State Research Institute Center for Physical Sciences and Technology

Public institution, Savanoriai ave. 231, LT-02300 Vilnius, Lithuania. Ph. +370 645 15550, +370 645 15557, e-mail: office@ftmc.lt, http://www.ftmc.lt. Data on entity is accumulated and stored in the Register of Legal Entities of the Republic of Lithuania. Code 302496128

Provectus redivivus, CJSC   2025-05-28   No   5432/KV
Code - 305646647
Birzisku str. 19, Vilnius, LT-11111
Lithuania

FOR THE TESTING OF SAMPLES

Samples submitted on   18-05-2025
Date of testing   21-27-05-2025

In response to your request, please find below the results of the test:

Sample No (ID)	Sample description	Analysis method	Results
SWG30	A piece of glued panel of recycled tyres. Black-grey in colour, easily brittle, with a specific rubbery, sour smell.	Gas chromatography-mass spectrometry method (GC-MS)	The most abundant volatile organic compound identified in the sample was: 2-Propanol, 1-chloro-, phosphate (3:1) (65,30 %) (weak acid chlorinated odour)

Sample preparation:

5 g of the crushed sample is poured over 20 ml of a solvent mixture (1:1/ pentane:diethyl ether) and extracted in an ultrasonic bath for 30 minutes. After extraction, the sample is filtered and the filtrate is skimmed off to constant weight. 10 mg of the dry residue was dissolved in 1 ml of a solvent mixture (1:1/ pentane:diethyl ether) and inject into the gas chromatographic system.

Analysis methods:

Analysis of volatile organic compounds was performed by gas chromatography-mass spectrometry (GC-2010Plus chromatograph coupled to a GCMS-QP2010Ultra mass detector (Szimadzu, Japan).

Chromatographic column: Rxi-5MS (33m-0.25mm-0.25µm) (Restek, USA)

Chromatographic conditions:
50 °C (2 min) raised at 16 °C/min to 250 °C (1 min) , then raised at 15 °C/min to 300 °C and held constant (4 min)
Injector/detector temp. 250 °C
Flow rate:1.3ml/min
Split mode: splitless
MS conditions:
Ion source temperature: 220 °C
Ionisation force: 70eV
Scanning range 33-500mz

Identification of compounds by comparison with mass spectra of volatile organic compounds in the Wiley, NIST and Flavour&Fragrance libraries. The main compounds and their amounts are given in the table above. Full chromatograms of the analysis with the identified compounds and their relative amounts are attached.

1 g of the recycled tyre sample has the potential to emit ≥ 0.08194 g (81.94 mg) of VOCs. The amounts of all compounds identified by gas chromatographic analysis from the recycled tyre sample, converted to mg/g product, are given in the Supplementary Annex.

Conclusion: the organic volatile compounds obtained during the analysis do not contain organic volatile compounds MINISTER OF HEALTH OF THE REPUBLIC OF LITHUANIA AND MINISTER OF SOCIAL WELFARE AND LABOUR OF THE REPUBLIC OF LITHUANIA 13 December 2001. No 645/169 of 13 December 2001 No 645/169 on the implementation of the Order on the implementation of the Lithuanian Hygiene Standard HN 23:2001 'Concentration limits for harmful chemical substances in the working environment. GENERAL REQUIREMENTS" and the MINISTER OF THE REPUBLIC OF LITHUANIA, 10 May 2007. No V-362 of the Order of the Ministry of Health of the Republic of Lithuania on HN 35:2007 "MAXIMUM ACCEPTABLE CONCENTRATION OF CHEMICAL SUBSTANCES (TERTIALS) IN THE AIR OF RESIDENTIAL AND PUBLIC USE PREMISES". As these compounds are not mentioned in the Regulations on the use of toxic substances in the Republic of Lithuania, the use of the above mentioned sound insulation panels is allowed and, according to the above mentioned documents, **is not dangerous to health.**

This analytical report and the accompanying chromatograms of the analyses and the supplementary appendix of the quantitative calculations cannot be used for the purpose of settling legal disputes.

The analysis was carried out and the protocol was prepared by   dr. Jurga Būdienė
researcher at the Laboratory of Materials Analysis

Department of Organic Chemistry,
Materials Analysis Laboratory
researcher J. Būdienė, jurga.budiene@ftmc.lt
Vardas Pavardė, tel., el. p.