

**SAFETY OF TOYS. SPECIFICATION FOR MIGRATION OF CERTAIN
ELEMENTS according to UNE EN 71-3:1996 AND DIRECTIVE 2009/48/EC**

1.- SAMPLE DESCRIPTION.

- UNCOATED IVORY

2.- MANUFACTURER

- TORRASPAPEL, S.A; CONDAT SAS; and CARTIERE DEL GARDA SPA
(LECTA GROUP)

3.- TEST METHODOLOGY.

Sample preparation and metals extraction have been carried out according to UNE-EN 71-3, chapter 8 and the corresponding actualizations UNE-EN 71-3/A1:2001 and UNE-EN 71-3/AC:2002.

Determination of aluminium (Al), boron (B), chromium (Cr), manganese (Mn), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), arsenic (As), selenium (Se), strontium (Sr), cadmium (Cd), tin (Sn), antimony (Sb), barium (Ba), mercury (Hg) and lead (Pb) have been made by ICP-MS induced plasma spectrometry.

4.- RESULTS.

Testing date: 30/05/2013

Analytical results referred to soluble element, expressed as mg element/kg material are presented in next table.

Metals	Content (ppm)	Maximum allowed value (ppm) directive 2009/48/EC	Maximum allowed value (ppm) UNE-EN 71-3
Aluminium	130,99	5625	
Boron	0,23	1200	
Chromium(total)	1,77	37,5	60
Manganese	15,01	1200	
Cobalt	2,84	10,5	
Nickel	0,36	75	
Copper	2,10	622,5	
Zinc	7,26	3750	
Arsenic	1,61	3,8	25
Selenium	<0,01	37,5	500
Strontium	43,92	4500	
Cadmium	0,17	1,9	75
Tin	0,10	15000	
Tin(org)	<0,10	0,9	
Antimony	<0,01	45	60
Barium	2,13	4500	1000
Mercury	<0,01	7,5	60
Lead	1,49	13,5	90

Results of migration indicate that none of the elements analyzed surpasses maximum values allowed.

5. - CONCLUSIONS.

Paper sample analysed, referred as UNCOATED IVORY is agree with UNE-EN 71-3 on safety of toys. Part 3: Migration of certain elements, and directive 2009/48/EC

Service responsible



Josep Puig Serramitja
Dr. Industrial Engineer

Laboratory responsible



Elena Recas Planellas
Biology Science Degree