



Universitat de Girona

## **METAL MIGRATION FOR TOYS SECURITY**

### **UNE EN 71-3**

#### **1.- SAMPLE DESCRIPTION.**

- METALVAC REGALOS paper.

#### **2.- FACTORY**

- SARRIOPAPEL, 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: 06/09/1999

#### **Metal migration.**

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



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	<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: METALVAC REGALOS is agree with UNE EN 71-3 norme about toys security.

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