

SGS INSTITUT FRESENIUS GmbH · Im Maisel 14 · D-65232 Taunusstein

Schott Duran Produktions GmbH & Co. KG
z. Hd. Herr Kopp
Hattenbergstraße 10

55122 Mainz

Sample ID: 010/ 7425801+7425802
Commission No: 1007544.1
Customer ID: 10021022

Mr. Jochen Ballach, PhD / sl
Project manager
Tel.: +49 (0)6128 / 744 - 117, Fax: - 205
jochen.ballach@institut-fresenius.de



CTS Spezielle Analytik

SGS INSTITUT FRESENIUS GmbH
Im Maisel 14
D-65232 Taunusstein

Taunusstein, 19/MAR/2008

**Analysis of samples acc. to directive 2002/95/EC and Lead and Cadmium release
Your order of 05/OCT/2007 – Order 118 / 4500779142 / MP-BKo – Delivery note 81592842**

Dear Madam, dear Sir,
dear Mr. Kopp,

we have analyzed your samples, received at Institut Fresenius on 10/OCT/2007, with regard to your order of 09/OCT/2007. As requested by your email from 18/MAR/2008 we have supplemented the former incomplete sample description of sample 010/7425802 according to your requirements. This report substitutes our previous report no. 1007544 from 06/NOV/2007.

The results of the analysis and the separate analytical reports are attached to this letter.

If you have questions about the results please feel free to contact us any time.

Yours sincerely

SGS INSTITUT FRESENIUS GmbH

i.V. 
Dr. Jochen Ballach

i.V. 
Dr. Rainer Dargel

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ANALYTICAL REPORT Analysis of a sample acc. directive 2002/95/EC	Sample ID: 010/7425801 Commission No.: 1007544.1 Date: 19/MAR/2007 Page 2 of 4
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1. **Commissioner** Schott Duran Produktions GmbH & Co. KG
 Hattenbergstraße 10
 55122 Mainz

2. **Sample information**
 Sample reception 10/OCT/2007
 Sample designation Glass dye, white; No.: 394219-N485 A
 Testing period 10/OCT/2007 – 06/NOV/2007

3. **Applied analytical techniques**
 Sample preparation Pulverization/Homogenization of the sample material
 Chromium, Lead, Cadmium Inductively coupled plasma atomic emission spectrometry acc. EN ISO 11885 after digestion with sodium peroxide
 Mercury Cold vapor atomic absorption spectrometry acc. DIN EN 1483 after digestion with sodium peroxide
 PBDE/PBB High-resolution gas chromatography with mass-selective detector after soxhlet extraction with toluene based EPA 3540C


4. **Analytical findings**


Parameter		Value	Limit acc. ElektroG ¹
Cadmium (Cd)	mg/kg	<1	100
Lead (Pb)	mg/kg	285	1000
Mercury (Hg)	mg/kg	<0.5	1000
Chromium, total (Cr)	mg/kg	40	1000
			(Hexavalent chromium, Cr(VI))
PBDEs	Monobromo diphenyl ether	mg/kg	<5
	Dibromo diphenyl ether	mg/kg	<5
	Tribromo diphenyl ether	mg/kg	<5
	Tetrabromo diphenyl ether	mg/kg	<5
	Pentabromo diphenyl ether	mg/kg	<10
	Hexabromo diphenyl ether	mg/kg	<10
	Heptabromo diphenyl ether	mg/kg	<10
	Octabromo diphenyl ether	mg/kg	<20
	Nonabromo diphenyl ether	mg/kg	<30
	Decabromo diphenyl ether	mg/kg	<50
			1000
			(Sum of polybrominated diphenyl ethers)
PBBs	Monobromo biphenyl	mg/kg	<5
	Dibromo biphenyl	mg/kg	<5
	Tribromo biphenyl	mg/kg	<5
	Tetrabromo biphenyl	mg/kg	<5
	Pentabromo biphenyl	mg/kg	<10
	Hexabromo biphenyl	mg/kg	<10
	Heptabromo biphenyl	mg/kg	<10
	Octabromo biphenyl	mg/kg	<20
	Nonabromo biphenyl	mg/kg	<30
	Decabromo biphenyl	mg/kg	<50

5. **Assessment**

Based on the performed tests on the submitted sample, the results **indicate no conflict** with the ElektroG or RoHS Directive 2002/95/EC and its subsequent amendments.

SGS INSTITUT FRESSENIUS GmbH

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 Dr. Jochen Ballach

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 Dr. Rainer Dargel

¹ The implementation of the directive 2002/95/EC into national legislation is carried out by the Elektro- und Elektronikgerätegesetz (ElektroG) in Germany. The cited limits acc. ElektroG of March 16th 2005 are strictly speaking for homogeneous materials only and correspond to the limits acc. directive 2005/618/EC.

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ANALYTICAL REPORT Analysis of a sample acc. directive 2002/95/EC	Sample ID: 010/7425802 Commission No.: 1007544.1 Date: 19/MAR/2007 Page 3 of 4
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1. Commissioner Schott Duran Produktions GmbH & Co. KG
 Hattenbergstraße 10
 55122 Mainz

2. Sample information

Sample reception 10/OCT/2007
 Sample designation DURAN-Borosilicate-glass 3.3, acc. glass norm no. 8330;
 non-printed, Beakers, form 16/400 without pressure; ILA 70211352; Art.-No.
 211064177
 Testing period 10/OCT/2007 – 06/NOV/2007

3. Applied analytical techniques

Sample preparation Pulverization/Homogenization of the sample material
 Chromium, Lead, Cadmium Inductively coupled plasma atomic emission spectrometry acc. EN ISO
 11885 after digestion with nitric acid/fluoric acid
 Mercury Cold vapor atomic absorption spectrometry acc. DIN EN 1483 after
 digestion with nitric acid/fluoric acid
 Bromine Semi quantitative X-ray fluorescence analysis based on DIN 51001


4. Analytical findings


Parameter	Value	Limit acc. ElektroG ¹
Cadmium (Cd)	mg/kg <1	100
Lead (Pb)	mg/kg <10	1000
Mercury (Hg)	mg/kg <0.5	1000
Chromium, total (Cr)	mg/kg <10	1000 (Hexavalent chromium, Cr(VI))
Bromine (Br) ² calculated as Penta- Bromo diphenyl ether	mg/kg < 200	1000 each (Sum of polybrominated diphenyl ethers and sum of polybrominated biphenyls)

5. Assessment

Based on the performed tests on the submitted sample, the results **indicate no conflict** with the ElektroG or RoHS Directive 2002/95/EC and its subsequent amendments.

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² The applience of brominated flame retardant in the tested material is not intended and not expected. Therefore, a screening analysis for bromine as a tracer substance instead of the determination of individual flame retardants was performed.

ANALYTICAL REPORT Analysis of Lead and Cadmium release	Sample ID: 010/7425802 Commission No.: 1007544.1 Date: 19/MAR/2007 Page 4 of 4
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2. Sample information

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 Sample designation DURAN-Borosilicate-glass 3.3, acc. glass norm no. 8330;
 non-printed, Beakers, form 16/400 without pressure; ILA 70211352; Art.-No.
 211064177
 Testing period 10/OCT/2007 – 06/NOV/2007

3. Applied analytical techniques

The sample was exposed to 4% acetic acid for 24 hours at 22°C, as given in DIN EN 1388-1 and according to the regulations of directive 2005/31/EC. Afterwards the lead and cadmium content of the extraction solution was determined via inductively coupled plasma atomic-emission spectroscopy (ICP-OES).


4. Analytical findings


	Dim.	Result	Limit acc. to 2005/31/EC	Limit acc. to FDA
Lead (Pb)	µg/l	<5	4000	2000
Cadmium (Cd)	µg/l	<0,5	300	500

5. Assessment

The results for Lead and Cadmium release of the sample, as analyzed, comply with the regulations given in directive 2005/31/EC and regulation no. 1935/2004 (EWG) as well as the regulations of the FDA (CPG 7117.06) and FDA (CPG 7117.07).

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