



Endocrine disrupting substances in REACH and the present EU priority list



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REACH – Regulation (EC) No 1907/2006 of 18 December 2006

All substances including endocrine disruptors are subject to registration under REACH when they are manufactured or imported into the EU in amounts of or above 1 tonnes per year

(However the normal test programme does not include specific test for endocrine disrupting properties)

Substances with endocrine disrupting properties are subject to the authorisation procedure under REACH *(if they are included in Annex XIV)*

Which substances are subject to authorisation?
*Substances of Very High Concern, SVHC
listed in Annex XIV*

SVHC:

Substances classified as C, M or R (category 1 or 2), PBT, vPvB substances, and substances having endocrine disrupting properties – or those having PBT, vPvB properties without fulfilling the criteria for PBT, vPvB - for which there is scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern to those of CMR, PBT or vPvB substances and which are identified on a case-by-case basis

Thus, clear guidance exist for CMR and PBT substances, while endocrine disruptors are identified on a case-by-case basis

What is the procedure for inclusion in Annex XIV?

According to the procedures described in Article 58 and Article 59 in REACH:

1. Substances of very high concern, SVHC will be identified by the competent authority or ECHA as SVHC in an Annex XV dossier proposing the substance as SVHC.
2. After evaluation the substance will be included in the Candidate list to Annex XIV.
3. Substances will be prioritised and included in Annex XIV of REACH

Which substances are given priority for inclusion into Annex XIV?

According to article 58 Inclusion of substances in Annex XIV:

- Prior to a decision to include substances in Annex XIV, the Agency shall recommend priority substances to be included

- Priority shall normally be given to substances with:
 - (a) PBT or vPvB properties; or
 - (b) wide dispersive use; or
 - (c) high volumes



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Registry of intentions

Pre-Registered substances

Registered substances

Authorisation

Candidate List

Annex XIV

Recommendations

Evaluation

Substances of Interest

Transitional measures

REACH-IT

CLASSIFICATION

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Candidate List of Substances of Very High Concern for authorisation

The identification of substances as Substances of Very High Concern and its inclusion in the Candidate List is the first step in the [procedure concerning authorisation](#).

There are [immediate obligations](#)  for companies linked to the substances on the Candidate List.

Substance identification		Substance composition	Date of inclusion	Reason for inclusion	Supporting documentation	Decision number
Substance name	EC (CAS No.)	Impurities (where relevant for C&L, PBT/vPvB)				
Triethyl arsenate	427-700-2	-	28.10.08	Carcinogenic (article 57a)	 (annex XV rep.)	ED/67/2008
Anthracene	204-371-1	-	28.10.08	PBT (article 57d)	 (support doc.)	ED/67/2008
4,4'- Diaminodiphenylmethane (MDA)	202-974-4	-	28.10.08	Carcinogenic (article 57a)	 (support doc.)	ED/67/2008
Dibutyl phthalate (DBP)	201-557-4	-	28.10.08	Toxic for reproduction (article 57c)	 (support doc.)	ED/67/2008
Cobalt dichloride	231-589-4	-	28.10.08	Carcinogenic (article 57a)	 (support doc.)	ED/67/2008
Diarsenic pentaoxide	215-116-9	-	28.10.08	Carcinogenic (article 57a)	 (support doc.)	ED/67/2008
Diarsenic trioxide	215-481-4	-	28.10.08	Carcinogenic (article 57a)	 (support doc.)	ED/67/2008
Sodium dichromate	234-190-3 (7789-12-0 and 10588-01-9)	-	28.10.08	Carcinogenic, mutagenic and toxic to reproduction (articles 57a, 57b and 57c)	 (support doc.)	ED/67/2008
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	-	28.10.08	vPvB (article 57e)	 (support doc.)	ED/67/2008
Bis (2-ethylhexyl)phthalate (DEHP)	204-211-0	-	28.10.08	Toxic to reproduction (article 57c)	 (support doc.)	ED/67/2008
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified:	247-148-4 and 221-695-9	-	28.10.08	PBT (article 57d)	 (support doc.)	ED/67/2008
Alpha-hexabromocyclododecane	(134237-50-6)					
Beta-hexabromocyclododecane	(134237-51-7)					
Gamma-hexabromocyclododecane	(134237-52-8)					
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	-	28.10.08	PBT and vPvB (article 57d - e)	 (support doc.)	ED/67/2008
Bis(tributyltin)oxide (TBTO)	200-268-0	-	28.10.08	PBT (article 57d)	 (support doc.)	ED/67/2008
Lead hydrogen arsenate	232-064-2	-	28.10.08	Carcinogenic and Toxic to reproduction (articles 57a and c)	 (support doc.)	ED/67/2008
Benzyl butyl phthalate (BBP)	201-622-7	-	28.10.08	Toxic to reproduction (article 57c)	 (support doc.)	ED/67/2008

Are endocrine disruptors within REACH?



Substances with endocrine disrupting properties are considered as SVHC **in case scientific evidence** indicate that they are of equivalent concern i.e. having the same levels of concern as substances identified as C, M, R category 1 or 2, PBT or vPvB substance.

However

No internationally agreed methodologies or criteria available for endocrine disrupting properties (ECHA Guidance for SVHC)

Priority of inclusion of EDC substances in Annex XIV be given to substances with a wide dispersive use or are manufactured or imported in high volumes

Decision for inclusion in Annex XIV will be based on available information and a **weight of evidence approach** will be used



Weight of evidence – EU priority list??

In 1996, the European Commission implemented a policy as to the use and regulation of suspected endocrine disturbing substances, and, in December 1999, it adopted a Community Strategy for Endocrine Disrupters.

The strategy contains actions on short-, medium- and long-term time scales.

- Short-term actions include gathering of scientific data and identification of substances for further evaluation
- Medium-term actions focus on testing issues
- Long-term actions include review and possible adaptation of policy and legislation e.g. implementation in REACH?

Thus a key short-term action is the establishment of **a priority list** of substances for further evaluation of their role in endocrine disruption

EU priority list



http://ec.europa.eu/environment/endocrine/strategy/substances_en.htm

The screenshot shows a Windows Internet Explorer browser window displaying the EU Endocrine Disruptors Website. The browser's address bar shows the URL: http://ec.europa.eu/environment/endocrine/strategy/substances_en.htm. The website header includes the 'Environment' logo and navigation links such as 'Home', 'Who's who', 'Policies', 'Integration', 'Funding', 'Resources', and 'News & Developments'. The main content area is titled 'Endocrine Disruptors Website' and features a sidebar with navigation options: 'Definitions', 'Strategy', and 'Documents'. The 'Strategy' section is expanded, showing 'What is being done?/ Priority list' as the selected item. The main text area contains the following content:

What is being done? Which substances are of concern?

- What is the basis for concern?
- How are the concerns being addressed?
- Priority list

What is the basis for concern?

Reports of adverse changes in the physiology and behaviour of wildlife apparently linked to exposure to chemical pollutants released into the environment, and the suggestion that humans may also be at similar risk of adverse health effects, have fuelled growing concern about the extent of the risk posed by chemical EDs and calls for action to reduce such risks.

However, modern civilised life involves the use of thousands of chemicals in various processes and products, many of which could eventually find their way into the environment through various routes (e.g. from disposal methods such as landfills, by entering the food chain, from consuming products such as sprays), and at present it is generally unclear which chemicals or processes pose an appreciable risk.

Concerns about the continued uncertainty regarding the extent of exposure to chemical pollutants in the environment and the effects that they might be having on the human population (particularly with regard to reproductive health) were highlighted during discussions at a major European workshop on EDs held in December 1996, jointly sponsored by the European Commission (DGXII), the European Environmental Agency, the European Centre for Environment and Health and the World Health Organisation.

How are the concerns being addressed?

Over the years, many organisations have published lists of 'suspected EDs', but frequently the basis for inclusion of a particular chemical, or for considering some chemicals of high priority, has not been clearly stated. Further scientific data collection and research was therefore considered necessary to identify selection criteria for placing substances on a 'list of suspected endocrine disrupters'. In addition, it is necessary to assess the quantities of the substances present in the environment (based on consideration of production volumes, subsequent processing, and final product and import/export volumes). To this end, the DG Environment commissioned series of studies in order to develop a coherent approach to establish a list of priority substances for further evaluation of their role in endocrine disruption.

Priority list

It is intended that the priority list of chemicals developed within the EU-Strategy for Endocrine Disrupters will be used to prioritise further detailed review of the information. However, it is important that the listings produced are **not** regarded as final and unchangeable: addition and removal of chemicals may be required in response to either developments in scientific knowledge or changes in chemical usage patterns.

The priority list was to be established in two phases, first an independent review of evidence of endocrine disrupting effects and human/wildlife

Historical evaluation process of the candidate substances

Table 2.1 Overview of candidate list substances

Selection criteria	Number of substances	Number of substances	CAT 1 substances
Original candidate list of substances with ED effects	565	565	
Excluded at the ED expert meeting of 1999	12		
Candidate list of substances with ED effects, 2000	553	553	
HPV already restricted or banned (109) + WRc evaluation (9)	118		
Remaining substances	435	435	
HPV and/or persistent and/or high exposure (evaluation by RPS BKH 2002)	204		93
Group names (not to be evaluated)	13		
Mixtures or polymers (not to be evaluated)	41		
Substances twice in list (not to be evaluated)	4		
Remaining substances on the candidate list to be evaluated in the DHI 2006 project	173	173	
New substances identified by stakeholders	22		
Total number of substances to be evaluated in the DHI 2006 project	195	195	
Not in ESIS database (excluded from the evaluation)	73		
No CAS No (excluded from the evaluation)	15		
Final number of substances evaluated in the DHI 2006 project	107	107	34
Total number of priority substances (Category 1)			194

Update of database and list



The ranked priority list contains the following information on all substances:

- CAS No. and substance name
- Endocrine Disrupter category (1, 2, 3a or 3b).
- Indication of High Production Volume or Low Production Volume substance
- If the substance is assigned a R53 phrase

Table 5.10 Distribution of CAT 1, 2 and 3 substances now included in the database

Total number of substances evaluated		575
CAT 1	At least one study providing evidence for endocrine disruption in an intact organism	194
CAT 2	Potential for endocrine disruption. <i>In-vitro</i> data indicating potential for endocrine disruption in intact organisms.	125
CAT 3	No scientific basis for inclusion in list or no data	109
Not evaluated	Mixture, no CAS, group name etc.	147

The categorisation of the substances was performed according to the following evaluation criteria:

CAT 1

At least one *in-vivo* study providing clear evidence for endocrine disruption in an intact organism.

CAT 2

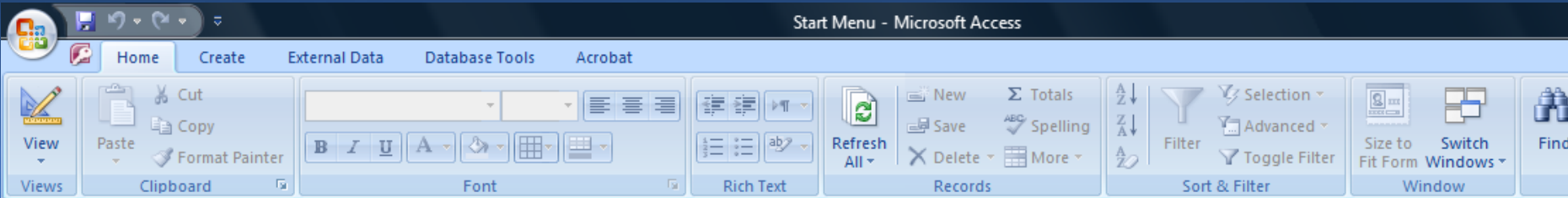
Potential for endocrine disruption. *In-vitro* data indicating potential for endocrine disruption in intact organisms. Also includes effects *in-vivo* that may, or may not, be ED-mediated.

CAT 3a

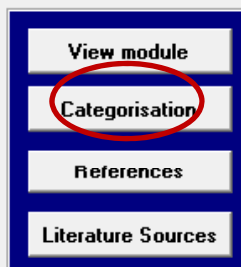
No scientific basis for inclusion in list (ED studies available but no indications of ED effects)

CAT 3b

Substances with no or insufficient data gathered



EDS database and Categorisation



Navigation Pane

Categorisation



CATEGORISATION - Microsoft Access

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EDS Database: Categorisation No of record: 194

NO	CASNR	NAME	HH	WL	Overall	Reference decision	Short Overview:
297	NoCAS 040	4-Hydroxy-3,3',4',5'-tetrachlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
278	53905-33-2	4-Hydroxy-2,2',5'-trichlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
279	4400-06-0	4-Hydroxy-3,4',5'-trichlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
283	67651-37-0	3-Hydroxy-2,3',4',5'-tetrachlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
284	100702-98-5	4,4'-Dihydroxy-2,3,5,6-tetrachlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
285	13049-13-3	4,4'-Dihydroxy-3,3',5,5'-tetrachlorobiphenyl	CAT1	CAT2	CAT1	BKH 2002	HH WL
37	4329-12-8	m,p'-DDD	CAT1	CAT3b	CAT1	BKH 2002	HH WL
36	72-54-8	p,p'-DDD	CAT1	CAT3b	CAT1	BKH 2002	HH WL
289	8068-44-8	Clophen A50	CAT1	CAT2	CAT1	BKH 2002	HH WL
35	65148-75-6	5-MeO-o,p'-DDD	CAT1	CAT3b	CAT1	BKH 2002	HH WL
291	NoCAS 036	PCB Aroclor 1016	CAT1	CAT1	CAT1	BKH 2002	HH WL
292	54991-93-4	Clophen A30	CAT1	CAT2	CAT1	BKH 2002	HH WL
34	53-19-0	o,p'-DDD	CAT1	CAT2	CAT1	BKH 2002	HH WL
294	NoCAS 037	PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)	CAT1	CAT1	CAT1	BKH 2002	HH WL
338	118174-38-2	6-Methyl-1,3,8-trichlorodibenzofuran	CAT1	CAT2	CAT1	BKH 2002	HH WL
313	56614-97-2	3,9-Dihydroxybenz(a)anthracene	CAT1	CAT2	CAT1	BKH 2002	HH WL
30	65148-72-3	4-MeO-o,p'-DDT	CAT1	CAT3b	CAT1	BKH 2002	HH WL
31	65148-73-4	5-OH-o,p'-DDT	CAT1	CAT3b	CAT1	BKH 2002	HH WL
32	65148-74-5	5-MeO-o,p'-DDT	CAT1	CAT3b	CAT1	BKH 2002	HH WL
320	57-97-6	7,12-Dimethyl-1,2-benz(a)anthracene	CAT1	CAT2	CAT1	BKH 2002	HH WL
319	56-49-5	3-Methylcholanthrene	CAT1	CAT3b	CAT1	BKH 2002	HH WL
295	NoCAS 038	Mixture of 2,3,4,5-tetrachlorobiphenyl (PCB 61), 2,2',4,5,5'-octachlorobiphenyl (PCB 101) and 2,2',3,3',4,4',5,5'-octachlorobiphenyl	CAT1	CAT1	CAT1	BKH 2002	HH WL
314	7099-43-6	5,6-Cyclopento-1,2-benzanthracene	CAT1	CAT2	CAT1	BKH 2002	HH WL
296	NoCAS 039	PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)	CAT1	CAT1	CAT1	BKH 2002	HH WL
266	35693-99-3	PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)	CAT1	CAT1	CAT1	BKH 2002	HH WL
301	NoCAS 042	PCB 122 (2,3,3',4,5-Pentachlorobiphenyl)	CAT1	CAT1	CAT1	BKH 2002	HH WL

1. Select Ref decision 2. Select Category 3. Select HH or WL VIEW DATA Help

HH
 WL

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EDS database



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EDS database HUMAN HEALTH RELEVANT DATA

Chemical name

- Use "*" to select from part of chemical name

CAS number Chemical group

All Identified chemicals Selected chemicals

4-Nonylphenol (4-NP)

Human health or Wildlife relevant effect data

Human health relevant data Wildlife relevant data

View data selected chemicals: **Short Overview** Details Details on Key studies Categories Start Menu

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SHORT OVERVIEW: HUMAN HEALTH RELEVANT EFFECTS DATA

Key	Chno	Name	Species/receptor	Effect	Crit.	Dose/ conc.	Unit	Test type	In file	RefID		
<input type="checkbox"/>	CGh214	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	stimulation of cell proliferation	LOEL	1	uM	In vitro	+e	Yes	Sot95
<input type="checkbox"/>	CGh567	138	4-Nonylphenol (4-NP)	Human serum	reduce specific binding of DHT to the protein SHBG (sex-hormone binding	LOEL	100	uM	In vitro	+e	Yes	Dan97
<input type="checkbox"/>	CGh557	138	4-Nonylphenol (4-NP)	Rat; prostate cells	specific binding of 5-a-DHT (dihydrotestosterone) to the	NOEL	100	uM	In vitro	-e	Yes	Dan97
<input type="checkbox"/>	CGh549	138	4-Nonylphenol (4-NP)	Rabbit; uteri cells	inhibition of estradiol binding to the estrogen receptor	LOEL	100	uM	In vitro	+e	Yes	Dan97
<input type="checkbox"/>	CGh497	138	4-Nonylphenol (4-NP)	rat	decreased testis weight and sperm count	LOEL	370	mg/kg body	in vivo	+e	Yes	Sot91
<input type="checkbox"/>	CGh496	138	4-Nonylphenol (4-NP)	Rat	higher endometrial mitotic index	LOEL	370	mg/kg body	In vivo	+e	Yes	Sot91
<input type="checkbox"/>	CGh423	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	increased cell proliferation	EC100	0.01	uM	In vitro	+e	Yes	Vil95
<input type="checkbox"/>	CGh422	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	increased cell proliferation	EC100	1	uM	In vitro	+e	Yes	Sot92
<input type="checkbox"/>	CGh421	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	increased cell proliferation	EC100	10	uM	In vitro	+e	Yes	Sot92
<input type="checkbox"/>	POh024	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	stimulation of proliferation				In vitro	+e	Yes	Sot95
<input type="checkbox"/>	CGh215	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	stimulation of cell proliferation	LOEL	10	uM	In vitro	+e	Yes	Sot95
<input type="checkbox"/>	DRh114y r06	138	4-Nonylphenol (4-NP)	Rat	Maternal Effects - Other effects	TDL0	4625	ug/kg	In vivo			RTE06
<input type="checkbox"/>	CGh209	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	binding affinity				In vitro	+e	Yes	Sot95
<input type="checkbox"/>	CGh201	138	4-Nonylphenol (4-NP)		increased uterus weight	LOEL	>=100	mg/kg	In vivo	+e	Yes	She96
<input type="checkbox"/>	CGh200	138	4-Nonylphenol (4-NP)	Rat	increased uterus weight	LOEL	<=20	mg/kg	In vivo	+e	Yes	Lee96
<input type="checkbox"/>	CGh199	138	4-Nonylphenol (4-NP)	Rat	stimulation of proliferation	LOEL	20	mg/kg	In vivo	+e	Yes	Sot91
<input type="checkbox"/>	CGh198	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	stimulation of proliferation				In vitro	+e	Yes	Sot91
<input type="checkbox"/>	WWh019	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	increased cell proliferation	LOEC	8	ug/l	In vitro	+e	Yes	Han98
<input type="checkbox"/>	WWh011	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	Binding affinity for estrogen receptors	IC50	39.4	uM	In vitro	+e	Yes	Nag97
<input type="checkbox"/>	WWh007	138	4-Nonylphenol (4-NP)	Human; MCF-7 cells	Binding affinity for estrogen receptors	IC50	2.74	uM	In vitro	+e	Yes	Nag97
<input type="checkbox"/>	WWh006	138	4-Nonylphenol (4-NP)	Yeast	Binding affinity for estrogen receptors	LOEC	20	ug/l	In vitro	+e	Yes	Rou96
<input type="checkbox"/>	CGh222	138	4-Nonylphenol (4-NP)	Yeast transfected	stimulation of estrogen-dependent transcription	EC50	4	uM	In vitro	+e	Yes	Rou96
<input type="checkbox"/>	DRh123y r06	138	4-Nonylphenol (4-NP)	Rat	Maternal Effects - Uterus, cervix, vagina	TDL0	700	mg/kg/14D	In vivo			RTE06

Change selection Details **Classification** Preprint overview ED related ED in-vivo tests ED in-vitro tests Systemic tox. tests **Key studies** All tests Help

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SHORT OVERVIEW: HUMAN HEALTH RELEVANT EFFECTS DATA

Key	Chno Name	Species/receptor	Effect	Crit.	Dose/ Unit	Test type	In file	RefID
138	4-Nonylphenol (4-NP)	rats. uterotrophic assay	Uterine weight, uterine/body weight significantly increased in 90 mg/kg	LOAEL	90 mg/kg	In vivo	+	yes

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EDS Database: Categorisation

NO	CASNR	NAME	HH	WL	Overall	Reference decision	Short Overview
138	104-40-5	4-Nonylphenol (4-NP)	CAT1	CAT1	CAT1	DHI 2006	HH WL

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REC. NO: GPh144yr06
CHEMNO: 138
CASNR: 104-40-5

Human Health relevant - Endocrine effects data

4-Nonylphenol (4-NP)

PART 1: Identify Key Studies | References/Source | PART 2: Evaluation Data Quality | PART 3 and 4: Categorisation and Remarks

SELECTED KEY-STUDY DATA QUALITY: DQ2

TEST_TYPE: In vivo ED related effects

SPECIES/RECEPTOR: rats. uterotrophic assay PLUS/MIN CODE: + e

EXPO_ROUTE: gavage UNIT DOSE: mg/kg REL_POTENCY:

DOSE_CONCENTR.: 90 mg/kg

EFFECT: Uterine weight, uterine/body weight significantly increased in 90 mg/kg and 120 mg/kg groups and a dose-response relationship was observed.

CRITERION: LOAEL CONCLUSION EDS: estrogen

REMARKS: OBJECTIVE: To investigate the estrogenic activity of para-nonylphenol in immature SD rats and explore the mechanism and sensitive indicators of its action in uterotrophic assay. METHODS: The vehicle control (peanut oil), positive control (estradiol benzoate, E2B, 0.4 mg/kg) and p-NP (60 mg/kg, 90 mg/kg and 120 mg/kg) were given orally (by gavage) q.d. on the 21st, 22nd, 23rd postnatal days. Then the rats were sacrificed 24 hours after the last administration. By using ABC immunohistochemistry, the progesterone receptor (PR), estrogen receptor (ER), and proliferating cell nuclear antigen (PCNA) of the rat uterine were analysed. RESULTS:

1. Select Ref decis



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SHORT OVERVIEW: WILDLIFE EFFECTS DATA

Key	Chno	Name	Species/recept Effect	Criterion	Dose/conc	Unit	Type	Test type	In file	RefID
<input type="checkbox"/>	1CGe036	4-Nonylphenol (4-NP)	Salmo quairdneri	induced of vitelogenin mRNA	10	uM	+e	in vitro	Yes	Flo95
<input type="checkbox"/>	1POe889	4-Nonylphenol (4-NP)	Daphnia magna	Hormone, General Changes in	NR	0.0625 mg/l	-e	in vivo	Yes	Bal97
<input type="checkbox"/>	1POe894	4-Nonylphenol (4-NP)	Salmo salar (Plasma)	Hormone, General Changes in; decrease	NR	25 mg/kg	-e	in vivo	Yes	Aru97
<input checked="" type="checkbox"/>	1WWe002	4-Nonylphenol (4-NP)	Rainbow trout							
<input type="checkbox"/>	1CGe037	4-Nonylphenol (4-NP)	Atlantic salmon							
<input type="checkbox"/>	1POe890	4-Nonylphenol (4-NP)	Daphnia magna							
<input type="checkbox"/>	1POse187	4-Nonylphenol (4-NP)	Pimephales promelas							
<input type="checkbox"/>	1POse193	4-Nonylphenol (4-NP)	Daphnia magna							
<input type="checkbox"/>	1WWe121	4-Nonylphenol (4-NP)	Daphnia magna,							
<input type="checkbox"/>	1WWe122	4-Nonylphenol (4-NP)	Daphnia magna,							
<input type="checkbox"/>	1POse189	4-Nonylphenol (4-NP)	Daphnia magna							
<input type="checkbox"/>	1CGe003	4-Nonylphenol (4-NP)	Oncorhynchus mykiss							
<input type="checkbox"/>	1POse191	4-Nonylphenol (4-NP)	Chironomus tentans							
<input type="checkbox"/>	1POse188	4-Nonylphenol (4-NP)	Salmo salar							
<input type="checkbox"/>	1POse190									
<input type="checkbox"/>	1POse194									
<input type="checkbox"/>	1POe895									
<input type="checkbox"/>	1CGe017									
<input type="checkbox"/>	1POse192									
<input type="checkbox"/>	1CGe006									
<input checked="" type="checkbox"/>	1GPw145yr	4-Nonylphenol (4-NP)	Oryzias latipes	Induction of VTG	LOEC	24.8 ug/l	+e	in vivo	yes	kan(03)

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SHORT OVERVIEW: WILDLIFE EFFECTS DATA

Key	Chno	Name	Species/recept Effect	Criterion	Dose/conc	Unit	Type	Test type	In file	RefID
<input checked="" type="checkbox"/>	1GPw145yr	4-Nonylphenol (4-NP)	Oryzias latipes	Induction of VTG	LOEC	24.8 ug/l	+e	in vivo	yes	kan(03)

Categorisation - Microsoft Access

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EDS Database: Categorisation

NO	CASNR	NAME	HH	WL	Overall	Reference decision	Short Overview:
138	104-40-5	4-Nonylphenol (4-NP)	CAT1	CAT1	CAT1	DHI 2006	HH WL

No of record: Reference decision Short Overview: HH | WL

Record: 14 of 4 of

Form View

The compilation of the priority list was based on a screening of available literature and is to be regarded as a starting point for further in-depth evaluation of the substances placed on the priority list with highest priority given to substances placed in the Category 1 group (clear evidence for endocrine disrupting effects in an intact organism)

The evaluations are NOT considered comprehensive risk assessments

In the future in-depth evaluations, a methodology needs to be developed to make the list iterative, i.e. that a substance can enter or be deleted from the list on the basis of an agreed approach

Thus at the moment with the available information there is not sufficient evidence for including CAT 1 substances on the candidate list to Annex XIV