Company

Assignment Measurlabs provided testing services for food contact material as requested by the customer.

Sample(s) Sampling was performed by the customer.

Description: 500 ml PET bottle
Date of reception (dd/mm/yyyy): -
Batch number or other sample identification: -

Results The results presented on the next page(s) relate to the tested sample(s) only.

Summary of the results

Tests performed	Compliance
Sensory analysis – transfer of odor and flavor from food contact materials	Compliant[1]
Overall migration testing – simulant C	Compliant[2]
Specific migration testing – elements of Annex II in Commission Regulation (EU) 10/2011	Compliant[2]
Specific migration testing – primary aromatic amines	Compliant[2]
Specific migration testing – terephthalic & isophthalic acids	Compliant[2]
Specific migration testing – ethylene glycol	Compliant[2]
Specific migration testing – acetaldehyde	Compliant[2]
Specific migration testing – non-intentionally added substances (NIAS), GC-MS/FID	Compliant[2]

[1] Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food (last update Regulation (EU) 2019/1381 of 20 June 2019).
[2] Commission Regulation (EU) 10/2011 on plastic materials and articles intended for contact with food, as amended (last update Regulation (EU) 2025/351 of 21 February 2025).

On XXXXX, issued by

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Test results - organoleptic properties

Test methods

Sensory analysis - scoring method (6 assessors) according to DIN 10955 (odor and flavor). Test performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx.

Test parameter	Simulant	Conditions	Value[1]	Criteria	Compliance[2]
Transfer of odor	Water	10 days at 40 °C	0.0	≤ 2.5	compliant
Transfer of flavor	Water	10 days at 40 °C	0.0	≤ 2.5	compliant

[1] The scale used for the odor and flavor assessment

0 - no noticeable deviation of the odor/flavor
1 - barely noticeable deviation of the odor/flavor (hard to define yet)
2 - weak deviation of the odor/flavor
3 - significant deviation of the odor/flavor
4 - strong deviation of the odor/flavor (this intensity does not determine the probable maximum)

[2] While Regulation (EC) 1935/2004 does not state a clear compliance limit for the test, a score under 2.5 is considered to have no negative effect on organoleptic properties.

Test results - overall migration

Test methods Test methods according to EN 1186-1. The migration method was article fill. Test performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx.

Test conditions 10 days at 40 °C

Food simulant volume 500 ml

Test - simulant	Simulant	Unit	Result	Criteria	Compliance[1]
Overall migration - simulant C	20% ethanol	mg/dm^2	< 0.5 (< 0.5; < 0.5; < 0.5)	≤ 10	compliant

[1] Commission Regulation (EU) 10/2011 on plastic materials and articles intended for contact with food, as amended (last update Regulation (EU) 2025/351 of 21 February 2025).

Test results - specific migration of ammonium ion and elements in Annex II of EU No 10/2011

Test methods	Internal method. The migration method was article fill. Simulant was prepared according to EN 13130-1. Test performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx
Test conditions	10 days at 60 °C
Food simulant(s)	20% ethanol
Food simulant volume	500 ml

Substance	Unit[1]	Result	Criteria[2]	Compliance[3]
Cadmium, Cd	mg/kg	< 0.002	≤ 0.002 (ND)	compliant
Arsenic, As	mg/kg	< 0.002	≤ 0.01 (ND)	compliant
Chromium, Cr	mg/kg	< 0.005	≤ 0.01 (ND)	compliant
Lead, Pb	mg/kg	< 0.005	≤ 0.01 (ND)	compliant
Mercury, Hg	mg/kg	< 0.005	≤ 0.01 (ND)	compliant
Nickel, Ni	mg/kg	< 0.005	≤ 0.02	compliant
Antimony, Sb	mg/kg	< 0.003	≤ 0.04	compliant
Cobalt, Co	mg/kg	< 0.005	≤ 0.05	compliant
Europium, Eu	mg/kg	< 0.005	≤ 0.05	compliant
Gadolinium, Gd	mg/kg	< 0.005	≤ 0.05	compliant
Lanthanum, La	mg/kg	< 0.005	≤ 0.05	compliant
Terbium, Tb	mg/kg	< 0.005	≤ 0.05	compliant
Lithium, Li	mg/kg	< 0.005	≤ 0.6	compliant
Manganese, Mn	mg/kg	< 0.005	≤ 0.6	compliant
Aluminum, Al	mg/kg	< 0.050	≤ 1	compliant
Barium, Ba	mg/kg	< 0.005	≤ 1	compliant
Copper, Cu	mg/kg	< 0.005	≤ 5	compliant
Zinc, Zn	mg/kg	< 0.005	≤ 5	compliant
Iron, Fe	mg/kg	< 0.005	≤ 48	compliant
Calcium, Ca	mg/kg	< 0.050	≤ 60	compliant
Magnesium, Mg	mg/kg	< 0.050	≤ 60	compliant
Potassium, K	mg/kg	< 0.050	≤ 60	compliant
Sodium, Na	mg/kg	< 0.100	≤ 60	compliant
Sum of lanthanides, Eu, Gd, La, Tb	mg/kg	< 0.003	≤ 0.05	compliant

[1] Migration as mg/kg food simulant applying the conventional surface to volume ratio of 6 dm^2 per 1 kg of food.

[2] ND, not detected

[3] Commission Regulation (EU) 10/2011 on plastic materials and articles intended for contact with food, as amended (last update Regulation (EU) 2025/351 of 21 February 2025).

Test results - specific migration of primary aromatic amines

Test methods Internal method. The migration method was article fill. Preparation of the simulant according to EN 13130-1. The test was performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx.

Test conditions 10 days at 60 °C

Food simulant 20% ethanol

Food simulant volume 500 ml

Substance	CAS number	Unit[1]	Result	Criteria	Compliance[2]
1,3-Phenylenediamine	108-45-2	µg/kg	< 2.0	≤ 2	compliant
2-Amino-4-nitrotoluene	99-55-8	µg/kg	< 2.0	≤ 2	compliant
2-Naphthylamine	91-59-8	µg/kg	< 2.0	≤ 2	compliant
2,4-Diaminoanisole	615-05-4	µg/kg	< 2.0	≤ 2	compliant
2,4-Toluenediamine	95-80-7	µg/kg	< 2.0	≤ 2	compliant
2,4,5-Trimethylaniline	137-17-7	µg/kg	< 2.0	≤ 2	compliant
3,3'-Dichlorobenzidine	91-94-1	µg/kg	< 2.0	≤ 2	compliant
3,3'-Dimethoxybenzidine	119-90-4	µg/kg	< 2.0	≤ 2	compliant
3,3'-Dimethylbenzidine	119-93-7	µg/kg	< 2.0	≤ 2	compliant
4-Aminoazobenzene	60-09-3	µg/kg	< 2.0	≤ 2	compliant
4-Aminodifenyl	92-67-1	µg/kg	< 2.0	≤ 2	compliant
4-Chloro-o-toluidine	95-69-2	µg/kg	< 2.0	≤ 2	compliant
4,4'-Diaminodiphenylmethane	101-77-9	µg/kg	< 2.0	≤ 2	compliant
4,4'-Oxydianiline	101-80-4	µg/kg	< 2.0	≤ 2	compliant
4,4'-Thiodianiline	139-65-1	µg/kg	< 2.0	≤ 2	compliant
4,4'-Diamino-3,3'-dimethyldiphenylmethane	838-88-0	µg/kg	< 2.0	≤ 2	compliant
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	µg/kg	< 2.0	≤ 2	compliant
Benzidine	92-87-5	µg/kg	< 2.0	≤ 2	compliant
o-Aminoazotoluene	97-56-3	µg/kg	< 2.0	≤ 2	compliant
o-Anisidine	90-04-0	µg/kg	< 2.0	≤ 2	compliant
o-Toluidine	95-53-4	µg/kg	< 2.0	≤ 2	compliant
p-Chloroaniline	106-47-8	µg/kg	< 2.0	≤ 2	compliant
p-Cresidine	120-71-8	µg/kg	< 2.0	≤ 2	compliant
1,2-Phenylenediamine	95-54-5	µg/kg	< 2.0	≤ 10	compliant
1,4-Phenylenediamine	106-50-3	µg/kg	< 2.0	≤ 10	compliant
1,5-Diaminonaphthalene	2243-62-1	µg/kg	< 2.0	≤ 10	compliant
2-Amino-1-naphthalenesulfonic acid	81-16-3	µg/kg	< 2.0	≤ 10	compliant
2-Amino-5-chloro-p-toluenesulfonic acid	88-53-9	µg/kg	< 2.0	≤ 10	compliant
2-Methoxy-4-nitroaniline	97-52-9	µg/kg	< 5.0	≤ 10	compliant
2,2'-Methylenedianiline	6582-52-1	µg/kg	< 2.0	≤ 10	compliant
2,4-Dimethylaniline	95-68-1	µg/kg	< 2.0	≤ 10	compliant
2,4'-Methylenedianiline	1208-52-2	µg/kg	< 2.0	≤ 10	compliant

2,5-Dimethoxy-4-chloroaniline	6358-64-1	µg/kg	< 2.0	≤ 10	compliant
2,6- Dimethylaniline	87-62-7	µg/kg	< 2.0	≤ 10	compliant
2,6-Diaminotoluene	823-40-5	µg/kg	< 2.0	≤ 10	compliant
3-Chloroaniline	108-42-9	µg/kg	< 2.0	≤ 10	compliant
4-Amino-3-fluorophenol	399-95-1	µg/kg	< 2.0	≤ 10	compliant
4-Aminobenzamide	2835-68-9	µg/kg	< 2.0	≤ 10	compliant
4-Aminotoluene-3-sulfonic acid	88-44-8	µg/kg	< 2.0	≤ 10	compliant
4-Methylaminosulfonyl-p-cresidine	49564-57-0	µg/kg	< 2.0	≤ 10	compliant
5-Amino-2-methylbenzenesulfonic acid	118-88-7	µg/kg	< 2.0	≤ 10	compliant
5-Amino-6-methyl-2-benzimidazolone	67014-36-2	µg/kg	< 2.0	≤ 10	compliant
6-Ethoxynaphthalen-2-amine	293733-21-8	µg/kg	< 2.0	≤ 10	compliant
Anilin	62-53-3	µg/kg	< 2.0	≤ 10	compliant
N,N-Dimethylaniline	121-69-7	µg/kg	< 2.0	≤ 10	compliant
p-Toluidine	106-49-0	µg/kg	< 2.0	≤ 10	compliant
2-Aminobenzamide	88-68-6	µg/kg	< 2.0	≤ 50	compliant
4,4'-Methylenebis(3-chloro-2,6-diethylaniline)	106246-33-7	µg/kg	< 2.0	≤ 50	compliant
4,4'-Diaminodiphenyl sulfone	80-08-0	µg/kg	< 2.0	≤ 5000	compliant
Sum of primary aromatic amines	-	µg/kg	< 2.0	≤ 10	compliant

[1] Migration as mg/kg food simulant applying the conventional surface to volume ratio of 6 dm^2 per 1 kg of food.
[2] Commission Regulation (EU) 10/2011 on plastic materials and articles intended for contact with food, as amended (last update Regulation (EU) 2025/351 of 21 February 2025); considers compounds listed in the entry 43 to Appendix 8 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

Test results - specific migration of compounds in the positive list of EU No 10/2011

Test methods	Preparation of the simulant was made according to EN 13130-1. The migration method was article fill. Test performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx.
Test conditions	10 days at 60 °C
Food simulant volume	500 ml

Substance	FCM	CAS number	Unit[1]	Simulant	Result	Criteria	Compliance[2]
Isophthalic acid	291	121-91-5	mg/kg	20% EtOH	< 0.5	≤ 5 (27)[3,4]	compliant
Terephthalic acid	785	100-21-0	mg/kg	20% EtOH	< 0.5	≤ 7.5 (28)[3,5]	compliant
Ethylene glycol	227	107-21-1	mg/kg	20% EtOH	< 3	≤ 30 (2)[3,6]	compliant
Acetaldehyde	128	75-07-0	mg/kg	20% EtOH	< 0.5	≤ 6 (1)[3,7]	compliant

[1] Specific migration results expressed in mg/kg applying the real surface to volume ratio in actual use (volume of 500 ml), acc. to Article 17, p.1 of Reg. (EU) 10/2011.
[2] Commission Regulation (EU) 10/2011 on plastic materials and articles intended for contact with food, as amended (last update Regulation (EU) 2025/351 of 21 February 2025).
[3] Criteria concern only the analyzed compounds. The Group Restriction Number according to Table 2 of Annex I to EU 10/2011 is given in brackets for the substances with group-related specific migration limitation (SML(T)). The migration of other compounds within the group was not taken into account.
[4] Expressed as isophthalic acid.
[5] Expressed as terephthalic acid.
[6] Expressed as ethylene glycol.
[7] Expressed as acetaldehyde.

Test results - non-intentionally added substances (GC-MS/FID screening)

Test methods

GC-MS/FID screening for non-intentionally added substances (NIAS) according to internal method. The migration method was article fill. Preparation of the simulant was made according to EN 13130-1. Test performed by an ISO/IEC 17025 accredited external service provider with an accreditation number xxxxx.

In the applied GC-MS/FID screening method, all identified substances were compared with the NIST14 library with a Match Factor (MF) over 80%. The method is semi-quantitative and thus cannot be treated as equivalent to specific migration.

Evaluation of the compliance of the identified substances was performed by the external service provider and Measurlabs' expert.

Test conditions 10 days at 60 °C

Food simulant 20% ethanol

Food simulant volume 500 ml

Compound	Score	CAS	Unit	Result	Criteria	Compliance
No substances detected migrating above 10 ppb	-	-	-	-	-	-

Comment NIAS compounds above the limit of quantification of 0.01 mg/kg were not detected.

End of the test report