

TEST REPORT

Report No. : GR:HL:5480030775

DATE : 20/11/2014



RAJASTHAN ELECTRIC INDUSTRIES.
C-2, INDUSTRIAL ESTATE BAIS GODAM
JAIPUR-
INDIA

CONTACT PERSON : Mr. GAURANG GUPTA

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS :

SAMPLE DESCRIPTION	COPPER WIRE
COUNTRY OF ORIGIN	INDIA
SAMPLE RECD ON	14/11/2014
TESTING PERIOD :	14/11/2014 - 19/11/2014

Test Requested : Selected test (s) as requested by client.
Test Method : Please refer to next page(s).
Test Result(s) : Please refer to next page(s).

Conclusion Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) **comply** with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Per Pro SGS India Pvt Ltd.

Kapil Patil (Asst. Manager- Chemical)
Authorized Signatory

Email your Test Report Related Enquiries at Feedback.HLT@sgs.com

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Test result:

ID for sample : 5480030775

Description for sample : COPPER WIRE

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Cadmium(Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd by ICP-OES)	n.d.	5	100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Pb by ICP-OES)	36.63	5	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES)	n.d.	5	1000
Hexavalent Chromium (CrVI) by Spot test / boiling water extraction (optional) #	---	With reference to IEC 62321:2008	Negative	-	
Sum of PBBs	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	-	1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-

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Decabromobiphenyl	mg/kg	With reference to IEC 62321:2008 (Determination of PBB by GC-MS)	n.d.	50	-
Sum of PBDEs	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	-	1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-
Decabromodiphenyl ether##	mg/kg	With reference to IEC 62321:2008 (Determination of PBDEs by GC-MS)	n.d.	50	-

Note :

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) n.d.= not detected
- (c) MDL = Method Detection Limit
- (d) # = a. Positive means the presence of CrVI on the tested areas
b. Negative means the absence of CrVI on the tested areas

For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

- (e) ## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE is included in the sum of PBDE after 01.07.2008
- (f) - = not regulated

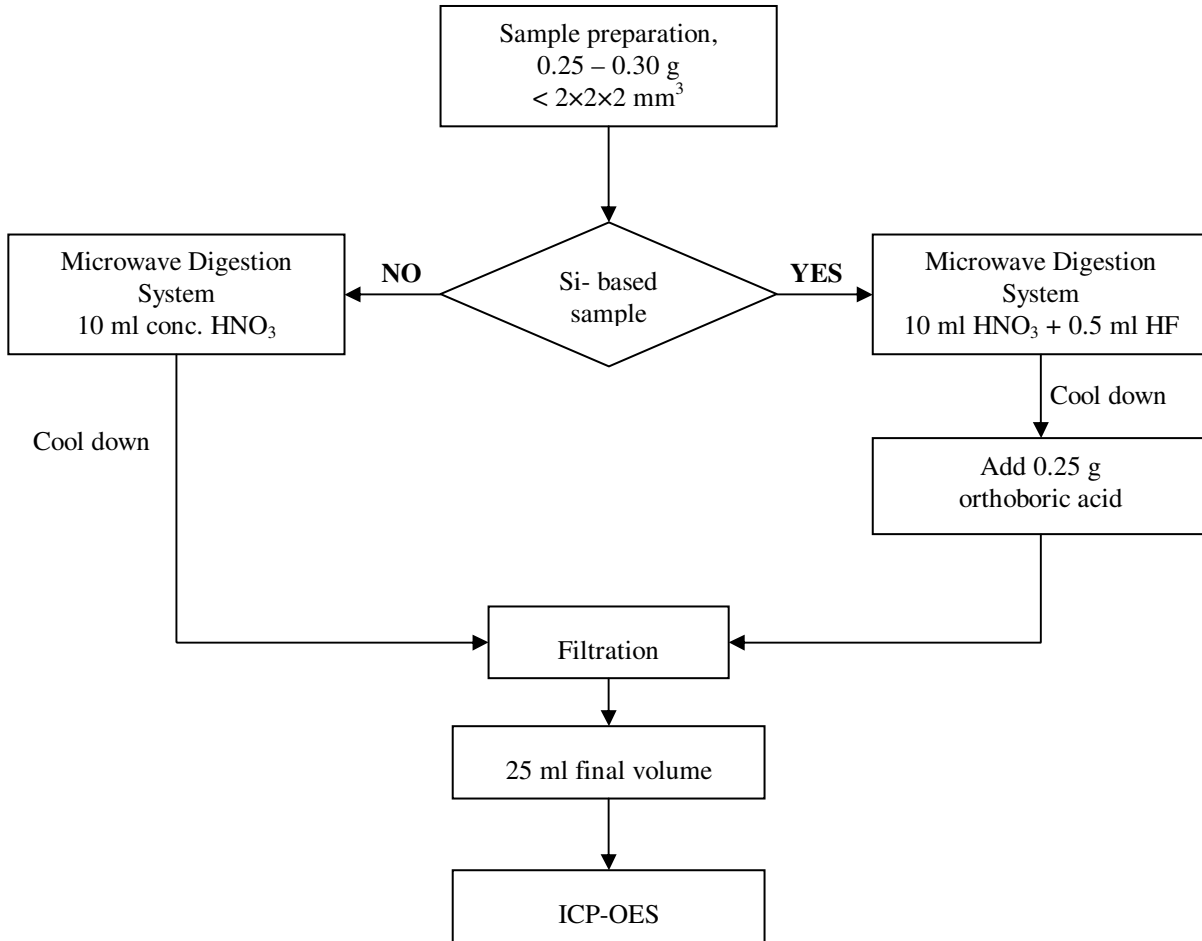
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Process Flow for analysis of metal contents in plastics, metals and electronic components sample



Analyzed By: Sudheer Reddy/Suman Mandrwal

Checked By: Kapil Patil

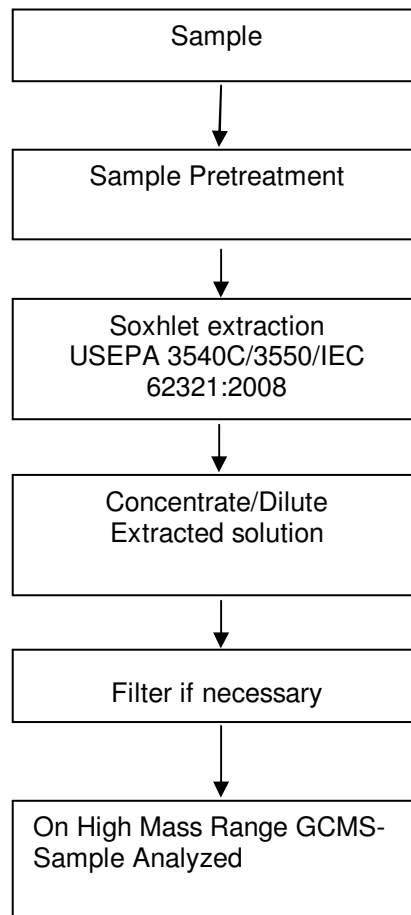
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Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample



Analyzed By: Sudheer Reddy/Suman Mandrwal

Checked By: Kapil Patil

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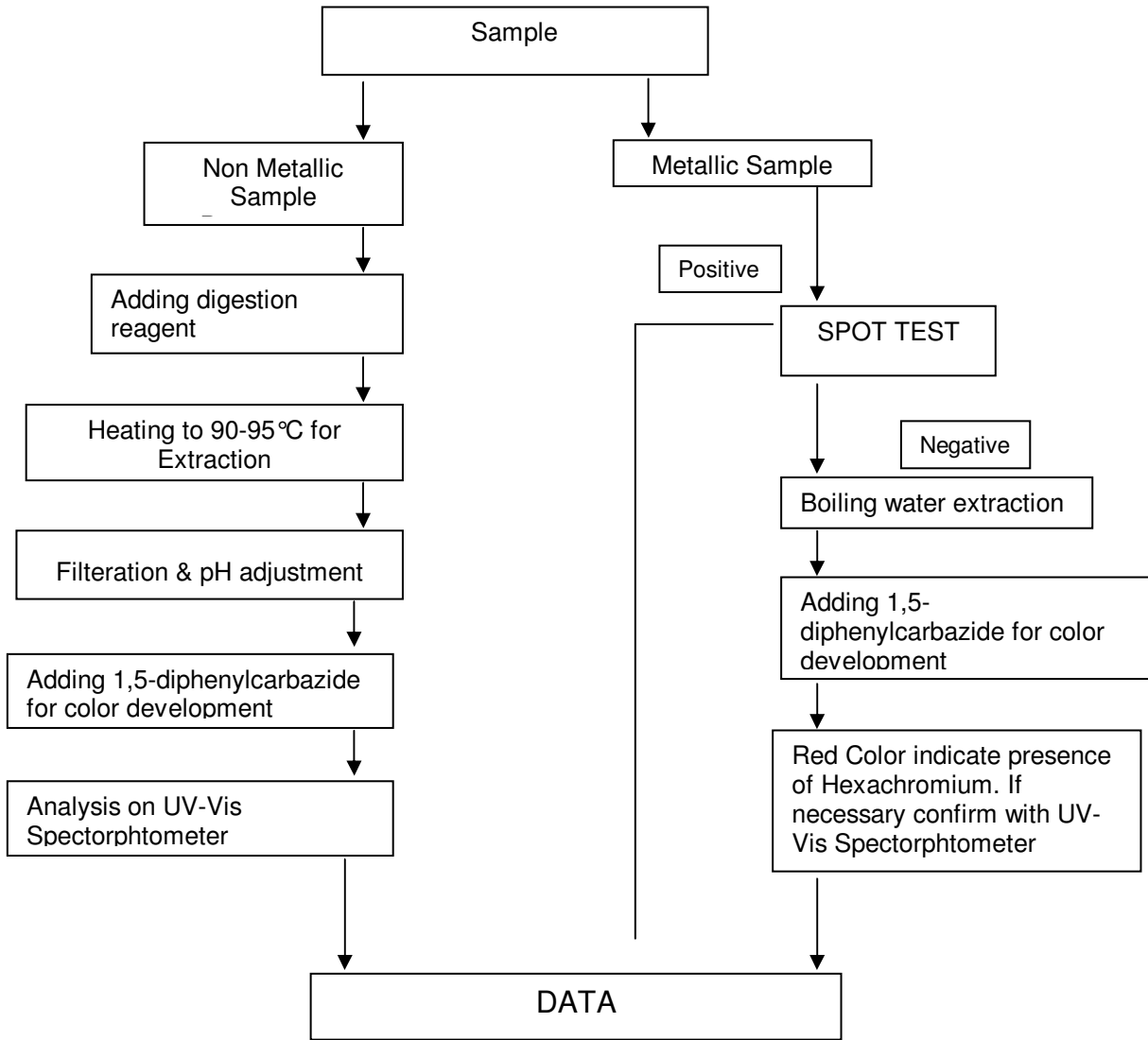
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Process Flow for analysis of Hexachromium contents in plastics, metals and electronic components sample



Analyzed By: Grish Pandey/Sudheer reddy

Checked By:Kapil Patil

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Sample Photo: as received



SGS authenticate the photo on original report only

*** End of Report ***