Norwegian Institute of Public Health

WP2 – Human Exposure
(Pathways and Monitoring)

ESR6:
An experimental approach to examining correlation between external exposure and human body burdens

Cathrine Thomsen

INFLAME kick-off meeting, Birmingham 24.01.2011

Norwegian Institute of Public Health

Norwegian Institute of Public Health

A governmental institution under the Ministry of Health and Care Services

Division of Environmental Medicine,

Department of Analytical Chemistry

Characterisation of human exposure to environmental pollutants

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The primary objective

is to assess pathways for human exposure to emerging flame retardants (FRs) by comparing external doses from measurements in indoor air and dust as well as food and beverages and compare these with internal doses obtained through biomonitoring

Develop sensitive and efficient analytical methods for determination of emerging

- persistent FRs in blood (Dechlorane plus, BTBPE, DBDP)
  GC-LR/HRMS

- metabolisable FRs in urine (brominated phthalates, organophosphorus FRs)
  Column-switching LC-MS/MS

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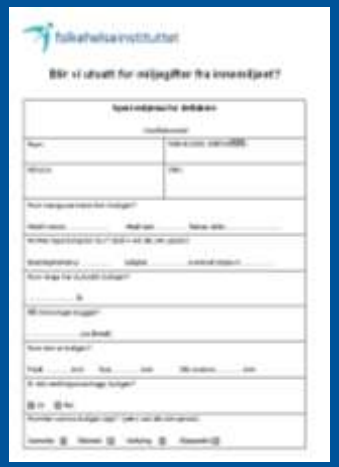
The study cohort

questionnaire



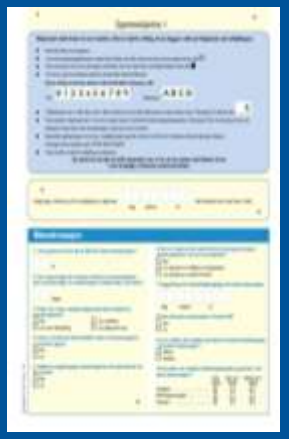
dust

air

n = 40

beverages

questionnaire



food

SU

Biological samples (n = 80)

Urine, blood, hair, nails and saliva

VITO

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Applicants for ESR6

- 12 men
- 7 women

Greece, Italy, Latvia, Poland, Spain, Egypt, China, Hong Kong, India, Iraq, Iran

- 4 selected for interview (3 men, 1 woman)

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So far:

Application for approval of the study to the Regional Committee for Medical Research Ethics

- Research protocol
- Information/invitation letter
- Consent form
- Questionnaires

Meeting 12 th January