

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

SAMPLE DESCRIPTION	Cap [Silver grey metal]	
OEM	OTHERS	
COUNTRY OF ORIGIN	INDIA	
SAMPLE RECD ON	28/11/2022	TESTING PERIOD : 09/12/2022 – 12/12/2022
TEST(S) REQUESTED	RoHS 4E	

Test Description	Remarks
ROHS 4E	Pass

**CONCLUSION :** Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium and Hexavalent chromium **comply** with the limits as set by Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Per Pro SGS India Private Ltd



SACHIN M. VIBHUTE  
Sr.Executive

Authorized Signatory

Email your Test Report Related Enquiries at [feedback.trp@sgs.com](mailto:feedback.trp@sgs.com)

**Test Part Description:**

Product No.	Sample No.	Material Description	Remarks
--	-	Cap [Silver grey metal]	--

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

**Test Method:**

- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
- (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
- (3) With reference to IEC 62321-4:2017-07, determination of Mercury by ICP-OES.
- (4) With reference to IEC 62321 - 7 - 1: 2015.09, determination of Hexavalent Chromium in colorless & colored corrosion- protected coatings on metals by the colorimetric method.
- (5) With reference to 62321 - 7 - 2: 2017.03, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis Spectrophotometer.

**Test result:**

Test Item(s):	Unit	Results	Reporting Limit	Acceptance Criteria
Cadmium(Cd)	mg/kg	n.d.	5	100 (0.01%)
Lead (Pb)	mg/kg	204	5	1000 (0.1%)
Mercury (Hg)	mg/kg	n.d.	5	1000 (0.1%)
Hexavalent Chromium (Cr(VI)) <sup>▼</sup>	µg/cm <sup>2</sup>	n.d.	0.1	--

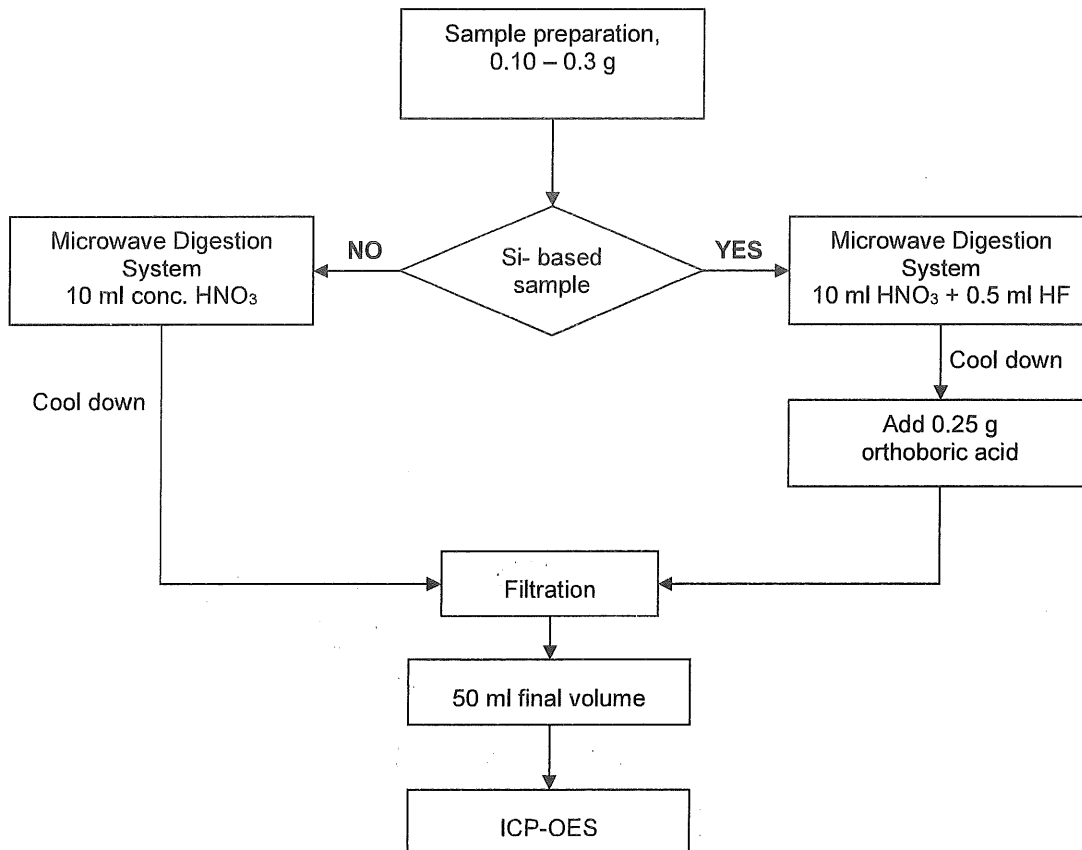
**Remarks:**

- (1) 1mg/kg=0.0001%
- (2) n.d = not detected (<Reporting Limit)
- (3) - = not regulated

## Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) Test has been performed on composite parts as per client's request
- (3)
  - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13  $\mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain Cr(VI).
  - b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10  $\mu\text{g}/\text{cm}^2$ ). The coating is considered non-Cr(VI) based coating.
  - c. The result between 0.10  $\mu\text{g}/\text{cm}^2$  and 0.13  $\mu\text{g}/\text{cm}^2$  is considered to be inconclusive - unavoidable coating variations may influence the determination.

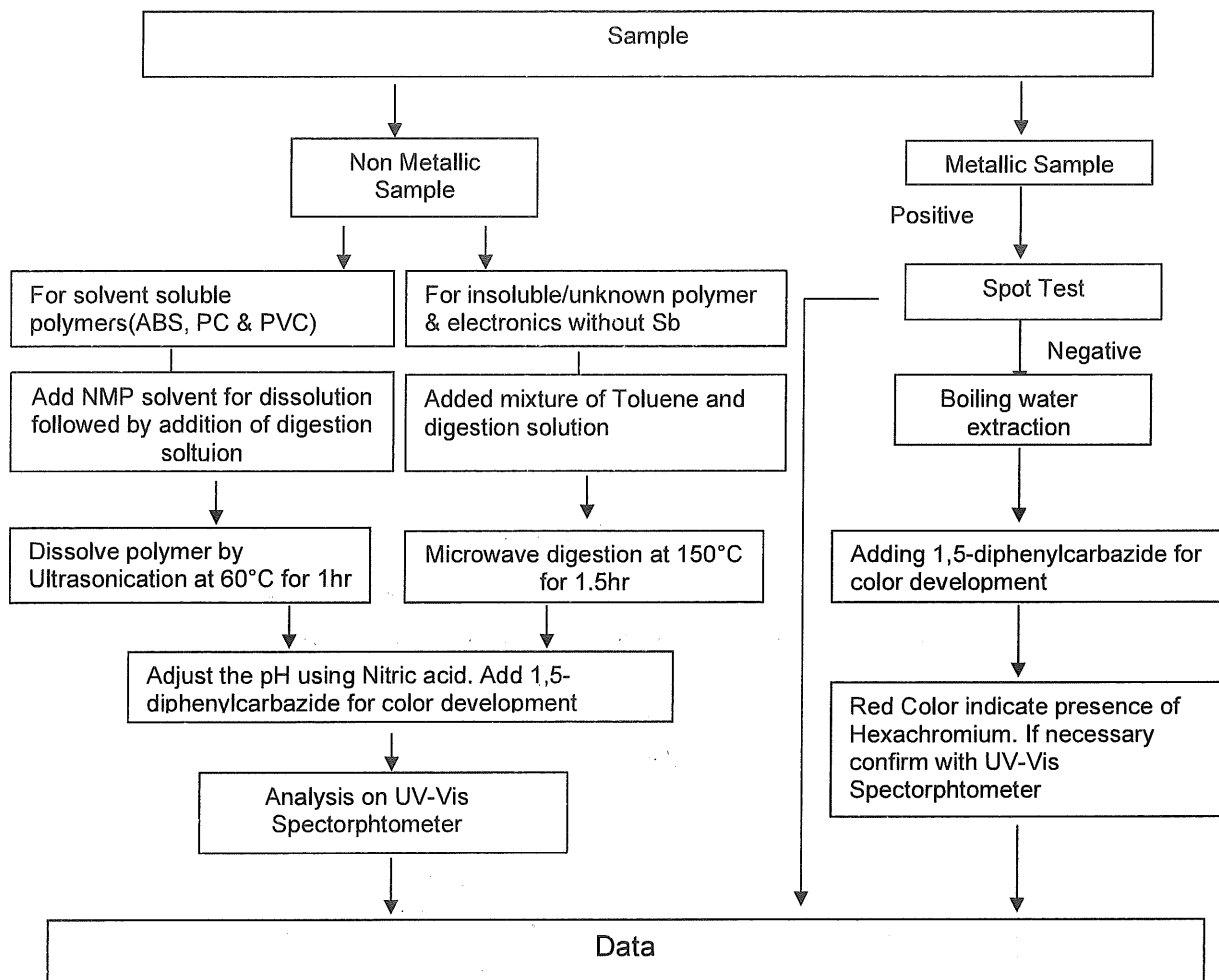
**Process Flow for analysis of metal contents in plastics, metals and electronic components sample**



Tested By: Tanvi  
Chemist

Checked By: Sachin Vibhute  
Sr.Executive

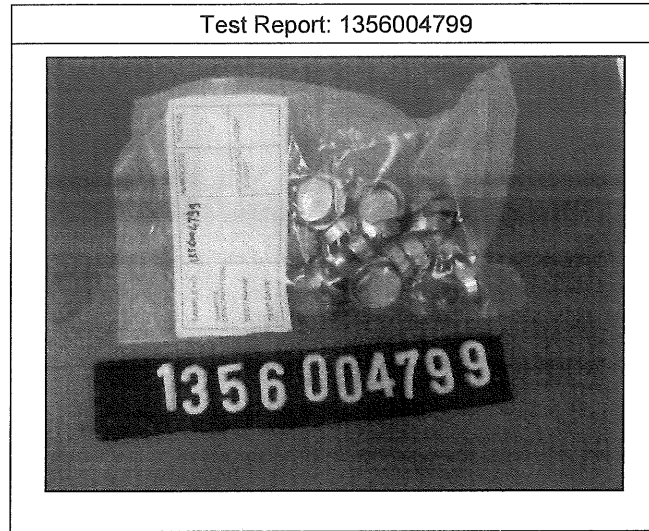
**Process Flow for analysis of Hexachromium contents in plastics, metals and electronic components sample**



Tested By: Tanvi  
Chemist

Checked By: Sachin Vibhute  
Sr.Executive

Sample Photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*



ULR -TC582522000004101F

TEST REPORT

TC-5825

Report No. : PN:EE:1356004798

DATE : 13/12/2022

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

SAMPLE DESCRIPTION	Header [Silver grey metal]	
OEM	OTHERS	
COUNTRY OF ORIGIN	INDIA	
SAMPLE RECD ON	28/11/2022	TESTING PERIOD : 09/12/2022 – 12/12/2022
TEST(S) REQUESTED	RoHS 4E	

Test Description	Remarks
ROHS 4E	Pass

**CONCLUSION :** Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium and Hexavalent chromium **comply** with the limits as set by Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Per Pro SGS India Private Ltd

SACHIN M. VIBHUTE  
Sr.Executive

Authorized Signatory

Email your Test Report Related Enquiries at [feedback.trp@sgs.com](mailto:feedback.trp@sgs.com)

JOE No. : 2256801084

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Control No.:1356504569

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Transportation Laboratory, Gat No. : 239/1/3, Village Khalumbre, Tal. Khed, Dist- Pune, Chakan – 410501, Maharashtra, India,  
Phone: +91 2135 615300, Fax: +91 2135 615333 [www.sgs.com](http://www.sgs.com)

Member of the SGS Group (SGS SA)

**Test Part Description:**

Product No.	Sample No.	Material Description	Remarks
--	-	Header [Silver grey metal]	--

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

**Test Method:**

- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
- (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
- (3) With reference to IEC 62321-4:2017-07, determination of Mercury by ICP-OES.
- (4) With reference to IEC 62321 - 7 - 1: 2015.09, determination of Hexavalent Chromium in colorless & colored corrosion- protected coatings on metals by the colorimetric method.
- (5) With reference to 62321 - 7 - 2: 2017.03, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis Spectrophotometer.

**Test result:**

Test Item(s):	Unit	Results	Reporting Limit	Acceptance Criteria
Cadmium(Cd)	mg/kg	n.d.	5	100 (0.01%)
Lead (Pb)	mg/kg	n.d.	5	1000 (0.1%)
Mercury (Hg)	mg/kg	n.d.	5	1000 (0.1%)
Hexavalent Chromium (Cr(VI)) <sup>▼</sup>	µg/cm <sup>2</sup>	n.d.	0.1	--

**Remarks:**

- (1) 1mg/kg=0.0001%
- (2) n.d = not detected (<Reporting Limit)
- (3) - = not regulated





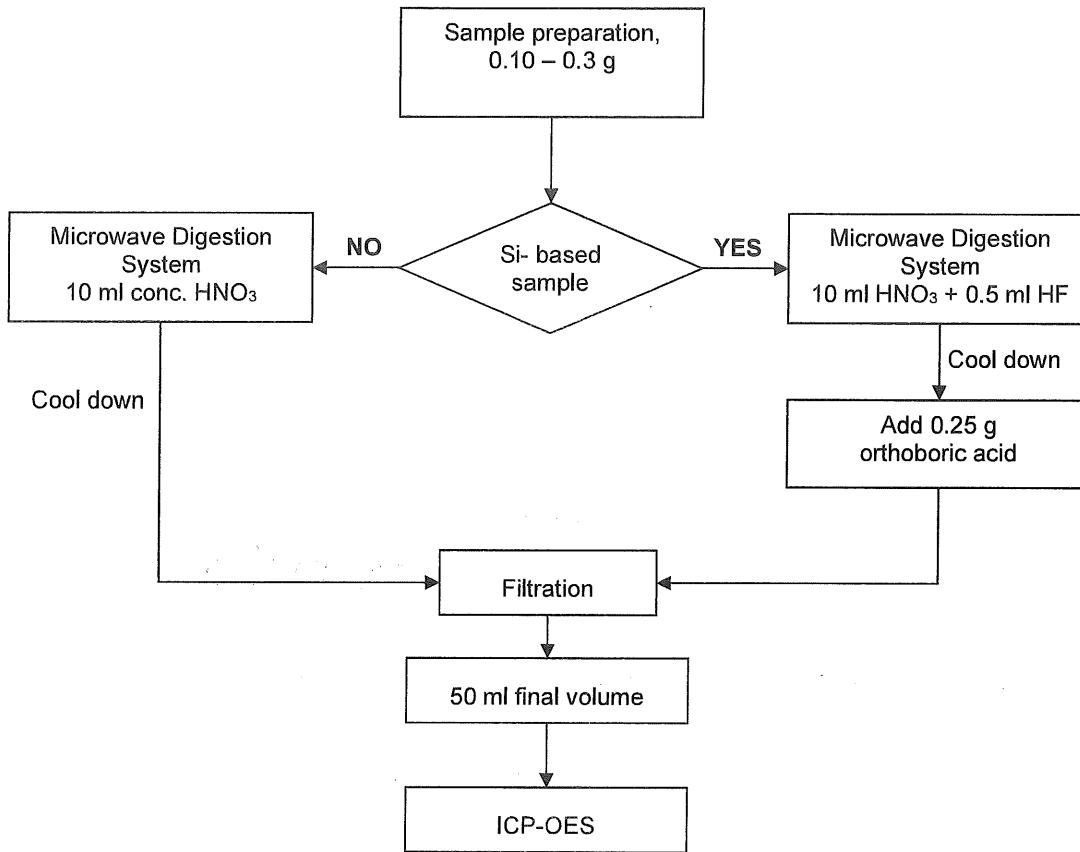
Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series

[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

- (2) Test has been performed on composite parts as per client's request
- (3)
  - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain Cr(VI).
  - b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered non-Cr(VI) based coating.
  - c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.

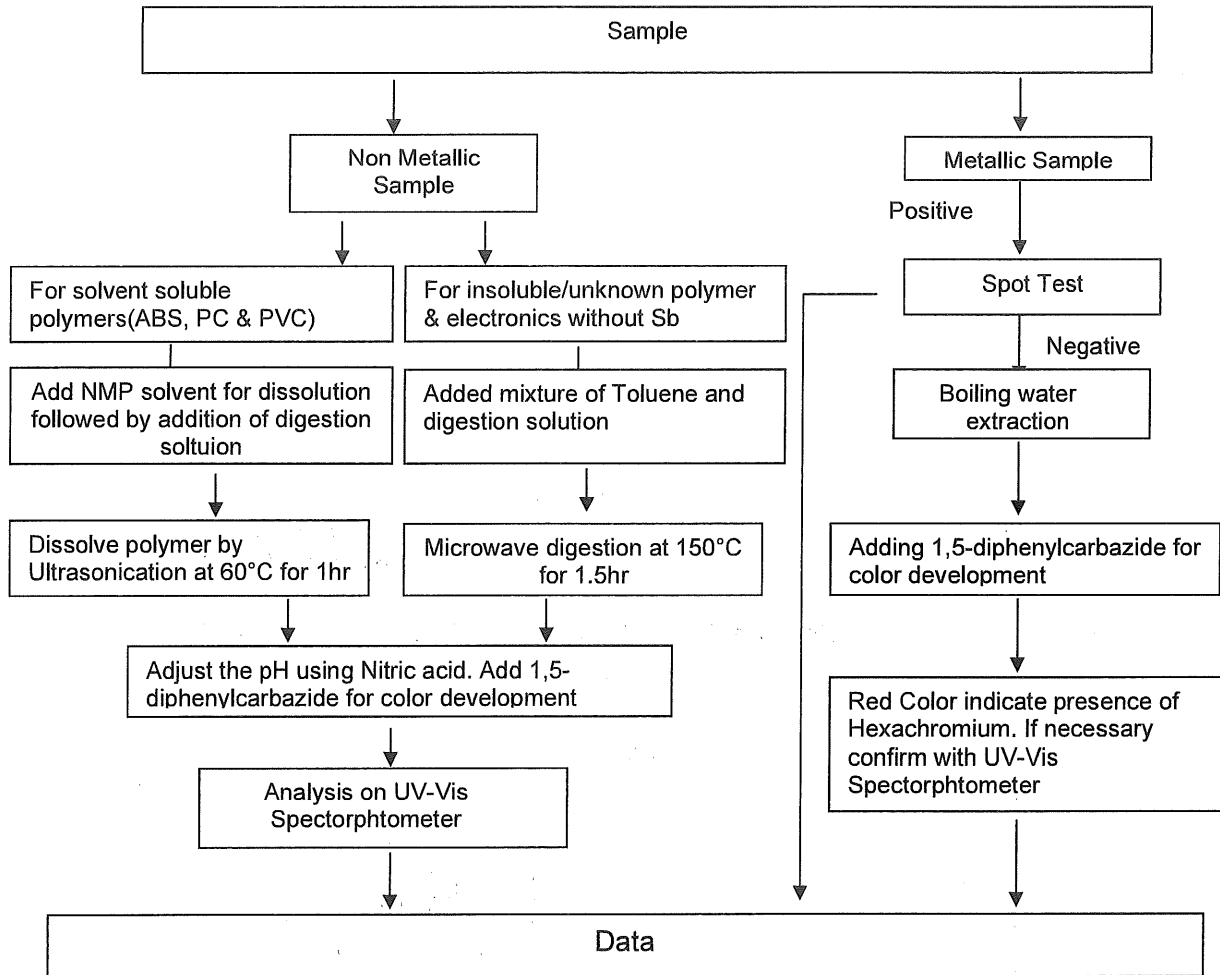
**Process Flow for analysis of metal contents in plastics, metals and electronic components sample**



Tested By: Tanvi  
Chemist

Checked By: Sachin Vibhute  
Sr.Executive

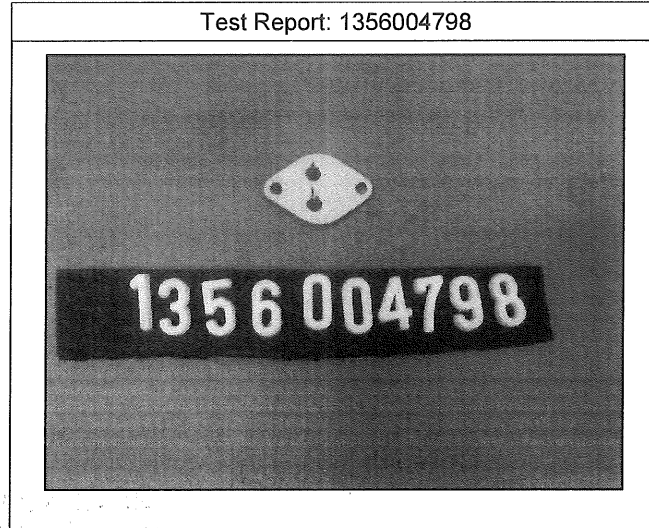
**Process Flow for analysis of Hexachromium contents in plastics, metals and electronic components sample**



Tested By: Tanvi Chemist

Checked By: Sachin Vibhute Sr.Executive

Sample Photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*



TC-5825

ULR -TC582522000004103F

TEST REPORT

Report No. : PN:EE:1356004800

DATE : 21/12/2022

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

SAMPLE DESCRIPTION	Blue [Ceramic glass]	
OEM	OTHERS	
COUNTRY OF ORIGIN	INDIA	
SAMPLE RECD ON	28/11/2022	TESTING PERIOD : 09/12/2022 – 16/12/2022
TEST(S) REQUESTED	ROHS 10E	

Test Description	Remarks
ROHS 10E	PASS

**CONCLUSION :** Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) **comply** with the limits as set by Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Per Pro SGS India Private Ltd

SACHIN M. VIBHUTE  
Sr.Executive

Authorized Signatory  
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JOE No.: 2256801084

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Control No.:1356504624

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Phone: +91 2135 615300, Fax: +91 2135 615333 [www.sgs.com](http://www.sgs.com)

Member of the SGS Group (SGS S)

**Test Part Description:**

Product No.	Sample No.	Material Description	Remarks
--	-	Blue [Ceramic glass]	--

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

**Test Method:**

- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
- (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
- (3) With reference to IEC 62321-4:2017-07, determination of Mercury by ICP-OES.
- (4) With reference to IEC 62321-7-2:2017-03, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis Spectrophotometer.
- (5) With reference to IEC 62321-6:2015-06, determination of PBBs and PBDEs by GC-MS.
- (6) With reference to IEC 62321-8:2017-03, determination of phthalates by GC-MS.

**Test result:**

Test Item(s):	Unit	Results	Reporting Limit	Acceptance Criteria
Cadmium(Cd)	mg/kg	n.d.	5	100
Lead (Pb)	mg/kg	n.d.	5	1000
Mercury (Hg)	mg/kg	n.d.	5	1000
Hexavalent Chromium (CrVI)	mg/kg	n.d.	8	1000
<b>Sum of PBBs</b>	mg/kg	<b>n.d.</b>	-	1000
Monobromobiphenyl	mg/kg	n.d.	50	-
Dibromobiphenyl	mg/kg	n.d.	50	-
Tribromobiphenyl	mg/kg	n.d.	50	-
Tetrabromobiphenyl	mg/kg	n.d.	50	-
Hexabromobiphenyl	mg/kg	n.d.	50	-
Pentabromobiphenyl	mg/kg	n.d.	50	-
Heptabromobiphenyl	mg/kg	n.d.	50	-
Octabromobiphenyl	mg/kg	n.d.	50	-
Nonabromobiphenyl	mg/kg	n.d.	50	-
Decabromobiphenyl	mg/kg	n.d.	50	-
<b>Sum of PBDEs</b>	mg/kg	<b>n.d.</b>	-	1000
Monobromodiphenyl ether	mg/kg	n.d.	50	-
Dibromodiphenyl ether	mg/kg	n.d.	50	-
Tribromodiphenyl ether	mg/kg	n.d.	50	-
Tetrabromodiphenyl ether	mg/kg	n.d.	50	-
Pentabromodiphenyl ether	mg/kg	n.d.	50	-
Hexabromodiphenyl ether	mg/kg	n.d.	50	-
Heptabromodiphenyl ether	mg/kg	n.d.	50	-
Octabromodiphenyl ether	mg/kg	n.d.	50	-
Nonabromodiphenyl ether	mg/kg	n.d.	50	-
Decabromodiphenyl ether	mg/kg	n.d.	50	-
<b>Phthalates</b>				
Dibutyl phthalate (DBP)	mg/kg	n.d.	100	1000
Butyl benzyl phthalate (BBP)	mg/kg	n.d.	100	1000
Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	n.d.	100	1000
Diisobutyl Phthalates (DIBP)	mg/kg	n.d.	100	1000

**Remarks:**

- (1) 1mg/kg=0.0001%
- (2) n.d = not detected (<Reporting Limit)
- (3) - = not regulated

## Notes:

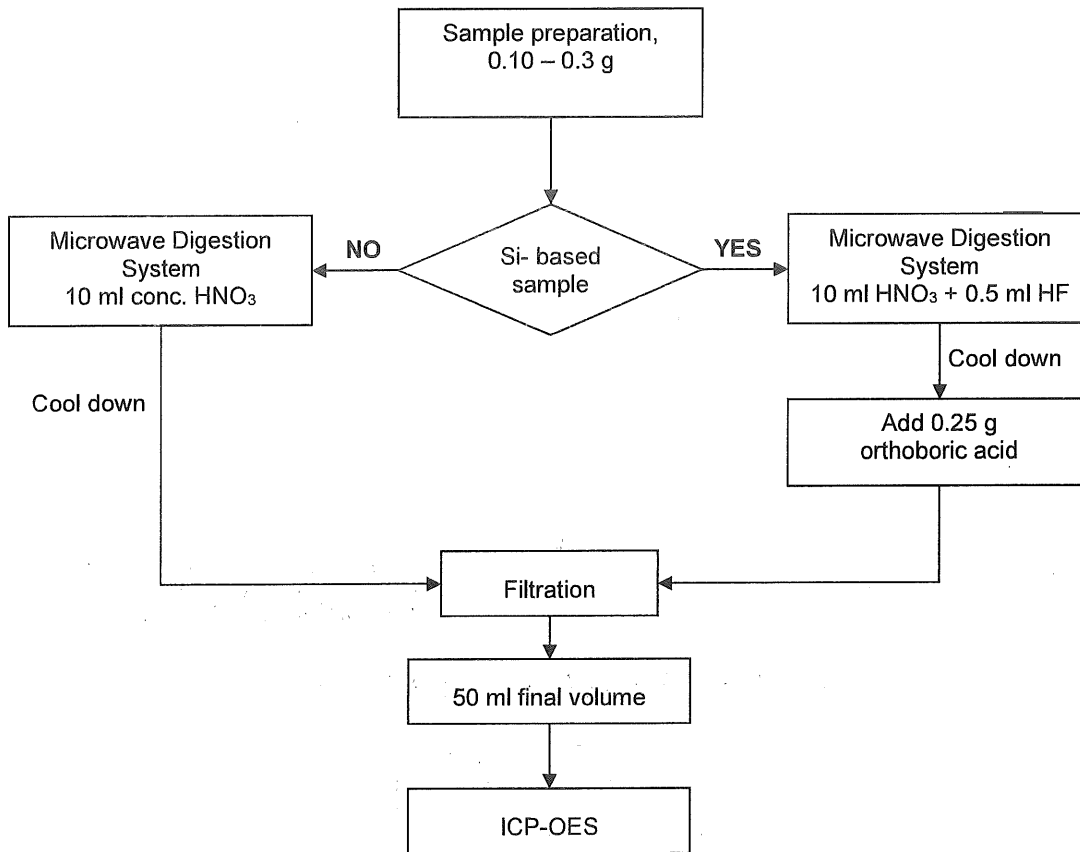
- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series

[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

- (2) The result of Hexavalent Chromium (Cr(VI)) is "n.d." as the result of Chromium (Cr) is "n.d.", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
- (3) If the Chromium (Cr) content is greater than the Reporting Limit of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
- (4) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the Rohs Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
- (5) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (6) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
- (7) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.



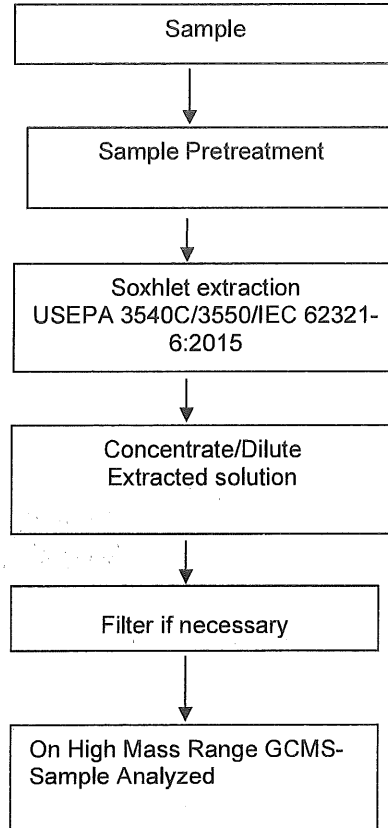
**Process Flow for analysis of metal contents in plastics, metals and electronic components sample**



Tested By: Swaroop Kulkarni  
Sr.Executive

Checked By: Sachin Vibhute  
Sr.Executive

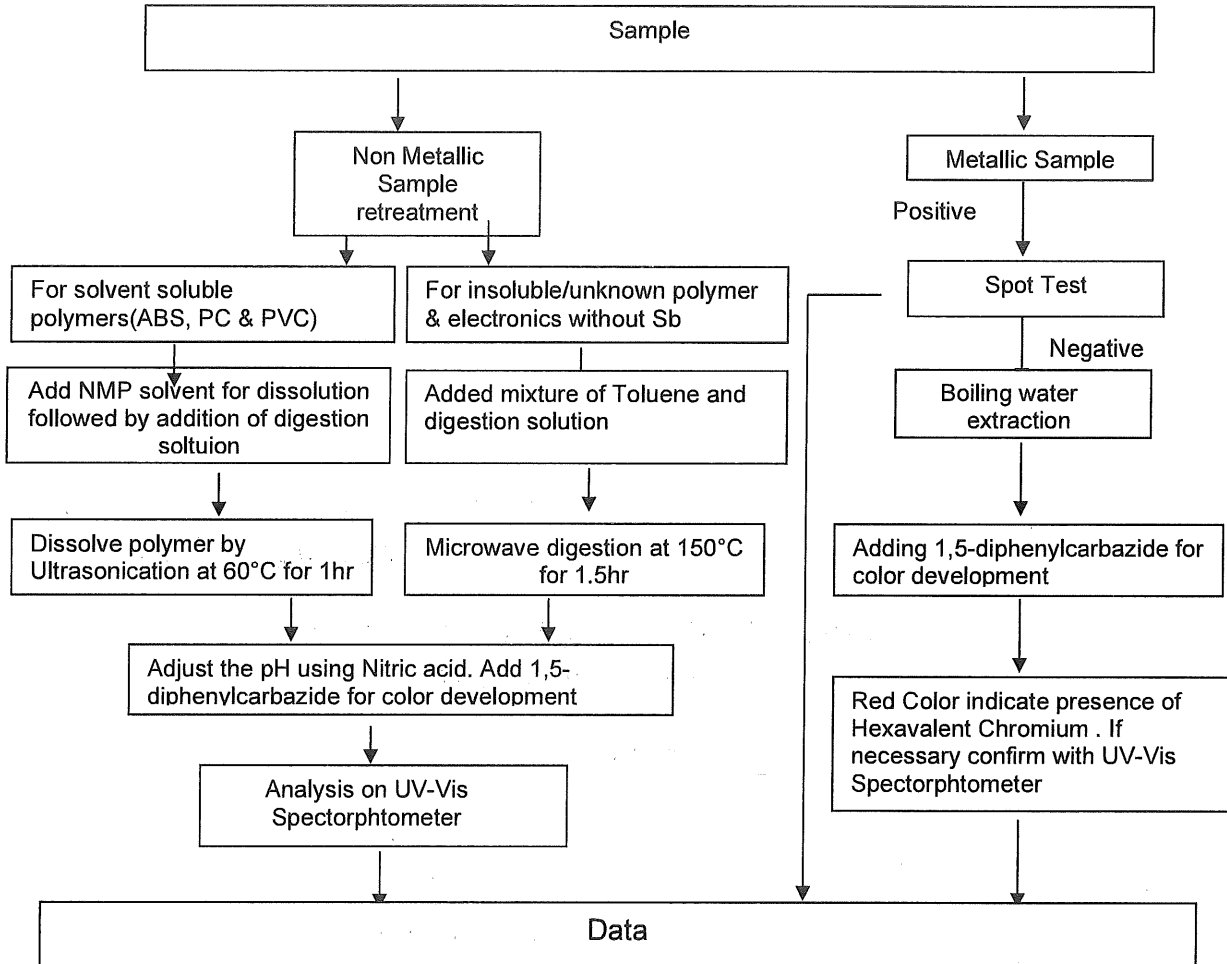
**Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample**



Tested By: Swaroop Kulkarni  
Sr.Executive

Checked By: Sachin Vibhute  
Sr.Executive

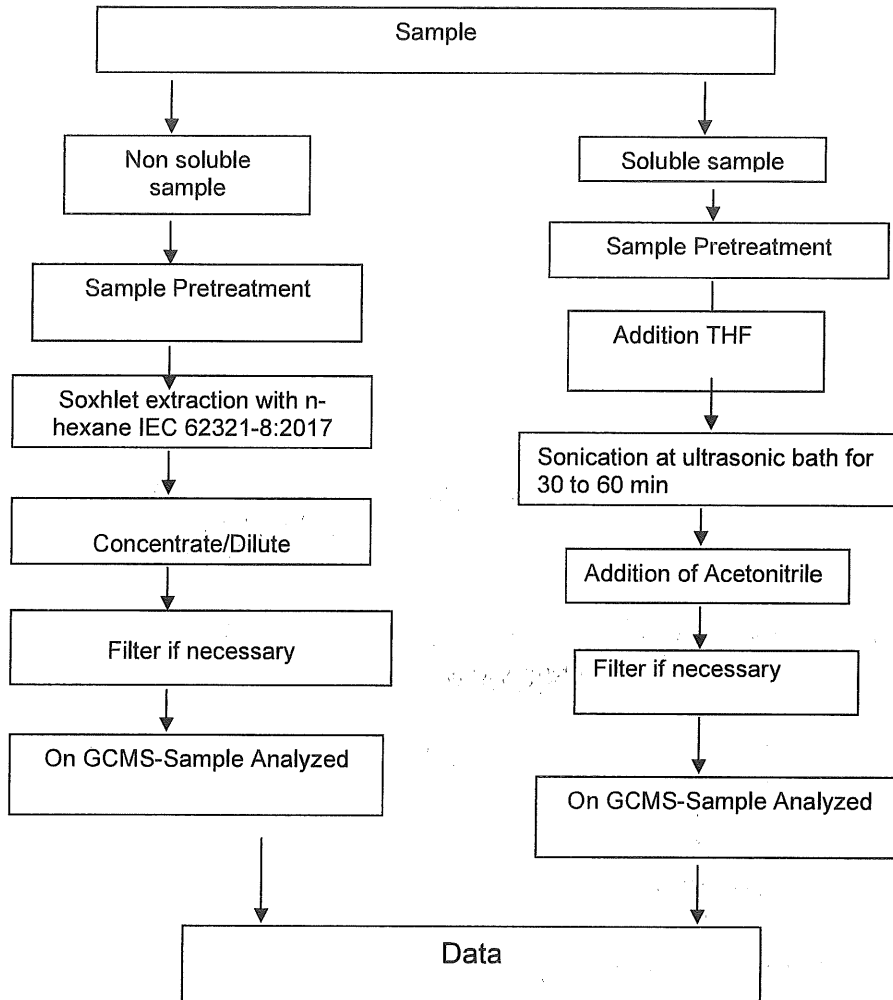
**Process Flow for analysis of Hexavalent Chromium contents in plastics, metals and electronic components sample**



Tested By: Swaroop Kulkarni  
Sr.Executive

Checked By: Sachin Vibhute  
Sr.Executive

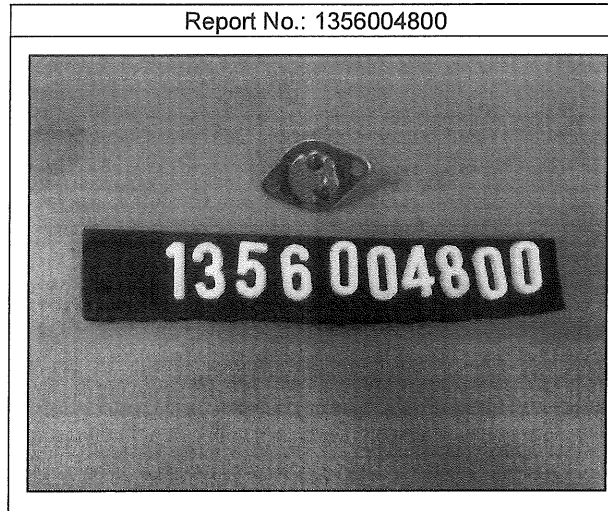
**Process Flow for analysis of Phthalates in Electrotechnical Product As per soxhelt Extraction or THE Extraction:**



Tested By: Swaroop Kulkarni  
Sr.Executive

Checked By: Sachin Vibhute  
Sr.Executive

Sample Photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*