

23 April 2009

SUMITOMO METAL TECHNOLOGY, INC. Kashima Div.

Report to : Epson Toyocom Corporation

1-1, Koyato 2-chome, Samukawa-machi, Koza-gun, Kanagawa 253-0192, JapanReport on Content of Cd, Pb, Cr⁶⁺, Hg, Br, Cl in Parts.

1. SMT Job No. G94-042-A
 2. Sample Receiving Date : 10 April 2009
 3. Test Requested : Analysis of the Cd, Pb, Cr⁶⁺, Hg, Br, Cl content in Parts.
 4. Sample Name

Sample

5. Test Method

Cadmium (Cd)	IEC62321
Lead (Pb)	IEC62321
Hexavalent chromium (Cr ⁶⁺)	IEC62321
Mercury (Hg)	IEC62321
Bromine (Br)	Heating & Vaporization & Dissolution
Chlorine (Cl)	Heating & Vaporization & Dissolution

Note : The Samples were dissolved completely. hydrofluoric acid treatment.

Analysis was performed by Graphite Furnace Atomic Absorption Spectroscopy (GFAA) and Diphenylcarbazide Spectrophotometer Method and Cold Vaporized Atomic Absorption Spectroscopy (CV-AAS) for Mercury. and Ion Chromatograph (IC) for Bromine & Chlorine.

6. Analysis Result

Table 1 (mass ratio)

Object	Test Method	Result	Unit	D. L.
Cd	GFAA	N. D.	ppm	5
Pb	GFAA	N. D.	ppm	50
Cr ⁶⁺	Spectrophotometer	N. D.	ppm	10
Hg	CV-AAS	N. D.	ppm	1
Br	Ion Chromatograph	N. D.	ppm	20
Cl	Ion Chromatograph	N. D.	ppm	20

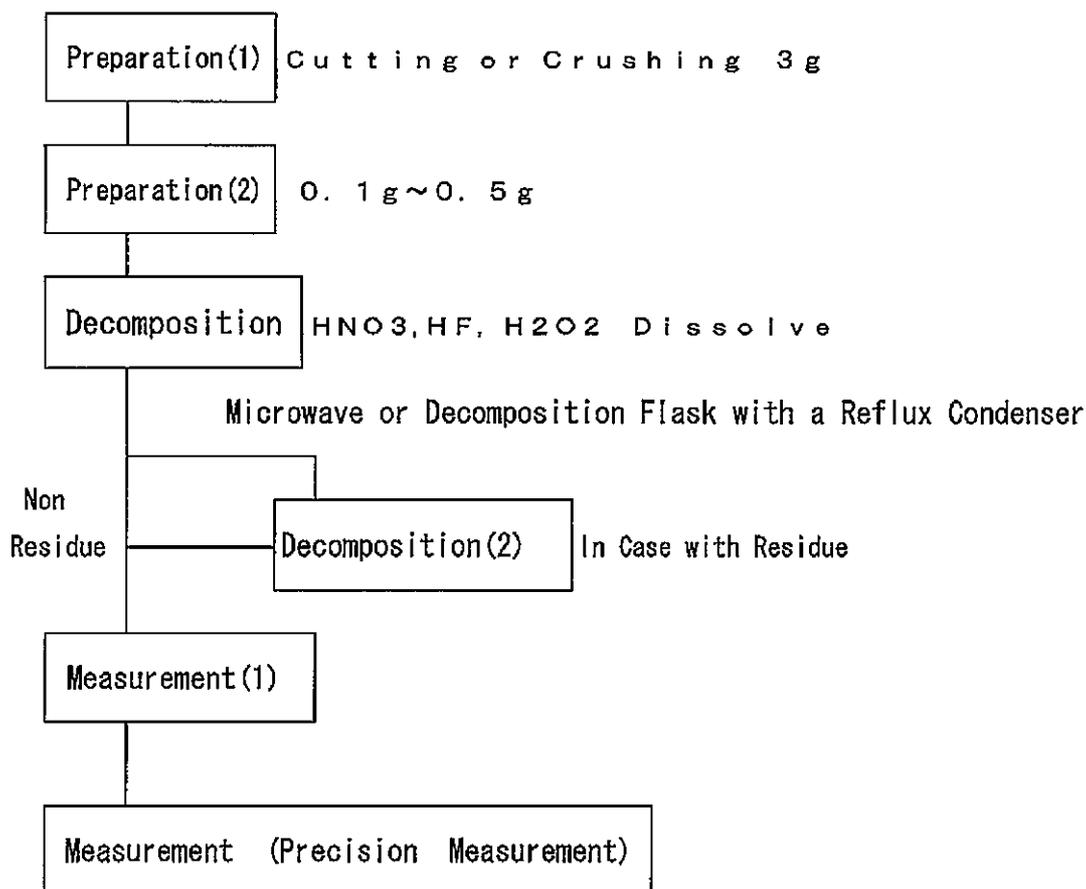
Note ; N. D. =Not Detected ; D. L. =Detection Limits ; ppm = mg/kg

7. Date of Analysis : 23 April 2009

8. Testing Laboratory

Company Name SUMITOMO METAL TECHNOLOGY, INC.Division Name Kashima Div.Responsible person for measurement Toshihiro AtsuiPerson in charge of measurement Naonori KidoSignature: Haruji ShinadaApprove: Ryuji Ogata

Pre-conditioning and measurement for (Cd, Pb)



<Precision Measurement >

- ① In Case <1000ppm...Cd, Pb
· ICP/MS (Plastics)
- ② In Case <1000ppm...Cd, Pb
· FL-AAS (Metal, Ceramics)
- ③ In Case 100ppm< ...Pb
In Case 50ppm< ...Cd
· ICP/AES (Metal, Ceramics)
- ④ In Case 100ppm< ...Pb
In Case 50ppm< ...Cd
· AAS (Metal, Ceramics)

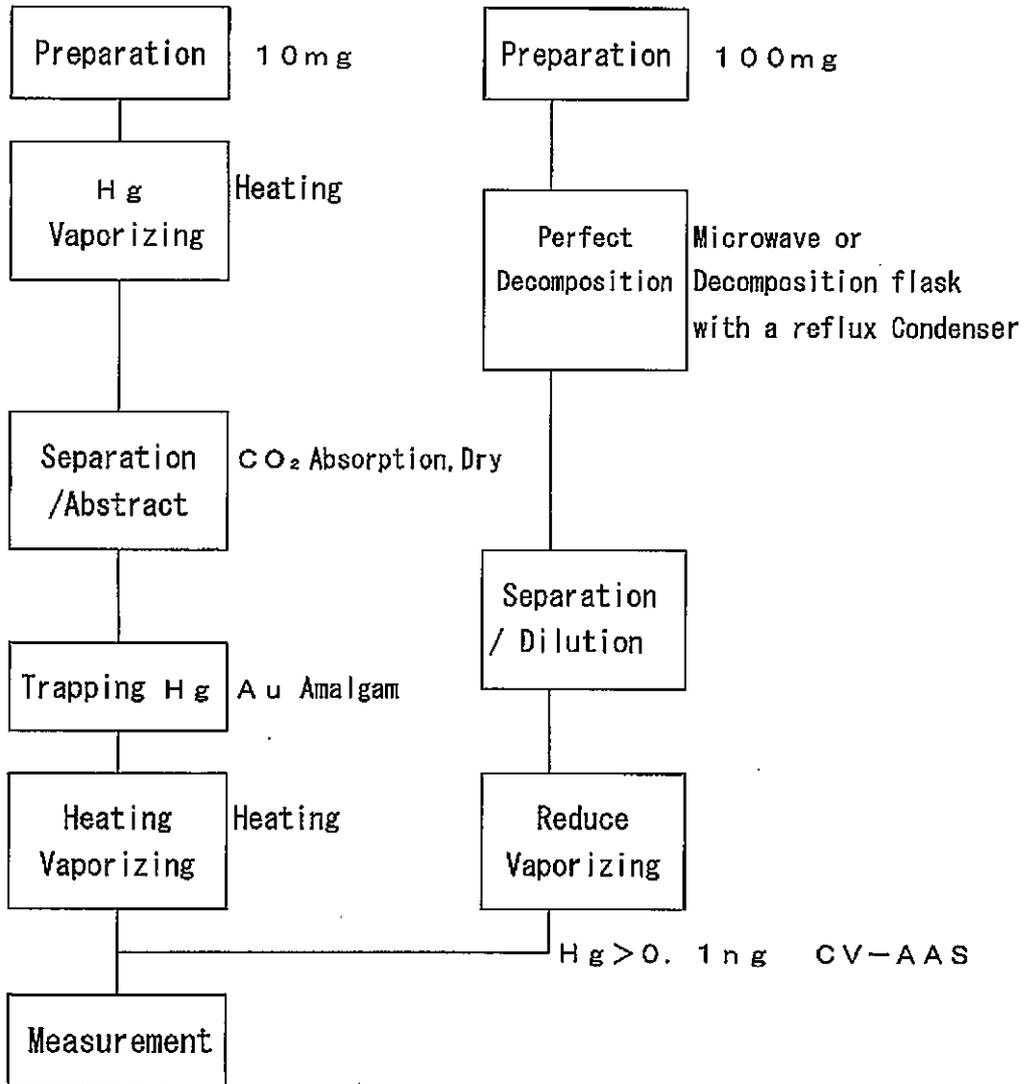
SUMITOMO METAL TECHNOLOGY, INC.

Pre-conditioning and measurement for (Cr⁶⁺)

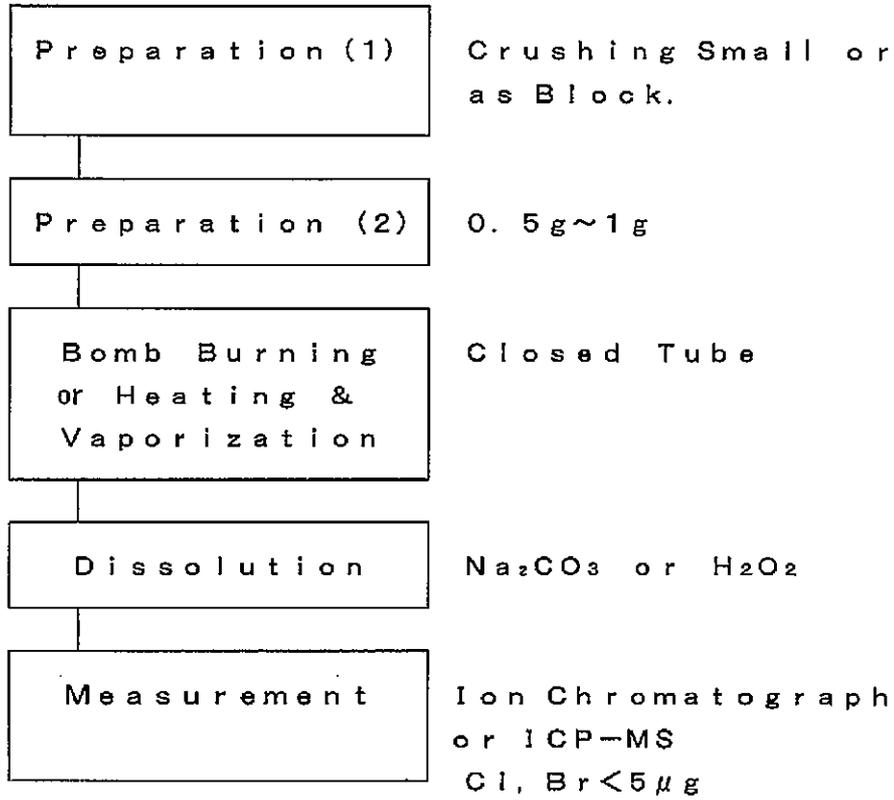
Hexavalent Chromium

Preparation (1)	Crushing Small or as Block.
Preparation (2)	Sample: 2g
Immerse	Pure Water 50ml
Boiling	5min.
Add Sulfuric Acid	H ₂ SO ₄ 4.5mol 3ml
Dilution	250ml
Add Reagent	Diphenylcarbazide
Add Buffer Solution	Ortho disodium hydrogen-phosphate. 25ml
Measurement	Cr ⁶⁺ > 5 μg Spectrometer (Absorbance)

Pre-conditioning and measurement for (Hg)



Pre-conditioning and measurement for (C l, B r)



Pre-conditioning and measurement for (Br)

