

Report



**Friends of
the Earth**

Shop till you drop?

Survey of high street retailers on risky chemicals in products – 2003/04

May 2004

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1. Executive Summary

"Chemicals are ever present in our society and our daily lives e.g. when cleaning, doing the dishes, laundry, painting or putting make up on. Chemicals are also found in our food, medicine and many other things. We have to see to it that the chemicals we use in our products to obtain certain functions neither cause allergy or other health problems nor damage the environment." IKEA, *IKEA Social and Environmental Issues*, 2001 [1].

"ELC [Early Learning Centre] believes it has a moral obligation, as a supplier of consumer goods to children, to ensure that any potential risks are researched and appropriate steps are taken to minimise those risks. Furthermore ELC has a role to play in bringing the issues surrounding the availability of data to the fore. With this in mind ELC signed the "Friends of the Earth Risky Chemicals Pledge", which has resulted in the production of this our first annual report on the subject." Early Learning Centre, *Risky Chemicals Annual Report*, 2003.

Background




We are exposed to industrial chemicals in our homes all the time, whether we like it or not. In recent years it has become clear that we know little about the safety of most of these chemicals. We continue to be exposed to chemicals that accumulate in and contaminate our bodies, and there are a range of health problems which may be associated with chemical exposures. Many products have no labelling requirements, and no-one knows exactly which chemicals are on the market and in products in the UK [2]. The current regulatory system fails to protect either our health or the health of the environment.

The survey

This survey is aimed at finding out what approach high street retailers are taking to a small group of hazardous chemicals which are commonly used in household products. It is part of Friends of the Earth's Safer Chemicals Campaign, which aims to get rid of risky chemicals in the products we buy and persuade the European Union and the UK Government to ensure that the EU proposed regulation on chemicals (REACH – the Regulation, Evaluation and Authorisation of Chemicals) adequately controls the most hazardous chemicals, including those found in the home.

All the risky chemicals we have been asking retailers about have been identified as chemicals of concern by at least one European government. In addition, several of the chemicals have been subject to increased regulatory pressure since our surveying started four years ago.

Main results

			
Score	Score > 50%	Score < 50%	No replies
Retailers	Ikea*, Body Shop*, Marks & Spencer*, B&Q*, Co-operative Retail*, Early Learning Centre*, Debenhams*, Boots* and Focus* (in descending order)	Woolworths*, Safeway Somerfield-Kwik Save*, Waitrose, , Argos*, John Lewis and Mothercare* (in descending order)	ASDA, BHS, Hamleys Homebase*, Iceland, Morrisons, Sainsbury's*, ,Superdrug, Tesco, Toys 'R' Us and Toymaster

*: retailers who have signed Friends of the Earth's retailers pledge (see page 5)

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It is very clear from this survey that some companies are doing a lot more than others to evaluate and reduce and report on their use of risky chemicals. Those companies at the top of our league tables are clearly making an effort to identify whether they are using the chemicals that we have highlighted in our survey, and are trying to phase out those uses they can find. Focus is a welcome newcomer to the league table since it did not respond to the survey in 2001.

Strong support for consumer right-to-know

All retailers who replied to the question said they believed that “consumers have a right to know, if they ask, what chemicals are present in the products they buy”. All retailers, except for Somerfield, Waitrose and Mothercare, stated that they plan to give out full information on chemicals in their products, either on labels or on request. (John Lewis did not answer the question.) However, it is also clear from some of the answers that neither retailers nor their suppliers necessarily have the information to hand.

Retailers are adopting policies on chemicals

Co-operative Retail[#], Marks & Spencer, Safeway*, Somerfield-Kwik Save*, Debenhams*, Ikea, Woolworths*, Boots*, Body Shop, Early Learning Center, B&Q, Focus Group all have a company policy on chemicals which seems to be taking them beyond the legal minimum. John Lewis have a sourcing policy but it did not have much detail on chemicals. (# Primarily for own-brand * Answers for own-brand products only. Note that Marks & Spencer, Body Shop and Ikea sell only own-brand products and thus have taken responsibility for looking at chemicals in their entire products ranges.)

“The Body Shop takes the safety of the products it sells very seriously and has a responsible approach to the use of chemicals in its products. We proactively assess the chemicals we use against criteria of health and safety, environmental impact and our Against Animal Testing policy.” The Body Shop, *Individual Stakeholder Accounts Environmental Report*, 2003 [³].

"Until now we have dealt with ‘toxics’ issues as they have arisen [...]. Taking a reactive approach, however, has often proven difficult and costly, so we decided to build on our past experiences to develop a more proactive strategy, called ‘DIY Detox’, to help us understand and manage these very complex issues going forward." B&Q, *Product Integrity: DIY Detox*, 2004 [⁴].

The Co-op has now set itself the following initial goals: eliminating a priority list of persistent toxic and bio-accumulative chemicals in products [...] that are associated with endocrine disruption and adverse effects on health, wildlife and the environment [...].” The Cooperative Group, *Shopping with Attitude*, 2004 [⁵]

More progress on own-brand products

The retailers who tend to do best in our survey are those with either 100% own brand or a significant proportion of own-brand products (such as Ikea, Body Shop and Marks & Spencer). Retailers selling branded (non own-brand) products occasionally noted the difficulty of influencing the supply chains or even getting information, or commented on the large numbers of lines that they are stocking. However we would argue that retailers should recognise their responsibility for the products that they are selling. They could take decisions not to stock certain products for example and/or could work in coalition to influence the supply chain, and/or could try to influence the chemicals debate in order to bring about more stringent chemicals legislation.

Involvement in the EU legislative process on chemicals (REACH)

Co-operative Retail, Marks & Spencer, Debenhams, Ikea, Woolworths, Boots, B&Q, Focus Group said that they had an active involvement in the legislative process on chemicals, using the principles of the Copenhagen Charter, which are similar to the essential points found in the recommendations below.

“We want to see a tough REACH system in place - one that is trusted, one that will stimulate EU plc to keep ahead of the global competition that it faces.” Mike Barry, Sustainable Development Manager, Marks and Spencer in House of Commons, *Minutes of evidence taken before Science And Technology Committee: EU Chemicals Legislation*, 2004.

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Government could do more

It is also clear that most retailers are dissatisfied with the support that they are getting from the Department of Trade and Industry. In Friends of the Earth's view, the DTI (or some other Government body) should be providing support in the sometimes difficult task of substituting risky chemicals with safer alternatives. Other countries, such as Sweden, provide this service – we believe it would help innovation in the UK. The Chemicals Stakeholder Forum, a government initiative bringing together various stakeholders (including retailers and NGOs) to look at specific hazardous chemicals, has made only slow progress.

Some failures to answer

Eleven companies failed to reply to our questions. Some have not completed this questionnaire or the previous one in 2001: Hamleys, BHS, ASDA, Morrisons, Toys 'R' Us and Toymaster. Others failed to reply on this occasion: Iceland, Superdrug, Tesco, Homebase and Sainsbury's – even though Sainsbury's and Homebase have signed our retailers' pledge (see below) and committed themselves to report on their progress regularly.

Recommendations

It is clear that the current regulation of chemicals is insufficient and ineffective – this makes retailers vulnerable to the problems caused by the use of risky chemicals.

We therefore recommend that those retailers who have not yet done so, **sign our retailers' pledge** and take action. The retailers' pledge is as follows:

A responsible retailer would:

- Using official lists, identify which man-made chemicals are suspected of building up in peoples bodies (bioaccumulation), or interfering with the hormone, immune or nervous systems.
- Produce a strategy to identify which of its own-brand and branded products, including fruit and vegetables, contain these chemicals.
- Produce a timeline to phase out these chemicals from its own-brand products, with the aim of eliminating them in 5 years, starting with those chemicals which pose the greatest threat.
- Put pressure on manufacturers of branded products to do the same.
- Report publicly on progress on an annual basis.

More attention needs to be paid to **branded products** and retailers should insist that their suppliers find out about the chemical content of products if they do not know.

We would also recommend that retailers consider using the **Chemicals Toolkit** put together by the British Retail Consortium [6]. This guide was published to help retailers manage the use of chemicals in consumer products by helping to prioritise chemicals of concern.

All retailers working with the BRC toolkit or with their own developed strategies should **publicly declare their progress and publish the list of chemicals** that they are working to replace or remove from their products.

Furthermore, we would encourage retailers to **get involved in the legislative process on chemicals (REACH)**. It is clear that strong legislation is needed. This would help both retailers and consumers by restricting the uses of hazardous chemicals early on rather than forcing retailers or consumers to individually attempt to make a choice. The **following essential points need to be included in the legislation:**

- the identification and mandatory substitution of all chemicals of “very high concern” [a];

a Chemicals of “very high concern” are chemicals that once released into the environment cannot be handled safely, and for which the EU has made a commitment to phase out emission, discharges and losses by 2020. These chemicals include substances that:

- do not break down quickly in the environment (very persistent chemicals) and can build up inside our bodies (very bio-accumulative chemicals); or
- have a combination of persistence, bio-accumulation and toxicity; or
- are able to disturb our hormone systems (endocrine disrupters); or
- can cause cancer (carcinogenic); can alter genes (mutagenic); or are toxic to the reproductive system; or
- are of “equivalent” concern.

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- a public's right-to-know on request what dangerous chemicals [b] are in any consumer products, and for labelling when chemicals of "very high concern" are present;
- a requirement that chemicals in products imported into the EU should conform to the same safety standards as those made in the EU.

In the absence of comprehensive labelling, we recommend that **consumers may still want to inquire about chemicals** in products, particularly in the branded products sold by a retailer. This is probably the only way in which to be exactly sure about purchases, and will also help push retailers to take note and be more pro-active about questioning their suppliers and phasing out the worst chemicals ahead of legislation. Even if REACH is eventually as strong a law as we would like, it is going to be a number of years before it sorts out the problems of chemicals in products.

"Basically retailers want to know which products to go to and which chemicals they will have to address, and possibly look at issues associated with substitution and so on. So the bare knuckles of it really is that they are looking for a definitive list of 25-30 chemicals that they need to address in their supply chain which really is a starting block in this. I am not saying it is an answer to everything - it is phase 1 of what is a very complex and long road, I believe - but it is being slightly more proactive ahead of REACH, and pressure is coming from the NGOs now as well to come up with chemical strategies and chemical lists, but clearly some of these companies do not have the level of expertise to do it." Nigel Smith of the British Retail Consortium. House of Commons, *Minutes of evidence taken before Science and Technology Committee: EU Chemicals Legislation*, 2004.

b Dangerous chemicals are those which meet the criteria for classification under EU legislation 67/548/EEC. This includes a number of negative human and environment effects, e.g. toxic, sensitising, flammable, etc.

2. Introduction

“Where synthetic chemicals are found in elevated concentrations in biological fluids such as breast milk and tissues of humans, marine mammals or top predators, regulatory steps [should] be taken to **remove them from the market immediately.**” [our emphasis] Royal Commission on Environmental Pollution *Chemicals in products: Safeguarding the Environment and Human Health*, 2003 [7].

We are exposed to industrial chemicals in our homes all the time, whether we like it or not. In recent years it has become clear that we know little about the safety of most of these chemicals. We continue to be exposed to chemicals that accumulate in and contaminate our bodies, and there are a range of health problems which may be associated with chemical exposures. The current regulatory system fails to protect either our health or the health of the environment.

In April 2000, Friends of the Earth wrote to retailers and consumer product manufacturers in a number of sectors, asking them whether they were using certain risky chemicals in their products. In 2001, we carried out another survey focussing mainly on retailers (available at www.foe.co.uk/campaigns/safer_chemicals/news/retailer_quiz_results.html). The current survey follows from the 2001 survey, to see what progress the retailers surveyed have made.

Why are we doing this survey?

This survey is aimed at finding out what approach retailers are taking to a small group of risky chemicals which are commonly used in household products. It is part of Friends of the Earth’s Safer Chemicals Campaign, which aims to get rid of risky chemicals in the products we buy and persuade the European Union and the UK Government to ensure that the EU proposed regulation on chemicals (REACH – Registration, Evaluation and Authorisation of Chemicals) adequately controls the most hazardous chemicals, including those found in the home.

Why we surveyed retailers

We consider that companies that sell industrial chemicals to consumers in their products have a responsibility to ensure that they are using the safest possible chemicals. In reality, this means all retailers should examine the chemicals that are being used in their products – whether they be sofas, baby toys or cosmetics.

In addition, Friends of the Earth believes that the scientific and public pressure on chemicals will increase over the next 5-10 years. Our ‘*Crisis in Chemicals*’ report and its update (both available free on the web - [8][9]) suggests that, over the next 5-10 years, scientists will find out much more about the harm done by chemicals, and will also be able to identify individuals who are particularly susceptible to individual chemicals. The report describes how the human genome project and related biomedical research will radically improve our ability to measure the effects of chemicals. This new information will make it easier for affected individuals to take legal actions against retailers and the identification of new problem chemicals will lead to difficulties for those selling affected products.

We therefore consider that it is the best interests of retailers to take a precautionary approach to the chemicals they use, and to encourage innovation towards safer chemicals and techniques. By acting now, retailers will also find themselves ahead of the game when new chemicals legislation is finally agreed and implemented, which will take some years yet.

Why are some chemicals a problem?

The chemical industry claims that “*the chemical industry is extremely heavily regulated*” [10]. In fact, a study in 1999 estimated that only 14% of the highest production volume chemicals in Europe have got a basic set of safety data publicly available [11], and a Swedish official has stated: “*most substances on the market are in reality not covered by the current legislation.*” [12].

More and more chemicals in everyday use are being found to be able to disrupt our endocrine (hormone) systems. At the same time, there are real concerns about a number of hormone-associated illnesses; rates of testicular, prostate and breast cancers have all been rising in recent decades, and no one knows why. We do know that we continue to be exposed to a wide range of endocrine-disrupting

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chemicals in our daily lives - many of them chemicals that were not around a hundred years ago. As the eminent Royal Society said in a report on the subject [13]:

“In reality, humans are exposed not to a single endocrine disrupter but to a cocktail of such chemicals, and the possibility that such chemicals have additive or reinforcing effects has to be considered seriously”.

Because there is so much we don't know about the effects of endocrine disrupting chemicals, scientists don't understand enough to be able to set safe exposure levels. Scientists understand more about setting safe levels for more established forms of toxicity, such as carcinogenicity, but even here there are uncertainties due to our constant exposure to mixtures of chemicals, and our continuing ignorance about how the body works. There are also growing concerns about the effects that exposure to chemicals may be having on the development of children's brains; there is already strong evidence of effects caused by exposure to the long-lasting (persistent) pollutants PCBs, which are no longer produced, but which contaminate everyone's body [14].

Because many problem chemicals accumulate in body fat (bioaccumulation), the developing child is exposed to them both whilst it is in the womb and through breast milk [15][16][17]. Friends of the Earth believes that it is always best to breast feed a baby; the advantages to the immune system and general health are substantial. However, we are calling for chemicals which contaminate body fat or breast milk to be phased out, whether they are currently thought to be toxic or not.

Why are we particularly concerned about the target chemicals?

All the groups of chemicals that we are targeting (see page 11) have at least one member that has been shown to be capable of disrupting hormones - except triclosan (though even here there is recent research suggesting possible endocrine disrupting activity [18]), perfluoro-octanyl sulphonate and perfluoro-octanic acid. In addition, many of the chemicals we have targeted are persistent in the environment and/or bioaccumulate in our bodies, therefore increasing exposures to the developing foetus and baby. They have all been highlighted as a concern by other governments such as in Sweden and Denmark, who are encouraging industry to stop using them.

However, these are not the only problem chemicals in everyday use, and in recent years it has become clear that we know little about the safety of most industrial chemicals. This survey, though, is deliberately focussing on a small, manageable group of risky chemicals.

What do we want retailers to do about the target chemicals?

We believe that these chemicals should be phased out and replaced by safer alternatives. As the Copenhagen Charter states (see page 30), we believe that companies should always use the safest chemical for any application, and should phase out the use of any chemicals that are persistent or bioaccumulate, or which are not safe beyond reasonable doubt.

We are recommending that retailers find out more about all the chemicals in the products they sell. In particular, we consider that they would be wise to look at the information that other Governments have produced to guide their companies on chemical use. One of the best examples is Sweden, who have produced an 'Observation List' of more hazardous chemicals, which they are recommending that industry move away from [19]. Friends of the Earth has produced a guide for retailers found at www.foe.co.uk/resource/briefings/risky_chemicals_retailers.pdf.

The good news is that in April 2004, the British Retail Consortium published a Chemicals Toolkit to help retailers manage the use of chemicals in consumer products by helping to prioritise chemicals of concern. This has been done following consultation with NGOs such as Friends of the Earth, Greenpeace and WWF, as well as government agencies such as DEFRA, the Environment Agency, the European Chemicals Bureau and the World Health Organisation – see www.brc.org.uk/press/chemicals/

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Non-chemical questions

We also asked, and scored:

- Retailers' views and actions on consumers' right to know about chemicals.
- Retailers' involvement in the EU legislative process on chemicals and whether it followed the principles of the Copenhagen Charter (see page 30).
- Retailers' willingness to sign our retailers' pledge (see page 5) if they had not done so.
- Retailers' implementation of internal processes described in the retailers' pledge.

How the survey was carried out

Retailers were selected to enable us to survey the largest companies in the relevant sectors. Note that we only surveyed larger companies; there may be smaller companies who have taken action on the risky chemicals that we are concerned about. Neither do we have quantitative information such as the proportion of branded to own-brand products that are sold by any retailer (except where a retailer is 100% own brand). Most retailers are concentrating on own-brand products where they have more influence over the production and their answers often only apply to own-brand ranges (but the scoring took that fact into account).

All the companies we surveyed had been previously surveyed by us in 2001. The survey asked about the same group of chemicals as in 2001, except for PFOS and PFOA which were new in this survey. Questions on internal processes and general questions were altered somewhat.

The questionnaire was first sent out on 4 November 2003, asking for a response by mid-January 2004. A reminder letter was sent mid-December to those companies who had not replied, requesting a response as soon as possible. Follow up calls were made in January, February and March.

The questions are listed in Appendix 1. A copy of the questionnaire as sent is also online at: www.foe.co.uk/campaigns/safer_chemicals/news/retailer_quiz_results.html

More information for and about retailers and chemicals is available in the retailers section of the Safer Chemicals Campaign web site: www.foe.co.uk/campaigns/safer_chemicals/resource/retailers.html

3. The political background

Following the publication of a white paper on chemicals policy in 2001, the European Commission published its legislative proposal on chemicals in October 2003. This is known as REACH, standing for the Registration, Evaluation and Authorisation of Chemicals^[20]. Under the REACH system, manufacturers and importers of any chemicals produced or imported at over one tonne per year, and on the market for more than two decades (an estimated 30,000 chemicals), will have to register such chemicals with a central agency and provide data on the characteristics and uses of the chemicals. This information will be evaluated, and the most hazardous chemicals of “very high concern” will be subjected to a system of authorisation. An estimated 1500 chemicals may end up in this authorisation category.

Friends of the Earth welcomes the fact that, under REACH, chemicals which are very persistent and very bioaccumulative, and hormone disrupting chemicals seem likely to be subject to authorisation restricting their use. However, we are worried that a loophole in the text may mean some continued uses even when safer alternatives may be available. The battle over “substitution” is a key issue for environmental NGOs now. It is also not clear that REACH will push the provision of information on chemicals in products to distributors and retailers, let alone consumers, which hardly makes for a transparent system where shoppers can make their own choices if necessary. We hope that this situation can be improved.

What happens next?

The proposal will be debated by both MEPs and environment ministers. It will be about two years before the new regulatory system is finalised (2006 at the earliest). It can already be seen that this new system is very likely to target many or all of the chemicals that are in this questionnaire. By acting now companies will be well prepared.

What do we want?

Friends of the Earth, alongside health, consumer and environmental groups, is pressing for a robust legislative framework which will include the following main points:

- the identification and mandatory substitution of all chemicals of “very high concern” [c];
- a public’s right to know on request what dangerous chemicals [d] are in any consumer products and for labelling when chemicals of “very high concern” are present;
- a requirement that chemicals in products imported into the EU should conform to the same safety standards as those made in the EU.

These points are similar to those found in the Copenhagen Charter (see page 30) but are more specific and take into account the latest developments on REACH. For regular update on our views on the legislation, go to www.chemicalreaction.org

We believe that an improved REACH should create a forward-looking, sustainable chemical industry - not an industry fighting to retain outdated, unsafe chemicals.

The next few years will be crucial in the battle to get a safe regulatory system. A global chemical industry lobby, with the help of the US government, is fighting hard against REACH, and pushing for high levels of confidentiality. The industry lobby has already achieved over a year’s delay in getting a new legislation in place.

c Chemicals of “very high concern” are chemicals that once released into the environment cannot be handled safely, and for which the EU has made a commitment to phase out emission, discharges and losses by 2020. These chemicals include substances that:

- do not break down quickly in the environment (very persistent chemicals) and can build up inside our bodies (very bio-accumulative chemicals); or
- have a combination of persistence, bio-accumulation and toxicity; or
- are able to disturb our hormone systems (endocrine disrupters); or
- can cause cancer (carcinogenic); can alter genes (mutagenic); or are toxic to the reproductive system; or
- are of “equivalent” concern.

d Dangerous chemicals are those, which meet the criteria for classification under EU legislation 67/548/EEC. This includes a number of negative human and environment effects, e.g. toxic, sensitising, flammable, etc.

4. Our target risky chemicals

Brominated flame retardants

Brominated flame retardants are a group of chemicals which are used as flame retardants in fabrics (e.g. home textiles and upholstered furniture) and plastics (e.g. electronic equipment such as TVs, computers and video systems). Most textiles with flame-proofing currently use brominated flame retardants.

Most brominated flame retardants are persistent and/or bioaccumulative, and several have been identified as endocrine disrupters. Contamination of human breast milk by one group, the PBDEs (polybrominated diphenyl ethers), is doubling every 5 years in Sweden [21]. A report looking at pollution in the Arctic – thousand of miles away from pollution sources – found that pollution by PBDE flame retardants is increasing [22].

The World Health Organisation has called for PBDEs “*not to be used where suitable replacements are available*” [23], whilst the Swedish and Danish Governments have called for PBDEs to be phased out because of their accumulation in breast milk and blood [24]. Early in 2003, a new EU directive phasing out the PBDEs penta- and octa-BDE by 15 August 2004 was agreed [25]. As for deca-BDE, the EU’s scientific committee on toxicology, a major scientific panel for reviewing the environmental and health impacts of chemicals, says the level of uncertainty surrounding deca-BDE’s environmental impact already warrants risk reduction [26].

Bisphenol A

Bisphenol A is used in the manufacture of linings for food cans and lids, and is the main ingredient in polycarbonate plastics, including most baby bottles. It has been estimated that 80-85% of food cans have linings containing bisphenol A, though there is no way consumers can tell. Food Standards Agency research has shown that bisphenol A does migrate from can linings into food [27].

Bisphenol A is an endocrine disrupter - it can imitate the female hormone, and low level exposures of developing female mice have been shown to advance their puberty [28]. Research has shown it can easily cross the placental barrier from mother to foetus in rats [29], and it is also been found to contaminate human blood serum [30]. Research has also found that female mice exposed to environmentally relevant doses of bisphenol A showed increases in abnormalities in developing egg cells, which in humans could lead to miscarriage, cancer or congenital defects like Down’s Syndrome [31].

Phthalates

Phthalates are a group of chemicals used as plasticisers in many PVC products (e.g. vinyl floor tiles, toys), glues and inks and as solvents in cosmetics (they will not usually be listed on the label).

Four commonly used phthalates, DEHP (a contaminant of house dust [32]), DBP, BBP and DINP have been shown to disrupt the development of male sex organs in rats - they are all hormone disrupters, acting as anti-androgens (reducing or blocking male hormone action) [33][34]. US researchers have found phthalates contaminating human urine, with the authors stating “*From a public health perspective, these data provide evidence that phthalate exposure is both higher and more common than previously suspected*” [35]. A study on young Puerto Rican girls with premature breast development found that they had higher blood phthalate levels than unaffected girls [36]. A major study into the US general public’s exposure to chemicals reported that children in the 6-11 age group are exposed to significantly higher levels of phthalates than adults or teenagers: it found that phthalates metabolites in urine samples were up to four times higher in children [37].

There has been an emergency ban of phthalates in toys designed to be put in the mouth of children under three since 1999 [38][39]. The Swedish Chemicals Inspectorate made a formal proposal for EU controls on the phthalate plasticiser DEHP. It would include an immediate ban on its use in medical devices for newborn babies and restrictions in some other applications [40]. Denmark’s toy and retailing industries have agreed to a voluntary ban on a wide range of toys containing phthalate plasticisers. The ban covers items designed or likely to be mouthed by over-threes [41].

Alkyltin compounds

Alkyltin compounds (also called organotin compounds) such as tributyltin (TBT) and dibutyltin are chemicals used as preservatives, antibacterial agents (e.g. in home textiles and upholstered furniture) and catalysts in the production of some plastics. They have been used in anti-bacterial shoe insoles and have been detected in nappies [42].

They are persistent, accumulate in the body – they have been found in human blood [43] and liver [44]– and have been shown to be hormone disrupters in human prostate cancer cells [45]. They also have possible immunotoxic effects and cause hormone disruption to marine molluscs, making female whelks grow penises (‘imposex’), devastating their populations [46].

An EU Regulation agreed in December 2002 prohibits the use of alkyltin based coatings on ships flying the flag of a Member State by July 2003 and all ships by January 2008 due to their effect on marine molluscs [47]. The EU’s top scientific toxicology committee has produced a scathing report on a targeted EU risk assessment to investigate the use of alkyltins for purposes other than anti-fouling paints on ship hulls. It said that the assessment was littered with data gaps and underestimated exposure and failed to recognise that TBT causes endocrine effects in mammals [48].

Alkylphenols

Alkylphenol ethoxylates (e.g. nonylphenol ethoxylate, nonoxynol 9, octylphenol ethoxylate) are used as industrial detergents, in some paints, cosmetic products and clothing. Alkylphenol phosphites are used as UV stabilisers in some plastics. There are safer substitutes available, for example, alcohol ethoxylates.

Alkylphenols are proven hormone disrupters - they can imitate the female hormone [49]. They have been identified as air pollutants in the USA [50] and have recently been found, alongside other chemicals, in household dust from several European countries [51].

In May 2003, the Council of the European Union voted to adopt a Directive restricting the marketing and use of certain dangerous substances including nonylphenol and nonylphenolethoxylates [52]. In the meantime, the Chemical Stakeholder Forum in the UK has recommended that the industry seeks a voluntary agreement to replace nonylphenol and nonylphenolethoxylates in a number of uses and to minimise discharges into the environment in order to reduce existing risks to the environment [53].

Artificial musks

Artificial musks are artificial fragrances added to perfumes, cosmetics, toiletries, laundry detergents, etc.

There are two main groups, the nitro musks and the polycyclic musks, both of which are persistent and bio-accumulative, and are widespread contaminants of the environment and the human body, having been found in breast milk, for example [54][55]. The human body metabolises musk xylene (a nitro musk) to some extent, and one of the chemicals produced has been found to be a female hormone mimic [56]; two of the polycyclic musks have also been found to imitate the female hormone [57].

The European Commission’s eco-label criteria for hand dishwashing detergents, published in a decision in 2001, does not allow for the inclusion of nitro musks and polycyclic musks [58].

Triclosan

Triclosan (sometimes marketed under the name ‘Microban’) is a chlorinated organic anti-bacterial chemical with close structural similarities to dioxins and furans, [59] which has been added to a wide range of products, including washing up liquids, liquid soaps, mouthwashes, dishcloths and chopping boards.

Triclosan is now being detected as a contaminant in human breast milk and fish [60], which demonstrates its poor breakdown in the environment and its ability to contaminate our bodies.

Governmental environment and other agencies in Sweden, Denmark, Finland and Germany have issued press statements discouraging people from using antibacterial household and personal hygiene products [61][62][63]. Norway’s pollution control agency showed its concern by proposing to the EU working group on classification and labelling of eco-toxic substances that triclosan be classified as an eco-toxin [64].

PFOS and PFOA

PFOS (perfluoro-octanyl sulphonate) and PFOA (perfluoro-octanic acid) may be found in stain-resistant fabric, cooking used in cookware and toiletries. PFOS's surfactants are used in applications like fire-fighting foams designed to smother burning petrol or oil fires.

PFOS is persistent, bioaccumulative and toxic to mammals, [65] while an US Environmental Protection Agency's draft risk assessment found that PFOA occurs in the blood of the US population [66].

The 3M Company stopped manufacturing PFOS chemicals in December 2000 because of concerns about their persistence in the environment and long-term health and environmental effects [67]. The phase-out was due for completion by the end of 2002. Moreover, Australia has decided to phase out all PFOS-containing products by December 2003 [68].

5. The league tables

Scoring system

Companies were scored on their replies to the questionnaire based on the scoring system described in Appendix 1 (page 26). Some companies have different scores in different tables. This is because not all chemical questions that companies were scored on were relevant to every sector. For each table, only scores from those questions relevant to that sector are included, to allow fair comparisons to be made, as far as possible.

For example, we have rated alkyltins and brominated flame retardants as irrelevant to ‘standard’ supermarkets (Safeway, Waitrose, etc), so they had no score (n/a) for this section. However, Marks & Spencer and the Co-operative Retail sell a greater range of products (furniture, etc), therefore these 2 chemicals are relevant to them. Though they have been scored on these chemicals in the overall league table, the score on these chemicals was removed from their rating in the supermarkets table, to make the results more comparable with more ‘standard’ supermarkets.

The scoring was a little different from that of the last questionnaire, for instance, in the way points were awarded for action on own-brand products. Companies that are taking action on branded products (or are 100% own-brand) receive more points than companies that are only looking at own-brand products. And fewer points were awarded for access to information issues. For more details, see Appendix 1.

We have made every effort to score fairly based on the companies’ responses, and to ensure that companies are compared to one another in as fair a way as possible. Due to the complexity of the survey and the variable quality of information received from companies, small discrepancies may exist. It is probably hard to truly distinguish between companies with very similar scores.

Companies who provided no answers to the survey

Hamleys, Morrisons, Sainsbury’s, Superdrug, Toymaster and Toys ‘R’ Us provided no answers to the survey or other useful information. Sainsbury’s stated that they “respond to only four selected questionnaires a year”. Note that Sainsbury’s have signed Friends of the Earth’s risky chemicals pledge and responded to the survey in 2001-2002.

Companies who provided very limited information

ASDA, BHS, Homebase, Iceland and Tesco provided limited information. ASDA, Homebase, Iceland and Tesco did not reply to the questionnaire but said that they were interested in the results of the British Retail Consortium research on chemicals – the Chemicals Toolkit (see page 23). Both Homebase and Iceland are planning to review their chemicals policies soon. BHS stated that: “Our investigations have shown that only a marginal number of our current supplies use any of these chemicals. We have asked them how long it will take to phase their use out and wherever possible, we are working with them to achieve this result.” Note that Homebase have signed Friends of the Earth’s risky chemicals pledge and that Homebase, Iceland, Superdrug and Tesco all responded to the survey in 2001-2002.

Note on John Lewis

John Lewis did not answer the questionnaire per se, but sent a letter outlining their policies. There was sufficient information to score them on chemicals, but they did not address the questions on “General questions” and “Internal processes” (sections 9 and 10 in the survey). The lack of points for these questions of course counted heavily against them.

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Overall retailers league table

This is a league table of all retailers surveyed. Scores are worked out as a percentage of the total possible score for all the relevant questions for each retailer to allow comparison. If all chemicals are relevant the maximum score is 72.

Rank	Rank 2001/2	Company	Total score	Relevant chemical sections + max score	% Score
1	1	Ikea	57.5	All except baby bottles and triclosan (toothpaste) = 67	86
2	2	Body Shop	42	All except brominated flame retardants, bisphenol A, PFOS/PFOA and 1 Q on branded products = 50	84
3	4	Marks & Spencer	54	All except baby bottles and 1 Q on branded products = 68	79
4	5	B&Q	43.5	All except bisphenol A & triclosan (toothpaste) = 61	71
5	3	Co-operative Retail (Co-op)	43.75	All = 72	61
6	6	Early Learning Centre	34	All except baby bottles, musks & triclosan = 58	59
7	9	Debenhams	41.5	All = 72	58
8	12	Boots	35.75	All except PFOS/PFOA = 66	54
9	v. limited info	Focus Group	31.5	All except bisphenol A and triclosan (toothpaste) = 61	52
10	17	Woolworths	33	All = 72	46
11	14	Safeway	28.5	All except BFRs = 66	43
12	v. limited info & no answers	Somerfield-Kwik Save	26.5	All except BFRs and baby bottles = 64	41
13	15	Waitrose	26.25	All except BFRs = 66	40
14	10	Argos	24	All except baby bottles & triclosan (toothpaste) = 67	36
15	18=	John Lewis	17	All except bisphenol A = 64	27
16	7	Mothercare	18	All = 72	25
v. limited info	no answers	ASDA	-	-	-
v. limited info	v. limited info	BHS	-	-	-
v. limited info	8	Homebase	-	-	-
v. limited info	13	Iceland	-	-	-
v. limited info	18=	Tesco	-	-	-
no answers	v. limited info	Hamleys	-	-	-
no answers	no answers	Morrisons	-	-	-
no answers	11	Sainsbury's	-	-	-
no answers	15	Superdrug	-	-	-
no answers	no answers	Toymaster	-	-	-
no answers	no answers	Toys 'R' Us	-	-	-

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Supermarkets league table

Rank	Rank 2001/2	Company	Total score	Max score	% Score
1	2	Marks & Spencer	50	62*	81
2	1	Co-op	38.25	64*#	60
3	5	Safeway	28.5	64#	45
4=	v. limited info	Somerfield - Kwik Save	26.5	64	41
4=	6	Waitrose	26.25	64#	41
v. limited info	4	Iceland	-	-	-
v. limited info	7	Tesco	-	-	-
v. limited info	no answers	ASDA	-	-	-
no answers	3	Sainsbury's	-	-	-
no answers	no answers	Morrisons	-	-	-

* Score for BFRs ignored allowing comparison to other supermarkets

Score for baby bottles without bisphenol A ignored to allow comparison to other supermarkets

Department and general stores league table

Rank	Rank 2001/2	Company	Total score	Max score	% Score
1	1	Ikea	57.5	67	86
2	2=	Marks & Spencer	52	65#^	80
3	2=	Co-op	41.75	67#^	62
4	4	Debenhams	39.75	67#^	59
5	6	Woolworths	29.5	67#^	44
6	5	Argos	24	65#	37
7	7	John Lewis	15.5	61^	25
v. limited info	v. limited info	BHS	-	-	-

^ Score for triclosan in toothpaste ignored allowing comparison to other department/general stores

Score for baby bottles without bisphenol A ignored to allow comparison to other department/general stores

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DIY Stores league table

Rank	Rank 2001/2	Company	Total score	Max score	% Score
1	1	B&Q	43.5	61	71
2	v. limited info	Focus Group	31.5	61	52
v. limited info	2	Homebase	-	-	-

Cosmetics/toiletries retailers league table

Rank	Rank 2001/2	Company	Total score	Max score	% Score
1	1	Body Shop	42	50	84
2	2	Marks & Spencer	46.5	56*□	83
3	4	Debenhams	38	58*#□	66
4	3	Co-op	35.5	58*#□	61
5	6	Boots	32.25	58*#	56
6	8	Safeway	28.5	58□	49
7	v. limited info	Somerfield-Kwik Save	23.5	58□	41
8	10	Waitrose	23.25	58□	40
v. limited info	7	Iceland	-	-	-
v. limited info	11~	Tesco	-	-	-
v. limited info	no answers	ASDA	-	-	-
no answers	5	Sainsbury's	-	-	-
no answers	9	Superdrug	-	-	-
no answers	no answers	Morrisons	-	-	-

* Score for BFRs ignored allowing comparison to other cosmetics/toiletries retailers

Score for baby bottles without bisphenol A ignored to allow comparison to other cosmetics/toiletries retailers

□ Score for PFOS/PFOA ignored allowing comparison to other cosmetics/toiletries retailers

~ Ranks were adjusted as cosmetics/toiletries manufacturers were not surveyed on this occasion

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Toy retailers league table

Rank	Rank 2001/2	Company	Total score	Max score	% Score
1	1	Ikea	51.5	61~	84
2	2	Early Learning Centre	34	58	59
3	5	Debenhams	38	64~#	59
4	6	Woolworths	28	64~#	44
5	4	Argos	23	59~#	39
6	7	John Lewis	14	58~	24
7	3	Mothercare	14	64~#	22
v. limited info	v. limited info	Hamleys	-	-	-
v. limited info	v. limited info	BHS	-	-	-
no answers	no answers	Toys 'R' Us	-	-	-
no answers	no answers	Toymaster	-	-	-

~ Artificial musks ignored to allow comparison with other toy retailers

Baby bottles ignored to allow comparison with other toy retailers

6. Detailed information gained by the survey

Questions on chemicals

Products containing brominated flame retardants

- No (all products): Ikea.
- No (own-brand products): Co-op, Early Learning Centre. Both working on alternatives for branded products.
- Yes but limited use: Marks & Spencer (sofas), Boots* (hairdryer circuit boards). Both working on alternatives.
- Yes: Debenhams*, John Lewis*, Argos, Woolworths* (home & garden textile furnishings), Mothercare*, B&Q, Focus Group (but reduction in use). All working on alternatives for own-brand products.
- Not applicable to products: Safeway*, Somerfield-Kwik Save*, Waitrose*, Body Shop.

* Answers for own-brand products only.

Products containing bisphenol A

- No (own-brand products): Debenhams, Early Learning Centre. Early Learning Centre working on alternatives for branded products.
- Yes: Co-op* (tin cans & baby bottles), Marks & Spencer (tin cans), Safeway*, Somerfield-Kwik Save*, Waitrose*, Argos, Ikea (clear bottles), Woolworths*, Boots*, Mothercare*. All working on alternatives to various degrees.
- Not applicable to products: John Lewis*, Body Shop, B&Q, Focus Group.

* Answers for own-brand products only.

Baby bottles without bisphenol A

- Yes: Woolworths (steri-bottle, easy-grip bottle and bottle-to-cup trainer from Tommy Tippee (Jackel International)), Boots (Boots bottle-to-cup trainer), Mothercare (Dr Brown's bottles).
- No: Co-op (but planning to phase them out in own brand by mid-2004), Safeway, Waitrose, Debenhams, Argos.
- Do not sell baby bottles: Marks & Spencer, Somerfield-Kwik Save, John Lewis, Ikea, Body Shop, Early Learning Center, B&Q, Focus Group.

Products containing phthalates

- No: none
- Yes but limited use: Ikea (PVC in electrical cords).
- Yes but removed from many products: Co-op*, Marks & Spencer, Safeway*, Woolworths* (all toys for children under 3 years old), Boots*, Body Shop. All working on alternatives to various degrees.
- Yes: Somerfield-Kwik Save*, Waitrose*, Debenhams*, John Lewis*, Argos, Mothercare*, Early Learning Centre*, B&Q, Focus Group. All working on alternatives to various degrees except Somerfield-Kwik Save and Argos.

* Answers for own-brand products only.

Products containing alkyltins

- No (all products): Marks & Spencer, Argos, Ikea, Body Shop, B&Q, Focus Group.
- No (own-brand products): Co-op, Safeway, Somerfield-Kwik Save, Waitrose, Debenhams, John Lewis, Boots, Mothercare, Early Learning Centre.
- Yes but limited use: Woolworths* (shoe insoles mostly): working on alternatives for own-brand products.

* Answers for own-brand products only.

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Products containing alkylphenols & derivatives

- No (all products): Marks & Spencer, Ikea, Body Shop, B&Q, Argos [unlikely].
- No (own-brand products): Co-op, Safeway, Waitrose, Early Learning Centre, Debenhams [unlikely], Boots, John Lewis [virtually eliminated].
- Yes but very limited use: Woolworths*.
- Yes: Somerfield-Kwik Save*, Mothercare*, Focus Group. All working on alternatives in products except for Somerfield-Kwik Save.

* Answers for own-brand products only

Products containing artificial musks

- No (all products): Ikea, B&Q.
- No (own-brand products): Debenhams, Woolworths, John Lewis [virtually eliminated].
- Yes but limited use: Co-op* - working on alternatives.
- Yes: Marks & Spencer#, Safeway*#, Somerfield-Kwik Save*, Waitrose*#, Argos, Boots*, Body Shop, Mothercare*#, Focus Group. All working on alternatives except for Argos and Focus Group.
- Not applicable to products: Early Learning Centre.

* Answers for own-brand products only. # Only polycyclic musks.

Products other than toothpaste containing triclosan

- No (all products): Argos [unlikely], Ikea, Body Shop.
- No (own-brand products): Co-op, Somerfield-Kwik Save, Debenhams, John Lewis [virtually eliminated].
- Yes but limited use: Marks & Spencer - working on alternatives.
- Yes: Safeway*, Waitrose*, Woolworths*, Boots*, Mothercare*, B&Q, Focus Group. All working on alternatives except for Woolworths and Focus Group.
- Not applicable to products: Early Learning Centre.

* Answers for own-brand products only.

Toothpastes containing triclosan

- No (all toothpastes): Body Shop.
- No (own-brand toothpastes): Co-op, Somerfield-Kwik Save, Waitrose, Debenhams, John Lewis [virtually eliminated], Woolworths, Mothercare, Boots.
- Yes but in limited number of lines of toothpaste: Safeway* - working on alternatives.
- Yes: Marks & Spencer but working on alternatives.
- Not applicable to products: Argos, Ikea, Early Learning Centre, B&Q, Focus Group.

* Answers for own-brand products only.

Products containing PFOS

- No (all products): Marks & Spencer, Body Shop.
- No (own-brand products): Co-op, Somerfield-Kwik Save, Waitrose, John Lewis [virtually eliminated], Boots, Early Learning Centre.
- Not known: Safeway*, Argos, Woolworths*, Mothercare*, Focus Group.
- Yes: Debenhams*, Ikea, B&Q. All working on alternatives in products to various degrees.

* Answers for own-brand products only.

Products containing PFOA

- No (all products): Body Shop, B&Q.

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- No (own-brand products): Somerfield-Kwik Save, Waitrose, John Lewis [virtually eliminated], Early Learning Centre, Boots.
- Not known: Safeway*, Argos, Woolworths*, Mothercare*, Focus Group.
- Yes: Co-op*, Marks & Spencer, Debenhams*, Ikea (frying pans). All working on alternatives in products to various degrees.

* Answers for own-brand products only.

General questions

Consumers' right to know: All retailers who replied to the question said they believed that "consumers had a right to know, if they ask, what chemicals are present in the products they buy". (John Lewis did not answer this question.)

Full chemical information: All retailers, except for Somerfield, Waitrose, John Lewis and Mothercare planned to give out full information on chemicals in their products, either on labels or on request.

Involvement in the EU legislative process on chemicals (REACH)

- Active involvement with principles of the Copenhagen Charter (see page 30): 8 - Co-op, Marks & Spencer, Debenhams, Ikea, Woolworths, Boots, B&Q, Focus Group.
- Active involvement with principles different from those of the Copenhagen Charter: none
- No involvement: Safeway, Somerfield-Kwik Save, Waitrose, Argos (but support Charter), Body Shop (but "participated in WWF's EU chemicals debate at Labour Party conference and urged the Minister, Lord Sainsbury, to take a progressive approach to the reform of the EU chemical regulations") Mothercare, Early Learning Centre (but support Charter).
- No answer: John Lewis.

Signatories to the retailers pledge on chemicals (see page 5)

At the time of writing, there are fifteen companies who have signed the retailers pledge:

Argos~, Boots, B&Q, Body Shop, Co-op, Debenhams, Early Learning Centre, Focus Wickes, Homebase, Ikea, Marks & Spencer, Mothercare, Sainsbury's had signed before the survey and Somerfield-Kwik Save and Woolworths have signed since. ~ With qualifications limiting the scope of the pledge.

Questions on internal processes

Identification of chemicals that are bio-accumulative or interfere with the hormone, immune or nervous system

- Yes: 11 - Co-op, Marks & Spencer, Safeway*, Debenhams*, Ikea, Boots*, Body Shop, Early Learning Centre*, B&Q, Focus Group.
- Being put in place/some work: Somerfield-Kwik Save*, Waitrose*.
- Awaiting results from the British Retail Consortium's study (see page 8): Argos, Woolworths*.
- No answer: John Lewis, Mothercare. * For own-brand products only.

Strategy to identify products containing chemicals of concern (as listed above)

- Yes: 13 - Co-op#, Marks & Spencer, Safeway*, Somerfield-Kwik Save*, Waitrose*, Debenhams*, Ikea, Woolworths*, Boots, Body Shop, Early Learning Centre, B&Q, Focus Group.
- No: Mothercare.
- Waiting for the British Retail Consortium study results: Argos.
- No answer: John Lewis (but they quoted their "responsible sourcing policy" which says that "Suppliers... should abide by international, national and sector codes of practice concerning the use of chemical products, including pesticides."

Primarily for own-brand products. * For own-brand products only.

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Company policy on chemicals in products

- Yes: 12 - Co-op[#], Marks & Spencer, Safeway*, Somerfield-Kwik Save*, Debenhams*, Ikea, Woolworths*, Boots*, Body Shop, Early Learning Centre, B&Q, Focus Group.
- No: Waitrose, Argos.
- No answer: John Lewis, Mothercare. # Primarily for own-brand products. * For own-brand products only.

Timeline for phasing out chemicals of concern (as listed before) in own-brand products

- Yes: 12 - Co-op, Marks & Spencer, Safeway, Somerfield-Kwik Save, Waitrose, Debenhams, Ikea, Woolworths, Boots, Early Learning Centre, B&Q.
- Waiting for the British Retail Consortium study results: Argos, Body Shop.
- Will do over the next 12 months: Focus Group.
- No: Mothercare.
- No answer: John Lewis.

Request to manufacturers for timeline for phasing out chemicals of concern (as listed before) in branded products

- Yes: 7 - Waitrose (some work), Debenhams (some work), Ikea, Woolworths (some work), Boots (some work), B&Q, Focus Group (some work).
- Working on it: Early Learning Centre.
- No: Co-op, Safeway, Somerfield-Kwik Save, Argos, Mothercare.
- No answer: John Lewis.
- Not relevant (only own-brand products): Marks & Spencer, Body Shop.

Annual public reports on progress regarding chemicals work

- Yes: 9 - Marks & Spencer, Safeway, Debenhams, Argos, Ikea (2001 & annually from 2004), Boots, Body Shop, Early Learning Center, Focus Group.
- Planned: Co-op (in 2004), Somerfield-Kwik Save (in 2004), Woolworths, Mothercare, B&Q.
- No: Waitrose (but on request).
- No answer: John Lewis.

Question on the role of the UK Government

Chemicals in consumer products are predominantly the responsibility of the Department for Trade and Industry, with the Department of the Environment, Food and Rural Affairs being responsible for chemical exposures via the environment. The DTI also has a role in fostering innovation, so we asked the companies we surveyed:




How would you rate the support you get from the UK Government in moving away from risky chemicals (on a scale of 1 - very poor, 2 - poor, 3 - adequate, 4 - good, 5 - excellent)?

Companies were not scored on this question. Nine companies answered:

- "No support at all" (written in rather than using the rating system): Debenhams.
- Very poor: Focus Group.
- Poor: Co-op, Marks & Spencer, Somerfield-Kwik Save, Woolworths.
- "Unsatisfactory" (written in rather than using the rating system): Argos.
- Adequate: Waitrose, Early Learning Centre.
- Good: None.
- Excellent: None.

7. Conclusions and recommendations

Main results

			
Score	Score > 50%	Score < 50%	No replies
Retailers	Ikea*, Body Shop*, Marks & Spencer*, B&Q*, Co-operative Retail*, Early Learning Centre*, Debenhams*, Boots* and Focus* (in descending order)	Woolworths*, Safeway Somerfield-Kwik Save*, Waitrose, , Argos*, John Lewis and Mothercare* (in descending order)	ASDA, BHS, Hamleys Homebase*, Iceland, Morrisons, Sainsbury's*, , Superdrug, Tesco, Toys 'R' Us and Toymaster

*: retailers who have signed Friends of the Earth's retailers pledge (see page 5)

It is very clear from this survey that some companies are doing a lot more than others to evaluate and reduce and report on their use of risky chemicals. Those companies at the top of our league tables are clearly making an effort to identify whether they are using the chemicals that we have highlighted in our survey, and are trying to phase out those uses they can find. Focus is a welcome newcomer to the league table since it did not respond to the survey in 2001.

Strong support for consumer right-to-know

All retailers who replied to the question said they believed that "consumers have a right to know, if they ask, what chemicals are present in the products they buy". All retailers, except for Somerfield, Waitrose and Mothercare, stated that they plan to give out full information on chemicals in their products, either on labels or on request. (John Lewis did not answer the question.) However, it is also clear from some of the answers that neither retailers nor their suppliers necessarily have the information to hand.

Retailers are adopting policies on chemicals

Co-operative Retail[#], Marks & Spencer, Safeway*, Somerfield-Kwik Save*, Debenhams*, Ikea, Woolworths*, Boots*, Body Shop, Early Learning Center, B&Q, Focus Group all have a company policy on chemicals which seems to be taking them beyond the legal minimum. John Lewis have a sourcing policy but it did not have much detail on chemicals. (# Primarily for own-brand * Answers for own-brand products only. Note that Marks & Spencer, Body Shop and Ikea sell only own-brand products and thus have taken responsibility for looking at chemicals in their entire products ranges.)

More progress on own-brand products

The retailers who tend to do best in our survey are those with either 100% own brand or a significant proportion of own-brand products (such as Ikea, Body Shop and Marks & Spencer). Retailers selling branded (non own-brand) products occasionally noted the difficulty of influencing the supply chains or even getting information, or commented on the large numbers of lines that they are stocking. However we would argue that retailers should recognise their responsibility for the products that they are selling. They could take decisions not to stock certain products for example and/or could work in coalition to influence the supply chain, and/or could try to influence the chemicals debate in order to bring about more stringent chemicals legislation.

Involvement in the EU legislative process on chemicals (REACH)

Co-operative Retail, Marks & Spencer, Debenhams, Ikea, Woolworths, Boots, B&Q, Focus Group said that they had an active involvement in the legislative process on chemicals, using the principles of the Copenhagen Charter, which are similar to the essential points found in the recommendations below.

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Government could do more

It is also clear that most retailers are dissatisfied with the support that they are getting from the Department of Trade and Industry. In Friends of the Earth's view, the DTI (or some other Government body) should be providing support in the sometimes difficult task of substituting risky chemicals with safer alternatives. Other countries, such as Sweden, provide this service – we believe it would help innovation in the UK. The Chemicals Stakeholder Forum, a government initiative bringing together various stakeholders (including retailers and NGOs) to look at specific hazardous chemicals, has made only slow progress.

Some failures to answer

Eleven companies failed to reply to our questions. Some have not completed this questionnaire or the previous one in 2001: Hamleys, BHS, ASDA, Morrisons, Toys 'R' Us and Toymaster. Others failed to reply on this occasion: Iceland, Superdrug, Tesco, Homebase and Sainsbury's – even though Sainsbury's and Homebase have signed our retailers' pledge (see page 5) and committed themselves to report on their progress regularly.

Recommendations

It is clear that the current regulation of chemicals is insufficient and ineffective – this makes retailers vulnerable to the problems caused by the use of risky chemicals.

We therefore recommend that those retailers who have not yet done so, **sign our retailers' pledge** and take action. The retailers' pledge is as follows:

A responsible retailer would:

- Using official lists, identify which man-made chemicals are suspected of building up in people's bodies (bioaccumulation), or interfering with the hormone, immune or nervous systems.
- Produce a strategy to identify which of its own-brand and branded products, including fruit and vegetables, contain these chemicals.
- Produce a timeline to phase out these chemicals from its own-brand products, with the aim of eliminating them in 5 years, starting with those chemicals which pose the greatest threat.
- Put pressure on manufacturers of branded products to do the same.
- Report publicly on progress on an annual basis.

More attention needs to be paid to **branded products** and retailers should insist that their suppliers find out about the chemical content of products if they do not know.

We would also recommend that retailers consider using the **Chemicals Toolkit** put together by the British Retail Consortium [69]. This guide was published to help retailers manage the use of chemicals in consumer products by helping to prioritise chemicals of concern.

All retailers working with the BRC toolkit or with their own developed strategies should **publicly declare their progress and publish the list of chemicals** that they are working to replace or remove from their products.

Furthermore, we would encourage retailers to **get involved in the legislative process on chemicals (REACH)**. It is clear that strong legislation is needed. This would help both retailers and consumers by restricting the uses of hazardous chemicals early on rather than forcing retailers or consumers to individually attempt to make a choice. The **following essential points need to be included in the legislation:**

- the identification and mandatory substitution of all chemicals of “very high concern” [e];

e Chemicals of “very high concern” are chemicals that once released into the environment cannot be handled safely, and for which the EU has made a commitment to phase out emission, discharges and losses by 2020. These chemicals include substances that:

- do not break down quickly in the environment (very persistent chemicals) and can build up inside our bodies (very bio-accumulative chemicals); or
- have a combination of persistence, bio-accumulation and toxicity; or
- are able to disturb our hormone systems (endocrine disrupters); or
- can cause cancer (carcinogenic); can alter genes (mutagenic); or are toxic to the reproductive system; or
- are of “equivalent” concern.

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- a public's right-to-know on request what dangerous chemicals [f] are in any consumer products, and for labelling when chemicals of "very high concern" are present;
- a requirement that chemicals in products imported into the EU should conform to the same safety standards as those made in the EU.

In the absence of comprehensive labelling, we recommend that **consumers may still want to inquire about chemicals** in products, particularly in the branded products sold by a retailer. This is probably the only way in which to be exactly sure about purchases, and will also help push retailers to take note and be more pro-active about questioning their suppliers and phasing out the worst chemicals ahead of legislation. Even if REACH is eventually as strong a law as we would like, it is going to be a number of years before it sorts out the problems of chemicals in products.

f Dangerous chemicals are those which meet the criteria for classification under EU legislation 67/548/EEC. This includes a number of negative human and environment effects, e.g. toxic, sensitising, flammable, etc.

8. Appendix 1: The Questions

This appendix includes all the questions that we asked the companies. Note that the questionnaire sent out included background text (similar to the text in the first part of this report). The full questionnaire is available on line at: www.foe.co.uk/campaigns/safer_chemicals/news/retailer_quiz_results.html

The questionnaire was divided into two main sections, the first section looking at the use of specific risky chemicals, the second section examining the companies policies and processes on chemicals.

General points on the questions

The following notes were included in the questionnaire:

The results of this survey will be publicised; please ensure that the information is accurate.

All the questions refer to both own-brand products and branded products. We realise that it is more difficult to obtain this information for branded products, but we consider that retailers are responsible for all the products they sell.

In the interests of transparency and a level playing field, we are sending out an identical questionnaire to all the companies we are surveying. Some questions may not be applicable to your company. If a question is not applicable to your company, please write N/A in the space provided. Please ensure that you are certain the question really is not applicable to what you make or sell before doing this.

Scoring system

The maximum score for each question is given in brackets beside the question. For each group of chemicals there are 6-8 marks available depending on the number of questions asked. If a chemical group is not applicable (N/A) to the company, no marks are given. The decision on whether 'not applicable' applies is based on the response of the company, responses made by other companies selling similar products, and any other knowledge in Friends of the Earth's possession. A full table of scores is given in Appendix 3.

Friends of the Earth has made every effort to score fairly, based on companies' responses, and to ensure that companies are compared in as fair a way as possible. Due to the complexities of the survey and the variable quality of information received, small discrepancies may exist.

Questions on individual risky chemicals

1. Brominated flame retardants

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

1a. Do you sell products containing brominated flame retardants? (no = 2; no, own-brand only = 1)

1b. Are you working on alternatives to brominated flame retardants? (yes = 2; yes, own-brand only = 1)

1c. If so, have you set a date to phase out brominated flame retardants? (yes = 2; yes, own-brand only = 1) What is this date?

1d. Would you inform Friends of the Earth, or a member of the public, which products contain brominated flame retardants? (no score)*

1e. Would you inform Friends of the Earth, or a member of the public, which products do not contain brominated flame retardants? (no score)*

* It was found that these questions were interpreted in various ways so the responses could not be scored meaningfully.

2. Bisphenol a

If N/A: score n/a. If selling no products with this chemical: score full marks = 6 (if baby bottles not applicable) or 8 (if baby bottles applicable), or 3 and 5 respectively for own-brand only.

2a. Do you sell products containing bisphenol A? (no = 2; no, own-brand only = 1)

2b. Are you working on alternatives to bisphenol A? (yes = 2; yes, own-brand only = 1)

2c. If so, have you set a date to phase out bisphenol A? (yes = 2; yes, own-brand only = 1) What is this date?

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2d. Do you make or sell baby bottles that do not contain bisphenol A (i.e. they are not made of polycarbonate?) If so, what are the brands? *[if this question is not applicable, mark N/A]* (2)

2e. Would you inform Friends of the Earth, or a member of the public, which products contain bisphenol A? (no score)

2f. Would you inform Friends of the Earth, or a member of the public, which products do not contain bisphenol A? (no score)

3. Phthalates

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

3a. Do you sell products containing phthalates? (no = 2; no, own-brand only = 1)

3b. Are you working on alternatives to phthalates? (yes = 2; yes, own-brand only = 1)

3c. If so, have you set a date to phase out phthalates? (yes = 2; yes, own-brand only = 1) What is this date?

3d. Would you inform Friends of the Earth, or a member of the public, which products contain phthalates? (no score)

3e. Would you inform Friends of the Earth, or a member of the public, which products do not contain phthalates? (no score)

4. Alkyltin compounds

If N/A: score n/a. If selling no products with these chemicals: score full marks = 8 or 4 for own-brand products only.

4a. Do you sell products containing deliberately added alkyltins (e.g. in antibacterial shoe insoles)? (no = 2; no, own-brand only = 1)

4b. Do you sell products which are contaminated by alkyltins (e.g. some plastics)? (no = 2; no, own-brand only = 1)

4c. Are you working on alternatives to alkyltins? (2) (yes = 2; yes, own-brand only = 1)

4d. If so, have you set a date to phase out alkyltins? (yes = 2; yes, own-brand only = 1)

What is this date?

4e. Would you inform Friends of the Earth, or a member of the public, which products contain alkyltins? (no score)

4f. Would you inform Friends of the Earth, or a member of the public, which products do not contain alkyltins? (no score)

5. Alkylphenols and their derivatives.

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

5a. Do you sell products containing alkylphenolic compounds? (no = 2; no, own-brand only = 1)

5b. Are you working on alternatives to alkylphenolic compounds? (yes = 2; yes, own-brand only = 1)

5c. If so, have you set a date to phase out alkylphenolic compounds? (yes = 2; yes, own-brand only = 1) What is this date?

5d. Would you inform Friends of the Earth, or a member of the public, which products contain alkylphenolic compounds? (no score)

5e. Would you inform Friends of the Earth, or a member of the public, which products do not contain alkylphenolic compounds? (no score)

6. Artificial musks.

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

6a. Do you sell products containing nitro musks? (no = 1; no, own-brand only = 1/2)

6b. Do you sell products containing polycyclic musks? (no = 1; no, own-brand only = 1/2)

6c. Are you working on alternatives to nitro musks? (yes = 1; yes, own-brand only = 1/2)

6d. If so, have you set a date to phase nitro musks them out? (yes = 1; yes, own-brand only = 1/2) What is this date?

6e. Are you working on alternatives to polycyclic musks? (yes = 1; yes, own-brand only = 1/2)

6f. If so, have you set a date to phase polycyclic musks out? (yes = 1; yes, own-brand only = 1/2) What is this date?

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6g. Would you inform Friends of the Earth, or a member of the public, which products contain artificial musks? (no score)

6h. Would you inform Friends of the Earth, or a member of the public, which products do not contain artificial musks? (no score)

7. Triclosan

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

7a. Do you sell products (other than toothpaste) containing triclosan? (no = 1; no, own-brand only = 1/2)

7b. Are you working on alternatives to triclosan in products (other than toothpaste)? (yes = 1; yes, own-brand only = 1/2)

7c. If so, have you set a date to phase out triclosan in products (other than toothpaste)? (yes = 1; yes, own-brand only = 1/2) What is this date?

7d. Would you inform Friends of the Earth, or a member of the public, which products (other than toothpaste) contain triclosan? (no score)

7e. Would you inform Friends of the Earth, or a member of the public, which products (other than toothpaste) do not contain triclosan? (no score)

7f. Do you sell toothpaste containing triclosan? (no = 1; no, own-brand only = 1/2)

7g. Are you working on alternatives to triclosan in toothpaste? (yes = 1; yes, own-brand only = 1/2)

7h. If you sell toothpaste containing triclosan: is triclosan mentioned in the list of ingredients? (yes = 1; yes, own-brand only = 1/2)

7i. Would you inform Friends of the Earth, or a member of the public, which toothpaste contain triclosan? (no score)

7j. Would you inform Friends of the Earth, or a member of the public, which toothpaste does not contain triclosan? (no score)

8. PFOS and PFOA

If N/A: score n/a. If selling no products with these chemicals: score full marks = 6 or 3 for own-brand products only.

8a. Do you sell products containing:

- PFOS? (no = 1; no, own-brand only = 1/2)

- PFOA? (no = 1; no, own-brand only = 1/2)

8b. Are you working on alternatives to

- PFOS? (yes = 1; yes, own-brand only = 1/2)

- PFOA? (yes = 1; yes, own-brand only = 1/2)

8c. If so, have you set a date to phase out

- PFOS? (yes = 1; yes, own-brand only = 1/2)

- PFOA? (yes = 1; yes, own-brand only = 1/2)

What is this date?

8d. Would you inform Friends of the Earth, or a member of the public, which products contain

- PFOS? (no score)

- PFOA? (no score)

8e. Would you inform Friends of the Earth, or a member of the public, which products do not contain

- PFOS? (no score)

- PFOA? (no score)

General questions

9a. Do you believe that consumers have the right to know, if they ask, what chemicals are present in the products they buy? (yes = 2)

9b. Have you got plans for providing full chemical information (yes = 2)

- On labels?

- On request?

9c. If so, by when? (no score - this question was interpreted in various ways so the responses could not be scored meaningfully).

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9d. Friends of the Earth and other consumer and environmental groups in Europe have agreed a set up basic principles for the new EU chemicals policy. These principles are named 'The Copenhagen Charter' and are explained in the Appendix 2 on page 30.

What is your involvement in the EU legislative process on chemicals?

a) We take an active involvement in the process responding to opportunities for consultation and are putting forward the principles of the Copenhagen Charter. (2)

b) We take an active involvement in the process responding to opportunities for consultation but are putting forward different principles to those of the Copenhagen Charter. (depends)

Please specify:

c) We have not been not been involved in the legislative process. (0)

9e. Friends of the Earth has also developed a pledge for retailers as follows. A responsible retailer would:

1) Using official lists, identify which man-made chemicals are suspected of building up in people's bodies (bioaccumulation), or interfering with the hormone, immune or nervous systems.

2) Produce a strategy to identify which of its own-brand and branded products contain these chemicals.

3) Produce a timeline to phase out these chemicals from its own-brand products, with the aim of eliminating them in 5 years, starting with those chemicals which pose the greatest threat.

4) Put pressure on manufacturers of branded products to do the same.

5) Report publicly on progress on an annual basis.

What is your company's response to the proposals in the retailers pledge below. (Mark appropriate answer):

a) We have already signed the pledge. (2)

b) We will sign the pledge now. (2)

c) We do not want to sign the pledge. (0)

d) Other - please specify:

Questions on internal processes

10a. Using official lists, have you identified which man-made chemicals are suspected of building up in people's bodies (bioaccumulation), or interfering with the hormone, immune or nervous systems? (yes = 2)

10b. Have you produced a strategy to identify which of your products contain these chemicals? *Please tick*

Yes, for own-brand products only (1).

Yes, for both own-brand and branded products.(2)

No.(0)

If so, could you send us a copy?

10c. Have you got a company policy on the chemicals you use in products you make and/or sell? If so, could you send us a copy? *For those that sent us a copy in 2001:* have you got an updated company policy? (yes = 2)

10d. Have you produced a timeline to phase out the chemicals referred to above from your own-brand products starting with those chemicals which pose the greatest threat? (yes = 2)

If yes, by when?

If no, are you planning to do so soon? (yes = up to 1)

10e. Have you requested from manufacturers of branded products that they do the same? (yes = 2)

10f. Have you been producing public reports on your progress on an annual basis? (yes = 2)

If no, are you planning to do so? (yes = up to 1)

Opinion of the support given to you by the UK Government

In countries like Sweden, the Government gives support to companies wishing to move away from risky chemicals. We would be interested to hear your company's view of the support the UK Government gives you.

The answers to this question will not be used as part of your company's rating.

How would you rate the support you get from the UK Government in moving away from risky chemicals (on a scale of 1 - very poor, 2 - poor, 3 - adequate, 4 - good, 5 - excellent)?

9. Appendix 2: Copenhagen Charter

In 1999 Friends of the Earth began a discussion with environment and consumer groups across Europe to formulate a common set of policies for this review. The agreed policies, now called the '**Copenhagen Charter**', are also supported by WWF, the EEB (an umbrella group for European environmental groups) and the European Consumers Organisation BEUC (the umbrella group for consumer groups across Europe).

- 1) A full right to know, including what chemicals are present in products.
- 2) A deadline by which all chemicals on the market must have had their safety independently assessed. All uses of a chemical should be approved and should be demonstrated to be safe beyond reasonable doubt.
- 3) A phase out of persistent or bio-accumulative chemicals.
- 4) A requirement to substitute less safe chemicals with safer alternatives.
- 5) A commitment to stop all releases to the environment of hazardous substances by 2020.

The Charter has been welcomed by EU Environment Commissioner Margot Wallström, and supported by former Danish Environment Minister Svend Auken ^[70]. These five policies, taken together, would create workable, precautionary, regulation of chemicals:

- A right to know would ensure that all decisions are transparent, and that consumers and downstream users are allowed to make their own choices.
- A deadline for assessment of safety will get rid of the scandal of unassessed chemicals. We want safety assessment to use non-animal methods to the maximum extent possible; see ^[71] [11].
- A phase out of persistent or bio-accumulative chemicals will stop the contamination of our bodies and environment, with chemicals having to rapidly break down into natural substances - with an exemption when these properties were an essential function in a specific application.
- Substitution will ensure that the safest possible chemicals - or techniques - are used.
- An end to releases of hazardous substances into the environment by 2020 will ensure that EU chemicals policy contributes towards the objectives of the OSPAR Convention, which aims to clean up marine pollution.

11. References

- ¹ www.ikea.co.uk/ms/en_GB/about_ikea/social_environmental/environmental.pdf
- ² The Chemicals Industry Association has recently stated that it is now compiling such a list .
- ³ www.thebodyshop.com/web/tbsgl/images/Environment_ISA_2003.pdf
- ⁴ www.diy.com/diy/jsp/aboutbandq/social_responsibility/detox.pdf
- ⁵ www.co-op.co.uk/pages/about_us.asp
- ⁶ www.brc.org.uk/press/chemicals/
- ⁷ Royal Commission on Environmental Pollution, *Chemicals in products: Safeguarding the Environment and Human Health*, 2003, Recommendation 17. www.rcep.org.uk/chemicals/ch00-rep.pdf
- ⁸ Warhurst, A.M., *Crisis in Chemicals: The threat posed by the 'Biomedical Revolution' to the profits, liabilities, and regulation of industries making and using chemicals*, 2000, Friends of the Earth, London, UK. www.foe.co.uk/resource/reports/crisis_chemicals.pdf
- ⁹ Warhurst, A.M., *Crisis in Chemicals Update*, 2002, Friends of the Earth, London, UK. www.foe.co.uk/resource/reports/crisis_chemicals_update.pdf
- ¹⁰ Chemical Industries Association, *Press release*, 5th June 2000.
- ¹¹ Allanou, R., B.G. Hansen, and Y. van der Bilt, *Public availability of data on EU High Production Volume chemicals*, 1999, European Chemicals Bureau, Ispra, Italy. ecb.ei.jrc.it/Data-Availability-Documents/datavail.pdf
- ¹² EU Chemicals Regulators, *Future European Chemicals Policy: Report Brainstorming session 16-17 December 1999*, 1999, Ministry of Housing, Spatial Planning and the Environment, The Netherlands. www.vhpc.nl/actualiteit/en/reportbrainstorm.pdf
- ¹³ The Royal Society, *Endocrine disrupting chemicals (EDCs)*, 2000, The Royal Society, London, UK. www.royalsoc.ac.uk/templates/statements/StatementDetails.cfm?statementid=111
- ¹⁴ Winneke, G., A. Bucholski, B. Heinzow, U. Krämer, E. Schmidt, J. Walkowiak, J.-A. Wiener, and H.-J. Steingrüber, 'Developmental neurotoxicity of polychlorinated biphenyls (PCBs): cognitive and psychomotor functions in 7-month old children', *Toxicological Letters*, 1998, 102-103: p. 423-428.
- ¹⁵ Lyons, G., *Toxic Trespass*, 1999, World Wide Fund for Nature, Godalming, UK. www.panda.org/toxics/downloads/chemical_trespass.doc
- ¹⁶ Greenpeace, *Chemical Legacy: Contamination of the Child*, 2003, October. Written by Catherine N. Dorey.
- ¹⁷ WWF, *Contamination: The results of WWF's Biomonitoring Survey*, 2003, November.
- ¹⁸ Foran, C.M., E.R. Bennett, and W.H. Benson, 'Developmental evaluation of a potential non-steroidal estrogen: triclosan', *Marine Environmental Research*, 2000, 50: p. 153-156.
- ¹⁹ KEMI, *Observation List*, 1998, Swedish National Chemicals Inspectorate (KEMI). www.kemi.se/publikationer/obs_eng/default.htm
- ²⁰ europa.eu.int/comm/environment/chemicals/reach.htm
- ²¹ Norén, K. and D. Meironyte, 'Certain organochlorine and organobromine contaminants in Swedish human milk in perspective of past 20-30 years', *Chemosphere*, 2000, 40: p. 1111-23.
- ²² ENDS, 'Arctic report sounds new warning on persistent chemicals', ENDS Report, 2002, 333 (October).
- ²³ World Health Organisation, *Environmental Health Criteria 205: Polybrominated dibenzo-p-dioxins and dibenzofurans*, 1998, World Health Organisation, Geneva.
- ²⁴ Sjödin, A., L. Hagmar, E. Klasson-Wehler, K. Kronholm-Diab, E. Jakobsson, and A. Bergman, 'Flame retardant exposure: Polybrominated diphenylethers in blood from Swedish workers', *Environmental Health Perspectives*, 1999, 107: p. 643-648.
- ²⁵ ENDS, 'Flame retardant controls confirmed', *Environment Daily* 1388, 19/2/2003.
- ²⁶ ENDS, 'EU scientists question deca risk assessment', *Environment Daily* 1331, 18 /11/2002.
- ²⁷ FSA, *Food Surveillance Information Sheet 13/01: Survey of Bisphenols in Canned Food*, 2001, Food Standards Agency, London, UK. www.foodstandards.gov.uk/fsainfsheet/2001/no13/13bisp.htm
- ²⁸ Howdeshell, K.L., A.K. Hotchkiss, K.A. Thayer, J.G. Vandenberg, and F.S. vom Saal, 'Exposure to bisphenol A advances puberty', *Nature*, 1999, 401: p. 763-764.
- ²⁹ Takashi, O. and S. Oishi, 'Disposition of orally administered 2,2-bis(4-hydroxyphenyl)propane (bisphenol a) in pregnant rats and the placental transfer to fetuses', *Environmental Health Perspectives*, 2000, 108: p. 931-935.
- ³⁰ Inoue, K., K. Kato, Y. Yoshimura, T. Makino, and H. Nakazawa, 'Determination of bisphenol A in human serum by high-performance liquid chromatography with multi-electrode electrochemical detection', *J Chromatogr B Biomed Sci Appl*, 2000, 749: p. 17-23.
- ³¹ Hunt, P.A., Koehler, K.E., Susiarjo, M., Hodges, C.A., Ilagan, A., Voigt, R.C., *et al.*, 'Bisphenol A exposure causes meiotic aneuploidy in the female mouse' *Curr Biol*, 2003, 13: 546-553 in *Environmental Health Perspectives* Volume 111, Number 9, July 2003.
- ³² Øie, L., L.-G. Hersoug, and J.Ø. Madsen, 'Residential exposure to plasticizers and its possible role in the pathogenesis of asthma', *Environmental Health Perspectives*, 1997, 105: p. 972-978.
- ³³ Gray, L.E., C. Wolf, C. Lambright, P. Mann, M. Price, R.L. Cooper, and J. Ostby, 'Administration of potentially antiandrogenic pesticides (procymidone, linuron, iprodione, chlozolinate, p, p'-DDE, and ketonazole) and toxic substances (dibutyl- and diethylhexyl phthalate, PCB 169, and ethane dimethane sulphonate) during sexual differentiation produces diverse profiles of reproductive malformations in the male rat', *Toxicology and Industrial Health*, 1999, 15: p. 94-118.
- ³⁴ Gray, L.E., J. Ostby, J. Furr, M. Price, D.N. Veeramachani, and L. Parks, 'Perinatal exposure to the phthalates DEHP, BBP, and DINP, but not DEP, DMP, or DOTP, alters sexual differentiation of the male Rat', *Toxicological Sciences*, 2000, 58: p. 350-65

Report on retailers' survey 2003-2004

- ³⁵ Blount, B.C., M.J. Silva, S.P. Caudill, L.L. Needham, J.L. Pirkle, E.J. Sampson, G.W. Lucier, R.J. Jackson, and J.W. Brick, 'Levels of seven urinary phthalate metabolites in a human reference population', *Environmental Health Perspectives*, 2000, 108: p. 979-982
- ³⁶ Colón, I., D. Caro, C.J. Bourdony, and O. Rosario, 'Identification of phthalate esters in the serum of young puerto rican girls with premature breast development', *Environmental Health Perspectives*, 2000, 108: p. 895-900.
- ³⁷ ENDS, 'Firms grow impatient over EU phthalates ban', *Environment Daily* 1496, 21/8/2003
- ³⁸ ENDS, 'Firms grow impatient over EU phthalates ban', *Environment Daily* 1496, 21/8/2003.
- ³⁹ ENDS, 'EU phthalates ban extended by six months', *Environment Daily* 1615, 25/2/2004
- ⁴⁰ ENDS, 'Sweden proposes EU curbs on DEHP', *Environment Daily* 1389, 20/2/2003.
- ⁴¹ ENDS, 'Danish retailers voluntarily widen toy ban', *Environment Daily* 1469, 24/06/2003.
- ⁴² ENDS, 'TBT in nappies traced back to polymerisation catalysts', ENDS Report, 2000, 307: p. 23-25.
- ⁴³ Kannan, K., K. Senthilkumar, and J.P. Giesy, 'Response to comment on "Occurrence of butyltin compounds in Human blood"', *Environmental Science and Technology*, 2000, 34: p. 1879-1880
- ⁴⁴ Takahashi, S., H. Mukai, S. Tanabe, K. Sakayama, T. Miyazaki, and H. Masuno, 'Butyltin residues in livers of humans and wild terrestrial mammals and in plastic products', *Environmental Pollution*, 1999, 106: p. 213-218
- ⁴⁵ Yamabe, Y., A. Hoshino, N. Imura, T. Suzuki, and S. Himeno, 'Enhancement of androgen-dependent transcription and cell proliferation by tributyltin and triphenyltin in Human prostate cancer cells', *Toxicology and Applied Pharmacology*, 2000, 169: p. 177-184
- ⁴⁶ ENDS, 'Belgium TBT ban falls foul of EC treaty', ENDS Report, 2000, 308.
- ⁴⁷ ENDS, 'EU forces the pace on organotins', ENDS Report, 2003, 336 (January)
- ⁴⁸ ENDS, 'Scientists rubbish EU organotin risk report', *Environment Daily* 1491, 04/08/03.
- ⁴⁹ Routledge, E.J. and J.P. Sumpter, 'Structural features of alkylphenolic chemicals associated with estrogenic activity', *Journal Of Biological Chemistry*, 1997, 272: p. 3280-3288.
- ⁵⁰ Dachs, J., D.A. Van Ry, and S.J. Eisenreich, 'Occurrence of estrogenic nonylphenols in the urban and coastal atmosphere of the lower Hudson river estuary', *Environmental Science and Technology*, 1999, 33: p. 2676-2679
- ⁵¹ Greenpeace, *Consuming Chemicals*, 2003, www.greenpeace.org.uk/MultimediaFiles/Live/FullReport/5679.pdf
- ⁵² Europe Environment, 'Ministers reach minor decisions on chemicals', 28/05/03
- ⁵³ Chemical Stakeholder Forum, 2003, 'Nonylphenol and Octylphenol', DEFRA, www.defra.gov.uk/environment/chemicals/csf/advice/nonyloctyl.htm
- ⁵⁴ Kallenborn, R. and G.G. Rimkus, 'Synthetic musks in environmental samples: indicator compounds with relevant properties for environmental monitoring', *Journal of Environmental Monitoring*, 1999, 1: p. 70N-74N.
- ⁵⁵ Daughton, C. G. and T.A. Ternes, 'Pharmaceuticals and Personal Care Products in the Environment: Agents of Subtle Change?', *Environmental Health Perspectives*, 1999, Volume 107, Supplement 6 (December) ehpnet1.niehs.nih.gov/members/1999/suppl-6/907-938daughton/daughton-full.html
- ⁵⁶ Riedel, J. and W. Dekant, 'Biotransformation and toxicokinetics of musk xylene in humans', *Toxicology and Applied Pharmacology*, 1999, 157: p. 145-155.
- ⁵⁷ Seinen, W., J.G. Lemmen, R.H.H. Pieters, E.M.J. Verbruggen, and B. van der Burg, 'AHTN and HHCB show weak estrogenic activity - but no uterotrophic activity', *Toxicological Letters*, 1999, 111: p. 161-168
- ⁵⁸ European Commission, 'Decision of 19 July 2001 establishing the ecological criteria for the award of the Community ecolabel to hand dishwashing detergents 2001/607/EC', *Official Journal of the European Communities*, 2001, L 214/30 8/8/2001 europa.eu.int/comm/environment/ecolabel/pdf/hand_dishwashing_detergents/en.pdf
- ⁵⁹ ENDS, 'Phase-out calls as toothpaste biocide turns up in breast milk', ENDS Report, 2000, 304 (May).
- ⁶⁰ ENDS, 'Toxicity fears limit triclosan use', ENDS Report, 2000, 309: p. 12-13.
- ⁶¹ ENDS, 'Denmark discourages household antibacterials', *Environment Daily*, 26/10/00.
- ⁶² ENDS, 'Finnish warning on anti-bacterial chemicals', *Environment Daily*, 16/02/01.
- ⁶³ ENDS, 'German appeal to limit anti-bacterial use', *Environment Daily*, 22/03/01
- ⁶⁴ ENDS, 'Norwegian initiative on triclosan', *Environment Daily* 1208, 2/5/02
- ⁶⁵ OECD, 'Hazard Assessment Of Perfluorooctane Sulfonate (PFOS) and its salts', 2002, www.oecd.org/dataoecd/23/18/2382880.pdf
- ⁶⁶ ENDS, 'DuPont in firing line over fluorochemicals', ENDS Report, 2003, 340 (May).
- ⁶⁷ ENDS, '3M's phase-out casts a shadow over fluorocarbon chemicals', ENDS Report, 2000, 307.
- ⁶⁸ NICNAS (National Industrial Chemicals Notification and Assessment Scheme), 'Perfluorooctanyl sulfonate (PFOS)', 2001, www.nicnas.gov.au/publications/pdf/Alert_1_PFOS.pdf
- ⁶⁹ www.brc.org.uk/press/chemicals/
- ⁷⁰ 'Copenhagen Conference on Chemicals', 2000, Copenhagen. www.chemical-awareness.com/activities
- ⁷¹ Friends of the Earth, *European Commission's White Paper "Strategy for a future Chemicals Policy": Response from Friends of the Earth Europe*, 2001, Friends of the Earth Europe, London, UK. www.foe.co.uk/resource/consultation_responses/eu_chem_white_paper_foee.pdf