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Final report

# S-Risk for the Walloon region substance data sheets part 4: Polycyclic Aromatic Hydrocarbons (PAHs)

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## LIST OF ACRONYMS

| | |
|---|---|
| ABS | Absorption factor |
| Al | Aluminum content |
| BCF | Bioconcentration factor |
| BTEXS | benzene, toluene, ethylbenzene, styrene |
| BTF | Biotransfer factor |
| Da | Diffusion coefficient in air |
| Dpe | Diffusion coefficient in polyethylene |
| Dpvc | Diffusion coefficient in PVC |
| Dw | Diffusion coefficient in water |
| FA | Factor used when calculating dermal absorption from water |
| Fe | Iron content |
| ISSeP | Institut Scientifique de Service Public |
| $K_d$ | Sorption coëfficient soil-water |
| Koa | Distribution coefficient octanol-air |
| Koc | Distribution coefficient organic carbon-water |
| Kow | Distribution coefficient octanol-water |
| Kp | Dermale permeability coefficient |
| MTBE | methyl-t-butylether |
| OVAM | Openbare Vlaamse Afvalstoffenmaatschappij (Public Waste Agency of Flanders) |
| PAH | polycyclic aromatic hydrocarbons |
| Ptot | Total phosphorus content |
| TCL | Tolerable Concentration in Air |
| TDI | Tolerable Daily Intake |
| TGD | Technical Guidance Document |

## LIST OF MODIFICATIONS

| Date | Modification |
|---|---|
| | |

# INTRODUCTION

The **substance data sheets** summarise the data as available in S-Risk 1.0 for the **Walloon region**. The substance data sheets are a copy of those used for the S-Risk Flanders version. They are not based on the Annexe B4 ("propriétés physico-chimiques de reference pour les polluants normés") of the GRER part B version 2.0. The differences between the Flemish and Walloon Region are highlighted using ***W*** (representing data used only in the Walloon version). Physiological parameters and BCF/BTF are the same for the two regions. The three main differences are:

- Toxicological values (values recently revised and harmonized in Wallonia);
- Carcinogenicity revision;
- Limit values used in Wallonia are regulatory values only ("code de l'eau" for drinking water and AGW, 2010 and EC, 2004 for outdoor air). No limit values in indoor air nor in plants and meats are proposed.
- All background values are set to "0" (background values are not taken into account in Wallonia).

Substance data sheets modified for the Walloon version summarize the data as available in S-Risk 1.0 for the Walloon region.

The current **substance data sheets** used for the **Flanders version** of S-Risk are a copy of those used for the calculation of the proposed soil clean-up values in Flanders, with some modifications. Following changes in model equations in S-Risk compared to the formerly used Vlier-Humaan model, some new parameter values had to be introduced. Also some supplementary options available in S-Risk required changes to the input data for which new values had to be collected. The most important changes are:

- **Dermal absorption**: Two new parameters are used that replace the formely used parameters to calculate dermal absorption, namely the fraction adsorbed for dermal uptake via soil and dust, and the dermal permeability coefficient for dermal uptake from water. The latter parameter is combined with a parameter FA.
- **Bioconcentration factors plants (BCF)**: For metals and arsenic very often either the BCF for maize or the BCF for grass was missing. In these cases the same BCF was used for maize and grass. Because this is incorrect, there is a need to search for additional BCFs.
- **Bioconcentration factors plants (BCF):** for organic compounds plant uptake in S-Risk can either be calculated starting from substance- and plant-specific characteristics or directly from BCF values expressed in mg/kg dm in the plant per mg/$m^3$ soil solution. For most organic substances plant uptake is calculated. For some organic substances however, BCF values reported in the original (Vlier-Humaan) data sheets had units of mg/kg dm in the plant per mg/kg dm in the soil, which are incompatible with the current S-Risk version. For these substances plant- and substance specific characteristics were used to calculate plant uptake. If so, this is mentioned in the data sheets.
- **Biotransfer factors animal products (BTF)**: S-Risk allows to specify BTF animal products by meat, milk, kidney and liver. For inorganic substances BTF values need to be filled in. The original data sheets only provided values for meat and milk. Lacking values were collected from De Raeymaecker et al. (2005). For organic substances model calculations are always used to obtain BTF values.
- **Biotransfer factors eggs (BTF):** S-Risk allows the user to calculate transfer to chicken eggs. This is a new feature as compared to Vlier-Humaan. However, using default settings in S-Risk this exposure route is not activated. For metals biotransfer factors to eggs have been collected and are included in the substance data sheets. For organic substances no BTF

have been collected and their value has been equaled to zero. When the exposure route to eggs is activated in S-Risk the user should enter appropriate BTF values.

- **Toxicity data**: The toxicity data in S-Risk are copied from the original substance data sheets. In contrast to Vlier-Humaan, where calculations were only possible for systemic effects and either carcinogenic or non-carcinogenic effects, S-Risk allows to make calculations for several endpoints simultaneously. As a consequence, the toxicity data in the current substance data sheets are sometimes more extensive than in the former ones.
- **Background exposure and background concentrations**: Vlier-Humaan did only allow to enter one value for background exposure (be it depending on the type of land use) via food. In S-Risk it is possible to enter age-dependent background exposure via food. Default ratios are most often used for age-dependency (according the the ratio's specified in the TGD). Differences between land-uses are taken into account based on the background concentrations for food that have been entered. S-Risk also separately calculates background exposure via drinking water.
- **Limit values for food**: For some substances calculated concentrations in food stuffs have to comply with existing standards. With this in mind recent legislation has been scrutinised and obsolete values were replaced by more recent ones when appropriate.

The existing information, which was copied in S-Risk is based on the following original substance data sheets:

- Heavy metals: OVAM (2009c) and (OVAM, 2009d) with accompanying spreadsheet;
- BTEXS: OVAM (2009a);
- Chlorinated aliphatic substances: OVAM (2004) for 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, dichloromethane, tetrachloroethene, tetrachloromethane, trichloroethene; OVAM (2009b) for 1,2-dichloroethane, vinyl chloride, trichloromethane (chloroform);
- Chloro-aromatics: OVAM (2004); OVAM (2009b) for hexachloro-benzene;
- PAHs: OVAM (2003a) for PAHs; OVAM (2005a) for changes in the evaluation criteria for for benzo(a)pyrene and dibenzo(a,h)antracene;
- Cyanides: OVAM (2004);
- Trimethylbenzenes: OVAM (2003b);
- Chlorophenols: OVAM (2005b)
- Hexane, heptane, octane: OVAM (2004);
- MTBE: OVAM (2003a)

Details on the new information are always available in the report discussing the calculation of clean-up values with S-Risk (Cornelis, Standaert, and Willems, 2013). Newly added or modified information compared to the original data sheets is clearly indicated in the S-Risk substance data sheets.
Changes entered after publication of the first version of the substance datasheets are listed in the section "List of modifications".

The substance data sheets consist of 6 documents:

- Part 1: Substance data sheets metals and arsenic
- Part 2: Substance data sheets benzene, toluene, ethylbenzene, xylenes, styrene, phenol and trimethylbenzenes
- Part 3: Substance data sheets chlorinated aliphatic substances, chlorobenzenes and chlorophenols

- **Part 4: Substance data sheets polycylic aromatic hydrocarbons**
- Part 5: Substance data sheets alkanes, MTBE and cyanides
- Part 6: Substance data sheets total petroleum hydrocarbons

# CHAPTER 7. SUBSTANCE DATA SHEETS POLYCYLIC AROMATIC HYDROCARBONS

Data on substances that do not derive from the former substance data sheets are indicated with N, accompanied with some explanation if appropriate. Detailed information on all new entries is given in Cornelis et al. (2013). Data on substances that differ from Flanders are indicated with W. Volatile pollutants (vapour pressure > 0.1 Pa at 20°C) are highlighted in the document.

## 7.1. ACENAPHTHENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 83-32-9 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 154 | Verschueren (1983) |
| Solubility | mg/l | 3.93 (25°C) | WHO (1998) |
| Vapour pressure* | Pa | 0.29 (25°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | 14.8 (25°C) | WHO (1998) |
| log Kow | g/g | 3.92 | WHO (1998) |
| log Koc | dm³/kg | 4.25 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00 \times 10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30 \times 10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, Feidt, Dziurla, Grandclaudon, and Jondreville, 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | W IARC (2010)<br>Baars et al. (2001) |
| Systemic effects threshold | | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| TDI oral | mg/kg.d | $6x10^{-2}$ | US-EPA (1993) |
| TCA inhalation[b)] | mg/m³ | $2.1x10^{-1}$ | Nouwen et al. (2000) |
| TDI dermal | mg/kg.d | $6x10^{-2}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-4}$ | W Carcinogenic potency= 0.001 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-3}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-4}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

* Volatile pollutant (vapour pressure > 0.1Pa at 20°C)

a) For the calculation of soil remediation values, BCF values were filled in (BCF aboveground plant parts and root vegetables set at 2.32 mg/kg dm per mg/kg dm)

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d.

## 7.2. ACENAPHTHYLENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 208-96-8 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 152 | Verschueren (1983) |
| Solubility | mg/l | 16.1 (25°C) | Bodenschutz, 1988 (reference cannot be traced back) |
| Vapour pressure* | Pa | 0.89 (25°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | 1.14 (25°C) | WHO (1998) |
| log Kow | g/g | 4.07 | WHO (1998) |
| log Koc | dm³/kg | 3.79 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00 \times 10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30 \times 10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | D | US-EPA (1991) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1 \times 10^{-3}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

* Volatile pollutant (vapour pressure > 0.1Pa at 20°C)

[a)] For the calculation of soil remediation values, BCF were filled in (2.32 mg/kg dm per mg/kg dm for all root and above ground vegetables).

## 7.3. ANTHRACENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 120-12-7 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 178 | Verschueren (1983) |
| Solubility | mg/l | $7.50x10^{-2}$ (15°C) | Verschueren (1983) |
| Vapour pressure | Pa | $1.3x10^{-4}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | 73 (25°C) | WHO (1998) |
| log Kow | g/g | 4.45 | van den Berg (1994) |
| log Koc | dm³/kg | 4.59 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | - | |
| Diffusion coefficient water (Dw) | m²/d | - | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1994c) |
| Systemic effects threshold | | | |
| TDI oral | mg/kg.d | $3.0x10^{-1}$ | US-EPA (1993) |
| TCL inhalation b) | mg/m³ | 1.05 | Nouwen et al. (2000) |
| TDI dermal | mg/kg.d | $3.0x10^{-1}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-2}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.022 mg/kg dm per mg/kg dm above ground vegetables and 0.002 mg/kg dm per mg/kg dm for root vegetables).

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d.

## 7.4. BENZO(A)ANTHRACENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 56-55-3 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 228 | Verschueren (1983) |
| Solubility | mg/l | $1.00x10^{-2}$ (24°C) | Verschueren (1983) |
| Vapour pressure | Pa | $5.51x10^{-6}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | 0.813 (25°C) | US-EPA (1994d) |
| log Kow | g/g | 5.61 | van den Berg (1994) |
| log Koc | dm³/kg | 6.04 | WHO (1998) |
| Log Koa | g/g | calculated | |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $4.99x10^{-5}$ | ? |
| Kp | [cm/h] | - | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>B2<br>2 | W IARC IARC (2010)<br>US-EPA (1993)<br>W EC EC (2004) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W Carcinogenic potency = 0.1 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-1}$ | W OEHHA (1999) relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.007 mg/kg dm per mg/kg dm above ground vegetables and 0.015 mg/kg dm per mg/kg dm for root vegetables).

## 7.5. BENZO(A)PYRENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 50-32-8 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 252 | Verschueren (1983) |
| Solubility | mg/l | $3.00x10^{-3}$ (20°C) | Verschueren (1983) |
| Vapour pressure | Pa | $1.31x10^{-8}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | 0.034 (25°C) | WHO (1998) |
| log Kow | g/g | 6.35 | van den Berg (1994) |
| log Koc | dm³/kg | 6.31 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | $2.00x10^{-10}$ | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $4.75x10^{-5}$ | ? |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 1<br>B2<br>2 | W IARC IARC (2012)<br>US-EPA (1994a)<br>W EC (2004) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-1}$ | W Baars, et al. (2001); INERIS (2003) |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | 1.1 | W OEHHA (1999) |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-1}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | $1.00x10^{-6}$ | W EC (2004); AGW (2010) |
| Limit value in drinking water | mg/m³ | 0.01 | W EC (1998); Code de l'Eau (2004) |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.002 mg/kg dm per mg/kg dm above ground vegetables and 0.012 mg/kg dm per mg/kg dm for root vegetables).

## 7.6. BENZO(B)FLUORANTHENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 205-99-2 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 252 | Verschueren (1983) |
| Solubility | mg/l | $1.20x10^{-3}$ (20°C) | WHO (1998) |
| Vapour pressure | Pa | $6.70x10^{-5}$ (20°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | $5.1x10^{-2}$ (25°C) | WHO (1998) |
| log Kow | g/g | 6.12 | WHO (1998) |
| log Koc | dm³/kg | calculated | |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | ? |
| Diffusion coefficient water (Dw) | m²/d | $4.75x10^{-5}$ | |
| Kp | [cm/h] | - | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>B2<br>2 | IARC (2010)<br>US-EPA (1993)<br>W EC (2000) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W Carcinogenic potency = 0.1 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-1}$ | W OEHHA (1999) relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | 0.1 | W EC (1998); Code de l'Eau (2004) |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.014 mg/kg dm per mg/kg dm above ground vegetables and 0.005 mg/kg dm per mg/kg dm for root vegetables).

## 7.7. BENZO(G,H,I)PERYLENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 191-24-2 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 276 | Verschueren (1983) |
| Solubility | mg/l | $2.60x10^{-4}$ (25°C) | Verschueren (1983) |
| Vapour pressure | Pa | $2.59x10^{-9}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | $2.7x10^{-2}$ (20°C) | calculated |
| log Kow | g/g | 6 | van den Berg (1994) |
| log Koc | dm³/kg | calculated | |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 0.8 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | N |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1990) |
| Systemic effects threshold | | | |
| TDI oral | mg/kg.d | $3.0x10^{-2}$ | Baars et al. (2001) |
| TCL inhalation b) | mg/m³ | $1.05x10^{-1}$ | calculated from oral value |
| TDI dermal | mg/kg.d | $3.0x10^{-2}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-2}$ | W RIVM (1989) |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | 0.1 | W EC (1998); Code de l'Eau (2004) |
| Limit value in plants | mg/kg fw | | |
| Limit value in meat | | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.004 mg/kg dm per mg/kg dm above ground vegetables and 0.011 mg/kg dm per mg/kg dm for root vegetables).

## 7.8. BENZO(K)FLUORANTHENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 207-08-9 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 252 | Verschueren (1983) |
| Solubility | mg/l | $7.60x10^{-4}$ (25°C) | WHO (1998) |
| Vapour pressure | Pa | $1.30x10^{-8}$ (20°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | $4.40x10^{-2}$ (20°C) | WHO (1998) |
| log Kow | g/g | 6.84 | WHO (1998) |
| log Koc | dm³/kg | 5.66 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $4.75x10^{-5}$ | ? |
| Kp | [cm/h] | - | N |
| FA | - | 0.7 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>B2<br>2 | IARC (2010)<br>US-EPA (1993)<br>EC (1998) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W Carcinogenic potency = 0.1 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-1}$ | W OEHHA (1999)relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | 0.1 | W EC (1998); Code de l'Eau (2004) |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | $mg/m^3$ | 0 | |
| Background indoor air | $mg/m^3$ | 0 | |
| Background drinking water | $mg/m^3$ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.003 mg/kg dm per mg/kg dm above ground vegetables and 0.015 mg/kg dm per mg/kg dm for root vegetables).

## 7.9. CHRYSENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 218-01-9 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 228 | Verschueren (1983) |
| Solubility | mg/l | $1.50x10^{-3}$ (15°C) | Verschueren (1983) |
| Vapour pressure | Pa | $2.6x10^{-7}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | calculated | |
| log Kow | g/g | 6.64 | van den Berg (1994) |
| log Koc | dm³/kg | 5.72 | WHO (1998) |
| Log Koa | g/g | - | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>B2<br>2 | W IARC (2010)<br>US-EPA (1993)<br>EC (2004) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-2}$ | W OEHHA (1999)relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.008 mg/kg dm per mg/kg dm above ground vegetables and 0.013 mg/kg dm per mg/kg dm for root vegetables).

## 7.10. DIBENZ(A,H)ANTHRACENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 53-70-3 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 278 | Verschueren (1983) |
| Solubility | mg/l | $5.00x10^{-4}$ (27°C) | WHO (1998) |
| Vapour pressure | Pa | $1.30x10^{-8}$ (20°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | $7.00x10^{-3}$ (25°C) | WHO (1998) |
| log Kow | g/g | 6.5 | WHO (1998) |
| log Koc | dm³/kg | 6.31 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | $5.00x10^{-10}$ | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 0.6 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>B2<br>2 | W IARC (IARC, 2010)<br>US-EPA (1993)<br>EC (2004) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-1}$ | W Carcinogenic potency =1.0 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | 1.2 | W OEHHA (1999) |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.0003 mg/kg dm per mg/kg dm above ground vegetables and 0.0005 mg/kg dm per mg/kg dm for root vegetables).

## 7.11. PHENANTHRENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 85-01-8 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 178 | Verschueren (1983) |
| Solubility | mg/l | 1.60 (15°C) | Verschueren (1983) |
| Vapour pressure | Pa | $2.41 \times 10^{-3}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | 3.98 (25°C) | WHO (1998) |
| log Kow | g/g | 4.46 | van den Berg (1994) |
| log Koc | dm³/kg | 4.61 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00 \times 10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $5.64 \times 10^{-5}$ | ? |
| Kp | [cm/h] | - | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30 \times 10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1990) |
| Systemic effects threshold | | | W |
| TDI oral | mg/kg.d | $4.0 \times 10^{-2}$ | W Baars et al. (2001) |
| TCL inhalation b) | mg/m³ | $1.4 \times 10^{-1}$ | W calculated from oral value |
| TDI dermal | mg/kg.d | $4.0 \times 10^{-2}$ | W = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1 \times 10^{-3}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.041 mg/kg dm per mg/kg dm above ground vegetables and 0.031 mg/kg dm per mg/kg dm for root vegetables).

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d.

## 7.12. FLUORANTHENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 206-44-0 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 202 | Verschueren (1983) |
| Solubility | mg/l | $2.65x10^{-1}$ (25°C) | Verschueren (1983) |
| Vapour pressure | Pa | $2.31x10^{-4}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | 0.65 (20°C) | WHO (1998) |
| log Kow | g/g | 5.33 | van den Berg (1994) |
| log Koc | dm³/kg | 5.21 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $5.30x10^{-5}$ | ? |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | 1.30E-01 | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1994b) |
| Systemic effects threshold | | | |
| TDI oral | mg/kg.d | $4x10^{-2}$ | US-EPA (1994b) |
| TCL inhalation b) | mg/m³ | $1.4x10^{-1}$ | calculated based on the TDI oral |
| TDI dermal | mg/kg.d | $4x10^{-2}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-2}$ | W Carcinogenic potency = 0.01 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-3}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.029 mg/kg dm per mg/kg dm above ground vegetables and 0.023 mg/kg dm per mg/kg dm for root vegetables).

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d.

## 7.13. FLUORENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 86-73-7 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 166 | Verschueren (1983) |
| Solubility | mg/l | 1.98 (25°C) | WHO (1998) |
| Vapour pressure | Pa | 0.08 (25°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | 10.1 (25°C) | WHO (1998) |
| log Kow | g/g | 4.18 | WHO (1998) |
| log Koc | dm³/kg | 4.39 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00 \times 10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30 \times 10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1990) |
| Systemic effects threshold | | | |
| TDI oral | mg/kg.d | $4.0 \times 10^{-2}$ | US-EPA (1990) |
| TCL inhalation b) | mg/m³ | $1.4 \times 10^{-1}$ | Calculated on the basis of the oral TDI |
| TDI dermal | mg/kg.d | $4.0 \times 10^{-2}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1 \times 10^{-3}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0 \times 10^{-4}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.005 mg/kg dm per mg/kg dm above ground vegetables and 0.009 mg/kg dm per mg/kg dm for root vegetables).

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d.

### 7.14. INDENO(1,2,3-CD)PYRENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 193-39-5 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 276 | Verschueren (1983) |
| Solubility | mg/l | $1.00x10^{-4}$ (11°C) | van den Berg (1994) |
| Vapour pressure | Pa | $2.6x10^{-9}$ | van den Berg (1994) |
| Henry coefficient | Pa m³/mol | $2.9x10^{-2}$ (20°C) | WHO (1998) |
| log Kow | g/g | 7.43 | van den Berg (1994) |
| log Koc | dm³/kg | calculated | |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $2.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | $4.54x10^{-5}$ | |
| Kp | [cm/h] | calculated | N |
| FA | - | 0.6 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>B2 | IARC (2010)<br>US-EPA (1993) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W Carcinogenic potency = 0.1 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-1}$ | W Carcinogenic potency = 0.1 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-2}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | 0.1 | W EC (1998); Code de l'Eau (2004) |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | |
| Dietary background children | mg/kg.day | 0 | |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.0001 mg/kg dm per mg/kg dm above ground vegetables and 0.0002 mg/kg dm per mg/kg dm for root vegetables).

### 7.15. NAPHTHALENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 91-20-3 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 128 | Verschueren (1983) |
| Solubility | mg/l | 30 (20°C) | Verschueren (1983) |
| Vapour pressure* | Pa | 32 (25°C) | Perry en Green (1984) |
| Henry coefficient | Pa m³/mol | 48.9 (25°C) | |
| log Kow | g/g | 3.36 | van den Berg (1994) |
| log Koc | dm³/kg | 3.17 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00 \times 10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | 0.5544 | van den Berg (1994) |
| Diffusion coefficient water (Dw) | m²/d | $6.65 \times 10^{-5}$ | ? |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30 \times 10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 2B<br>C<br>3 | W IARC (2002)<br>W US-EPA (1998)<br>W EC (2004) |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $1.0 \times 10^{-8}$ | W dummy value (considered non-carcinogenic by oral exposure) |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $3.4 \times 10^{-2}$ | W OEHHA (2004) |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $1.0 \times 10^{-8}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | - | |
| Limit value in meat | | | |
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | W |
| Background indoor air | mg/m³ | 0 | W |
| Background drinking water | mg/m³ | 0 | |

* Volatile pollutant (vapour pressure > 0.1Pa at 20°C)

a) For the calculation of soil remediation values, BCF were filled in (2.92 mg/kg dm per mg/kg dm above ground vegetables and 2.92 mg/kg dm per mg/kg dm for root vegetables).

## 7.16. PYRENE

| Parameter | Unit | Value | Source |
|---|---|---|---|
| CAS nr. | | 129-00-0 | |
| Type | | organic | |
| Dissociating | | no | |
| Molecular weight | g/mol | 202 | Verschueren (1983) |
| Solubility | mg/l | $1.35x10^{-1}$ (25°C) | WHO (1998) |
| Vapour pressure | Pa | $6.00x10^{-4}$ (25°C) | WHO (1998) |
| Henry coefficient | Pa m³/mol | 1.10 (25°C) | WHO (1998) |
| log Kow | g/g | 5.18 | WHO (1998) |
| log Koc | dm³/kg | 4.88 | WHO (1998) |
| Log Koa | g/g | calculated | N |
| BCF | | calculated | N a) |
| Dpe | m²/d | $5.00x10^{-7}$ | van den Berg (1994) |
| Dpvc | m²/d | calculated | |
| Diffusion coefficient air (Da) | m²/d | calculated | |
| Diffusion coefficient water (Dw) | m²/d | calculated | |
| Kp | [cm/h] | calculated | N |
| FA | - | 1 | N US-EPA (2004) |
| ABS dermal soil/dust | - | $1.30x10^{-1}$ | N US-EPA (2004) |
| BTF beef | d/kg | calculated | |
| BTF mutton | d/kg | calculated | N |
| BTF liver | d/kg | calculated | N |
| BTF kidney | d/kg | calculated | N |
| BTF milk | d/kg | calculated | |
| BTF soil – egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| BTF feed - egg | d/kg | 0 | N Low recovery in egg yolk in investigated PAHs (Fournier, et al., 2010) |
| Carcinogenicity | | 3<br>D | IARC (2010)<br>US-EPA (1991) |
| Systemic effects threshold | | | |
| TDI oral | mg/kg.d | $3.0x10^{-2}$ | US-EPA (1993) |
| TCL inhalation b) | mg/m³ | $1.05x10^{-1}$ | Calculated from oral value |
| TDI dermal | mg/kg.d | $3.0x10^{-2}$ | = oral value |
| averaging period | | child, adolescent, adult | |
| Systemic effects non-threshold | | | |
| Oral slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-4}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Inhalation unit risk | $(mg/m^3)^{-1}$ | $1.1x10^{-3}$ | W Carcinogenic potency = 0.001 relative to benzo(a)pyrene |
| Dermal slope factor | $(mg/kg.d)^{-1}$ | $2.0x10^{-4}$ | W = oral value |
| Limit value in outdoor air | mg/m³ | - | W |
| Limit value in drinking water | mg/m³ | - | W |
| Limit value in plants | mg/kg fw | | |
| Limit value in meat | | | |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Beef | mg/kg fw | - | |
| Mutton | mg/kg fw | - | |
| Liver | mg/kg fw | - | |
| Kidney | mg/kg fw | - | |
| Milk | mg/kg fw | - | |
| Butter | mg/kg fw | - | |
| Egg | mg/kg fw | - | |
| Dietary background adults | mg/kg day | 0 | W |
| Dietary background children | mg/kg.day | 0 | W |
| Background potatoes | mg/kg fw | 0 | |
| Background root crops | mg/kg fw | 0 | |
| Background bulbous plants (onion …) | mg/kg fw | 0 | |
| Background fruit vegetables | mg/kg fw | 0 | |
| Background cabbage | mg/kg fw | 0 | |
| Background leafy vegetables | mg/kg fw | 0 | |
| Background legume | mg/kg fw | 0 | |
| Background beef | mg/kg fw | 0 | |
| Background offal | mg/kg fw | 0 | |
| Background milk | mg/kg fw | 0 | |
| Background butter | mg/kg fw | 0 | |
| Background eggs | mg/kg fw | 0 | |
| Background outdoor air | mg/m³ | 0 | |
| Background indoor air | mg/m³ | 0 | |
| Background drinking water | mg/m³ | 0 | |

a) For the calculation of soil remediation values, BCF were filled in (0.011 mg/kg dm per mg/kg dm above ground vegetables and 0.021 mg/kg dm per mg/kg dm for root vegetables).

b) Conversion can be done by multiplying the value in mg/kg.d with a body weight of 70 kg and an inhalation rate of 20 m³/d

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