



TRANSPHORM

Transport related Air Pollution and Health impacts – Integrated Methodologies for Assessing Particulate Matter

Collaborative Project, Large-scale Integrating Project

SEVENTH FRAMEWORK PROGRAMME

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Database with PM data on the TRANSPHORM website

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This document presents the composition of PM sampled and analysed as described in Deliverable 2.1.1 on the website of TRANSPHORM (<http://www.transphorm.eu>). The PM samples concerned PM_{2.5} and PM₁₀ samples collected in twenty study areas in fifteen countries across Europe (see: Fig.1). In each study area, three types of sampling sites were selected: regional background, urban background and street location.



Figure 1: The 20 study areas in the fifteen participating countries in the ESCAPE project.

The following components have been analyzed: NO, NO₂, NO_x, PM_{2.5}, PM₁₀, PM_{2.5}-absorbance, PM₁₀-absorbance and elemental composition by XRF in PM_{2.5} and PM₁₀. In

addition, in ten study areas PM_{2.5} samples have been analyzed for polycyclic aromatic hydrocarbons (PAH), EC/OC and oxidative potential. In four study areas (the Netherlands/Belgium, Munich, Catalonia and Oslo) the analysis of PM_{2.5} samples was further extended with analysis of hopanes and steranes, levoglucosan and an additional oxidative potential analysis by the DDT test (see: Table 1). The results are available in a database Deliverable 2.1.5 on the website of TRANSPHORM.

Table 1. Description of the 20 ESCAPE/TRASPHORM study areas and chemical analysis.

Country	Study area: 1-20	Sampling period	Analyses	Sites	Sites types		
					RB	UB	S
Norway	Oslo (1)	05-02-2009–29-01-2010	XRF_PM10, PAH, EC/OC, DTT, H&S	19	3	9	8
Sweden	Stockholm (2)	03-12-2008–01-12-2009	XRF_PM10	20	3	6	11
Finland	Helsinki (3)	27-01-2010–26-01-2011	XRF_PM10, PAH, EC/OC, DTT	20	2	10	8
Denmark	Copenhagen (4)	19-11-2009–17-11-2010	XRF_PM10, PAH, EC/OC, DTT	20	3	6	11
Lithuania	Kaunas (5)	20-01-2010–19-01-2011	XRF_PM10	20	4	6	10
United Kingdom	Manchester (6)	27-01-2009–20-01-2010	XRF_PM10	20	0	8	12
	London (7)	26-01-2010–18-01-2011	XRF_PM10, PAH, EC/OC, DTT	20	1	12	7
The Netherlands/ Belgium	Rotterdam, Amsterdam (8) Groningen, Amersfoort	17-02-2009–19-02-2010	XRF_PM10, PAH, EC/OC, DTT, H&S	16	4	4	8
	Utrecht, Groningen Maastricht, Doetinchem, Antwerp		XRF_PM10	40	10	12	18
Germany	Ruhr area (9)	15-10-2008–12-10-2009	XRF_PM10	20	4	8	8
	Munich/Augsburg (10)	27-10-2008–05-11-2009	XRF_PM10, PAH, EC/OC, DTT	20	5	6	9
Austria	Vorarlberg Cities (11)	27-10-2008–05-11-2009	XRF_PM10	20	3	7	10
France	Paris (12)	04-01-2010–04-01-2011	XRF_PM10, PAH, EC/OC, DTT, H&S	20	4	9	7
Hungary	Gyor (13)	22-02-2010–24-02-2011	XRF_PM10	20	1	9	10
Switzerland	Lugano (14)	02-03-2009–10-03-2010	XRF_PM10	19	3	6	10
Italy	Turin (15)	01-02-2010–25-01-2011	XRF_PM10	20	1	8	11
	Rome (16)	27-01-2010–26-01-2011	XRF_PM10, PAH, EC/OC, DTT, H&S	20	2	8	10
Spain	Catalunya (Barcelona, Girona, Sabadell) (17)	14-01-2009–14-01-2010	XRF_PM10, PAH, EC/OC, DTT	40	4	13	23
	Barcelona City (18)	14-01-2009–14-01-2010	XRF_PM10, PAH, EC/OC, DTT, H&S	20	1	8	11
Greece	Athens (19)	21-04-2010–27-04-2011	XRF_PM10, PAH, EC/OC, DTT	20	1	12	7
	Heraklion (20)	18-02-2009–16-02-2010	XRF_PM10	20	0	12	8