



Prüfbericht - Nr.: 113138309-01		Seite 1 von 8			
<i>Test Report No.:</i>		<i>Page 1 of 8</i>			
Auftraggeber: <i>Client:</i>	Coppenrath Verlag GmbH & Co. KG Hafenweg 30, 48155 Münster, Germany				
	Hersteller: Layana Company <i>Manufacturer:</i> No.378, Pao Bou Rd., Changhua, Taiwan, R.O.C.				
Gegenstand der Prüfung: <i>Test Item:</i>	1 fork				
Bezeichnung: <i>Identification:</i>	#280 Mini Forks				
Anlieferungszustand: <i>Delivery condition:</i>	apparent good	Eingangsdatum: <i>Date of Receipt:</i>	05.10.2010		
Prüfart: <i>Testing location:</i>	Nankang Branch, Taipei				
Prüfgrundlage: <i>Test specification:</i>	Suitability for contact with foodstuffs according paragraph 30, 31 LFGB				
Prüfresultat: <i>Test result:</i>	According to the kind and extend of tests performed the above mentioned test item passed the test specification.				
geprüft: tested by:	kontrolliert: checked by:				
 21.10.2010 Carl Chang /Assistant Manager	 21.10.2010 Bernd Fritzsche /Manager				
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges/ Other Aspects:					
Test period: 05.10.2010 – 19.10.2010 This test report repeats test report no. 113138309.					
Abkürzungen: ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar			Abbreviations: ok / P = passed fail / F = failed n.a. / N = not applicable		
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>					



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

Description of test specimen :

Test Sample	#280 Mini Forks
Lab.-No.	TCL101005-01
Color	red/white, metallic
Material	plastics, metal

The product is, in accordance with § 2 (6) 1 of the German Food and Feed Code (LFGB), a commodity, which is intended and foreseen to come into contact with foodstuffs.

Examination Procedure:

The analysis will be carried out with reference to the following acts and regulations:

- Publication of the Food Feed Code (LFGB) published on 07.09.2005 in the Bundesgesetzblatt (BGBl I 2005, 2618)
- Publication of the of the Commodities Ordinance (BGVO) published on 23.12.1997, latest revision published on 30.05.2006
- Recommendation of the Commission on Synthetic Materials in the BfR, („Kunststoffe im Lebensmittelverkehr,“) „Recommendation on the evaluation of synthetic materials and other high molecular weight polymers with regard to health aspects,“ (synthetic materials in contact with food)
- EC-directives :

02/72: COMMISSION DIRECTIVE 2002/72/EC, Material and objects made of plastic, which are intended to come in contact with foodstuffs.

07/19: Amending Directive 2002/72/EC and Council Directive 85/572/EEC

04/19: COMMISSION DIRECTIVE 2004/19/EC of 1 March 2004 amending Directive 2002/72/EC relating to plastic materials and articles intended to come into contact with foodstuffs

97/48: Second revision of the EC-regulation 82/711 from the council for the determination of the migration from materials and objects made of plastic, which are intended to come in contact with foodstuffs

04/1935: 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 and repealing Directives 80/590/EEC and 89/109/EEC

The evaluation of documentation or markings on the test sample its manual or package is not part of this test report.

Annex XVII to Regulation (EC) No 1907/2006 (REACH): Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

The chemical tests to examine the suitability for contact with foodstuffs in the sense of § 30 and § 31 LFGB and art.3 of décret n° 92-631 (08.07.1992) were carried out on the basis of the test stipulations specified as follows:

- Official compilation of examination procedures in accordance with the method compilation based on § 64 LFGB, Band II/1 Commodities (B).
- EC-directives:
 - 85/572** : List of simulation solvents for migration examinations-materials made of plastic which are intended to come in contact with foodstuffs.
 - 82/711**: Basic regulations for the determination of the migration from materials and objects, which are intended to come in contact with foodstuffs.
- German Act concerning the trading of objects containing lead and zinc (German Lead & Zinc Act), 25.06.1887, revision of 02.03.1974
- BS EN 601 - Aluminum and aluminum alloys - castings - Chemical composition of castings , which are intended to come in contact with foodstuffs, 1995

Information regarding the ingredients was not available; a control of the present components in the sense of 2002/72/EC was therefore not possible.



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

Test Results

1. General manufacture and materials employed

The products submitted for examination are of clean and hygienic manufacture. No other damage could be determined which, in the sense of its foreseen and intended utilisation, could lead to the user being endangered or the health of the user being impaired.

2. Sensorial examination

It is examined to what extent drinking water, which comes into contact with the specimen during designated utilisation, is sensorially influenced. The specimen was brought into contact with water for 24 hours at 23°C. After this treatment the drinking water was examined by 5 tasters with regard to any divergence in smell and taste

The examination is carried out on the basis of §64 LFGB L 0090-7 in connection with DIN 10955.

Evaluation table for the transfer of taste and smell - evaluation scheme

- 0 = no discernible deviation
- 1 = barely discernible deviation
- 2 = weak deviation
- 3 = clear deviation
- 4 = strong deviation

Limit: 2.5

2.1 Examination of the transfer of taste and smell

Sample	#280 Mini Forks (complete product)
Lab.-No.	TCL101005-01
taste, water	0
smell, water	0

The product submitted is inconspicuous with regard to the transfer of taste and smell-bearing substances to the test food.



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

3. Global migration

The overall migratory behaviour is examined based on EC-Directive 2002/72/EC and corresponding regulations. Deviating to the regulations the following tests were performed as orientating single tests. The following simulation solvents and test conditions were stipulated:

Migration solution	test duration/temperature	
3% Acetic acid	2 hr / 70°C	
95% Ethanol	2 hr / 60°C	
Isooctane	0.5 hr / 40°C	
Sample	#280 Mini Forks (handle, red/white)	
Lab.-No.	TCL101005-01	
3% Acetic acid	mg/dm ²	<10
95% Ethanol	mg/dm ²	13*
Isooctane	mg/dm ²	<10

According to §8 Part (2) of the German „Bedarfsgegenständeverordnung“, the material with contact to food may not submit more than 10 mg/dm² of substances (global migration).

The tested sample does keep this limit.

* According to 2002/72/EC Annex I Paragraph 7 concerning the uncertainty of the test method used, the tested sample is still regarded as compliant.

Food simulant	Uncertainty acc. to 2002/72/EC Corrigendum 1 (13.02.2003)
rectified olive oil and its substitutes	3 mg/dm ² or 20 mg/kg
other simulants acc. to 82/711/EC & 85/572/EEC	2 mg/dm ² or 12 mg/kg

4. Lead and Cadmium after total digestion

By experience plastic materials often contain lead in high concentrations. Basically lead is absorbed via the skin, so only parts which are in permanent contact with the skin, may have a hazardous potential.

Contents of cadmium are regulated for products with plastic parts by "Annex XVII to Regulation (EC) No 1907/2006 (REACH)", to a limit of 100 mg/kg. This value even applies to parts of products.

Sample	#280 Mini Forks (handle, red/white)	
Lab.-No.	TCL101005-01	
Lead, Pb	mg/kg	<20
Cadmium, Cd	mg/kg	<20



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

5. Specific migration of steel following the official test method § 64 LFGB 80.30 1-3(EG)

The concentration of migratory elements is determined from a migration solution. The concentration of the following elements is examined by means of ICP/OES following DIN EN ISO 11885.

Migration solution	test duration/temperature
3% Acetic acid	24 hr / RT

Sample		#280 Mini Forks (fork, stainless steel) TCL101005-01	Technically preventable limit
Lab.-No.			
Nickel, Ni	mg/dm ²	<0.1	0.1
Chromium, Cr	mg/dm ²	<0.45	0.45
Cadmium, Cd	mg/dm ²	<0.005	0.005
Lead, Pb	mg/dm ²	<0.02	0.02
Copper, Cu	mg/dm ²	<0.5	0.5

The examined sample meets these limits.

6. Identification of metal

The metal is dissolved by means of acid dissolution. The concentration of elements is determined by means of ICP-OES.

The calibration is performed by chemical analysis of comparable high alloy steel.

Sample		#280 Mini Forks (fork, stainless steel) TCL101005-01
Lab.-No.		
Chromium, Cr	%	16.88
Nickel, Ni	%	<0.1

In accordance with the composition of the metal determined, the analyzed part is made of stainless steel.

7. Corrosion test

After the corrosion test the specimen is examined with the unmagnified eye for any changes on the surface.

solution	test duration/temperature
1% NaCl	6 hr / 60°C

Sample	#280 Mini Forks (fork, stainless steel+fixer) TCL101005-01
Lab.-No.	
corrosion test	No corrosion on the surface visible



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

8. V.O.C. for ABS/PS

The determination of volatile organic substances is performed according to the 19th announcement of the National Institute for Consumer protection 14, No. 265 (1971); modified and amended by the 48th announcement 25, No. 10 (1982).

Sample	#280 Mini Forks (handle, red/white)	
Lab.-No.	TCL101005-01	
90°C / 24hours	mg/dm ²	<15

According to *Recommendation VI of the Federal Institute for Risk Assessment on Plastics Intended to Come into Contact with Food*, the finished product must not release more than 15 mg/dm² volatile organic components. The sample materials do keep this requirement.

9. PAHs

Sample	#280 Mini Forks (handle, red/white)		
Lab.-No.	TCL101005-01		
Parameter	CAS#	Unit	Result
Acenaphthene	83-32-9	mg/kg	<0.1
Acenaphthylene	208-96-8	mg/kg	<0.1
Anthracene	120-12-7	mg/kg	<0.1
Benz[a]anthracene	56-55-3	mg/kg	<0.1
Benzo[b]fluoranthene	205-99-2	mg/kg	<0.1
Benzo[ghi]perylene	191-24-2	mg/kg	<0.1
Benzo[k]fluoranthene	207-08-9	mg/kg	<0.1
Chrysene	218-01-9	mg/kg	<0.1
Dibenz[ah]anthracene	53-70-3	mg/kg	<0.1
Fluoranthene	206-44-0	mg/kg	<0.1
Fluorene	86-73-7	mg/kg	<0.1
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	<0.1
Naphthalene	91-20-3	mg/kg	<0.1
Phenanthrene	85-01-8	mg/kg	<0.1
Pyrene	129-00-0	mg/kg	<0.1
Benzo[a]pyrene (BaP)	50-32-8	mg/kg	<0.1
group PAH* (sum)	---	mg/kg	<0.1

Single components with concentrations below the limit of detection (LoD) are not regarded for calculation of the sum.

Naphthalene is a volatile compound - its results refer to the sample condition at the time of testing. Due to emission the content might vary over time.



Test Report No. : 113138309-01
Customer : Coppenrath Verlag GmbH & Co. KG

21.10.2010

Test Methods

Smell, Taste	§ 64 LFGB L 0090-7 in connection with DIN 10955
Global migration	§ 64 LFGB 80.30 1-3(EG) (2002/72/EC)
Specific migration	§ 64 LFGB 80.30 1-3(EG)
Lead	Microwave digestion, determination by ICP-OES
Cadmium	EN 1122 B or microwave digestion; det. by ICP-OES
Corrosion resistance	following EN ISO 8442-2
Identification of metal	DIN 38406-E22
V.O.C. for ABS/PS	QMA-TCL-04.35 Determination of Volatile Organic Compound for ABS / PS
PAHs	ZEK 01.2-08: solvent extraction, determination by GC-MS

Test Sample



--- End of Test-Report ---

