A positive list for safer food

EU Tariffs - Make deals, not barriers
Shoppers in Poland no longer accept second best
Scrapping cars - The ELV Directive
The Japanese government has imposed stringent requirements on agricultural residues in food imports to Japan.

Though the Japanese still relish their sushi and sake, Japanese consumers are more and more appreciative of food products from overseas, eating out and experiencing new dishes when travelling abroad. It’s not uncommon to find cherries from California, New Zealand kiwifruit, Chinese beer or prawns from Thailand on the shelves of Japanese supermarkets. The fact is, local products alone cannot feed Japan’s population. With 60% of food needs supplied from imports; even dietary trends are actually beginning to favour imports from abroad. Fish and shellfish is the leading imported food category followed by meat products, then fruit and vegetables. Yet food scares have hit the press with alarming regularity, exposing risks in the supply chain, and badly damaging consumer confidence.

With higher levels of food safety awareness and shoppers demanding more information about the food they consume, the Japanese government has launched more stringent requirements. The result is a new comprehensive safety and sanitation monitoring programme, the Japan Positive List, with checks starting overseas, in the country of origin. The Positive List is a major amendment to Japan’s Food Sanitation Law and enforces restrictions on the amount of pesticides and other material residues allowed in imported foods.

The recent introduction of the Positive List System arose from an incident in March 2002 when the Ministry of Health, Labour and Welfare (MHLW) detected residues from the insecticide ‘Chlorpyrifos’ in batches of frozen spinach from China. At that time, frozen vegetables were categorized as a processed food which was exempt from any kind of clearance inspection. Moreover, there was no set standard for acceptable (and safe) residue levels for agricultural chemicals in frozen spinach. This hastened a barrage of media criticism and shopper anger. Besides pesticide residues, other food scares & scandals continued: BSE outbreaks (2001), avian flu, E-coli deaths and mislabelling of products—all adding to the government’s woes.

All this media awareness dramatically highlighted how important food safety and traceability was to the Japanese consumer. So much so that a survey by the Nikkei Marketing Journal on food safety (April 2004) found that over 65% of shoppers were willing to pay more if the food item were guaranteed as safe. With high disposable incomes and foreign tastes, the
Japanese market has long offered one of the best opportunities for food and drink exporters, and those foreign companies that can prove the safety and high quality of their products have a big advantage. Researching consumers’ worries, the Japan External Trade Organisation (JETRO) looked at what were the key concerns that imported food products faced. As the chart shows above, pest & pesticides, additives and GMO (genetically modified organisms) products scored the highest, with the highest concerns.

With the new Positive List system, the MHLW intends to give clearer guidelines to foreign food producers about the level of acceptable agricultural chemicals found in food products. The system regulates the Minimum Residue Limits (MRLs) allowed in any fresh foodstuff produced by food manufacturers, importers, traders or related organizations who are exporting food products to Japan. The Positive List has been enforced from May 29th 2006, from when all imported perishable food products have had to comply.

There are thousands of pesticides and agrichemicals used in the world, but the MHLW has established MRL’s for only 804. Typically each agricultural product has its own set of pesticide MRL’s, and the difficulty is that testing for each pesticide is timely and expensive. With an increasing number of hazardous materials being found, it is not surprising that volume of samples being tested is growing quite rapidly.

Thailand has long been a major source of Japanese food imports. This led to the creation of a dedicated SGS centre of testing excellence and innovation in Bangkok – the APAC Competence Centre. In May 2006, as the Japanese Positive List was coming into force, the SGS Thailand testing centre was approved by the MHLW as an accredited laboratory with the high-tech chemical capability required for Positive List testing. As a key global R&D centre, the team of experienced lab technicians and state-of-the-art lab equipment will continue to apply themselves at developing best testing practice for agrichemicals in accordance with the monitoring and inspection requirements of the Positive List.

On the reception side, SGS Japan has established a Technical Coordination Centre to help harmonize the diverse SGS food safety checks that take place on food items as they arrive in the Japanese market. For the main food export countries this means mandatory multiple audits, inspections and testing on food items. As a single collection point, the SGS hub in Yokohama centralises the latest information related to updating new food standards and regulations, rapid alerts and violation cases against the Positive List.

Together, SGS Japan and Thailand will continue to research more effective test methods for SGS laboratory networks, multi-screening techniques and to provide the analysis methods for other chemical and microbiological tests related to the Japan Food Sanitation Law.

SGS can provide total solutions to food customers from training to farmers, growers and food producers and certifying to GAP, GMP, HACCP and other international standards. Our global laboratory network delivers the widest agrichemical testing capabilities in ensuring products and raw materials comply with regulations and customers’ contractual agreements. Updates on Positive List regulations & requirements are made available through seminars and SafeGuardS, our regular technical bulletins.

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Full compliance to the Positive List can lead to food safety management systems that can be applied throughout the food chain from primary product to final consumption.
The EU decision to impose tariffs of 16.5% on leather shoes from China and 10% on those from Vietnam, for a period of two years, has raised ire and a determination to fight back in both countries, with manufacturers pleading poverty and governments threatening international legal action.

EU members voted to impose tariffs, led by Italy which claimed that shoe imports were being ‘dumped’ below market prices, undercutting their own footwear industry. Spain, France, Poland and Portugal stood behind the Italians while other EU members saw this tariff as barrier to free trade.

Action Aid International Vietnam reported, in conjunction with the Vietnam Leather and Footwear Association, that almost all footwear companies have been affected by the tariffs. Companies supplying women’s footwear were the most seriously affected since they are more likely to use leather in their production. As a result of the tariffs, EU buyers were turning to countries such as Indonesia, Cambodia and Thailand to source leather shoes.

That Vietnam was allowed to join the WTO last month could be the key to unlocking this deadlock between supplier and buyer. Upon accession to the WTO, Vietnam immediately pledged an immediate end to all WTO-inconsistent state subsidies to the textile & footwear industry.

Recognizing that external market forces will only strengthen under WTO, Deputy Minister of Trade Luong Van Tu called on local enterprises to join forces to better brace for stiffer competition next year.

EU Tariffs

Make deals, not barriers

And to counteract the effect of the tariffs, China’s shoe makers shifted production to other Asian nations and re-focused their exports to non-EU markets, such as South America and Australia.

But some members of the Chinese shoe industry have been less opportunistic, and the government has said it will back efforts by the industry to file a lawsuit with the European Court of Justice. The Chinese Ministry of Commerce has said the tariffs contradict the principles of fair and free trade as promoted by the World Trade Organization. The Chinese government describe the tariff as “legally defective” and “not in accordance with global trade rules”. Chong Quan, spokesmen for China’s Commerce Ministry goes further “The European anti-dumping measures on Chinese leather shoes lack any legal or factual basis and damage the Chinese companies’ legitimate rights”.

The Chinese do it differently

The Chinese region of Wenzhou is a main shoe manufacturing area, hosting over 4,000 footwear companies and employing 400,000 workers who produce 600 million pairs of shoes a year. Last year, almost 150 million of the 1.25 billion shoes that went to Europe came out of Wenzhou, a quarter of all output. But in June and July of this year, its exports to Europe dropped by 7.17 percent on the same period in 2005. Chinese In commercial tradition
There have been dramatic quality improvements in Polish goods

Poland’s accession into the European Union has led to dramatic changes in the local requirements for food manufacturers. Now, under EU regulations, a lapse of compliance can result in quality control sanctions, business losses or potential claim costs.

Where food safety is concerned many EU requirements have now been implemented in Poland. Specifically, the Food Safety Act dated September 27, 2006 (previously issued May 11th, 2001) introduced the obligation of having a HACCP system implemented at all production stages, from crops to consumers (except primary production). Although a HACCP system was already present in Poland before this date it was used more as a distinguishing trait than an obligatory standard and fundamental criteria to operate. As of May 1, 2004 any economic entity which manufactures, packs, transports or sells food products, regardless of its size, has to have the HACCP system implemented.

Another fundamental for food manufacturers was the need to formalize traceability issues within the production chain. In Poland the issue of traceability as a concept was until then known only to big companies, international corporations or manufacturers concerned with the quality of their product. As of January 1, 2005 traceability is a compulsory requirement for any (local) food manufacturer.

The last significant change which Polish food manufacturers have to deal with, concerns the issue of marking allergenic substances (EU Directive number 2003/89/EC). As of January 1, 2006, Poland introduced the Ministry of Agriculture Act which states that all food manufactures have the obligation to declare the use of any potentially allergenic substances in their products. This, beyond any doubt, has increased consumer safety by increasing awareness for allergenic substances. In helping clients to comply, SGS’s auditors have observed examples of good practice as well as cases of apparent helplessness by manufacturers who were not up-to-date with current legislation.

Another example of adapting local requirements to EU regulations is prohibiting the use of animal-derived components in animal feedstuffs. This prohibition was introduced before Poland’s formal accession into the EU but the change regarding the use of meat and bone meal was implemented as a result of EU regulations. The initial resistance of animal breeders and the increase in the prices of feedstuffs was soon forgotten - now the use of the prohibited additives is unthinkable.

Manufacturers of toys, machinery, equipment, cosmetic products, furniture and textiles also have to adapt to new EU requirements. The most significant change here was introducing the CE marking. Relevant EU legislation was introduced in Poland through the Act on the System of Conformity dated August 30, 2002 along with all amendments made in 2004. Before the CE marking was introduced, relevant products had to be marked with the “B” safety mark. In order to be able to place the “B” mark on a product, the manufacturer had to test the product in selected government-owned laboratories - usually meaning state research institutes. After 2004, manufacturers can use their own research centers and private labs for testing and if the results of the analyses are positive, the CE marking can be placed on the product. When the EU regulations became valid in Poland the market was initially flooded with all types of products bearing the CE marking, including products which were not subject to it.

The pursuit of harmony and order in the requirements imposed on consumer goods is a positive thing. But as consumer awareness for product standards increases so there has been a rise in the numbers of products recalled – shoppers no longer just accept second best. Product compliance to these legal regulation costs money but many producers have preferred to swallow the additional charges in this price sensitive market.

Often the speed of change to meet conformity regulations makes it hard for the manufacturers to keep up. The wealth of experience and strength of network capability from SGS is a great help in providing clients with the right information. For more information about SGS services in Poland, please contact: Artur. Dominiak@sgs.com.
In 2002, the European Union introduced legislation requiring a greater proportion of decommissioned cars to be recycled. As this ambitious directive is implemented we have a look at the main provisions required, how these have been interpreted and if they are actually being achieved.

The EU End-of-Life Vehicle Directive (2000/53/EC) is focused on better management of waste & pollution resulting from vehicles that have reached the end of their practical life - also known as End of Life Vehicles (ELV). The legislation is aimed at decreasing the current 10 million tonnes of waste generated by about 12 million cars that become ELVs each year in the EU. The legislation sets forth requirements for 15 Member States to set local laws to encourage re-use, recycling and other forms of recovery of ELVs and their components and ban certain hazardous substances.

The facts are alarming. Today, approximately 25% of each scrapped vehicle still goes into landfills, un-recycled and unwanted. In weight terms, this is the equivalent to 240 kilos of waste per vehicle entering and polluting the ground. By 2015, not only is the volume of ELV’s expected to rise (to 14 million tonnes), but so is the average weight per ELV – from 964kg (2006) to 1,025kg. You don’t have to be a scientist to be able to realise the damage this can do to the environment. Thus the ELV Directive. By 1st January 2006, an average of at least 85 percent by weight of all ELVs is to be re-used or recovered and 80 percent is to be re-used and recycled. By 1st January 2015, these figures will increase to 95 percent and 85 percent respectively.

“So far in 2006, the process of dismantling the car and re-using the parts (mainly the metal bits) has enabled recovery rates of 80% (of total vehicle weight) in some EU countries – short of the 85% target. To increase this rate and achieve the Directives’ aims is more complicated that it seems. Technology, taxes and take-away fees all influence recovery, re-cycling and re-use rates.

As total vehicle weight decreases, the percentage of materials, which are difficult to recycle, such as plastic, will increase. This will make it more difficult for manufacturers to meet more stringent recycling targets at a reasonable cost. To close the gap on 2006’s recycling targets requires considerable investment in post shredding technologies (PST). This allows sorting and recycling of far more plastics, ferrous and non-ferrous components, fibres and even tens of kilos of so-called ‘shredder sand’ from a scrap car wreck. This very fine-grained fraction, which contains glass dust, particles of rust and varnish and plastics, makes up a significant amount of the mass balance. If more shredder sand can be recycled, the Directive’s target will be easier to achieve.

Objectives of the ELV Directive

- To place restrictions on the use of heavy metals in new vehicles or components
- Introduce targets for the recovery of End of Life Vehicles
- Ensure that hazardous materials are removed before a vehicle is dismantled
■ Require treatment facilities to issue a “Certificate of Destruction” to the last vehicle holder
■ Prescribe minimum technical standards for storage and treatment sites
■ Ensure treatment facilities hold a permit for de-pollution activities
■ Require producers to meet “all or a significant part” of the costs for treatment of negative or nil value vehicles

To encourage investment in PST, governments need to manage waste dumping costs by keeping tax rates for land-filling shredder waste high. The goal for any sensible recycling model requires that the fee for waste processing is lower than the landfill costs.

The Directive also introduces provisions on the collection of all end-of-life vehicles – known as ‘free-take-back’. This is at no cost to the last vehicle owner and is a shared responsibility of the automotive industry. Implementation was required by July 1, 2002 for all new vehicles put on the market and July 2007 for existing vehicles. It includes the implementation of a system of deregistration upon presentation of a certificate of destruction. Although it is one of the core requirements of the Directive, it is down to the individual member countries as to how this part of the legislation is implemented.

But in truth, vehicle re-cycling still does not yet pay for itself. Over time, as the recycling market matures, the income from materials should be able to cover the costs of disposal and processing. For the moment though there is a disposal fee which drivers have to pay to get their car removed. In the Netherlands, everyone applying for a car registration for the first time pays a waste disposal fee. Since 2004, the cost has been €45; now it is falling to €15 from 2007. Metals have traditionally generated money, but recently plastics are also becoming more valuable because of high oil prices. This is evidence that the system can gradually pay for.

The principle of producer responsibility means that producers should increasingly take responsibility for their products once they become waste and ensure that vehicles are increasingly designed for recycling. Automotive manufacturers doing business in Europe will have to comply with the ELV Directive, whether manufacturing vehicles or components. In addition to aggressive targets, companies will face significant costs related to compliance. Despite voluntary agreements on recycling and recovery of ELVs already in place in several member states, analysts estimate the requirements of the ELV Directive might result in an additional €20 to €150 per vehicle in costs for compliance. The ELV Directive clearly requires producers to pay for “all or a significant part” of the costs. These costs will be driven through the vehicle value-chain to cover activities such as collection, dismantling, recycling or recovery, and destruction of End-of-Life Vehicles.

Waste prevention is the priority objective of the Directive.

To this end, vehicle manufacturers and material and equipment manufacturers must:
■ Endeavour to reduce the use of hazardous substances when designing vehicles;
■ Design and produce vehicles which facilitate the dismantling, re-use, recovery and recycling of end-of-life vehicles;
■ Increase the use of recycled materials in vehicle manufacture;
■ Ensure that components of vehicles placed on the market after 1 July 2003 do not contain mercury, hexavalent chromium, cadmium or lead

Of all the directives issued by the EU in the last decade, the ELV Directive is one of the most difficult to implement as it has many implications for different businesses, organisations and motorists. Not surprisingly governments have struggled to translate the Directive into a local applicable law. In 2005, the European Commission threatened to take Austria and Germany to the Court of Justice for failing to comply fully with the ELV Directive, which only underlines its complexity.

If the balance between costs, taxes, recycling capability (e.g. PST), environmental benefits as well as energy return is not optimal, then the ELV Directive is doomed. A continuing problem is that, in some countries, for every car that is environmentally disposed of, another two cars are scrapped illegally. Across the EU, thousands of tonnes of toxic waste are created by drivers who fail to dispose of their vehicles in the way demanded by the European Union. Legitimate re-cycling operators struggle to compete with the illegal car-breakers. States one, “You’ve only got to pick up the local paper, turn to the back page and there will be dozens of adverts with mobile numbers to remove your vehicles; we can’t compete with that.” Usually the vehicle is then abandoned. For more information about the ELV Directive, please contact: Ivan.Chan@sgs.com.
Product Integrity Engineering enables you to address product failure during the design phase. This helps to ascertain the feasibility of your product and to assess the risks your product may face at different stages of production. In this case study we describe a practical example of the steps involved in ensuring a product is safe.

Regulatory Overview
In today’s litigious environment, meeting legal product regulations is not always sufficient to protect against product failures or design defects.

The General Product Safety Directive in Europe requires products placed on the market to present little or no risk to consumers, regardless of the product’s compliance with existing standards.

The Toy Safety Directive in Europe sets essential requirements for toys requiring them to be safe taking into account the normal behaviour of children.

Section 15 of the Consumer Product Safety Act in the United States requires only safe products to be placed in the market. Many of the product recalls in the United States occur on products that either conform to legal standards or do not have standards defined.

Case Study – Pencils Supplied as Premiums*
As an example, let’s examine a supplier who is providing pencils as a premium with another product that is sold in the mainstream market. The product being sold is specifically designed for school aged children, but it is possible younger children could also receive the product.

The first step in a product risk assessment would be to perform a Data Analysis. This would involve a look into past recalls and injuries using sources like the CPSC Recall database, the European RAPEX Recall database, injury data from the CPSC NEISS collection and other injury data sources. Instead of looking at only pencils, other products that have similar characteristics would also be studied (e.g. pens, markers, etc.). Results from this analysis shows that some of the more critical issues include airway obstruction, foreign body injuries and punctures.

The second step in a product risk assessment would be to perform a Foreseeable Use Analysis. Information on how the pencils are likely to be used, both on receipt of the product as well as during long term use, would be predicted using information from the data analysis as well as knowledge about children’s play habits and developmental patterns. The overall care taken by the original purchaser of the product would also be understood to determine what age groups would likely receive the product. This information will be used during the Hazard Analysis to better understand the probability of certain hazards occurring. For pencils in general, it can be assumed that parents would not give a sharpened pencil to a young child, but it would depend on if they knew what was being provided as a premium. The attractiveness of the pencil would also play a major part in understanding if younger children would play with the pencil.

The third step in a product risk assessment would be to perform a Hazard Identification and Analysis. In this stage, the product would be reviewed against all possible hazards to determine the probability of the hazard occurring, as well as the severity of each hazard. SGS uses a combination of compliance regulations and internally developed standards to evaluate each specific hazard. For pencils, any sharpened points would be identified as potential puncture hazards (which are supported by the large amount of injuries found during the data analysis). Additionally, any small parts supplied with the pencil as a topper or other device would be identified as airway obstruction hazards.

Once the information is collected, recommendations are made to minimize the overall risk of the product. In this example, a recommendation would be made to supply the pencils in either an unsharpened state or with blunted ends. This would minimize any potential injuries to younger children who received the product without the parent first being aware sharp pencils were included.

*Note this is only a partial risk assessment of pencils and should not be used for final decisions.

For more information on how these or other Product Integrity Engineering services can be used to protect your brand, please contact the SGS’ Global Product Integrity Engineering team. Together, we can ensure the safety of your product, helping to protect your brand and provide piece of mind.
SGS Turkey has Achieved UKAS Certificate

SGS Consumer Testing Laboratory in Turkey has achieved the UKAS (United Kingdom Accreditation Services) Certificate according to the standard of ISO/IEC 17025: 2000 General Requirements for the Competence of the Testing and Calibration Laboratories. This certificate is only granted to laboratories having the defined quality requirements.

The accreditation covers physical and chemical tests for textiles, electrical & electronics products and toys.

Serving its customers for “More quality Turkish products” since 1976, SGS Turkey added the last ring into its service network by opening the Consumer Testing Services Laboratory in 2004. The CTS Lab is capable of meeting the performance and quality needs of all consumer goods manufactured in Turkey.

The core services offered by SGS Turkey can be divided into three activities:

■ **Testing:** The laboratory tests the quality and the performance of all textile products from yarn to fabric, from garment to home textiles, according to the international quality standards. CTS Turkey performs chemical testing for E&E products according to RoHS & WEEE EC Directives.

■ **Inspection:** CTS Turkey inspects and verifies the quantity, weight and quality of traded goods. Inspection services cover the entire supply chain and the visual evaluation of selected samples.

■ **Assessments:** SGS Factory Assessments verifies the capability of a manufacturer to meet contractual conditions for safety, quality, performance, quality and delivery terms. In addition to Factory Quality Assessments, SGS monitors social and environmental conditions through Code of Conduct Assessments. For more information, please contact: Senay.Sahin@sgs.com

SGS Egypt Collaborates with EOS to Launched Public Private Partnership

In Conjunction with the Egyptian Government’s strategy to deepen its partnership with the private sector, SGS Egypt & the Egyptian Organization for standardization (EOS) have taken the initiative of launching a Public Private Partnership (PPP) in the Laboratory Management field.

The agreement of joint Laboratory Management was signed on November 20th 2006, at the Marriott Hotel, Cairo. The event was attended by Helmy Abul Eish, Executive Director of the Industrial Modernization Center (IMC) - an EU Funded Initiative, Denis Knobel, and Commercial Attache of the Switzerland embassy, Minister of Industry & Trade Mr. Rashid M. Rashid, SGS Egypt Managing Director, Mr. Osman M. Osman and EOS Chairman, Dr. Mahmoud Eissa.

EOS is the accredited national reference and sole official body in Egypt that responsible for activities relating to product and process standards, quality, testing and industrial metrology. Established under the Presidency Decree no. 2/1957 and 392/1979, EOS owns and manages laboratories in the fields of calibration, textiles, chemicals, engineering products and food.

SGS and EOS will commence their collaboration with the textile Laboratories. Later, it is planned to gradually extend the partnership into engineering products, chemical & building material and food products. It is hoped that the partnership will improved standards, so supporting Egyptian products to compete globally in accordance with international standards & regulations.

SGS will provide the laboratory with technical and administration expertise as well as setting up the processes and systems to have the laboratories accredited to ISO 17025 at a later date. For more information, please contact: Gamal.Gabre@sgs.com.
A new 3D computerised Tomography (CT) system has been installed and tested at SGS Dortmund, Germany. Weighing 5 tonnes, this heavy CT scanner can x-ray a great variety of different components – at up to 5 micrometer spatial resolution – greatly facilitating a visual investigation of the internal structure of objects. The broad range of products that can be scanned includes everything from microchips to diesel particle filters. This machine will significantly extend SGS CTS portfolio in failure and damage analysis of variety of products, regardless of material, its geometry or surface condition.

In the seventies, Computerized Tomography (CT) was originally developed for medical diagnostics. CT is a special type of X-ray in which a great number of x-ray images are captured from different angles. By investigating these so called projections, powerful computers can generate sectional views of the product sample under study. Then 3-D images are obtained by stacking tomographic slices upon each other. The technique can detect the presence of certain diseases and distinguishes between different kinds of tissue. Its success in diagnosing specific therapeutic strategies is well known.

Outside the medical field, it is also being used as a diagnostic method in Non-destructive Material Testing (NDT). This equipment distinguishes itself from traditional physical measurement techniques which can only measure the external geometry or surface of the product sample. Furthermore, CT can investigate many kinds of defects (such as cracks, pores, shrinkage, inclusions etc.) and the three-dimensional measurement of internal and external structures is more relevant to enable non-destructive access to the internal structure of the product.
However the industrial tomography scanners do differ significantly from medical devices. Constant improvement is required, in particular for non-destructive material testing where higher spatial resolutions and measurability of different materials are needed. Our new 3D tomography system reaches a spatial resolution of several micrometers with the help of a micro-focus X-ray source and an amorphous silicon flat panel detector. This allows the installation to be used to investigate the smallest electronic components.

**Tomography analysis**
The sample under investigation is placed on a rotational stage. Various clamping tools allow the mounting of components with different sizes and geometries.

During the measuring process the sample performs a 360° rotation. While it goes round, nearly 1,500 different x-ray projections are recorded and transferred to an inter-linked cluster of four IBM multi-processor servers. These computers reconstruct the volume dataset of the product simultaneously as it is being measured. A 4 GB volume dataset of the sample is thus instantly available for further evaluations.

Through this dataset spatial slices can be positioned for any orientation in real time and possible failures can be analyzed. Geometrical measurements of distances, angles, circular arcs, surfaces or partial volumes can be executed from these single slices or the complete 3D volume dataset.

All relevant images from the CT investigation (e.g. sectional views, 3D views, 2D/3D animations) are stored in commonly used file formats like TIFF, JPEG and MPEG making them easy to integrate into presentations. Additionally we can provide clients online access via the 3D viewing software. Our specialists are on call to make an analysis of the obtained 3D volume set in real time.

**Range of investigable samples or components**
A large variety of different samples can be investigated non-destructively with variable magnifications and different X-ray energy levels.

- Diesel particle filters / catalysts (defects due to assembly, cracks and pores in the substrate, inhomogeneities in the coating ("wash coat"), incomplete DPF-plugs).
- Printed circuit boards and electronics (solder quality, BGA-inspection, bond wires)
- Crimp connectors (crimp quality and geometry)
- Electrical connectors (geometry, location of contact zones)
- Potted components (cracks, pores, delamination in the potting and/or exact location of potted components)
- Ceramics (cracks, pores)
- Light metal alloys (cracks, geometry)
- Injection moulding (polymers) (cracks, pores, geometry)
- Microstructures (design, defect in adhesive / of abrication, bond wires)
- Carbon-fibre-reinforced plastics (CFRP) (delamination, other defects of fabrication)

**Samples from different industries can be analysed:**
- Automotive
- Electronics and electrical engineering
- Microsystems technology
- Medical technology

Computerized Tomography provides a tremendous potential to get a better understanding of structures and effectiveness of numerous materials. For more information please contact: olaf.guennewig@institut-fresenius.de
A new international standard of care symbols has been published. This standard has been technically revised, a number of new symbols has been introduced and changes. Click here to learn more.

Sun Hats & UV Protection
Sun exposure can cause skin damage, or worst it can lead to skin cancer. A new UV Protection standard has been published defining a test method and performance criteria for hats designed protect the wearer against ultraviolet radiation. Click here for details.

Food contact Materials: Traceability requirements came into force 27th October 2006
Defined as the ability to trace & follow a material or article through all stages of manufacturer, processing and distribution. The framework regulation on materials and articles which to come into contact with food has been in place for nearly 2 years. Specific articles came into force on 27th October 2006. For details, click here.

RoHS for product of Category 8 and 9
European Directives 2002/95/EC (RoHS) and 2002/96/EC (WEEE) define requirements for electrical and electronic equipment brought to the European market. To do so the European Commission ordered a review to determine the status of these products. Click here to read more.
coated items. Recently new EU method standards (EN 12472:2005) were published, replacing conflicting national standards. This bulletin compares the similarities and differences between 2005 and 1998 versions. Click here to learn more.

**EN 71-9 ORGANIC CHEMICAL COMPOUNDS: How to comply?**
The EN-71 Toy Directive regulates the chemical safety of toys. This edition of SafeGuardS helps to define the different ways product compliance can be achieved. Click here for details.

**Control of Volatile Organic Compounds Content on Paint, Varnishes & Vehicle Refinishing Products**
Paints and coatings are the largest source of Volatile Organic Compounds (VOC). Due to the serious effects on both human health and the environment, the EU, the US and China have implemented different regulations to control VOC emissions from these products. Click here to read more.

**New EU Requirements for Production Sealing Material Used in Metal Lids of Glass Jars Intended for Food**
Azodicarbonamide is used for over 20 years as a blowing agent for plastics in contact with foods. Now Commission Directive 2004/1/EC prohibits the usage of this agent in any food contact materials. Click here and read more about the standards.

**State Assembly Bill 1681 for Lead in Jewellery**
Based on Proposition 65 settlement, the Governor of California signed the State Assembly Bill 1681 which restricts the use of lead in metal and non-metal components in body piercing, adult and children jewellery. Click here for details.

**2005/84/EC phthalates directive**

**update Accessibility Implementation and transposition in Member States**
The Phthalates Directive 2005/84/EC will come into force on January 16th 2007. This new regulation raises many questions about toys & childcare articles. This edition of SafeGuardS provides definitions on accessibility and detailed information on the different ways EU member states are implementing the directive. Click here to learn more.
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