



LABORATORI
D'ENGINYERIA PAPERERA
I MATERIALS POLIMÈRICS



Universitat
de Girona

Product in accordance

with Recommendation XXXVI of german BfR about paper and
board designed for foodstuffs contact

The sample composition of paper SOPOPORTE KRAFT
manufactured by TORRASPAPEL, S.A. is **in accordance** with the
Recommendation XXXVI of German regulation BfR and passed the
suitability tests related to pentachlorophenol, metallic elements
(mercury, cadmium and lead), antimicrobial constituents, colourings
and brightenings analysis and sodium glycolate to come into contact
with foodstuffs as described in actual fabrication.

Correspondence number: eCP_11_05 SK/LB

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Service responsible

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Membre de:



XARXA DE CENTRES
DE SUPORT
A LA INNOVACIÓ
TECNOLÒGICA

ANALYSIS DESCRIPTION AND RESULTS

Sample board: SOPOPORTE KRAFT

Experimental analysis and standard methods related:

Analysis	Standard Method
Determination of pentachlorophenol: PCP	EPA 604
Determination of transfer of antimicrobial constituents	UNE-EN 1104
Determination of colour fastness of dyed paper and board	UNE EN 646:2001
Determination of the fastness of fluorescent whitened paper and board	UNE EN 648:1994
Paper and board intended to come in contact with foodstuffs- Determination of mercury in an aqueous extract.	UNE-EN 12497
Paper and board intended to come in contact with foodstuffs- Determination of cadmium and lead in an aqueous extract.	UNE-EN 12498
Determination of sodium glycolate content	ASTM D 1439

DETERMINACIÓN OF PENTACHLOROPHENOL (PCP)

METHOD EPA 604: PHENOLS

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

- April 13th, 2006
- CROMLAB S.L. Acer 30-32 pl.2 mód. 3
08038 BARCELONA

4.- SAMPLE TREATMENT:

Extraction of 10g of sample in Soxhlet with Hexane: Dichloromethane (1:1).

5.- RESULTS:

Results obtained by means of HRGC-ECD for the sample is:

		<u>Maximum value allowed*</u>
Pentachlorophenol	not detectable	0,15 mg/Kg (ppm)
MDL 10 ng/g		

* Recommendation XXXVI . Paper and board for food contact.- April 1th 2004.

**DETERMINATION OF TRANSFER OF ANTIMICROBIC
COMPONENTS according to UNE-EN 1104.**

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

May, 9th 2006

Grupo LEPAMAP. Universitat de Girona.

Av. Lluís Santaló s/n. 17071 GIRONA

4.- SAMPLE TREATMENT:

The preparation of culture means is made following the indications given in mentioned method.

Plates of petri prepared with Bacillus Subtilis and Aspergillus Niger are incubated during 3 days to 30°C and 5 days to 25°C respectively. It is observed a growth of flora in all the surface and therefore evidence of zone of inhibition is not appreciated. So, the sample does not contain antimicrobial components that are water soluble.

**DETERMINATION OF COLOUR FASTNESS OF DYED PAPERS AND
BOARDS. UNE EN 646:2001 METHOD**

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

- May 23th, 2006

Grupo LEPAMAP. Universitat de Girona.

Av. Lluís Santaló s/n. 17071 GIRONA

4.- SAMPLE TREATMENT AND RESULTS

Both faces of paper sample have been tried according to procedure A (long time contact) of UNE EN 646 methodology with assayed fluids (water, acetic acid, sodium carbonate and olive oil). Evaluation is made in accordance with EN 20105-A03 standard. Next values of colour fastness are obtained:

	Cara A				Cara B			
	H ₂ O	AcOH	Na ₂ CO ₃	Accite	H ₂ O	AcOH	Na ₂ CO ₃	Accite
Blanco	91,12	91,14	91,14	85,75	91,12	91,14	91,14	85,75
<i>Y trist.</i>	91,03	91,25	91,19	81,62	91,00	91,17	90,96	82,14
Dif. CIELAB	0,09	-0,11	-0,05	4,13	0,12	-0,03	0,18	3,61
GRADO	5	5	5	4	5	5	5	4-5

Degree 1 means bad colour fastness and degree 5 means good colour fastness.

**DETERMINATION OF THE FASTNESS OF FLUORESCENT
WHITENED PAPERS AND BOARDS. UNE EN 648:1994 METHOD**

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

- May 23th, 2006

Grupo LEPAMAP. Universitat de Girona.

Av. Lluís Santaló s/n. 17071 GIRONA

4.- SAMPLE TREATMENT AND RESULTS

Both faces of paper sample have been tried according to procedure A (long time contact) of UNE EN 648 methodology, with specified fluids. Results have been evaluated by means of ultraviolet lamp with UV-A (365 nm) filters.

Fluid	Face A	Face B
Water	5	5
Acetic acid	5	5
Sodium carbonate	5	5
Oil	5	5

The evaluation is made by comparison with papers witness prepared and treated with optical brightening FWAS, constitution number 40622. Class 1 means bad solidity and class 5 means good solidity.

DETERMINATION OF MERCURY IN AN AQUEOUS EXTRACT.

UNE-EN 12497

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

May 18th 2006

4.- SAMPLE TREATMENT

Sample preparation and mercury extraction have been carried out according to UNE-EN 645 regulation and UNE-ENV 12497

5.- RESULTS.

	Results (ppm)	Maximum allowed value (ppm)
Mercury	< 0,025 ppm	0,3

These results are expressed in $\mu\text{g/g}$.

Maximum value is those allowed in Recommendation XXXVI of german BfR for this specific metal referred to soluble part.

**DETERMINATION OF CADMIUM AND LEAD IN AN AQUEOUS
EXTRACT. UNE-EN 12498**

1.- SAMPLE DESCRIPTION:

– Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

Cd, Pb, analysis: May 18th 2006

4.- SAMPLE TREATMENT

Sample preparation and cadmium, chromium and lead extraction have been carried out according to UNE-EN 645 and UNE-ENV 12498 regulations

5.- RESULTS.

	Results (ppm)	Maximum allowed value (ppm)
Cadmium	<0,0250	0,5
Lead	0,0612	3

These results are expressed in $\mu\text{g/g}$.

Maximum value is those allowed in Recommendation XXXVI of BfR for these specific metals referred to soluble part.

**TESTING OF PAPER, BOXBOARD AND PAPER BOARD.
DETERMINATION OF SODIUM GLYCOLATE CONTENT
(ASTM D 1439)**

1.- SAMPLE DESCRIPTION:

- Paper sample: SOPOPORTE KRAFT

2.- MANUFACTURER:

- TORRASPAPEL, SA

3.- DATE AND PLACE OF TESTING:

- May, 11th 2005
- Universitat de Girona. Chemical Engineering Department
Av. Lluís Santaló s/n. 17071 GIRONA

4.- SAMPLE TREATMENT AND RESULTS

Sodium glycolate is extracted and analysed according to ASTM D 1439.

Sodium glycolate content is:

	Concentración (ppb)
Glycolate content	Not detectable

Sodium glycolate content is lower than maximum value allowed by XXXVI Recommendation of German BfR Reglamentation.