

## Toxicity of PAHs to soil organisms, soil microbial processes and enzyme activity

species/process/activity	species properties	soil type	pH	o.m. [%]	clay [%]	temp [deg. C]	exp. time	criteria	test endpoint	result test soil [mg/kg dw]	NOEC stand. Soil [mg/kg dw]	notes	reference
<b>naphthalene</b>													
<b>Annelida</b>													
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	86	75		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	86	75		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	28	25		Bleeker et al., 2003
<b>Macrophyta</b>													
<i>Lactuca sativa</i>		loam	7.5	1.4	12	21	7 d	EC50	shoot growth	100	243	7, 52	Hulzebos et al., 1993
<i>Lactuca sativa</i>		loam	7.5	1.4	12	21	6 d	NOEC	shoot growth	32	78	7, 52	Adema & Henzen, 1990
<i>Lactuca sativa</i>		loam	7.5	1.4	12	21	6 d	EC10	shoot growth	47	114	7, 47, 52	Adema & Henzen, 1990
<i>Lactuca sativa</i>		loam	7.5	1.4	12	21	14 d	EC50	shoot growth	>100	>243	7, 52	Hulzebos et al., 1993
<i>Lactuca sativa</i>		loam	7.5	1.4	12	21	14 d	NOEC	shoot growth	≥100	≥243	7, 52	Adema & Henzen, 1990
<b>Microbial processes</b>													
Respiration, nitrogen mineralization, nitrification			7.3	3	13	25	80 d	NOEC		≥21	≥24	8	Kirchman et al., 1991
<b>Collembola</b>													
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	24	21		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	24	21		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	11	10		Bleeker et al., 2003
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	167	210	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	20	25	12	Sverdrup et al., 2002
<b>benzo[a]anthracene</b>													
<b>Annelida</b>													
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>990	>860		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>990	>860		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	≥990	≥860		Bleeker et al., 2003
<b>Crustacea</b>													
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	growth	9.05	0.34	1	van Brummelen et al., 1996
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	EC10	growth	21	0.79	1	van Brummelen et al., 1996
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	protein, reproduction, survival	≥286	≥11	1	van Brummelen et al., 1996
<i>Porcellio scaber</i>	7-11 mg	-	-	>90%	-	20	16 w	NOEC	growth, protein	≥90.5	≥3.4	1	van Brummelen et al., 1996
<b>Collembola</b>													
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>990	>860		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>990	>860		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	≥990	≥860		Bleeker et al., 2003
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>980	>1200	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>980	>1200	12	Sverdrup et al., 2002
<b>benzo[b]fluoranthene</b>													
<b>Collembola</b>													
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>360	>450	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>360	>450	12	Sverdrup et al., 2002

**benzo[k]fluoranthene****Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>560	>710	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>560	>710	12	Sverdrup et al., 2002
<i>Folsomia candida</i>	10-12 d	artif. Soil	-	10	20	-	28 d	NOEC	reproduction (number of co ≥180)	≥61		50	Bowmer et al., 1993

**benzo[a]pyrene****Annelida**

<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>930	>810		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>930	>810		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	≥930	≥810		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	-	-	-	3.9	-	20-25	30 d	NOEC	reproduction	3.4	8.7	2	Achazi et al., 1995
<i>Eisenia f. fetida</i>	-	-	-	3.9	-	20	28 d	NOEC	mortality/reprod.	1	2.6	3	Achazi et al., 1995

**Crustacea**

<i>Oniscus asellus</i>	2.82±0.59 mg	-	-	>90%	-	20	9 w	NOEC	weight/length	32	1.2	1, 4	van Brummelen & Stuijzand, 1993
<i>Oniscus asellus</i>	2.82±0.59 mg	-	-	>90%	-	20	9 w	EC10	fresh weight	73	2.8	1, 4, 47	van Brummelen & Stuijzand, 1993
<i>Oniscus asellus</i>	2.82±0.59 mg	-	-	>90%	-	20	9 w	EC10	length	110	4.2	1, 4, 47	van Brummelen & Stuijzand, 1993
<i>Oniscus asellus</i>	2.82±0.59 mg	-	-	>90%	-	20	9 w	EC10	dry weight	81	3.1	1, 4, 47	van Brummelen & Stuijzand, 1993
<i>Oniscus asellus</i>	2.82±0.59 mg	-	-	>90%	-	20	9 w	NOEC	survival	100	3.8	1	van Brummelen & Stuijzand, 1993
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	growth, protein, reproductio	≥316	≥12	1	van Brummelen et al., 1996
<i>Porcellio scaber</i>	8.52±2.85 mg	-	-	>90%	-	20	9 w	NOEC	weight	32	1.2	1, 4	van Brummelen & Stuijzand, 1993
<i>Porcellio scaber</i>	8.52±2.85 mg	-	-	>90%	-	20	9 w	NOEC	length	≥316	≥12	1, 4	van Brummelen & Stuijzand, 1993
<i>Porcellio scaber</i>	adult male	-	-	>90%	-	17	4 w	NOEC	growth efficiency	25	0.94	4, 5	Van Straalen & Verwey, 1991
<i>Porcellio scaber</i>	adult male	-	-	>90%	-	17	4 w	EC50	growth efficiency	50	1.89	4, 5, 47	Van Straalen & Verwey, 1991
<i>Porcellio scaber</i>	adult male	-	-	>90%	-	17	4 w	EC10	growth efficiency	14	0.53	4, 5, 47	Van Straalen & Verwey, 1991
<i>Porcellia scaber</i>	7-11 mg	-	-	>90%	-	20	16 w	NOEC	growth	≥316	≥12	1	van Brummelen et al., 1996

**Collembola**

<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>930	>810		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>930	>810		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	≥930	≥810		Bleeker et al., 2003
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>840	>1100	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>840	>1100	12	Sverdrup et al., 2002

**indeno[1,2,3-cd]pyrene****Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>910	>1100	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>910	>1100	12	Sverdrup et al., 2002

**dibenz[a,h]anthracene****Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>780	>980	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>780	>980	12	Sverdrup et al., 2002

**anthracene**

**Annelida**

<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>900	>780		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>900	>780		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	≥900	≥780		Bleeker et al., 2003

**Macrophyta**

<i>Avena sativa</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	525	893		Mitchell et al., 1988
<i>Avena sativa</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	30	51	6	Mitchell et al., 1988
<i>Avena sativa</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	<10	<17		Mitchell et al., 1988
<i>Cucumis sativus</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	>1000	>1700		Mitchell et al., 1988
<i>Cucumis sativus</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	720	1224	6	Mitchell et al., 1988
<i>Cucumis sativus</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	<10	<17		Mitchell et al., 1988
<i>Glycine max</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	>1000	>1700		Mitchell et al., 1988
<i>Glycine max</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	>1000	>1700	6	Mitchell et al., 1988
<i>Glycine max</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	>1000	>1700		Mitchell et al., 1988
<i>Banksia ericifolia</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	>1000	>1700		Mitchell et al., 1988
<i>Banksia ericifolia</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	>1000	>1700	6	Mitchell et al., 1988
<i>Banksia ericifolia</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	<10	<17		Mitchell et al., 1988
<i>Casuarina distyla</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	>1000	>1700		Mitchell et al., 1988
<i>Casuarina distyla</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	>1000	>1700	6	Mitchell et al., 1988
<i>Casuarina distyla</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	>1000	>1700		Mitchell et al., 1988
<i>Eucalyptus eximia</i>	-	sandy loam	5.5	2	-	23-35	14 d	LC50	mortality	>1000	>1700		Mitchell et al., 1988
<i>Eucalyptus eximia</i>	-	sandy loam	5.5	2	-	23-35	14 d	EC50	growth	>1000	>1700	6	Mitchell et al., 1988
<i>Eucalyptus eximia</i>	-	sandy loam	5.5	2	-	23-35	14 d	NOEC	emergence time	<10	<17		Mitchell et al., 1988
<i>Lolium perenne</i>	15 d	gleyic luvisol	6.6	2.6	26	18	40 d	NOEC	shoot/root growth	<100	<133	39	Leyval & Binet, 1998

**Collembola**

<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>680	>590		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	>680	>590		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	≥680	≥590		Bleeker et al., 2003
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	67	84	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	5	6	12	Sverdrup et al., 2002

**acenaphthylene****Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	145	183	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	23	29	12	Sverdrup et al., 2002

**acenaphthene****Macrophyta**

<i>Lactuca sativa</i>		loam	7.5	1.8	24	21	7 d	EC50	shoot growth	37	70	7	Hulzebos et al., 1993
<i>Lactuca sativa</i>		loam	7.5	1.8	24	21	14 d	EC50	shoot growth	25	47	7	Hulzebos et al., 1993
<i>Lactuca sativa</i>		loam	7.5	1.8	24	21	7 d	NOEC	shoot growth	3.2	6.0	7	Hulzebos et al., unpublished data
<i>Lactuca sativa</i>		loam	7.5	1.8	24	21	14 d	NOEC	shoot growth	1	1.9	7	Hulzebos et al., unpublished data

**Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	107	135	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	31	39	12	Sverdrup et al., 2002

**phenanthrene****Annelida**

<i>Eisenia fetida</i>	-	artif. Soil	-	10	20	-	21 d	EC50	reproduction (number of co	241	82	9	Bowmer et al., 1993
<i>Eisenia fetida</i>		artif. Soil	-	10	20	-	21 d	NOEC	mortality	320	109	9	Bowmer et al., 1993
<i>Eisenia fetida</i>		artif. Soil	-	10	20	-	21 d	NOEC	reproduction (number of co	100	34	9	Bowmer et al., 1993
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	LC50	mortality	134	169	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC50	growth	94	118	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC10	growth	25	31	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	NOEC	growth	31	39	13	Sverdrup et al., 2002a
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>2000	>2500	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	87	110	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	40	50	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	34	43	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	356	310		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	100	87		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	<98	<85		Bleeker et al., 2003

**Collembola**

<i>Folsomia candida</i>	10-12 d	artificial soil	-	10	20	-	28 d	LC50	mortality	145	49	10	Bowmer et al., 1993
<i>Folsomia candida</i>	10-12 d	artificial soil	-	10	20	-	28 d	NOEC	reproduction (number of co	75	26	10	Bowmer et al., 1993
<i>Folsomia candida</i>	10-12 d	artificial soil	-	10	20	-	28 d	NOEC	mortality	124	42	10	Bowmer et al., 1993
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	65	57		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	46	40		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	29	25		Bleeker et al., 2003
<i>Folsomia candida</i>	juvenile 10-12 d	artificial soil	6.3±0.3	10.0	20	20±2	33-34 d	EC50	reproduction	175	60	55	Crouau et al., 1999
<i>Folsomia candida</i>	juvenile 10-12 d	artificial soil	6.3±0.3	10.0	20	20±2	33-34 d	NOEC	reproduction	140	48	55	Crouau et al., 1999
<i>Folsomia candida</i>	juvenile 10-12 d	artificial soil	6.3±0.3	10.0	20	20±2	33-34 d	NOEC	mortality	220	75	55	Crouau et al., 1999
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	41	52	12	Sverdrup et al., 2001, 2002, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	30	38	12	Sverdrup et al., 2001, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	23	29	12	Sverdrup et al., 2001, 2002, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	21	26	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	30	38	12, 16	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	37	47	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>41	>52	12, 18	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	22	28	12, 16	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	24	30	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	47	59	12, 18	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	14	18	12, 16	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	14	18	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	9.4	12	12, 18	Sverdrup et al., 2002c

**Macrophyta**

<i>Sinapsis alba</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	77	97	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	480	604	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	26	33	14, 48	Sverdrup 2003, thesis

<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	340	428	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	850	1070	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	37	47	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	79	99	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	24	30	14, 48	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	46	58	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	190	239	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	300	378	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	760	957	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	174	219	14, 48	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	300	378	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	760	957	14	Sverdrup 2003, thesis
<b>Crustacea</b>													
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	growth, protein, reproductic	≥706	≥27	1	van Brummelen et al., 1996
<i>Porcellia scaber</i>	7-11 mg	-	-	>90%	-	20	16 w	NOEC	growth, protein	≥706	≥27	1	van Brummelen et al., 1996
<b>Microbial process</b>													
nitrification		sandy loam	6.2	2.7	13	20	28 d	NOEC		26	33		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC10		42	53		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC50		250	315		Sverdrup et al., 2002d
Heterotrophic flagellates		sandy loam	6.2	2.7	13	20	28 d	EC5	number	250	315		Sverdrup et al., 2002d
Total protozoa		sandy loam	6.2	2.7	13	20	28 d	EC5	number	2400	3022		Sverdrup et al., 2002d
<b>pyrene</b>													
<b>Collembola</b>													
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	152	132		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	21	18		Bleeker et al., 2003
<i>Folsomia candida</i>	11-13 d	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	12	10		Bleeker et al., 2003
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	LC50	mortality	21.7	7.4	64	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	NOEC	mortality	80	27	64	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	LC50	mortality	26	8.8	64, 47	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	LC10	mortality	3.4	1.2	64, 47	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	EC50	number of juveniles	7.79	2.6	64	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	NOEC	number of juveniles	5.0	1.7	64	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	EC50	number of juveniles	6.5	2.2	64, 47	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	EC10	number of juveniles	1.6	0.54	64, 47	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	NOEC	r population	20	6.8	64	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	EC50	r population	18	6.1	64, 47	Herbert et al., 2004
<i>Folsomia candida</i>	10-12 d	artificial soil	6.0±0.5	10	20	20±1	28 d	EC10	r population	6.6	2.2	64, 47	Herbert et al., 2004
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	53	67	12	Sverdrup et al., 2001, 2002, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	16	20	12	Sverdrup et al., 2001, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	10	13	12	Sverdrup et al., 2001, 2002, 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	13	16	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	74	93	12, 16	Sverdrup et al., 2002c

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	49	62	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	44	55	12, 18	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	LC50	mortality	50	63	26	Sjursen et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	20	25	12, 16	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	25	31	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	18	23	12, 18	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	14	18	12, 16	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	17	21	12, 17	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	12	15	12, 18	Sverdrup et al., 2002c
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	NOEC	mortality	13	16	26	Sjursen et al., 2001
<b>Annelida</b>													
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	LC50	mortality	155	195	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC50	growth	71	89	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC10	growth	38	48	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	NOEC	growth	29	37	13	Sverdrup et al., 2002a
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	LC50	mortality	>850	>740		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	EC50	reproduction	679	591		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	adult 1 cm	loamy sand	5.6±0.4	3.9	-	-	28 d	NOEC	reproduction	179	156		Bleeker et al., 2003
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>2300	>2900	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	42	53	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	11	14	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	18	23	12	Sverdrup et al., 2002b
<b>Macrophyta</b>													
<i>Sinapsis alba</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000		14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	120	151	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	1500	1889	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	27	34	14, 48	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	810	1020	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	>>1000		14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000		14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	49	62	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	380	479	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	15	19	14, 48	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	56	71	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	640	806	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000		14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	1300	1637	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	433	546	14, 54	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	>>1000		14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	>>1000		14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	>>1000		14	Sverdrup 2003, thesis
<b>Microbial process</b>													
nitrification		sandy loam	6.2	2.7	13	20	28 d	NOEC		79	99		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC10		130	164		Sverdrup et al., 2002d

**fluoranthene****Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	81	102	12	Sverdrup et al., 2001, 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	LC50	mortality	65	82	26	Sjursen et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	51	64	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	37	47	12	Sverdrup et al., 2001, 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	47	59	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	NOEC	mortality	47	59	26	Sjursen et al., 2001

**Annelida**

<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	LC50	mortality	416	524	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC50	growth	166	209	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC10	growth	113	142	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	NOEC	growth	98	123	13	Sverdrup et al., 2002a
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>2500	>3100	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	61	77	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	15	19	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	38	48	12	Sverdrup et al., 2002b

**Macrophyta**

<i>Sinapis alba</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Sinapis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	650	819	14	Sverdrup 2003, thesis
<i>Sinapis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	1600	2015	14	Sverdrup 2003, thesis
<i>Sinapis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	384	483	14, 48	Sverdrup 2003, thesis
<i>Sinapis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	1200	1511	14	Sverdrup 2003, thesis
<i>Sinapis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	140	176	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	710	894	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	54	68	14, 48	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	150	189	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	750	944	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	490	617	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	1200	1511	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	290	365	14, 48	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	480	604	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	1200	1511	14	Sverdrup 2003, thesis

**Crustacea**

<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	growth, protein, reproductic	≥802	≥30	1	van Brummelen et al., 1996
<i>Porcellia scaber</i>	7-11 mg	-	-	>90%	-	20	16 w	NOEC	growth, protein, reproductic	≥802	≥30	1	van Brummelen et al., 1996

**Microbial process**

nitrification		sandy loam	6.2	2.7	13	20	28 d	NOEC		24	30		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC10		13	16		Sverdrup et al., 2002d
Heterotrophic flagellates		sandy loam	6.2	2.7	13	20	28 d	EC5	number	2200	2770		Sverdrup et al., 2002d

**fluorene**

**Collembola**

<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	39	49	12	Sverdrup et al., 2001, 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	LC50	mortality	23	29	26	Sjursen et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	14	18	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	7.7	10	12	Sverdrup et al., 2001, 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	14	18	12	Sverdrup et al., 2001
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d + 6 d + 2 d	NOEC	mortality	14	18	26	Sjursen et al., 2001

**Annelida**

<i>Allolobophora tuberculata</i>		artificial soil	6.0±0.5	10	20	20	14 d	LC50	mortality	206	70		Neuhauser et al., 1986a
<i>Eisenia fetida</i>		artificial soil	6.0±0.5	10	20	20	14 d	LC50	mortality	173	59		Neuhauser et al., 1985, 1986a,b
<i>Eisenia fetida</i>		artificial soil	-	14	~0	25	8 w	NOEC	reproduction (number of co	500	121		Neuhauser and Callahan, 1990
<i>Eisenia fetida</i>		artificial soil	-	14	~0	25	8 w	NOEC	mortality	1000	243		Neuhauser and Callahan, 1990
<i>Eisenia fetida</i>		artificial soil	-	14	~0	25	8 w	EC10	reproduction (number of co	280	68	47	Neuhauser and Callahan, 1990
<i>Eisenia fetida</i>		artificial soil	-	14	~0	25	8 w	EC10	growth	250	61	47	Neuhauser and Callahan, 1990
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	LC50	mortality	69	87	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC50	growth	50	63	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	EC10	growth	31	39	13	Sverdrup et al., 2002a
<i>Eisenia veneta</i>	0.3-0.8 g	sandy loam	6.2	2.7	13	20	28 d	NOEC	growth	28	35	13	Sverdrup et al., 2002a
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	1600	2015	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC50	reproduction	55	69	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	25	31	12	Sverdrup et al., 2002b
<i>Enchytraeus crypticus</i>	mature	sandy loam	6.2	2.7	13	20	21 d	NOEC	reproduction	27	34	12	Sverdrup et al., 2002b
<i>Eudrilus eugeniae</i>		artificial soil	6.0±0.5	10	20	20	14 d	LC50	mortality	197	67		Neuhauser et al., 1986a
<i>Perionyx excavatus</i>		artificial soil	6.0±0.5	10	20	20	14 d	LC50	mortality	170	58		Neuhauser et al., 1986a

**Macrophyta**

<i>Sinapsis alba</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	120	151	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	1200	1511	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	31	39	14, 48	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Sinapsis alba</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	950	1196	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	55	69	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	360	453	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	18	23	14, 48	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	76	96	14	Sverdrup 2003, thesis
<i>Trifolium pratense</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	530	667	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seeds	sandy loam	6.2	2.7	13	15-25	19-21 d	LC50	emergence	>>1000	>>1300	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	fresh weight	380	479	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	fresh weight	950	1196	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC10	fresh weight	222	280	14, 48	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC20	dry weight	350	441	14	Sverdrup 2003, thesis
<i>Lolium perenne</i>	seedlings	sandy loam	6.2	2.7	13	15-25	19-21 d	EC50	dry weight	880	1108	14	Sverdrup 2003, thesis

**Crustacea**

<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	growth	65.9	2.5	1	van Brummelen et al., 1996
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<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	EC10	growth	370	14.0	1	van Brummelen et al., 1996
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	protein	20.8	0.79	1	van Brummelen et al., 1996
<i>Oniscus asellus</i>	6-10 mg	-	-	>90%	-	20	47 w	NOEC	survival, reproduction	≥659	≥25	1	van Brummelen et al., 1996
<i>Porcellia scaber</i>	7-11 mg	-	-	>90%	-	20	16 w	NOEC	growth, protein, survival	≥659	≥25	1	van Brummelen et al., 1996
<b>Microbial process</b>													
nitrification		sandy loam	6.2	2.7	13	20	28 d	NOEC		72	91		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC10		33	42		Sverdrup et al., 2002d
nitrification		sandy loam	6.2	2.7	13	20	28 d	EC50		190	239		Sverdrup et al., 2002d
<b>chrysene</b>													
<b>Collembola</b>													
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	LC50	mortality	>1030	>1300	12	Sverdrup et al., 2002
<i>Folsomia fimetaria</i>	23-26 d	sandy loam	6.2	2.7	13	20	21 d	EC10	reproduction	>1030	>1300	12	Sverdrup et al., 2002
<i>Folsomia candida</i>	10-12 d	artif. Soil	-	10	20	-	28 d	NOEC	reproduction (number of co ≥180)	≥180	≥61	49	Bowmer et al., 1993
<b>Annelida</b>													
<i>Eisenia fetida</i>	-	artif. soil	-	10	20	-	14 d	NOEC	mortality	≥1000	≥340	11	Bowmer et al., 1993
<b>benzo[ghi]perylene</b>													
<b>Collembola</b>													
<i>Folsomia candida</i>	10-12 d	artif. Soil	-	10	20	-	28 d	NOEC	reproduction (number of co ≥180)	≥180	≥61	51	Bowmer et al., 1993