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**Safety**

**You have what? An evaluation of three New Jersey public school chemical inventories**

2005-05-18

Most secondary schools in New Jersey have courses including chemistry, biology, physics, and other science programs that require the use of chemicals for teaching. With the permission of school administrators, a survey of three public schools was performed for the purpose of assessing chemical inventories with an eye toward stockroom safety. Of the schools that were inspected for this survey, it appeared as though the science departments accumulated unique collections through excess purchasing over decades or were recipients of donated laboratory chemicals. There appeared to be no thought given to need, use, storage availability, or eventual disposal of the chemical inventories.

Authors: Becker, James M.; Elston, Harry J.
Full source: Chemical Health & Safety 2004, 11(5), 21-23 (Eng)

**Lower explosibility limits of dusts generated during chipboard and MDF-board processing**

2005-05-18

In this paper the results of the lower explosibility limits determination for a chipboard and MDF-board dusts have been presented. Both dusts had a grain sizes below 500 mum and an absolute humidity of 0%, 7% and in hygroscopic equilibrium points (13,2% and 9,6% respectively). On the basis of the obtained results, taken for the same testing conditions, it has been stated that a chipboard dust is more explosive than a MDF-board dust. It has been also stated that an absolute humidity as well as a grain size distribution influences an explosion ability of both tested dusts.

Authors: Zietek, Ziemowit; Szelemej, Zbigniew; Piotrowski, Tadeusz
Full source: Annals of Warsaw Agricultural University, Forestry and Wood Technology 2003, 53, 405-410 (Eng)

**1,5-Diamino-4-methyltetrazolium Dinitramide**

2005-05-18

The highly friction-sensitive 1,5-diamino-4-methyltetrazolium dinitramide was synthesized by a metathetical reaction of the corresponding iodide and silver dinitramide. An intriguing interaction of one nitro group with the tetrazolium cation was found as a crystal structure determining feature (X-ray determination), and the chemical bond is discussed on the basis of the theory of atoms in molecules (AIM). Safety: silver dinitramide, aminotetrazoles, and their derivatives are energetic materials and tend to explode under certain conditions - safety precautions should be taken.

Authors: Klapoetke, Thomas M.; Mayer, Peter; Schulz, Axel; Weigand, Jan J.
Full source: Journal of the American Chemical Society 2005, 127(7), 2032-2033 (Eng)

**Porous material containing a lot of minerals for water treatment**

2005-05-18

The claimed material is a fired product of a mixture containing a mineral-rich bittern and a porous material precursor. Preferably, the bittern is obtained from deep-sea water. The precursor may be mud containing silicic acid anhydride, Al2O3, and Fe oxide or coal power. The material, especially suitable for water purification and preparation of drinking water, cosmetics,
Nutritional composition, ginsenoside content and fundamental safety evaluation with leaf and stem extract of Panax ginseng
2005-05-18
This study was conducted to investigate the application possibility of leaf and stem extract (LSE) from the mixture of leaf and stem of Panax ginseng. This study measured the general nutritional composition, amino acid, minerals contents and fatty acid composition of LSE. The results imply that leaf and stem of Panax ginseng could be used as possible food resources and functional food material and feed stuff.
Authors: Han, Jong-Hyun; Park, Sung-Jin; Ahn, Chong-Nam; Wee, Jae-Joon; Kim, Ki-Young; Park, Sung-Hye
Full source: Han’guk Sikp’um Yongyang Kwahak Hoechi 2004, 33(5), 778-784 (Korean)

Safety and effectiveness of a new saline filled testicular prosthesis
2005-05-18
Testicular prostheses have been used for 50 years to replace missing or removed testes. In 1995 the manufacture of the silicone gel filled testis prosthesis in the United States was discontinued because of concern about the safety profiles of other implants. Authors assessed the safety and effectiveness of a new, saline filled implant for testicular replacement. At short-term follow-up a new, saline filled testis prosthesis appears safe and well tolerated. Importantly validated self-esteem measures also suggest improvement in quality of life after prosthesis placement.
Authors: Turek, Paul J.; Master, Viraj A.; The Testicular Prosthesis Study Group
Full source: Journal of Urology (Hagerstown, MD, United States) 2004, 172(4, Pt. 1), 1427-1430 (Eng)

Gelatin: Traceability and safety of raw materials
2005-05-18
By definition, gelatin is produced from animal collagenic tissues, particularly bovine and porcine but also from poultry and fish. The safety and the traceability of the raw materials are the first conditions to produce a safe gelatin. The efficiency of the manufacturing process is another important condition. Raw materials always come from animals deemed fit for human consumption. They are produced in establishments under local veterinary control, in European Union or in third countries. A full traceability is mandatory for the production of these animal-byproducts which necessitates a whole system of official control. Industrial requirements such as sanitary specifications and supplier audits add a greater safety. For bovine raw materials, due to the BSE in some parts of the world, additional guaranties are required by sanitary authorities from the different countries where the gelatin and the pharmaceutical products are put on the market.
Authors: Fabien-Soule, V.
Full source: STP Pharma Pratiques 2004, 14(5), 407-411 (English/French)

In 1995 the manufacture of the silicone gel filled testis prosthesis in the United States was discontinued because of concern about the safety profiles of other implants.
Safety

Remedial strategy drinking water pollution
2005-05-18
Industrial effluents and wastes contain harmful chemicals, toxic substances and unhealthy bacteria. These cause pollution of surface and ground water, which is the primary source of drinking water for humans and animals and for irrigation purposes. The polluted water is the cause for many diseases in human beings & animals. Effluent and waste from each industry has a number of pollutants and each pollutant has typically different impact. Several technologies are available for controlling water pollution from industrial activities. These include physical, chemical and biological treatments; recycling, utilization, production of byproducts and safe disposal of surplus. The most important aspect, however, is their earnest application on the part of owners, designers, operating personnel of industries. The onus of proper implementation of pollution control squarely rests on the Government, public representatives and pollution control authorities.
Authors: Kant, Rajni
Full source: Chemical Engineering World 2005, 40(1), 95-100 (Eng)

Isocyanates - risk assessment in practice
2005-05-18
The dangerous materials regulations will undergo amendments in the foreseeable future, in which the handling and exposure to materials harmful to health will be specified in terms of protection stage concepts. The basis for the allocation of activities to one of the four protection stages is a risk assessment which must be carried out by the employer. The company doctor or occupational medical specialist, together with the safety specialist, has the responsibility of assisting the employer. According to technical regulations for dangerous materials, TRGS 430 “Isocyanates”, the doctor is responsible for providing occupational medical and toxicological consultation for employees, together with precautionary occupation medical care in case of activities involving isocyanates.
Compulsory examinations are only prescribed where exposure relevant to health or difficult to check can be anticipated. Fundamentally, occupational medical initial and follow-up examinations to G27 are recommended for all employees having any contact with isocyanates, irrespective of the expected exposure level. With the conventional measurement procedures, it has so far only been possible in Germany to define airborne limit values for monomer di-isocyanates. This is adequate for the majority of applications. Limit values for oligomer isocyanate compounds are however particularly desirable, especially in the area of spray applications, although these can only be established when measurement methods for these substances have been fully developed. Until such time, the regulations of TRGS 430 continue to apply for performance of the risk assessment.
Authors: Webendoerfer, Stefan; Schupp, Thomas
Full source: Zentralblatt fuer Arbeitsmedizin, Arbeitsschutz und Ergonomie 2005, 55(1), 36-39 (German)