



Universitat de Girona

Departament d'Enginyeria
Química, Agrària i Tecnologia
Agroalimentària

METAL MIGRATION FOR TOYS SECURITY

UNE EN 71-3

1.- SAMPLE DESCRIPTION.

- AUTOADHESIVO RA-678 paper

2.- FACTORY

- TORRASPAPEL, S. A.

3.- TEST CONDITIONS.

Sample preparation and metals extraction has been carried out as UNE EN 71-3 norme specifies.

Determinations of antimony, arsenic, barium, cadmium, chromium, lead and selenium have been made by ICP-induced plasma spectrometry while mercury has been analysed by atomic absorption technique.

4.- RESULTS.

Date of testing: 03/04/1999

Metal migration.

Spectrometric analysis has not detected any significant concentration of any metal. The determination of values is conditioned by apparatus limit detection.



	<u>Result</u>	<u>Maximum allowed value</u>
Antimony	< 0.1	60
Arsenic	< 0.1	25
Barium	< 0.1	1000
Cadmium	< 0.01	75
Chromium	< 0.01	60
Lead	< 0.1	90
Mercury	< 0.01	60
Selenium	< 0.1	500

These results are expressed in mg of the element to Kg of material. Maximum values are those allowed in UNE EN 71-3 norme for these specific metals all them refered to soluble part.

5.- CONCLUSION.

The paper sample analysed: AUTOADHESIVO RA-678 **is agree** with UNE EN 71-3 norme about toys security.

Service responsible

Pere Mutjé Pujol

Dr. Engineer

Laboratory responsible

Fabiola Vilaseca Morera

L. Chemistry Science