

**Advanced Training Courses (each main topic will provide 1-3 h instruction; Discussion sessions will also be included)**

**ATC1: Techniques for Monitoring FRs in the Environment. 2 days;  
Course Organiser, Pim Leonards, VU.**

**Location: Grand Hotel Opduin De Koog Texel (Ruijslaan 22, De Koog)**

<http://www.opduin.nl/index.php?page=Home&lang=nl>

| <b>Day 1 Sampling, sample treatment and QA/QC (Monday 12 September)</b>                                                          | <b>Lecturer</b>          | <b>Duration</b> | <b>Time</b> |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|-------------|
| Approaches and techniques for sampling indoor air and dust                                                                       | Ernie Weijers (ECN)      | 9.00-10.00      | 60 min      |
| Coffee break                                                                                                                     |                          | 10.00-10.15     |             |
| The importance of sampling strategy, sample handling and storage                                                                 | Frédéric Maas (VITO)     | 10.15-11.15     | 60 min      |
| Coffee break                                                                                                                     |                          | 11.15-11.30     |             |
| Principles of FR Analysis (I)                                                                                                    | Pim Leonards (VU)        | 11.30-12.15     | 45 min      |
| Lunch                                                                                                                            |                          | 12.15-13.15     |             |
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| Principles of FR Analysis (II)                                                                                                   | Adrian Covaci (VU)       | 13.15-14.00     | 45 min      |
| Coffee break                                                                                                                     |                          | 14.00-14.15     |             |
| Quality assurance, analytical measurement uncertainty and scrutinising analytical data                                           | Stefan Voorspoels (VITO) | 14.15-15.15     | 60 min      |
| Coffee break                                                                                                                     |                          | 15.15-15.30     |             |
| LC-MS methods                                                                                                                    | Pim de Voogt (UvA)       | 15.30-16.30     | 60 min      |
|                                                                                                                                  |                          |                 |             |
| <b>Day 2 Hyphenated techniques and case studies (Tuesday 13 September)</b>                                                       |                          |                 |             |
| GC-MS and LC-MS methods for FR analysis                                                                                          | Sicco Brandsma (VU)      | 9.00-10.00      | 60 min      |
| Coffee break                                                                                                                     |                          | 10.00-10.15     |             |
| GCxGC(-MS) methods                                                                                                               | Pim Leonards (VU)        | 10.15-11.15     | 60 min      |
| Coffee break                                                                                                                     |                          | 11.15-11.30     |             |
| Proficiency tests and interlaboratory studies for FRs                                                                            | Jacob de Boer (VU)       | 11.30-12.30     | 60 min      |
| Lunch                                                                                                                            |                          | 12.30-13.30     |             |
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| Case study approaches; break-out groups – trainees set task of developing an approach to analysis of a given FR in a given media | ALL                      | 13.30-14.45     | 75 min      |
| Coffee break                                                                                                                     |                          | 14.45-15.00     |             |
| Transfer to Antwerp (bus, boat, train ☺)                                                                                         |                          | 15.00           |             |
|                                                                                                                                  |                          |                 |             |

**Wednesday 14 September**  
**Network assembly and Supervisory Board Meeting**

**Location:** University of Antwerp, Stadscampus (CST), Rodestraat 14, 2000 Antwerpen, Room R231.

<http://www.ua.ac.be/main.aspx?c=.ROUTE&n=26518&ct=25831&e=67497>

|                                                       | <b><i>Duration</i></b> | <b><i>Time</i></b> |
|-------------------------------------------------------|------------------------|--------------------|
| <b>Network meeting</b>                                |                        |                    |
| ESRs/ERs present a brief summary (10 min) of progress | <b>09.30-11.00</b>     | <b>90 min</b>      |
| Coffee break                                          | <b>11.00-11.15</b>     |                    |
| ESRs/ERs present a brief summary (10 min) of progress | <b>11.15-12.15</b>     | <b>60 min</b>      |
| Lunch                                                 | <b>12.15-13.30</b>     |                    |
|                                                       |                        |                    |
|                                                       |                        |                    |
| <b>Supervisory board meeting</b>                      |                        |                    |
| Supervisors and 2 representatives from ESRs/ERs       | <b>13.30-15.30</b>     | <b>120 min</b>     |
| Meeting close                                         | <b>After 15.30</b>     |                    |

**ATC2: Techniques for Assessment of Exposure to FRs. 2 days;**  
**Course Organiser, Adrian Covaci, UA**

**Location:** University of Antwerp, Stadscampus (CST), Rodestraat 14, 2000 Antwerpen, Room R231.

<http://www.ua.ac.be/main.aspx?c=.ROUTE&n=26518&ct=25831&e=67497>

| <b>Day 1: Investigating the pathways of human exposure to FRs (Thursday 15 September)</b>                                        | <b>Lecturer</b>                | <b>Duration</b> | <b>Time</b> |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------|-------------|
| An overview of human exposure to FRs – part 1                                                                                    | Stuart Harrad (UB)             | 9.00-10.00      | 60 min      |
| Coffee break                                                                                                                     |                                | 10.00-10.15     |             |
| An overview of human exposure to FRs – part 2                                                                                    | Stuart Harrad (UB)             | 10.15-11.15     | 60 min      |
| Coffee break                                                                                                                     |                                | 11.15-11.30     |             |
| An overview of human exposure to FRs – part 3                                                                                    | Stuart Harrad (UB)             | 11.30-12.30     | 60 min      |
| Lunch                                                                                                                            |                                | 12.30-13.30     |             |
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| Design, Use, and Interpretation of Food Frequency Questionnaires                                                                 | Anne Lise Brantsæter (NIPH)    | 13.30-14.30     | 60 min      |
| Coffee break                                                                                                                     |                                | 14.30-14.45     |             |
| Human biomonitoring – ethical and practical considerations                                                                       | Georg Becher (NIPH)            | 14.45-15.45     | 60 min      |
| Coffee break                                                                                                                     |                                | 15.45-16.00     |             |
| Non-invasive biomarkers of exposure                                                                                              | Adrian Covaci (UA)             | 16.00-17.00     | 60 min      |
|                                                                                                                                  |                                |                 |             |
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| <b>Day 2: Assessing human exposure to FRs (Friday 16 September)</b>                                                              |                                |                 |             |
| Human exposure to FRs at contaminated sites (e.g. e-waste)                                                                       | David Santillo (Greenpeace UK) | 9.00-10.00      | 60 min      |
| Coffee break                                                                                                                     |                                | 10.00-10.15     |             |
| Are there differences in patterns of exposure to various FRs?                                                                    | Adrian Covaci (UA)             | 10.15-11.15     | 60 min      |
| Coffee break                                                                                                                     |                                | 11.15-11.30     |             |
| Current biomonitoring studies for FRs; general information about setup of biomonitoring studies                                  | Ann Colles (VITO)              | 11.30-12.30     | 60 min      |
| Lunch                                                                                                                            |                                | 12.30-13.30     |             |
|                                                                                                                                  |                                |                 |             |
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| Case study approaches; break-out groups – trainees set task of developing an approach to monitoring human exposure to a given FR | ALL                            | 13.30-15.30     | 120 min     |
| Meeting Close                                                                                                                    |                                | 15.30           |             |
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