

Bellaterra: 1st July, 2010
Report N°.: 10/1699-1824
Petitioner reference: **ROSAGRES**
NIF: A08126997
Pol. Ind. "El Mas vell", c/Ramón Sugrañes nº1
43144 Vallmoll (Tarragona)

TEST REPORT**MATERIAL RECEIVED:**

A sample of pressed GLAZED CERAMIC TILE in different colours was received at Applus on 10th May, 2010, with the following characteristics per the Petitioner:

<p>CERAMIC TILE Ref.: "Rosagres Porcelain Product"</p>	
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TEST REQUIRED:

- Determination of volatile organic compounds. Gas chromatography with mass detector method.

DATE ON WHICH THE TESTS WERE PERFORMED: From 13/05/2010 to 27/05/2010.

RESULTS: See attached pages.



Firmado digitalmente
por Juan Martinez Egea



Firmado digitalmente por
Miguel María Ayala Morán

Responsible for Construction Materials
LGAI Technological Center S.A.

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The present document is a translation of the report nº 10/1398-1368M1. In case of dispute, the valid is the spanish version.

The results specified herein pertain exclusively to the material received at Applus and tested according to the instructions provided.

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ROSAGRES	CERAMIC TILE Ref.: "Rosagres Porcelain Product"

Determination of volatile organic compounds. Gas chromatography with mass detector method.

The determination of Volatile Organic Compounds (VOCs) was implemented by means of the Gas Chromatography, CG-EM method and the static head space method, for 2 h, at 120° C.

A glass container with a Twin type plug and a valve septum was used.

A container with the same characteristics was readied with the following solvent patterns: Benzene, toluene, xylene, ethylbenzene and cyclohexanone (total, 0.876 mg)).

A blank test was conducted of the ambient air under the same conditions.

Chromatographic conditions were as follows:

Initial temperature: 40°C

Final temperature: 240°C

Temperature variation: 8°C / s

Initial time: 4 minutos

Column flow: 2.4 ml / min

Injector at 240°C

Mass detector at Full Scan

Initial mass: 22

Final mass: 350 UMA

The total VOC content is calculated taking into account the total peaks detected and with reference to the external patterns mentioned earlier.

Several samples were received at the lab from fragments of glazed ceramic tile in black and light blue colours, as well as a sample of brown unglazed ceramic tile.

RESULTS:

Further to subjecting the ceramic tile sample at a temperature of 120 °C for 2 hours, the volatile organic compounds present therein were analysed by means of the gas chromatography with mass detector technique and the static head space method.

The ceramic tile tested according to the petitioner's specifications pertains to the fragments of black glazed tile.

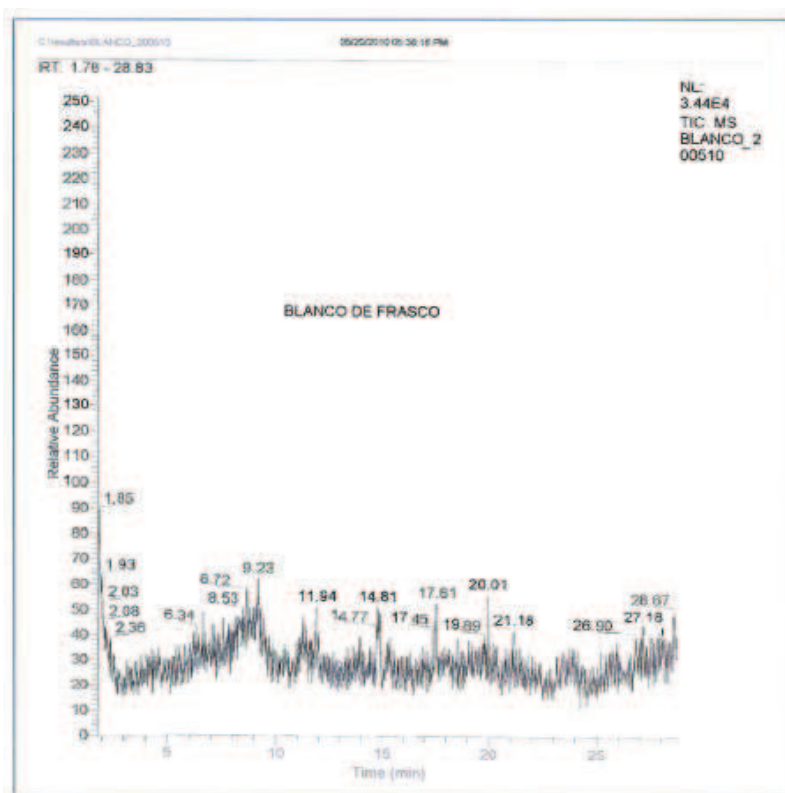
A certain number of volatile compounds have been detected; further to adding them all up, the total value of VOCs amounts to 2ppm.

** 1 ppm ≡ 1mg/1kg*

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CHROMATOGRAM

Volatile compounds on blank sample



Volatile compounds on sample

