

List of Priority Substances

Innholdsfortegnelse

- 1) Criteria for the selection of Priority Substances

List of Priority Substances

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Norway is aiming to reduce emissions of substances that pose a serious threat to health or the environment continuously, with a view to eliminating them completely by 2020. The priority list includes more than 30 named substances and groups of substances. The first version of the priority list was published in 1997, in a white paper on an environmental policy for sustainable development.

Criteria for priority substances

A set of criteria has been drawn up for identifying priority substances. These include substances that are persistent and bioaccumulative, that have serious long-term health effects, or that show high ecotoxicity.

Steps to reduce releases

Releases of many priority substances have been substantially reduced since 1995. Norway has taken action at national level to reduce or eliminate releases of nearly all priority substances. There are also international agreements to phase out or restrict the use of many of these chemicals.

Nevertheless, some priority substances are still in use for certain purposes, and not all sources of pollution have been phased out. In addition, pollutants and waste released in the past can still create problems today. The environmental authorities are therefore continuing efforts to reduce releases of these substances even further.

Priority Substances

Change in emissions 1995-2015	Norwegian legislation and international agreements
<p>Arsenic</p> <p>34% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 2002</p> <ul style="list-style-type: none"> • Restrictions concerning CCA-impregnated wood, fouling by micro-organisms, plants or animals, treatment of industrial waters: REACH Annex XVII. Entry 19 , Listed on the Candidate List and REACH Annex XIV • Regulation of arsenic in toys (Regulation on safety of toys) • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning local air quality: Pollution Regulations. Local air quality • Regulations concerning discharges and emissions of arsenic: Pollution Regulation. Permits pursuant to the Pollution Control Act • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulation Chapter 2 • Substitution: Product Control Act. Section 3A

<p>Benzotriazole UV-stabilizers (UV-320, UV-327, UV-328 and UV-350)</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2017</p> <ul style="list-style-type: none"> Listed on the REACH Candidate List
<p>Bisphenol A</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2007</p> <ul style="list-style-type: none"> Discharge requirements for domestic waste water from permanent and non-permanent residences. Pollution regulation. Chapter 11 Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste Regulations concerning discharges and emissions of bisphenol A: Permits pursuant to the Pollution Control Act Substitution: Product Control Act. Section 3A
<p>Brominated flame retardants</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 1997 (penta-, octa- and deka-BDE, HBCD and TBBPA)</p> <ul style="list-style-type: none"> Certain compounds (penta-, octa- and deka-BDE) are prohibited: REACH Annex XVII. Entry 45 and Product Regulations. Section 2-7, and 4-1 and 4-2 Ban on brominated flame retardants: Product Regulations. Section 2a Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste Regulations concerning discharges and emissions: Permits pursuant to the Pollution Control Act Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) Action Plan against brominated flame retardants (PDF in Norwegian) Substitution: Product Control Act. Section 3A International cooperation: POPs Convention, OSPAR List of Chemicals for Priority Action
<p>Bis(2-ethylhexyl) phthalate (DEHP)</p>	

<p>50% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 2002</p> <ul style="list-style-type: none"> • Phthalates in toys and childcare articles: REACH Annex XVII. Entry 51. Listed on the Candidate List and REACH Annex XIV • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions of DEHP: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A • International cooperation: OSPAR List of Chemicals for Priority Action
<p>Certain surfactants (DTDMAC, DSDMAC, DHTDMAC)</p>	
<p>96% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Regulations relating to restrictions on the use of chemicals and other products hazardous to health and the environment: Product Regulations. Section 2-14 • Substitution: Product Control Act. Section 3A
<p>1,2-Dichloroethane (EDC)</p>	
<p>92% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions of EDC: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A • REACH: Listed on the Candidate List and REACH Annex XIV
<p>Dioxins and furans</p>	
	<p>Listed on the priority list in 1997</p>

<p>75% reduction in emissions 1995-2015</p>	<ul style="list-style-type: none"> • Prohibition: Product Regulations. Section 4-1 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Approval of closed fireplaces: Regulations on technical requirements for building works (PDF) • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on POPs, POPs Convention, OSPAR List of Chemicals for Priority Action
<p>Cadmium</p>	
<p>77% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Regulations relating to stabilizers and colouring agents in plastic materials, paint, vehicles, packaging, EE-products: REACH Annex XVII. Entry 23 and Product regulations. Section 2-15 and Section 2a • Cadmium, cadmium oxide, cadmium sulfide and cadmium chloride are listed on REACH Candidate List • Regulations relating to hazardous chemicals in toys (Regulation on safety of toys) • Substitution: Product Control Act. Section 3A • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2 • Limit values for heavy metals in fertilisers and sewage sludge for soil improvement • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on Heavy Metals, OSPAR List of Chemicals for Priority Action
<p>Chlorinated alkyl benzenes (CABs)</p>	
<p>Almost 100% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A

Chromium

46% reduction in emissions 1995-2015

Listed on the priority list 1997

- Regulations relating to chromium in impregnated wood, vehicles, packaging, EE-products and cement: Product regulations. Section 2-11, 2-15, 2-19 and Section 2a
- Regulations relating to chromium VI in cement and leather: REACH Annex XVII. Entry 47
- Regulations relating to hazardous chemicals in toys (Regulation on safety of toys)
- Substitution: Product Control Act. Section 3A
- Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste
- Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act
- Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2
- Limit values for heavy metals in fertilisers and sewage sludge for soil improvement

Dodecylphenol

Increase in emissions

Listed on the priority list 2007

Hexachlorobenzene

90% reduction in emissions 1995-2015

Listed on the priority list 1997

- Prohibition: Product Regulations. Section 4-1
- Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste
- Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act
- Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation)
- Approval of closed fireplaces: Regulations on technical requirements for building works (PDF)
- Substitution: Product Control Act. Section 3A
- International cooperation: ECE-Protocol on POPs, POPs Convention, Rotterdam Convention, OSPAR List of Substances of Possible Concern

Lead	
90% reduction in emissions 1995-2015	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Ban on use of lead shots at shooting ranges: Product regulations §2-2 • Regulation concerning use of lead shots: Norwegian hunting regulations §17 • Strict regulations on packaging, vehicles, petrol and EE-products: Product Regulations. Sections 2-2, 2-15, 2-19, 2-20 and Section 2a • Lead compounds listed on REACH Candidate List and Annex XIV • Restrictions on lead and lead compounds in paint: REACH Annex XVII. Entries 16 and 17 • Regulations relating to hazardous chemicals in toys (Regulation on safety of toys) • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Regulations concerning local air quality: Pollution Regulations Chapter 7. Local air quality • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2 • Limit values for heavy metals in fertilisers and sewage sludge for soil improvement • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Substitution: Product Control Act. Section 3A • Voluntary agreement to phase out leaded ammunition on military ranges • International cooperation: ECE-Protocol on Heavy Metals, OSPAR List of Chemicals for Priority Action
Medium-chain chlorinated paraffins	
29% reduction in emissions 1995-2015	<p>Listed on the priority list 2002</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act
Mercury	
	Listed on the priority list 1997

<p>74% reduction in emissions 1995-2015</p>	<ul style="list-style-type: none"> • General prohibition on the use of mercury in products, with a few exceptions: REACH Annex XVII. Entries 18 and 18a and Product Regulations. Sections 2-3, 2-15, 2-17, 2-19 and Section 2a • Prohibition against phenylmercury compounds: REACH Annex XVII. Entry 62 • Regulations relating to hazardous chemicals in toys (Regulation on safety of toys) • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning local air quality: Pollution Regulations. Local air quality • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2 • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Limit values for heavy metals in fertilisers and sewage sludge for soil improvement • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on Heavy Metals, Rotterdam Convention, OSPAR List of Chemicals for Priority Action, Minamata Convention
<p>Musk xylenes</p>	
<p>Almost 100% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Regulations concerning cosmetics • REACH: Listed on the Candidate List and Annex XIV • Substitution: Product Control Act. Section 3A • International cooperation: OSPAR List of Chemicals for Priority Action
<p>Nonylphenol and its ethoxylates</p>	
<p>90% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Prohibition on the use of nonylphenol and its ethoxylates in a number of products: REACH Annex XVII. Entry 46 • RECH: Listed on the Candidate List • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A • International cooperation: OSPAR List of Chemicals for Priority Action

Octylphenol and its ethoxylates (OP, OPE)

90% reduction in emissions 1995-2015

Listed on the priority list 1997

- Prohibition on the use of octylphenol and its ethoxylates in a number of products: Product Regulations. Section 2-5
- Substitution: Product Control Act. Section 3A
- Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste
- Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation)
- Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act
- International cooperation: OSPAR List of Chemicals for Priority Action

Polycyclic aromatic hydrocarbons (PAHs)

Emissions relatively stable in recent years

Listed on the priority list in 1997

- Regulations concerning wood impregnated with creosote and car tyres: REACH Annex XVII. Entry 31 and Entry 50
- Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste
- Regulations concerning local air quality: Pollution Regulations Chapter 7. Local air quality
- Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act
- Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation)
- Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2
- Standards for new wood-burning stoves: Regulations on technical requirements for building works (PDF)
- Substitution: Product Control Act. Section 3A
- International cooperation: ECE-Protocol on POPs, OSPAR List of Chemicals for Priority Action

Pentachlorophenol (PCP)

Listed on the priority list 1997

<p>More than 99% reduction in emissions 1995-2015</p>	<ul style="list-style-type: none"> • Prohibition: REACH Annex XVII. Entry 22 and Product Regulations. Section 2-10 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on POPs, Rotterdam Convention, OSPAR List of Chemicals for Priority Action
<p>Polychlorinated biphenyls (PCBs)</p>	
<p>More than 90% reduction in emissions 1980-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Prohibited in products. Requirements for the phasing out of PCB-containing lighting fixtures and other PCB-containing electrical products: Product Regulations. Section 2-1 and 4-10 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2 • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on POPs, POPs Convention, Rotterdam Convention, OSPAR List of Chemicals for Priority Action
<p>PFCA (C9-C14) Long-chain perfluorinated acids</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2014</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A • REACH: C9, its sodium and ammonium salts, and C11-C14 are listed on the Candidate List
<p>PFHxS and PFHxS-related substances</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2017</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A • Assessed for further regulation in the EU

PFOA	
Emission levels unknown 1995-2015	<p>Listed on the priority list 2007</p> <ul style="list-style-type: none"> • Prohibited in consumer products: Product Regulations. Section 2-32 • Substitution: Product Control Act. Section 3A • REACH: Listed on the Candidate List
PFOS and PFOS-related substances	
0 tonnes emissions of PFOS in 2015. Emissions from contaminated soil and sediments are not included.	<p>Listed on the priority list 2002</p> <ul style="list-style-type: none"> • Prohibited in several products: Product Regulations Section 2-9 and Chapter 4 • Substitution: Product Control Act. Section 3A • International cooperation: ECE-Protocol on POPs, POPs Convention, OSPAR List of Chemicals for Priority Action
Short-chain chlorinated paraffins	
67% reduction in emissions 1995-2015	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Prohibition: Product Regulations Chapter 4 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • International cooperation: ECE-Protocol on POPs, POPs Convention, OSPAR List of Chemicals for Priority Action
Siloxane-D4	
Emission levels unknown 1995-2015	<p>Listed on the priority list 2012</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A
Siloxane-D5	

<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2006</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A
<p>Siloxane-D6</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2018</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A
<p>Tris (2-chloroethyl) phosphate (TCEP)</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2012</p> <ul style="list-style-type: none"> • REACH Annex XIV – subject to approval • REACH Annex XVII. Entry 30 – prohibited in substances and mixtures to consumers with a concentration limit of 0.3% • Substitution: Product Control Act. Section 3A
<p>Tetrachloroethene (PER)</p>	
<p>99% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Tax on wagering • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A
<p>Organic tin compounds (TBT, TPT, DBT and DOT)</p>	

<p>TBT and TPT: 100% reduction in emissions 1995-2015</p> <p>DBT and DOT: Emission levels unknown</p>	<p>TBT and TPT: Listed on the priority list 1997 DBT and DOT: Listed on the priority list 2017</p> <ul style="list-style-type: none"> • Prohibition: REACH Annex XVII. Entry 20 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Cleaning of contaminated soil in connection with building and excavation work: Pollution Regulations. Chapter 2 • Substitution: Product Control Act. Section 3A • International cooperation: Rotterdam Convention, OSPAR List of Chemicals for Priority Action
<p>Trichlorobenzene (TCB)</p>	
<p>81% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Prohibition: REACH Annex XVII. Entry 49 • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Requirements to reduce discharges of hazardous chemicals to water (the Water Regulation) • Regulations concerning discharges and emissions: Pollution Regulations. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A • International cooperation: OSPAR List of Chemicals for Priority Action
<p>Trichloroethene (TRI)</p>	
<p>Almost 100% reduction in emissions 1995-2015</p>	<p>Listed on the priority list 1997</p> <ul style="list-style-type: none"> • Tax on wagering • REACH: Listed on the Candidate List and Annex XIV • Regulations relating to waste: hazardous waste, incineration of waste and landfilling of waste • Regulations concerning discharges and emissions: Pollution Regulation. Permits pursuant to the Pollution Control Act • Substitution: Product Control Act. Section 3A
<p>Triclosan</p>	

<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2008</p> <ul style="list-style-type: none"> • Regulations concerning cosmetics • Substitution: Product Control Act. Section 3A
<p>2,4,6 Tri-tert-butylphenol</p>	
<p>Emission levels unknown 1995-2015</p>	<p>Listed on the priority list 2007</p> <ul style="list-style-type: none"> • Substitution: Product Control Act. Section 3A • International cooperation: OSPAR List of Chemicals for Priority Action

1. Criteria for the selection of Priority Substances

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Substances that fulfil one or more of the following four sets of criteria are included in the national target to achieve substantial reductions in emissions. The criteria and the values that are presented below are mainly based on international work in the EU and OSPAR, and laid down in REACH (see Annex XIII).

1	2	3	4
P+B+Th and/or Te	vP+vB	Additional criteria	
Substances that are persistent, bioaccumulative and have serious long-term effects on health or are highly toxic to the environment.	Very persistent, and very bioaccumulative substances (documentation of toxicity is not required).	Substances that are detected in the food chain at levels which give rise to an equivalent reason for concern.	Other substances, such as substances that have endocrine disrupting effects and heavy metals, that give rise to an equivalent level of concern.

For these sets of criteria the following definitions are used:

Criterion		Defined by
Persistent	P	<p>One of the following:</p> <ol style="list-style-type: none"> 1) Fresh water: half-life > 40 days 2) Marine water: half-life > 60 days 3) Sediment, fresh water: half-life > 120 days 4) Sediment, marine: half-life > 180 days 5) Soil: half-life > 120 days <p>Other relevant information may be used if test results are lacking.¹⁾</p>
Bioaccumulative	B	<p>Bioconcentration factor (BCF) > 2000</p> <p>Other relevant information may be used if test results are lacking.¹⁾</p>

Serious long-term effects on health	T	<p>One of the following:</p> <p>1) Carcinogenic (Category 1A or 1B), i.e. classified as H350 or H350i</p> <p>2) Mutagenic (Category 1A or 1B), i.e. classified as H340</p> <p>3) Toxic to reproduction (Category 1A, 1B or 2), i.e. classified as H360 or H361</p> <p>4) Chronic toxicity (STOT RE category 1 or 2), i.e. classified as H372 or H373</p>
Highly toxic for the environment	T	<p>One of the following:</p> <p>1) Very high chronic toxicity for aquatic organisms: NOEC (aquatic, chronic) < 0,01 mg/l</p> <p>2) Substances that are sufficiently documented in internationally accepted tests as causing endocrine disrupting effects</p> <p>Other relevant information may be used if test results are lacking.1)</p>
Very persistent	vP	<p>One of the following:</p> <p>1) Fresh water and marine water: half-life > 60 days</p> <p>2) Sediment, fresh water or marine: half-life > 180 days</p> <p>3) Soil: half-life > 180 days</p> <p>Other relevant information may be used if test results are lacking.1)</p>
Very bioaccumulative	vB	<p>Bioconcentration factor (BCF) > 5000</p> <p>Other relevant information may be used if test results are lacking.1)</p>
Additional criteria		<p>One of the following:</p> <p>1) Metals that may cause serious long-term effects.</p> <p>2) Substances that are traced in the food chain or for example in breast milk at levels that give rise to an equivalent level of concern.</p> <p>3) Substances that are sufficiently documented in internationally accepted tests as causing endocrine disrupting effects.</p>
<p>1) Test results that show potential for persistency, toxicity and bioaccumulation may be used if tests of higher quality are lacking: a) potentially high persistency: does not fulfil the criteria for ready or inherent persistency (OECD 301, 302 or 306), b) potentially high chronic aquatic toxicity: L(E)C50 in acute test < 0,1 mg/l. This is most relevant with regard to persistency, as half-life test has recently been internationally accepted and little test data therefore exists today.</p>		