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RNW 1765

- 1 SI - CA/096/057642X
CC - CA/163005
AU - Bayraktar-Alpmen G ; Gulhan S
AD - Eczacilik Fak., Istanbul Univ., Istanbul
TI - Studies on antiseptic and preservative solutions stored in plastic and glass containers
SO - Doga, Seri C; VOL 4, ISS 2, 1980,5-12
PT - JOURNAL ARTICLE
CY - Turk.
LA - TUR
CD - DSTID
AB - CBAC COPYRIGHT: CHEM ABS Solns. of the antiseptics H2O2, I, and Rivanol [1837-57-6] and the preservatives methylparaben [99-76-3], sorbic acid [110-44-1], benzoic acid [65-85-0], thymol [89-83-8], PhOH [108-95-2], and benzyl alc. [100-51-6] were stored in high- and low-d. polyethylene [9002-88-4], poly(vinyl chloride) [9002-86-2], and amber glass containers, and in Erlenmeyer flasks at room temp., in sunlight, and at 37.degree.. Polyethylene containers were suitable only for the storage of I soln.
RN - 65-85-0; 89-83-8; 99-76-3; 100-51-6; 108-95-2; 110-44-1; 1837-57-6; 7553-56-2; 7722-84-1; 9002-86-2; 9002-88-4
EM - 8405
- 2 SI - CA/097/027797E
CC - CA/159000
AU - Dodic S
TI - Vinyl chloride and its polymer as a new potential pathogenic factor in modern illness
SO - Med. Podmladak; VOL 32, ISS 1, 1980,67-9
PT - JOURNAL ARTICLE
CY - Yugoslavia
LA - SCR
CD - MPODA
IS - 0369-1527
AB - CBAC COPYRIGHT: CHEM ABS Review vinyl chloride occupational hazard Cancer vinyl chloride manuf review PVC manuf occupational hazard review Disease occupational PVC chloroethene review;Disease In vinyl chloride and poly(vinyl chloride) manufg. workers, in Yugoslavia Occupational;Neoplasms In vinyl chloride and poly(vinyl chloride) manufg. workers, in Yugoslavia
RN - 75-01-4; 9002-86-2
EM - 8208
- 3 SI - CA/096/175629W
CC - CA/104003
AU - Hilado CJ
AD - Prod. Saf. Corp., Sunnyvale
TI - Some relationships between relative toxicity and total and lethal weight loss of polymers
SO - Org. Coat. Plast. Chem.; VOL 43,, 1980,297-303
PT - JOURNAL ARTICLE

- CY - USA
ZP - 94087
LA - ENG
CD - OCPCD
IS - 0161-214X
AB - CBAC COPYRIGHT: CHEM ABS Polymers from 4 different groups: the 1st contg. only C, H, and O; the 2nd contg. Cl; the 3rd N; and the 4th S, were exposed to rising temp. (40.degree./min from 200 to 800.degree.) without forced air flow, and the toxicity to mice of the resulting off-gases evaluated in relation to the wt. loss of the polymers. The results indicated that increased thermal stability, as indicated by reduced wt. loss on heating, appears to be accompanied by decreased relative toxicity in the case of polymers from which CO is the principal toxicant evolved.
- RN - 630-08-0; 9002-81-7; 9002-86-2; 9002-88-4; 9003-56-9; 9008-66-6; 9010-98-4; 9011-14-7; 9016-75-5; 25038-54-4; 25585-20-0; 27026-93-3; 32131-17-2; 62238-79-3
EM - 8206
- 4 SI - CA/096/148144C
CC - CA/159002
AU - Ustinov EP ; Bannikov VN ; Kudryavtseva GA
TI - Evaluation of work zone air pollution in the production of extruded poly(vinyl chloride) materials
SO - Sb. Tr. Vses. N.-i. i Proekt.-konstrukt. In-t Polimer. Stroit. Materialov; ISS 54, 1980,71-5
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS PVC extrusion air pollution;Air pollution In PVC extrusion
RN - 9002-86-2
EM - 8205
- 5 SI - CA/096/128867N
CC - CA/159005
AU - Kvasha PN ; Kordo YP ; Stepanenko TD
TI - Problems in the hygienic evaluation of labor conditions in the production of furniture from polyvinylchloride-based polymers
SO - Vlyanie Khim. Faktorov Vnesh. Sredy na Zdorov'e Cheloveka, Rostov N/D.; 1980,95-7
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Hygiene PVC furniture manufg;Furniture PVC polymer, hygienic evaluation of working conditions in manuf. of;Hygiene In furniture manufg. from PVC
RN - 9002-86-2
EM - 8205

- 6 SI - CA/096/012939H
CC - CA/171012
AU - Okamoto S ; Katayama S ; Takeya C ; Hayakawa T ; Iwata S
TI - Synergism of gamma-ray irradiation and temperature on the deterioration of flame-retardant cables
SO - Annu. Rep. Radiat. Cent. Osaka Prefect.; VOL 21,, 1980,41-5
PT - JOURNAL ARTICLE
CY - Japan
LA - ENG
CD - ARROA
IS - 0474-7879
AB - CBAC COPYRIGHT: CHEM ABS Irradn synergism flame retardant cable Reactor flame retardant cable irradsn Power plant nuclear cable irradsn;Electric cables Synergism of gamma-irradn. and temp. on deterioration of flame-retardant, for nuclear power plants;Gamma ray Synergism of temp. and, on deterioration of flame-retardant cables for nuclear power plants;Nuclear reactors Synergism of gamma-ray irradsn. and temp. on deterioration of flame-retardant cables for;Rubber Synergism of gamma-ray irradsn. and temp. on deterioration of flame-retardant cables contg., at nuclear power plants Neoprene;Rubber Synergism of gamma-ray irradsn. and temp. on deterioration of flame-retardant cables contg., at nuclear power plants Ethylene-propene
RN - 9002-86-2; 9002-88-4
EM - 8204
- 7 SI - CA/094/133388V
AU - Richards RJ ; George G ; Hunt J ; Tetley TD
AD - Dep. Biochem., Univ. Coll., Cardiff
TI - The relationship between the hemolytic potential of certain particulates and their reactivity at the lung surface 'in vivo'
SO - In Vitro Eff. Miner. Dusts, [Proc. Meet.]; 1980,323-32
LA - ENG
CD - 44ZZA
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM The hemolytic activity of 9 widely-differing particulates are compared and contrasted with changes they produce in free cell nos., pulmonary surfactant levels, and lung-lavage protein levels following dust instillation or inhalation in the rat. Two particulates (chrysotile and Ca silicate A) are highly hemolytic, 2 dusts (PVC 7 and glass powder) are moderately hemolytic, 3 (fiber glass, amosite, and Ca silicate B) are weakly hemolytic, and latex and TiO2 are virtually nonhemolytic. (12001-29-5 Chrysotile)(9002-86-2 PVC 7)(12172-73-5 Amosite) Thus, while hemolysis provides a rapid test system to examine the ability of a particulate to damage cell membranes, it cannot be assumed that dusts with high hemolytic potential will induce extensive changes at the lung surface. Conversely, it cannot be assumed that a particulate with low or no hemolytic activity will produce no effect in the lung.
RN - 12001-29-5; 9002-86-2; 12172-73-5; 1344-95-2; 13463-67-7
EM - 8110

- 8 SI - CA/093/144743N
AU - Sanders AJ
TI - Horticultural capillary substrate
SO - Brit. PATENT NO. 1562182 03/05/80 (Imperial Chemical Industries Ltd.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM A horticultural capillary substrate for use in hydroponics was prep'd., comprising a laminate of a water-impermeable sheet and a textile fabric. E.g., synthetic fibers with a core of poly(hexamethylene adipamide) and a sheath of poly(epsilon-caprolactam) were woven into a fabric, capable of transporting and retaining an aq. liq., which was attached to a polyethylene sheet by extrusion laminating. (32131-17-2 Poly(hexamethylene adipamide))(25038-54-4 poly(epsilon-caprolactam))(9002-88-4 Polyethylene) The laminate may be formed into a trough contg. plant containers, down which nutrient-contg. water can flow.
RN - 32131-17-2; 25038-54-4; 9002-88-4; 9002-86-2
EM - 8105
- 9 SI - CA/093/138050T
AU - Rachev D ; Markov L
AD - Durzh. Inst. Kontrol Lek. Sredstva, Sofia
TI - Quantitative determination of lead and zinc in poly(vinyl chloride) blood transfusion systems
SO - Farmatsiya (Sofia); VOL 30, ISS 2, 1980,6-10
LA - BUL
CD - FMTYA
AB - CBAC COPYRIGHT: CHEM ABS Pb and Zn were detd. quant. in PVC systems by at.-absorption study of aq. autoclave products after 30 min at 120.degree. using cut samples. (9002-86-2 PVC) The amt. of Zn extd. during autoclaving decreased with increasing pH of the extractant at pH 3-4. The method had reproducibility $\pm .2\%$ for Zn.
RN - 9002-86-2; 7439-92-1; 7440-66-6
EM - 8010
- 10 SI - CA/092/135366U
AU - Wu W ; Arteaga M ; Mlodozieniec AR ; Poppers PJ
AD - Anesthesiol. Serv., VA Med. Cent., New York
TI - Surface ultrastructure and pressure dynamics of tracheal tube cuffs
SO - J. Biomed. Mater. Res.; VOL 14, ISS 1, 1980,11-21
LA - ENG
CD - JBMRB
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM The outer and inner surfaces of 6 com. endotracheal tube cuffs were characterized using SEM and energy dispersive x-ray anal. Lateral tracheal wall pressure (LWP) was measured at various steps of cuff inflation using a mock-trachea system. The surface characteristics of the cuffs varied widely. The surface of the Lanz cuff was relatively smooth but showed a regular array of circular depressions 0.8 mm

in diam. Uniform spheres also 0.8 mm in diam. were distributed through the thickness of the membrane. The American Hi-Lo cuff surface was also relatively smooth but was covered widely with flakes of material which x-ray showed to be a clay-like substance contg. aluminum, silica, and potassium. The Harlake cuff was covered widely with roughly spherical, 5-mm-diam. particles, probably starch granules. The membrane itself was smooth even at 3000.times.. The Foregger cuff had a rough surface and was covered with the same clay-like particles seen on the American cuff. The inner surface with irregular, uneven areas were surrounded by fissures. The Rusch Armored tube cuff was completely covered by a continuous 2-mm-thick chlorinated coating. The surface was highly convoluted and irregular. The 3 cuff membranes showing relatively smooth surfaces, Lanz, American and Harlake, also produced relatively low LWP at various points of cuff inflation. While there was no data to indicate that cuff surface smoothness correlates with tracheal morbidity, it would seem prudent to select cuffs that produce low LWP's with smooth surfaces for clin. use.

RN - 9002-86-2
EM - 8010

- 11 SI - CA/095/209555R
AU - Mollet M ; Puisieux F ; Rasquin B ; Untersinger C
AD - Serv. Pharmacotech., Pharm. Cent. Hop., Paris
TI - A solution suitable for central parenteral nutrition in premature infants
SO - Prog. Clin. Pharm.; VOL 2,, 1980,295
LA - ENG
CD - PCPYD
AB - CBAC COPYRIGHT: CHEM ABS A soln. contg. glucose 165 g, amino acids 18.75 g, Na 24 mmol, Cl 17.25 mmol, K 18.75 mmol, P 330 mg, Ca 360 mg, Mg 43.5 mg, and H2O 1000 mL for parenteral feeding of premature infants is prepd. in 2 sep. compartments in PVC bags to prevent Maillard reactions. (9002-86-2 PVC) Upon use, the solns. from the 2 compartments are brought together via a 1-way valve.

RN - 9002-86-2
EM - 8201

- 12 SI - CA/093/244780R
AU - Haxo HE Jr
AD - Matrecon, Inc., Oakland
TI - Interaction of selected lining materials with various hazardous wastes - II
SO - U. S. Environ. Prot. Agency, Off. Res. Dev., [Rep.] EPA; ISS EPA-600/9-80-010, Disposal Hazard. Waste,, 1980,160-80
LA - ENG
CD - XPARD
AB - CBAC COPYRIGHT: CHEM ABS Soil, bentonite clays, soil cement, hydraulic asphaltic concrete, asphaltic membranes, and polymer membranes were exposed to hazardous wastes for .1toeq.3 yr to det. their effectiveness in preventing groundwater pollution at

landfills. The wastes included strong acids and bases, oil refinery tank waste, lead waste from gasoline, hydrocarbons, and pesticides. No single material contained all types of waste for this time period. Membrane swelling, loss of elongation with time, and permeability of the liner to each specific waste detd. which liner best contained the waste.

- RN - 9002-86-2; 9002-88-4; 9010-79-1
EM - 8101
- 13 SI - CA/093/225193K
AU - Kosiewicz ST
AD - Los Alamos Natl. Sci. Lab., Los Alamos
TI - Cellulose thermally decomposes at 70.degree.C
SO - Thermochim. Acta; VOL 40, ISS 2, 1980,319-26
LA - ENG
CD - THACA
AB - CBAC COPYRIGHT: CHEM ABS Low-temp. thermal decompn. of radioactive org. wastes during geol. storage was studied. Threshold decompn. temps. for common materials (cellulose, plastic, and rubber) found in Pu labs. were detd., and long-term surveillance expts. were made at 20, 40, and 70.degree.. Thermal decompn. did not, as obsd. by thermogravimetry, occur for any of the materials studied at <150.degree.. Other more sensitive expts. showed that thermal decompn. occurs for cellulose at .apprx.70.degree., and a slight amt. of decompn. may occur at 40.degree.. Some materials may slightly catalyze thermal decompn. at 40.degree..
- RN - 9002-84-0; 9002-86-2; 9002-88-4; 9003-07-0; 9004-34-6; 9011-14-7
EM - 8101
- 14 SI - CA/093/224946W
AU - Addis V ; Di Felice M ; Scanzi G
AD - Tecno Habitat, Milan
TI - Atmospheric pollution problems in the plastic coating process of metal frames
SO - AES; VOL 2, ISS 2, 1980,57-63
LA - ITA
CD - AESID
AB - CBAC COPYRIGHT: CHEM ABS The process of coating PVC over metal is described. Gas fumes and powders escape into the air consisting of tDOP, diisononyl phthalate (DINP), and PVC. (117-81-7 tDOP)(28553-12-0 Di(isononyl) phthalate)(9002-86-2 PVC)
To purify the emissions, a packed column with back crashing is proposed.
- RN - 117-81-7; 28553-12-0; 9002-86-2
EM - 8101

- 15 SI - CA/093/232009H
AU - Klos M ; Nowicki P ; Sobiecka B
AD - Postgrad. Educ. Cent., Mil. Med. Acad., Warsaw
TI - The effect of plasticizers of plastic material bags on
biochemical and morphological changes of morphotic blood elements
SO - Pol. J. Pharmacol. Pharm.; VOL 32, ISS 1, 1980,103-7
LA - ENG
CD - PJPPA
AB - CBAC COPYRIGHT: CHEM ABS The concn. of di-2-ethylhexyl
phthalate (DEHP) was detd. in whole blood, packed red cells, and
plasma of the blood collected into blood PVC bags in samples
withdrawn immediately after collection and 1, 2, and 3 wks later.
(117-81-7 Di-2-ethylhexyl phthalate)(9002-86-2 PVC) ATPase
activity and electrolyte (K+, Na+, Mg2+) compn. of erythrocytes
were tested and possible morphol. changes were inspected in
phase-contrast microscope. (9000-83-3 ATPase) Platelet
aggregation induced by ADP, collagen, and adrenaline was also
investigated. Blood stored in glass bottles served as a std.
The DEHP concns. were similar in samples contained in various
bags. Max. DEHP concn. in the whole blood, after 3 wks of
storage, attained 52 mug/cm3. ATPase activity was more rapidly
depressed in the blood kept in bags instead of glass bottles.
Erythrocyte morphol. and results of platelet function tests
remained unaffected.
RN - 117-81-7; 9002-86-2; 9000-83-3; 7439-95-4; 7440-09-7; 7440-23-5
EM - 8101
- 16 SI - CA/093/225660K
TI - Artificial blood vessels with antithrombic materials
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 60461 05/07/80 (Toray
Industries, Inc.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Medical devices such as artificial,
blood vessel having antithrombogenicity were made of
heparin-cationic polymer complexes and macromol. components in
which the sepd. cationic polymers have microphase structure of
0.05-5 mu diam. and the heparin content was 0.5-50 wt. % of the
total. Thus, a soln. of 30 g CH2:CMcCO2CH2CH(OH)CH2N+Me3 Cl- in
aq. DMF was treated with 30 mg ammonium persulfate and the mixt.
heated 16 h at 70.degree. under N to give a cationic polymer
soln. which (30 g) was treated with 60 g 15 wt.% PVC in DMF to
give a complex with 0.1-1 mu cationic polymer homogeneously
dispersed. A tube of 0.7 mm thickness made from the complex was
immersed in 5% aq. heparin Na at 60.degree. for 1 day to give a
tube contg. 28% H2O and 15.3% heparin with good mech. strength
and flexibility.
RN - 9002-86-2; 9005-49-6; 25609-94-3
EM - 8101

- 17 SI - CA/093/209542T
AU - Boettner EA ; Ball GL
AD - Sch. Public Health, Univ. Michigan, Ann Arbor
TI - Thermal degradation products from PVC film in food-wrapping operations
SO - Am. Ind. Hyg. Assoc. J.; VOL 41, ISS 7, 1980,513-22
LA - ENG
CD - AIHAA
AB - CBAC COPYRIGHT: CHEM ABS Hot wire and coal rod cutting devices are used in food wrapping by PVC film in suupermarkets. (9002-86-2 PVC) Emissions, from cutting the PVC film by the hot wire, contained acrolein, C6H6, CO, HCl, PhMe, and plasticizer. (107-02-8 Acrolein)(71-43-2 Benzene)(108-88-3 Toluene) Only plasticizer was detected when the cool rod was used.
RN - 9002-86-2; 107-02-8; 71-43-2; 108-88-3; 77-90-7; 103-23-1; 117-81-7; 630-08-0; 7647-01-0
EM - 8012
- 18 SI - CA/093/191541E
AU - Schmid F ; Illes V
TI - Pyrolysis of organic wastes
SO - Magy. Asvanyolaj- Foldgazkiserl. Intez. Kozl.; VOL 20,, 1980,117-32
LA - HUN
CD - MAFKA
AB - CBAC COPYRIGHT: CHEM ABS Polyethylene and polypropylene agglomerates, polystyrene, poly(vinyl chloride) (I) powder, and ground rubber were pyrolyzed at 380-500.degree.. (9002-88-4 Polyethylene)(9003-07-0 Polypropylene)(9003-53-6 Polystyrene)(9002-86-2 Polyvinylchloride) Polyethylene, polypropylene, and polystyrene yield 72-94% liq. products and 6-18% gaseous products, based on the original wt., with hardly any nonvolatile products. The liq. products from pyrolysis of polyethylene and polypropylene were alkanes, alkenes, and arom. hydrocarbons. Polystyrene yielded styrene and alkyl aroms. (100-42-5 Styrene) In the pyrolysis of I, HCl 53-58, liq. (mainly arom.) hydrocarbons 10, and residue 28-32% (and a little gas) are formed. Rubber yielded 24-38% liq. product rich in aroms., some gas, and >40% residue similar to coke.
RN - 9002-88-4; 9003-07-0; 9003-53-6; 9002-86-2; 100-42-5
EM - 8012
- 19 SI - CA/093/191537H
AU - Norov SK ; Gureev ES ; Aronbaev DM
AD - Inst. Yad. Fiz., Tashkent
TI - Potentiometric determination of nitrate ion in discharges from hydrometallurgical production using a film nitrate electrode
SO - Zavod. Lab.; VOL 46, ISS 4, 1980,303-4
LA - RUS
CD - ZVDLA
AB - CBAC COPYRIGHT: CHEM ABS A NO3- ion-selective electrode, prepd. from a membrane of dioctyl phthalate-plasticized PVC contg.

tetradecyl ammonium nitrate as the electrode-active substance, is used with a satd. AgCl ref. electrode and a pH meter. (9002-86-2 PVC)(34719-43-2 Tetradecyl ammonium nitrate) The e.m.f. of the electrode is directly proportional to the log. of the mean ionic activity for 1 .times. 10⁻⁴ -1.0M NaNO₃ or KNO₃ solns. The electrode response is stable for several days. Large concns. of SO₄²⁻, CO₃²⁻, Cl⁻, oxalate and tartrate ions do not interfere, but NaK tartrate must be added to avoid interference from Mo⁶⁺ and W⁶⁺.

RN - 9002-86-2; 34719-43-2; 7439-98-7; 7440-33-7; 7732-18-5; 14797-55-8
EM - 8012

20 SI - CA/093/210210Q

AU - Chuang HY K ; Mohammad SF ; Sharma NC ; Mason RG

AD - Coll. Med., Univ. Utah, Salt Lake City

TI - Interaction of human alpha-thrombin with artificial surfaces and reactivity of adsorbed alpha-thrombin

SO - J. Biomed. Mater. Res.; VOL 14, ISS 4, 1980,467-76

LA - ENG

CD - JBMRB

AB - CBAC COPYRIGHT: CHEM ABS Thrombin adsorbed onto Cuprophane or poly(vinyl chloride) (PVC) was inactive with respect to amidase activity. (9002-04-4 Thrombin)(9002-86-2 Poly(vinyl chloride))(9012-56-0 Amidase) Desorbed thrombin from these two artificial surfaces showed only low amidase activity. However, in the presence of albumin, the surface-bound thrombin appeared to exhibit increased amidase activity. This apparent activity may be due to the action of thrombin displaced from the surfaces by albumin. Thrombin bound to Cuprophane or PVC was capable of reacting with antithrombin III (AT III) only in the presence of heparin. (9000-94-6 antithrombin III)(9005-49-6 Heparin) On the other hand, AT III bound to Cuprophane or PVC was unable to react with thrombin in either the absence or presence of heparin. Fibrin formation on or at surfaces was demonstrated by phase contrast microscopy when Cuprophane or PVC, pretreated with thrombin and carefully rinsed, was incubated in a fibrinogen soln. This fibrin formation is time dependent and likely is the result of direct interaction of adsorbed thrombin with fibrinogen in soln. Glass, Cuprophane, and PVC pretreated with thrombin attracted more platelets than resp. untreated surfaces. The enhancing effect of adsorbed thrombin on platelet adhesion was similar to the enhancing effect of adsorbed fibrinogen. Thrombin adsorbed onto PVC and crosslinked by glutaraldehyde treatment was shown to be antigenically active with a 125I-labeled monospecific antithrombin IgG produced in rabbits. No other plasma proteins adsorbed singly or from plasma or serum onto PVC reacted significantly with the antithrombin IgG prepn.

RN - 9002-04-4; 9002-86-2; 9012-56-0; 9000-94-6; 9005-49-6
EM - 8012

- 21 SI - CA/093/198560U
AU - Einhorn IN ; Grunnet ML
AD - Flammability Res. Cent., Univ. Utah, Salt Lake City
TI - The physiological and toxicological aspects of degradation products produced during the combustion of poly(vinyl chloride) polymers
SO - Spec. Rep. - Electr. Power Res. Inst. (Palo Alto, Calif.); ISS EPRI EL-1263, Flammability Solid Polym. Cable Dielectr., 1980,3/1-3/47
LA - ENG
CD - SREID
AB - CBAC COPYRIGHT: CHEM ABS A review and discussion with 53 refs. Review PVC combustion toxicity
RN - 9002-86-2
EM - 8012
- 22 SI - CA/093/192074S
AU - Steer PL ; Edwards JV
TI - Plastics laminate
SO - Brit. UK Pat. Appl. PATENT NO. 2029764 03/26/80 (Kingsdown Medical Consultants Ltd.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS The title laminate, useful in the manuf. of ostomy appliances, comprises a 1st layer of gas-permeable, liq.-impermeable plastic, a 2nd deodorizing layer of active C cloth or matrix-bound C particles, and a 3rd layer of gas-permeable, liq.-impermeable material. The 1st and/or 3rd layers may be manufd. from chem. treated PVC, polyethylene, or an adhesive. (9002-86-2 PVC)(9002-88-4 Polyethylene) The 2nd layer may be manufd. from C-impregnated paper or nonwoven fabric.
RN - 9002-86-2; 9002-88-4; 7440-44-0
EM - 8012
- 23 SI - CA/093/173785H
AU - Hiroyoshi S
TI - Ultrasonic removal of ethylene oxide from surgical goods
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 31419 03/05/80
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Gases adsorbed by surgical goods were removed by ultrasound. Thus, after disinfection of 500 mg 1 cm long tubes made of soft polyvinyl chloride, silicone, polyurethane, or polypropylene with ethylene oxide (2200 mg/L) the adsorbed ethylene oxide was removed by ultrasonic irradiation. (300W, 28 kHz) 5 min/h. (9002-86-2 Polyvinyl chloride)(9003-07-0 Polypropylene)(75-21-8 Ethylene oxide) The concn. of the remaining ethylene oxide after 7 h was 1200 ppm on the polyvinyl chloride, 80 ppm on the silicone, 820 ppm on the polyurethane, and 600 ppm on the polypropylene tubes vs. 2000, 200, 2340, and 1600 ppm, resp., for the control samples.
RN - 9002-86-2; 9003-07-0; 75-21-8
EM - 8011

- 24 SI - CA/093/173319J
AU - Byrne GA ; Aylott RI
TI - An concentrator for removing organic materials from aqueous systems
SO - Brit. PATENT NO. 1566253 04/30/80 (Inveresk Research International)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS A device for concg. org. materials from water, useful for monitoring pollutant levels in wastewater to be discharged, comprises a housing contg. an org. medium which wets a selectively permeable membrane over one face of the housing and dissolves org. mols. diffusing through the membrane from the water outside the app. For example, a glass housing was fitted with a 44-cm² Cuprophane (regenerated cellulose) membrane having dry thickness .apprx.20 mu and pore size 0.003 mu and filled with hexane. (110-54-3 Hexane) The app. was placed in the secondary sedimentation tank of a sewage effluent treatment plant. After 5 wk, the hexane had collected 2.1 mug dieldrin and 3.0 mug gamma-BHC (360 mL-vol. app.), whereas typical anal. of water samples gave concns. 0.03-0.13 and 0.42-0.77 mug/L, resp. (60-57-1 Dieldrin)(58-89-9 .gamma.-BHC)
RN - 110-54-3; 60-57-1; 58-89-9; 56-23-5; 67-66-3; 71-43-2; 75-09-2; 75-26-3; 95-48-7; 108-38-3; 108-88-3; 1330-20-7; 7440-44-0; 7732-18-5; 9002-84-0; 9002-86-2; 9003-00-3; 24937-79-9
EM - 8011
- 25 SI - CA/093/173281R
TI - Treatment of radioactive wastes
SO - Belg. PATENT NO. 880108 03/17/80 (ALKEM G.m.b.H.)
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS A method is given for reducing the vol. of radioactive wastes consisting mainly of PVC and other plastics contg. a PuO₂-UO₂ mixt. of .gtoreq.5 g/m³. (9002-86-2 PVC) The wastes are 1st ground to particle size .ltoreq.5 mm. Next sol. particles (.apprx.75% of the waste) are dissolved in a hot org. solvent (e.g. THF or EtCOMe), the pptd. insol. materials (A) are removed, by centrifuging and filtration, the solvent is recovered by distn., and the radioactive A are encapsulated in a ceramic material for disposal or storage. Plastics recovered from the solvent can be treated like non radioactive plastic wastes.
RN - 9002-86-2; 1344-57-6; 12059-95-9
EM - 8011
- 26 SI - CA/093/155847A
AU - Hariki Y ; Tateno I ; Harasawa I
TI - Polymer films for preventing dermatitis in celery farmers
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 22642 02/18/80 (Nippon Carbide Industries Co., Inc.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Dermatitis caused by fluorocoumarins in celery was prevented by using polymer film covers to block out

radiation of <380 nm. Thus, a polymer compn. contg. PVC 100, dioctyl phthalate as plasticizer 45, Zn stearate as thermal stabilizer 1.0, benzotriazole deriv. (I) as UV absorbent 1.5 wt.%, etc., was made into 100 mu-thick film and used to cover the celery to show 0.3% fungus disease in the crop and no dermatitis occurrence in the farmers, vs. 5.8% disease and widespread dermatitis with a com. PVC film cover. (9002-86-2 PVC)

RN - 9002-86-2; 3864-99-1; 91-64-5
EM - 8011

- 27 SI - CA/093/119835M
AU - Tominaga S ; Suzuki S ; Kikuchi S
TI - Oxidation catalyst used in wastewater along with oxidant
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 27075 02/26/80 (Osaka Oxygen Industries, Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Ni, Mn, and/or Co oxides are fixed with chloro- and/or fluororesin on a support and used along with O₃, NaClO, NaBrO, H₂O₂, Cl, or KMnO₄ in the treatment of wastewater. Colitis, Malodor, COD, heavy metal ions, CN-, HCHO and phenols are removed. (50-00-0 Formaldehyde) Thus, 15 and 10 diam. .times. 15 mm long PVC tubes were soaked in 30% PVC resin in MeCOEt, Ni₂O₃ was added to the tube surfaces, and the tubes were air-dried for 24 h. (9002-86-2 PVC) NaClO decompn. was 90% after 500 h when aq. NaClO 200 ppm was stirred with the catalyst for 15 min. When wastewater contg. HCHO 100 was mixed with NaClO 1000 ppm 70% of the HCHO was removed.
RN - 50-00-0; 9002-86-2; 1314-06-3; 7681-52-9
EM - 8010

- 28 SI - CA/093/079241F
AU - Takahashi M
TI - Rotating aerator
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 28721 02/29/80
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS PVC, saran, nylon, or glass fiber ribbon is fixed on wheels in a radial, spiral, or concentric manner. (9002-86-2 PVC)(9002-85-1 saran) An assembly of the wheels is slowly rotated in wastewater to biol. remove BOD.
RN - 9002-86-2; 9002-85-1
EM - 8009

- 29 SI - CA/093/1014630
AU - Solntseva IL ; Kaplun SI ; Trukhachev OF ; Velikii LS
AU - Prilutskaya NV
AD - Khar'k. Nauchno-Issled. Khim. Farm. Inst., Kharkov
TI - Optimization of the formulation of a plastisol made from poly(vinyl chloride) for coating glass and aerosol containers
SO - Khim.-Farm. Zh.; VOL 14, ISS 4, 1980,76-8
LA - RUS
CD - KHFZA
AB - CBAC COPYRIGHT: CHEM ABS A math. model was derived for the title optimization. Plastisol prepd. from PVC 250, Dioctyl

phthalate 54.75, di-Bu sebacate 40.15, white spirit 42.9, Last K stabilizer 12.7, TiO₂ filler 5, tall-oil fatty acids 18 and PEG-400 3.5 g formed a coating with tensile strength 165 g/cm and relative elongation at break 500-600% which was suitable for medicinal packaging. (9002-86-2 PVC)

RN - 9002-86-2

EM - 8009

30 SI - CA/093/080008S

AU - Kaetsu I ; Kumakura M ; Asano M ; Yamada A ; Sakurai Y

AD - Takasaki Radiat. Chem. Res. Establ., JAERI, Takasaki

TI - Immobilization of enzymes for medical uses on plastic surfaces by radiation-induced polymerization at low temperatures

SO - J. Biomed. Mater. Res.; VOL 14, ISS 3, 1980,199-210

LA - ENG

CD - JBMRB

AB - CBAC COPYRIGHT: CHEM ABS The immobilization of some medically useful enzymes were studied by means of radiation-induced polymn. at -78.degree.. Glucose oxidase and glucose peroxidase were immobilized in the form of thin membranes inside poly(vinyl chloride) tubes and on polyethylene films; these membranes showed considerable activity yield, as well as good activity retention. (9001-37-0 glucose oxidase)(9003-99-0 glucose peroxidase) Two effective methods were adopted to improve the surface properties of the base materials and to facilitate firm immobilization by coating: i.e., an undercoating method followed by radiation curing of the undercoating and an irradiation grafting method with a monomer. Both were tested with good results. An immobilization of urokinase was also carried out successfully by similar methods. (9039-53-6 Urokinase) The thrombogenicity of the immobilized urokinase showed a remarkable effect on thrombus formation.

RN - 9001-37-0; 9003-99-0; 9039-53-6; 9002-86-2; 9002-88-4; 25249-16-5; 57619-91-7; 74256-02-3; 74256-03-4

EM - 8009

31 SI - CA/093/062280V

AU - Bailey AV ; Boudreaux GJ ; Sumrell G

AD - South. Reg. Res. Cent., USDA, New Orleans

TI - Preparation of some fatty glycolic acid derivatives and screening for antimicrobial activity

SO - J. Am. Oil Chem. Soc.; VOL 57, ISS 4, 1980,139-41

LA - ENG

CD - JAOCA

AB - CBAC COPYRIGHT: CHEM ABS Nine glycolic acid derivs. were prepd. and screened as primary plasticizers for PVC and for antimicrobial activity. (74275-77-7 PVC) Two types of compds. were represented: (a) those with a Me or Et ester grouping at the carboxyl function of glycolic acid and a fatty acyl group at the hydroxyl function; and (b) those with 3 acyl groups attached at the functions of the amide, resulting from the reaction of glycolic acid and diethanolamine. (111-42-2 Diethanolamine) None of the compds. was compatible with PVC at the 35% level of

incorporation, and the compds. were not further evaluated as plasticizers. They were screened for antimicrobial activity against *Staphylococcus aureus*, *Escherichia coli*, *Candida utilis*, and *Penicillium*. Six of the compds. inhibited two or more of the test organisms. Bis(carbomethoxymethyl)adipate was the most active compd. (74275-80-2 Bis(carbomethoxymethyl)adipate)

RN - 74275-77-7; 111-42-2; 74275-80-2; 79-14-1; 96-35-5; 112-67-4;
764-85-2; 9002-86-2; 17409-41-5; 36557-00-3; 74275-78-8;
74275-79-9; 74275-81-3; 74275-82-4; 74275-83-5; 74275-84-6

EM - 8009

32 SI - CA/095/191849C

AU - Miyata K ; Miyazaki H ; Mizuno R ; Ohtsuka K

AD - Tokai Works, Power React. Nucl. Fuel Dev. Corp., Tokai

TI - Acid digestion of chlorine-containing wastes. II. Engineering tests of the pilot plant

SO - Tokai Works Annu. Prog. Rep.; ISS PNCT831-80-01,, 1980,106-15

LA - ENG

CD - TWARD

AB - CBAC COPYRIGHT: CHEM ABS Results obtained from the pilot plant 200-L digester for the acid digestion of Cl-contg. solid waste (org. chlorides, mainly poly(vinyl chloride) and chloroprene) from the Pu Fuel Fabrication Facility of PNC are discussed. The poly(vinyl chloride) oxidn. by HNO₃ and H₂SO₄, org. material accumulation in the digester, and offgas compn. are considered.

RN - 7664-93-9; 7697-37-2; 9002-86-2

EM - 8112

33 SI - CA/095/181818C

AU - Hilado CJ ; Cumming HJ ; Casey CJ

AD - San Francisco Univ., San Francisco

TI - Relative toxicity of pyrolysis gases from materials: chemical structure, char yield, and HC value

SO - Kasai; VOL 127,, 1980,6-22

LA - JPN

CD - KASID

AB - CBAC COPYRIGHT: CHEM ABS Toxicity of pyrolysis gases from 97 polymer materials was detd. by a method described previously (C.J. Hilado, et al., 1978). The HC value (flammability of mixts. of combustible gases) (C. J. Hilado and H. J. Cumming, 1977) decreased with increasing char yield. Based on time required for causing mortality, the toxicity of pyrolysis gases decreased with increasing char yield. This appeared to be due to a decreased CO prodn. when the char yield was increased. For polymers contg. S or N, the toxicity of pyrolysis gases increased with increasing char yield, indicating that CO was not responsible for the toxicity.

RN - 80-05-7; 541-59-3; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6;
9003-56-9; 9008-66-6; 9011-14-7; 25014-12-4; 25038-54-4;
32131-17-2; 79586-05-3; 79586-06-4

EM - 8112

- 34 SI - CA/095/102177S
AU - Kabrt L ; Chakraborti D ; Sucha L
AD - Dep. Anal. Chem., Prague Inst. Chem. Technol., Prague
TI - Determination of fluorides in atmosphere. III. Applicability of sampling devices designed for weekly replacement of the absorption solutions
SO - Sb. Vys. Sk. Chem.-Technol. Praze, Anal. Chem.; VOL H 15,, 1980,129-38
LA - ENG
CD - SVSAB
AB - CBAC COPYRIGHT: CHEM ABS Air concns. of 0.4-24 mug F-/L +/- 5% were detd. continuously with weekly changes of the absorption solns. using modified Aeromat and SF 8 sampling devices. In the Aeromat app., the glass parts that contacted the air were replaced by Teflon and poly(vinyl chloride) parts, but glass flasks were still used to contain alk. absorption soln. (9002-84-0 Teflon)(9002-86-2 Poly(vinyl chloride))
RN - 9002-84-0; 9002-86-2; 7664-39-3; 16984-48-8
EM - 8110
- 35 SI - CA/095/085701P
AU - Aisaka K ; Matsuzaki J ; Hirama Y ; Yoshizawa T ; Miyoshi H
AD - Chiba Prefect. Lab. Water Pollution
TI - Investigation of wastewater from polymer production
SO - Zenkoku Kogaiken Kaishi; VOL 5, ISS 1, 1980,7-12
LA - JPN
CD - ZKKAD
AB - CBAC COPYRIGHT: CHEM ABS The effluents from the prodn. of polyethylene, poly(vinyl chloride), polystyrene, polypropylene, polybutadiene, EP rubber, and SBR rubber were analyzed for suspended solids, COD, total O demand, total org. C, UV absorbance, Al, Ti, Kjeldahl-N, total phosphate, and pH; the 1st 5 parameters were used for the calcn. of correlation coeffs. (9002-88-4 Polyethylene)(9002-86-2 Polyvinyl chloride)(9003-53-6 Polystyrene)(9003-07-0 Polypropylene) The effluent compns. varied according to the processes.
RN - 9002-88-4; 9002-86-2; 9003-53-6; 9003-07-0; 7429-90-5; 7727-37-9
EM - 8109
- 36 SI - CA/095/067123X
AU - Steblev AV
TI - Evaluation of the explosion hazard of dichloroethane-chlorine mixtures
SO - Khim. Prom-st., Ser.: Khlornaya Prom-st.; ISS 4, 1980,12-13
LA - RUS
CD - KHKPD
AB - CBAC COPYRIGHT: CHEM ABS The max. explosion pressure (Pmax) developed during the combustion of dichloroethane-Cl mixts., and the time required to reach its max. (tau) were detd. to assess the explosion hazards of such mixts. formed in the manuf. of chlorinated poly(vinyl chloride). (1300-21-6 Dichloroethane) Results indicated that Pmax of vapors of the mixts. at

105.degree. and at the initial pressure (P0) of 1 atm was .ltoreq.1.8 atm. The tau was .gtoreq.0.88 s. At 105.degree. and at P0 2 atm, Pmax was .ltoreq.3.8 atm. and tau was 0.6-1.75 s. The mean temps. of the combustion products were fairly low, with the min. and max. temps. being 340 and 560 K, resp. Mixts. of dichloroethane with Cl are comparatively safe. The max. pressure increase during the combustion of the most hazardous mixt. (contg. 34% dichloroethane) did not exceed a 2-fold increase in the initial pressure. With mixts. contg. <20% and >45% dichloroethane, the max. pressure increase was .ltoreq.10% of the initial pressure.

- RN - 1300-21-6; 7782-50-5; 9002-86-2
EM - 8109
- 37 SI - CA/095/067086N
AU - Olson DB ; Calcote HF
AD - AeroChem Res. Lab., Inc., Princeton
TI - A comparison of polycyclic aromatic hydrocarbons in soot produced from various sources
SO - Chem. Phys. Processes Combust.; 1980, Paper No. 9, 4 pp.
LA - ENG
CD - CPPCD
AB - CBAC COPYRIGHT: CHEM ABS Polycyclic arom. hydrocarbon concns. detd. (by other sources) in soot from the combustion of kerosene, benzene, coal, wood, poly(vinyl chloride) (PVC) C2H4, and C2H2 and from aircraft turbine engine fuels were correlated and discussed. (71-43-2 Benzene)(9002-86-2 Poly(vinyl chloride))(74-84-0 Ethane)(74-86-2 Ethyne) Of the 50 aroms. detd. in soot from each fuel, fluorene, phenanthrene, anthracene, and pyrene were the most common, with the largest amts. formed from kerosene and PVC fuel. (86-73-7 Fluorene)(85-01-8 Phenanthrene)(120-12-7 Anthracene)(129-00-0 Pyrene)
RN - 71-43-2; 9002-86-2; 74-84-0; 74-86-2; 86-73-7; 85-01-8; 120-12-7; 129-00-0
EM - 8109
- 38 SI - CA/095/048630U
AU - Simon R ; Wieczorek H ; Brambilla G ; Grover JR
AD - CEC, Brussels
TI - Volume reduction and plutonium recovery - their place in alpha waste management
SO - Comm. Eur. Communities, [Rep.] EUR; ISS EUR 6871, Radioact. Waste Manage. Disposal,, 1980,92-110
LA - ENG
CD - CECED
AB - CBAC COPYRIGHT: CHEM ABS Solid combustible Pu-contaminated materials are largely produced by mixed oxide (PuO2/UO2) fuel prepn. and fuel element fabrication. The following processes to reduce the vol. of the waste by combustion of all org. compds., but also to provide the means of extg. a high percentage of the P were studied: (1) low temp. 2-stage incineration and Pu-recovery from ashes, (2) incineration in molten salt; (3) acid digestion; and (4) cryogenic crushing and leaching. These processes can

reduce the vol. of the waste by .ltoreq.95% and ext. .ltoreq.98% of the Pu contaminant. Their application advantages are discussed.

RN - 7440-07-5; 9002-86-2; 9002-88-4; 9004-34-6
EM - 8109

- 39 SI - CA/095/048340Z
AU - Pavlova LA ; Sukharev YG ; Boldyrev VI
TI - Methods for Removal of Vinyl Chloride from Waste Gases in PVC Production
SO - 1980,12 pp.
LA - RUS
CD - BOOKA
AB - CBAC COPYRIGHT: CHEM ABS A book. Book vinyl chloride removal gas
RN - 75-01-4; 9002-86-2
EM - 8109
- 40 SI - CA/095/048201E
AU - Cohen ES ; Kurchatova G
AD - Inst. Hyg. Mal. Prof., Sofia
TI - Flameless atomic absorption method for the determination of nanogram quantities of beryllium in air
SO - Dokl. Bolg. Akad. Nauk; VOL 33, ISS 11, 1980,1505-8
LA - FRE
CD - DBANA
AB - CBAC COPYRIGHT: CHEM ABS A method was developed for the detn. of Be in air at concs. .gtoreq.0.1 ng/cm3. Air was filtered through chlorinated poly(vinyl chloride) filters and the dust retained was analyzed by a flameless at. absorption spectrometer equipped with a graphite atomizer. The coeff. of variation was 4.1-8.7%.
RN - 7440-41-7; 9002-86-2
EM - 8109
- 41 SI - CA/095/055839X
AU - Eitingon AI ; Poddubnaya LT ; Korobeinikova NV
TI - Toxicological characteristics and combustion product composition of some polymeric film material
SO - Bezopasn. Lyudei pri Pozharakh, (Moskva); ISS 2, 1980,112-15
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Polymer material combustion toxicity Pyrolysis polymer material toxicity PVC pyrolysis toxicity
RN - 9002-86-2; 24937-79-9; 24981-14-4
EM - 8109

- 42 SI - CA/095/049412M
AU - Dresback DS
TI - Compositions and method for controlling helminths in pastoral soils
SO - Braz. Pedido PI PATENT NO. 79 03591 12/09/80 (Pfizer Inc.)
LA - POR
AB - CBAC COPYRIGHT: CHEM ABS The insertion of a device for the controlled-release of anthelmintics in the rumen reticular sacs of ruminants (particularly cattle and sheep) results in a disruption of the reproductive cycle of those parasites inside the animal and thus a decreased no. of larvae are excreted in the feces. Consequently, a much lesser contamination of the grazing fields and low infestation rates for all animals grazing in such fields is obsd. The device is made of a porous material, the pores of which are layered with a hydrogel, it has a reservoir contg. the anthelmintic prepn., a hydrosol. liq. excipient, and/or a detergent. A polyethylene device with pores layered with cellulose triacetate gel has a reservoir contg. morantrel tartrate (I) mixed with polyethylene glycol 400 and Na hexametaphosphate, at 63.31, 26.61, and 10.08%, resp., was prepd. by a multistep process. (9002-88-4 Polyethylene)(9012-09-3 Cellulose triacetate)(26155-31-7 Morantrel tartrate) The device weighed .apprx.90 g, its d is .apprx.2.2 g/mL. When inserted in cattle it releases .apprx.250 mg I/day for .apprx.60 days. The use of this device in cattle resulted in a marked redn. of helminths larvae in pasture during the rainy season.
RN - 9002-88-4; 9012-09-3; 26155-31-7; 5685-86-9; 9002-84-0; 9002-86-2; 9003-07-0; 9003-53-6; 16595-80-5; 33401-94-4; 69525-81-1
EM - 8109
- 43 SI - CA/095/036643N
AU - Gilbert J ; Shepherd MJ
AD - Food Sci. Div., Minist. Agric., Fish. Food, Norwich
TI - The low-molecular-weight fraction of PVC - a potential source for migration
SO - Lect. - Int. Symp. Migr., 3rd; 1980,178-97
LA - ENG
CD - 45UUA
AB - CBAC COPYRIGHT: CHEM ABS Trichloroethane and low-mol.-wt. components of PVC were datd. in PVC containers and food by different techniques including headspace anal. and solvent extn. coupled with steric exclusion fractionation of the low-mol.-wt. components, e.g., vinyl chloride oligomers. (71-55-6 Trichloroethane)(9002-86-2 PVC)
RN - 71-55-6; 9002-86-2; 16887-00-6
EM - 8109

- 44 SI - CA/095/011681K
AU - Wagoner JK ; Infante PF ; Apfeldorf RB
AD - Environ. Defense Fund, Washington
TI - Toxicity of vinyl chloride and poly(vinyl chloride) as seen through epidemiologic observations
SO - J. Toxicol. Environ. Health; VOL 6, ISS 5-6, 1980,1101-7
LA - ENG
CD - JTEHD
AB - CBAC COPYRIGHT: CHEM ABS A review with many refs. Review vinyl chloride exposure toxicity PVC toxicity occupational exposure review
RN - 75-01-4; 9002-86-2
EM - 8108
- 45 SI - CA/094/213607F
AU - Krajewski J ; Miczarska A ; Dobecki M
AD - Zakl. Chem. Zanieczyszczen Powietrza, Inst. Pracy, Lodz
TI - Usefulness of different methods of air sampling for the evaluation of occupational exposure to vinyl chloride
SO - Med. Pr.; VOL 31, ISS 3, 1980,165-70
LA - POL
CD - MEPAA
AB - CBAC COPYRIGHT: CHEM ABS Vinyl chloride (I) concns. in air were measured in the polymn. room of a PVC plant. (75-01-4 Vinylchloride)(9002-86-2 Poly(vinyl chloride)) The stationary sampling of the air did not reflect the actual exposure of the individual workers in varying I levels, 1.9-209.5 mg m-3, depending on their occupational activity. Air sampling with the use of personal miniature pumps is necessary to obtain a reliable evaluation of individual exposures.
RN - 75-01-4; 9002-86-2
EM - 8107
- 46 SI - CA/094/213606E
AU - Krajewski J ; Dobecki M ; Milczarska A
AD - Zakl. Chem. Zanieczyszczen Powietrza, Inst. Pracy, Lodz
TI - Evaluation of the working atmospheres at the PVC plants
SO - Med. Pr.; VOL 31, ISS 2, 1980,149-53
LA - POL
CD - MEPAA
AB - CBAC COPYRIGHT: CHEM ABS The vinyl chloride (I) concns. in the air at 2 PVC plants in Poland were detd. (75-01-4 Vinyl chloride)(9002-86-2 Polyvinyl chloride) Before modernization of the plants, the concns. exceeded the max. permissible concn., i.e., 30 mg I/m3 air. Esp. in polymn. rooms and during autoclave cleaning, the PVC levels were occasionally higher than 200 and 1500 mg/m-3, resp. Hermetization of the polymn. processes and introduction of mech. cleaning of the autoclave considerably reduced the exposure of workers.
RN - 75-01-4; 9002-86-2
EM - 8107

- 47 SI - CA/094/196855R
AU - Kordo YP ; Alikova LF ; Gudenko VF ; Kvasha PN
AD - Vses. Proizvod. Ob'edin. "Yugmebel"
TI - Health and hygiene criteria for working conditions in the manufacture of furniture accessories from plastics
SO - Derevoobrab. Prom-st.; ISS 8, 1980,22
LA - RUS
CD - DVPYA
AB - CBAC COPYRIGHT: CHEM ABS Extensive use of polystyrene, polyethylene, PVC, ABS and SNP-2 and polypropylene in the furniture industry has resulted in the pollution of the work areas with products of thermal-oxidative destruction of those plastics. (9003-53-6 Polystyrene)(9002-88-4 Polyethylene)(9002-86-2 PVC)(9003-56-9 ABS)(9003-54-7 SNP-2)(9003-07-0 Polypropylene) In the casting of thermoplastic materials ChPPPr-63 and ARR-63, the noise exceeds the permissible level by 2-20 decibels; the permissible level is 18-30 decibels at 1000-8000 HZ frequency. (77538-11-5 ChPPPr-63)(77538-04-6 ARR-63) The chem. pollutants were dibutyl phthalate, NH₃, CO, and arom. hydrocarbons. (84-74-2 Dibutylphthalate) The major source of dibutyl phthalate and PhMe is acetylcellulose. (108-88-3 Toluene)(9004-35-7 Acetylcellulose) The installation of ventilators at vantage points is recommended.
RN - 9003-53-6; 9002-88-4; 9002-86-2; 9003-56-9; 9003-54-7; 9003-07-0; 77538-11-5; 77538-04-6; 84-74-2; 108-88-3; 9004-35-7; 630-08-0; 7664-41-7
EM - 8107
- 48 SI - CA/094/197530T
AU - Mason RG ; Chuang HY K ; Mohammad SF
AD - Univ. South Florida, Tampa
TI - Antithrombogenic surfaces: platelet-interface reactions
SO - Report; ISS Order No. PB81-123127,, 1980,66 pp.
LA - ENG
CD - D8REP
AB - CBAC COPYRIGHT: CHEM ABS Thrombin absorption onto Cuprophane surfaces was not saturable at thrombin concns. of .1 to req. 1 mg/mL and gave adsorption isotherms distinct from those for 4 other proteins: albumin, fibrinogen, IgG, and antithrombin III. (9002-04-4 Thrombin) Kinetic analyses suggested 2 types of binding sites, with thrombin-Cuprophane apparent dissoch. consts. (K_d) of 300 and 7190 nM, resp. Data from the competitive adsorption of thrombin on Cuprophane in the presence of albumin and IgG at both low and high thrombin concns. and the absence of such types of adsorption of thrombin on PVC support the concept of the presence of these 2 types of binding sites on Cuprophane. (9002-86-2 PVC) On the other hand, thrombin-PVC interaction resulted in a Langmuir type adsorption. IgG had higher affinity for PVC (K_d = 35 nM) than did the other 4 proteins (K_d = 300-900 nM). It is proposed that multiple types of binding sites specific for certain plasma proteins may exist on various artificial surfaces.

RN - 9002-04-4; 9002-86-2
EM - 8107

- 49 SI - CA/094/180263K
AU - Krug G ; Lahr H ; Schween P
TI - Treatment of combustible, solid, radioactive wastes
SO - Ger. Offen. PATENT NO. 2916203 11/06/80 (KEWA
Kerbrennstoff-Wiederaufarbeitungs-Gesellschaft m.b.H.)
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS A procedure is given for treating wastes which consists esp. of alpha-emitting radionuclides. The radioactive waste is mixed with H2SO4 to a concn. of 16 M and undergoes a reaction at high temps. The H2SO4 under the surface is oxidized by using HNO3 or NOx. The resulting solid residue is sepd. from the liq., radioactive substances are again recovered from the residue and afterward the remainder is solidified. The H2SO4 and HNO3 are recycled in the process. Before contacting the waste with H2SO4, the former is subjected to mech. treatment which consists of (1) breaking up the pieces into .ltoreq.20 mm sizes and (2) milling of the resulting pieces at <123 K to a grain size of .ltoreq.1 mm. Waste pieces from the 1st step are embrittled in liq. N and then milled in a cold app. The material from step 2 and the 90% H2SO4 form a suspension at <313 K. The reaction of the waste with the H2SO4 takes place at a pressure of 100-500 millibar and at .ltoreq.493 K. A simulated waste contained poly(vinyl chloride) 45, neoprene 20, cellulose 15, polyethylene granules 7.5, and polypropylene granules 7.5 wt.%.
RN - 7722-84-1; 9002-86-2; 9002-88-4; 9003-07-0; 9004-34-6
EM - 8106

- 50 SI - CA/094/162247D
AU - Komarov MM ; Kozlov MP ; Lushkov MS ; Valeev RK ; Dubyaga VP
AD - Vses. Nauchno-Issled. Inst. Sint. Smol, Vladimir
TI - Ultrafiltration treatment of wastewaters from iron oxide pigment production
SO - Lakokras. Mater. Ikh Primen.; ISS 6, 1980,61-2
LA - RUS
CD - LAMAA
AB - CBAC COPYRIGHT: CHEM ABS Ultrafiltration treatment of wastewaters from the Fe oxide pigment manufg. utilizes cellulose acetate, PVC, and dynamic membranes. (9004-35-7 Cellulose acetate)(9002-86-2 PVC) Dynamic membranes were effective (>99%) in removing pigment from the wastewater. An ultrafiltration app. with dynamic membranes has 2-4 times higher productivity and is more economical than 1 with PVC membranes.
RN - 9004-35-7; 9002-86-2; 1332-37-2
EM - 8106

- 51 SI - CA/094/144493B
AU - Krajewski J ; Milczarska A ; Dobecki M
AD - Inst. Occup. Med. Text. Chem. Ind., Lodz
TI - Suitability of air sampling techniques for the evaluation of occupational exposure to toxic substances
SO - Gig. Tr. Prof. Zabol.; ISS 10, 1980,17-20
LA - RUS
CO - GTPZA
AB - CBAC COPYRIGHT: CHEM ABS The av. concn. (.hivin.x) was detd. of vinyl chloride (VC) in air, sampled by different techniques at the plant for the prodn. of PVC. (75-01-4 Vinyl chloride)(9002-86-2 PVC) The distribution of various sampling sites, the value of .hivin.x in air samples over different operating zones (loading ramp, service bay, etc.), and variations in .hivin.x value over a period of 30 days were detd. The values of .hivin.x do not reflect adequately the extent of occupational hazard due to exposure to vc. The level of exposure (1.8-209.5 mg/m³ of air) was highly variable and depended on the kind of work performed.
RN - 75-01-4; 9002-86-2
EM - 8105
- 52 SI - CA/094/126849T
TI - Biological filters for wastewater treatment
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80111895 08/28/80 (Kohkoku Chemical Industries Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS The title materials having improved bacteria-retaining capabilities are manufd. from synthetic resins and high-mol. wt. water-sol. polymers. Thus, a corrugated sheet filter was manufd. from a mixt. contg. PVC 100, poly(vinyl alc.) (I) 10, and other additives 16.5 wt. parts. (9002-86-2 Poly(vinyl chloride))(9002-89-5 Poly(vinyl alcohol)) A dairy wastewater (321 ppm BOD) was aerobically biol. digested by spraying the wastewater over the corrugated filter to give a wastewater contg. 29 ppm BOD, vs. 41 ppm using a filter that was prepd. from a similar compn. contg. no I.
RN - 9002-86-2; 9002-89-5
EM - 8105
- 53 SI - CA/094/126765N
AU - Kudryavtsev NA ; Pronin AI ; Ruzanov SR
TI - Study of the removal of emulsion poly(vinylchloride) from wash waters in hydrocyclones
SO - Khim. Prom-st., Ser.: Proizvod. Pererab. Plastmass Sint. Smol; ISS 4, 1980,8-11
LA - RUS
CO - KPSSD
AB - CBAC COPYRIGHT: CHEM ABS Emulsified powd. PVC is effectively removed from wash waters (from wet dust removal from waste gas) using hydrocyclones with diam. .1toeq.30 mm and a feed pressure .1toeq.4 kg/cm². (9002-86-2 PVC)

PVC

- RN - 9002-86-2
EM - 8105
- 54 SI - CA/094/145405M
TI - Gas-treated PVC for clinical uses
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80137138 10/25/80 (Toray Industries, Inc.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS PVC resin is treated with gases like CO, NH3, and H2-N2 mixt. to prevent the release of the polymer additives and to improve the phys. properties suitable for medical and agricultural uses. (9002-86-2 PVC) Thus, a blood bag made of PVC was exposed to a gas mixt. consisting of CO and NH3 (95 and 5 mol%, resp.) at the pressure of 1 Torr. The amt. of dioctyl phthalate released from the bag into n-hexane for 2 h in a test container was 8 ppm, whereas that from untreated bag was 1614 ppm.
RN - 9002-86-2; 630-08-0; 1333-74-0; 7664-41-7; 7727-37-9
EM - 8105
- 55 SI - CA/094/145321F
AU - Zalewski W ; Zabojszcz WM ; Brzezicka-Bak M ; Kozlowski K
AD - Inst. Lekow, Warsaw
TI - Research for a biological model for evaluation of the effects of ethylene oxide sterilization of poly(vinyl chloride) medical materials
SO - Probl. Tech. Med.; VOL 11, ISS 3, 1980,195-204
LA - POL
CD - PTMDB
AB - CBAC COPYRIGHT: CHEM ABS A simple and sensitive test was described for the detection of the residue of ethylene oxide in a plastic material and its decompn. products. (75-21-8 Ethylene oxide) The toxicity of the residue obtained by extg. the ethylene oxide impregnated poly(vinyl chloride) medical drain was tested on fishes and on yeast. (9002-86-2 Poly(vinyl chloride)) Sensitivity with guppies was quite low. However an increase of human plasma clotting time was obsd. on plasma contact with ethylene oxide sterilized poly(vinyl chloride) material; this was a highly sensitive test.
RN - 75-21-8; 9002-86-2
EM - 8105
- 56 SI - CA/094/127301V
AU - Khanna SK ; Gode KD ; Jayaswal SB
AD - Inst. Technol., Banaras Hindu Univ., Varanasi
TI - Studies on sustained release solid dosage forms of propranolol hydrochloride
SO - Indian Drugs; VOL 18, ISS 3, 1980,103-8
LA - ENG
CD - INDRB
AB - CBAC COPYRIGHT: CHEM ABS Sustained release of propranolol-HCl (I) from different materials and in the presence of different adjuvants (carnauba wax, stearyl alc., poly(vinylpyrrolidone),

PVC, cellulose acetate, talc, lactose, and Encompress was compared in vitro using simulated gastric fluids. (318-98-9 Propranolol hydrochloride)(112-92-5 Stearyl alcohol)(9003-39-8 Poly(vinylpyrrolidone)(9002-86-2 PVC)(9004-35-7 Cellulose acetate)(63-42-3 Lactose) The highest dissoln. time (25 and 50% release) was obtained with carnauba wax. Encompress, talc, and talc-lactose mixt. caused the prolongation of I action. I release from Amberlite IR-120 and Zeokarb-225 showed a zero-order release with time. (9002-23-7 Amberlite IR-120)(9011-03-4 Zeokarb-225) With Amberlite IRC-50, .apprx.70% of I was released in 30 min. (9002-29-3 Amberlite IRC-50) With Indion CXC-125 and Agrion C-100, the I release followed a zero-order pattern. (69772-32-3 Indion CXC-125)(55191-64-5 Agrion C-100)

RN - 318-98-9; 112-92-5; 9003-39-8; 9002-86-2; 9004-35-7; 63-42-3;
9002-23-7; 9011-03-4; 9002-29-3; 69772-32-3; 55191-64-5;
7789-77-7; 14807-96-6

EM - 8105

57 SI - CA/094/089735E

TI - Decomposition of organic radioactive wastes

SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80129797 10/07/80 (Toyo Engineering Corp.)

LA - JPN

AB - CBAC COPYRIGHT: CHEM ABS Org. radioactive wastes are decompd. by boiling with conc. H2SO4 and an oxidant; then the vapor is condensed with a coolant at 160-300.degree. to return the condensate to the boiling mixt. For example, contaminated poly(vinyl chloride) sheet is added to boiling H2SO4 and then further treated with concd. HNO3. (9002-86-2 PVC) The vapor is cooled with a high-temp. Dowtherm.

RN - 9002-86-2; 7664-93-9; 7697-37-2

EM - 8104

58 SI - CA/094/089692P

TI - Filtration materials for biological digestion of wastewaters

SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80104693 08/11/80 (Kohkoku Chemical Industries Co., Ltd.)

LA - JPN

AB - CBAC COPYRIGHT: CHEM ABS The title materials having good bacteria-retaining properties are manufd. from synthetic resins and sol. inorg. salts. Thus, a mixt. contg. poly(vinyl chloride) 100, NaCl 20, and additives 18.5 wt. parts was pressed and extruded to obtain a corrugated sheet (0.7 mm thickness). (9002-86-2 Poly(vinyl chloride)) The sheet retained bacteria better than a sheet prepd. from a similar compn. contg. no NaCl.

RN - 9002-86-2; 7647-14-5

EM - 8104

- 59 SI - CA/094/089391Q
AU - Saito N ; Yanai E
TI - Fire behavior and combustion products in full scale room fire test
SO - Shobo Kenkyusho Hokoku; VOL 49,, 1980,21-8
LA - JPN
CD - SHKHB
AB - CBAC COPYRIGHT: CHEM ABS Full scale room fire tests were carried out to det. toxic gases evolved from burning wood and other polymeric materials. Their fire behaviors show good reproducibility. Twenty one combustion products including CO, CN-, and aldehydes are identified and 18 products of them are analyzed quant. CO is considered to be the most dangerous product because of its high concn. formed during fire situations. The max. concns. of aldehydes and CN- formed from synthetic polymers contg. N atoms are obtained several minutes after a period showing the small rate of complete combustion and large wt. loss rate. The CN- are formed more efficiently from synthetic polymers than from wool.
- RN - 67-56-1; 67-64-1; 71-43-2; 74-82-8; 74-84-0; 74-85-1; 74-86-2; 74-90-8; 74-98-6; 74-99-7; 75-05-8; 75-07-0; 106-97-8; 107-02-8; 107-13-1; 108-88-3; 110-00-9; 115-07-1; 124-38-9; 542-92-7; 630-08-0; 9002-86-2; 25014-41-9; 25167-67-3; 27137-41-3
- EM - 8104
- 60 SI - CA/094/070772T
AU - Walloschke E
TI - Active sludge process for biological wastewater purification
SO - Ger. Offen. PATENT NO. 2904658 08/14/80
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS In the aerated activated-sludge process, the length of time it takes for the air bubbles to travel from the bottom of the tank to the surface is increased by a system of baffles, e.g., free-floating poly(vinyl chloride) pipe sections, 30-60 mm in both diam. and length, which have a rough surface. (9002-86-2 PVC)
- RN - 9002-86-2
EM - 8104
- 61 SI - CA/094/109270E
AU - Sugitachi A ; Tanaka M ; Kawahara T ; Takagi K
AD - Dep. Surg., Osaka Natl. Hosp., Osaka
TI - Antithrombogenicity of urokinase-immobilized polymer surfaces
SO - Trans. - Am. Soc. Artif. Intern. Organs; VOL 26,, 1980,274-8
LA - ENG
CD - TAIOA
AB - CBAC COPYRIGHT: CHEM ABS A plasminogen activator, urokinase, was immobilized on a polymer (nylon 6, nylon 11, PVC, Ducor polyurethane, polyester elastomer, and silicone rubber) to provide local plasminogen-activating activity and to maintain fibrinolytic activity over a long term. (9039-53-6 Urokinase)(25038-54-4 nylon 6)(25035-04-5 nylon 11)(9002-86-2 PVC)(76632-93-4 Ducor) A urokinase-immobilized nylon 6 tube

maintained fibrinolytic activity during storage at 25.degree. for >12 mo. The immobilized tubes were used as drains and catheters.

- RN - 9039-53-6; 25038-54-4; 25035-04-5; 9002-86-2; 76632-93-4
EM - 8104
- 62 SI - CA/094/109126N
AU - Gouillet D ; Fusselier M
AD - Pharm. Cent. Hosp. Civ. Lyon, Lyon
TI - Evaluation of toxicological risks produced by the migration of two plasticizers, diethylhexyl phthalate and diethylhexyladipate, from poly(vinyl chloride) objects used in medicine
SO - Labo-Pharma - Probl. Tech.; VOL 28, ISS 304, 1980,939-48
LA - FRE
CD - LPPTA
AB - CBAC COPYRIGHT: CHEM ABS A review, with 73 refs., of the toxicity and metab. of bis(2-ethylhexyl) phthalate (I) and bis(2-ethylhexyl) adipate and the risks to patients from their leaching from poly(vinyl chloride)-based medical-surgical equipment such as blood containers. (117-81-7 Diethylhexyl phthalate)(103-23-1 bis(2-ethylhexyl) adipate)(9002-86-2 Poly(vinyl chloride))
RN - 117-81-7; 103-23-1; 9002-86-2
EM - 8104
- 63 SI - CA/094/109109J
AU - Biggs MS ; Baldwin J
AD - PVC Div., British Ind. Plast. Ltd., Durham
TI - Flexible PVC compound for long-term contact with human tissue
SO - Plast. Rubber: Mater. Appl.; VOL 5, ISS 4, 1980,187-91
LA - ENG
CD - PRMAD
AB - CBAC COPYRIGHT: CHEM ABS The development of flexible PVC medical disposable devices and formulation with improved resistance to plasticizer extn. are discussed and reviewed with 12 refs. (9002-86-2 PVC)
RN - 9002-86-2
EM - 8104
- 64 SI - CA/094/090294S
AU - Pregnolato NP ; Murata LT Fu ; Garrido NS
AD - Outros Mater. Embalagem Inst. Adolfo Lutz
TI - Test of various plastic materials employed in containers for Brazilian pharmaceuticals and clinical equipment
SO - Rev. Inst. Adolfo Lutz; VOL 40, ISS 1, 1980,55-7
LA - POR
CD - RIALA
AB - CBAC COPYRIGHT: CHEM ABS Of 185 samples of plastic materials examd. only polyethylene fulfilled the requirements under Brazilian legislation for packaging of pharmaceuticals and clin. supplies. (9002-88-4 Polyethylene) Polyoxypropylene, PVC, polystyrene, ABS resin, latex, polyamides and silicones did not satisfy those requirement due to their pH and/or extraneous odors resulting from plasticizers and stabilizers. (25322-69-4

Polyoxypropylene)(9002-86-2 PVC)(9003-53-6 Polystyrene)(9003-56-9 ABS resin) All samples were sterilized by autoclave prior to examn. The addn. of the plasticizer dioctyl phthalate to the flexible film of PVC and of the stabilizer tin dioctyl bis (2-ethylhexylthioglycerolate) to rigid PVC caused these the extraneous odors in those materials. (117-81-7 Dioctyl phthalate)(26401-97-8 tin dioctyl bis (2-ethylhexylthioglycerolate))

RN - 9002-88-4; 25322-69-4; 9002-86-2; 9003-53-6; 9003-56-9; 117-81-7; 26401-97-8
EM - 8104

65 SI - CA/094/077714J

AU - Ungvary G

AD - State Inst. Occup. Health, Budapest

TI - Studies on the teratogenicity of PVC

SO - Acta Morphol. Acad. Sci. Hung.; VOL 28, ISS 1-2, 1980,159-64

LA - ENG

CD - AMSHA

AB - CBAC COPYRIGHT: CHEM ABS A review with many refs. on the teratogenicity of PVC. (9002-86-2 PVC)

RN - 9002-86-2

EM - 8104

66 SI - CA/094/071450Y

AU - Morosoff N ; Yasuda H

AD - Res. Triangle Inst., Research Triangle Park

TI - A study of an electrodeless glow discharge as a means of modifying the surface of polymers

SO - Report; ISS RTI/0790/00-01F, NIH-NO1-HV-3-2913-7; Order No. PB80-212715,, 1980,160 pp.

LA - ENG

CD - D8REP

AB - CBAC COPYRIGHT: CHEM ABS A method of modifying the surface of materials for use in prosthetic devices in contact with blood was developed by the deposition of glow discharge polymer. The effect of choice of monomer and of operational parameters on the chem. nature of the glow discharge polymer was elucidated. The method gave a very thin (750-1000 .ANG.), highly adhesive and cohesive coating that did not affect the bulk properties of the substrate. Surfaces with a wide range of chem. properties were a barrier to leaching of plasticizer from PVC formed by glow discharge treatment and a change of chem. properties for tetramethyldisiloxane glow discharge polymer was found with aging. (9002-86-2 PVC)

RN - 9002-86-2

EM - 8104

- 67 SI - CA/094/071432U
AU - Salthouse TN ; Matlaga BF
AD - Cell Biol. Sect., Ethicon Res. Found., Somerville
TI - Effects of implant surface on cellular activity and evaluation of histocompatibility
SO - Adv. Biomater.; VOL 1, ISS Eval. Biomater., 1980,295-305
LA - ENG
CD - ABIOD
AB - CBAC COPYRIGHT: CHEM ABS Poly(tetrafluoroethylene) (PTFE) rods of identical size with either smooth or abraded surfaces were implanted in gluteal muscles of rats for 14, 28, 42, 56, and 90 days. (9002-84-0 Poly(tetrafluoroethylene)) PVC rods contg. 0.4% dibutyltin, of similar size and with known toxic effect, were also implanted for 14, 21, and 28 days. (9002-86-2 Poly(vinylchloride))(1002-53-5 Dibutyltin) The cellular response to the abraded PTFE and PVC rods was significantly higher than that obsd. with the smooth PTFE implants. Acid phosphatase and aminopeptidase activity was enhanced in the cellular reaction to the abraded and PVC implants, but was minimal with the smooth samples at all time periods. (9001-77-8 Acid phosphatase)(9031-94-1 Aminopeptidase) Glucose-6-phosphate dehydrogenase, indicative of pentose shunt activity, was greater at abraded rod implant sites in comparison to smooth samples, and absent at PVC implant sites. (9001-40-5 Glucose-6-phosphate dehydrogenase) Pos. 3H-thymidine incorporation by autoradiog. was obsd. in macrophages from 42 to 90 days at abraded implant sites, signifying DNA synthesis and cell replication. No cell replication was assocd. with the smooth samples. PVC samples were not treated for autoradiog. Surfaces thus appear to affect profoundly the physiol. of responding cells at implant sites. Because the abraded surface had significant effects on the cellular response, enzyme activity, and cell turnover at implant sites, it is concluded that strict standardization of implant surface is necessary for valid comparative evaluations of biomaterials for histocompatibility.
RN - 9002-84-0; 9002-86-2; 1002-53-5; 9001-77-8; 9031-94-1; 9001-40-5
EM - 8104
- 68 SI - CA/094/071276W
AU - Contreras TJ ; Jemionek JF ; French JE ; Shields LJ
AD - Dep. Exp. Hematol., Armed Forces Radiobiol. Res. Inst., Bethesda
TI - Effect of plastic containers on liquid preservation of human granulocytes. I. With and without deoxyribonuclease and hydrocortisone
SO - Transfusion (Philadelphia); VOL 20, ISS 5, 1980,519-30
LA - ENG
CD - TRANA
AB - CBAC COPYRIGHT: CHEM ABS Of the 4 types of plastic containers evaluated, PL-146 (PVC) was the container of choice for granulocyte storage for >48 h. (9002-86-2 PL-146) Granulocytes stored in these transfer packs had higher viability and slower mean cell vol. expansion rates during storage than did

granulocytes stored in other plastic containers (bionriented-biaxial polyolefin, ethylene-vinyl acetate copolymer, polypropylene). (24937-78-8 Ethylene-vinyl acetate copolymer)(9003-07-0 Polypropylene) The addn. of hydrocortisone and DNase to the storage medium for all containers resulted in overall higher viability and decreased mean cell vol. expansion rate, but no change in phagocytic function. (50-23-7 hydrocortisone)(9003-98-9 DNase)

RN - 9002-86-2; 24937-78-8; 9003-07-0; 50-23-7; 9003-98-9
EM - 8104

- 69 SI - CA/094/059202M
AU - Hilado CJ ; Huttlinger PA
AD - Prod. Saf. Corp., Sunnyvale
TI - Overheating of thermal insulation materials: toxicity of gases
SO - Proc. Int. Conf. Therm. Insul.; VOL 2,, 1980,119-30
LA - ENG
CD - PCTND
AB - CBAC COPYRIGHT: CHEM ABS Of several thermal insulation materials tested for overheating off-gas toxicity in mice, the polyimide-type and phenolic rigid foams exhibited the shortest times to death and the polyisocyanurate, poly(vinyl chloride), polyurethane, and polystyrene rigid foams exhibited the longest times to death. (27026-93-3 Polyisocyanurate)(9002-86-2 Poly(vinyl chloride))(9003-53-6 Polystyrene) Cellulosic boards based on bagasse, newsprint, and starch exhibited longer times to death than cellulosic boards based on mixed hardwood fibers and phenol-HCHO or urea-HCHO binder. The addn. of air flow reduced the time to death. CO was apparently the principle toxicant in the pyrolysis gases, in some cases the CO levels were high enough to implicate it as the only toxicant.
RN - 27026-93-3; 9002-86-2; 9003-53-6; 630-08-0; 25014-12-4; 62238-79-3
EM - 8104
- 70 SI - CA/094/052173U
TI - Treatment of odorous waste gas from an oven for foaming PVC
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 99516 07/29/80 (Kiso Kogyo K. K.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS The title waste gas is deodorized by combustion in a manner such that the heat of the combustion waste gas is recovered. Thus, PVC was foamed in an oven at 230.degree. and, at the center portion of the oven, a portion of the waste gas (contg. 20,000 ppm odorants) formed was withdrawn and burned to give a deodorized gas (550.degree.). (9002-86-2 PVC) This gas was heat-exchanged with a 2nd portion of the waste gas (contg. 300 ppm odorants) from the side portion of the oven and then discharged. The heat-exchanged 2nd waste gas (350.degree.) was used to maintain the oven temp. at 230.degree..
RN - 9002-86-2
EM - 8103

- 71 SI - CA/094/053001Y
AU - Pusineri C ; Goletto J
TI - Poly(vinyl chloride) and polyurethane compositions for medical use and objects obtained from these compositions
SO - Eur. Pat. Appl. PATENT NO. 12701 06/25/80 (SODIP, Societe des Industries Plastiques S. A.)
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS Mixts. of PVC or vinyl chloride copolymers and polyurethanes having tertiary amine and/or NH4+ groups having improved mech. properties, transparency, and hemocompatibility were prepd. and used in medical applications, e.g. catheters. (9002-86-2 PVC) Thus, aminoacetic hydrazide-diphenylmethane 4,4'-diisocyanate-N-ethyldiethanolamine-propylene oxide copolymer (I) was prepd. and 5.33 g of it was mixed with 80 g of PVC soln. (100 g PVC in 900 g DMF) to give a 60:40 PVC-polyurethane mixt. (62859-17-0 aminoacetic hydrazide-diphenylmethane 4,4'-diisocyanate-N-ethyldiethanolamine-propylene oxide copolymer) The mixt. was converted a transparent film with good tear resistance. I-MeI salt was also used with PVC mixts. Heparinized compns. having good hemocompatibility and antithrombogenicity were prepd. from PVC, quaternized polyurethane (NH4+ contg.), and 1-15% heparin. (9005-49-6 Heparin)
RN - 9002-86-2; 62859-17-0; 76066-95-0; 9005-49-6; 9003-22-9; 9005-09-8; 76066-99-4; 76067-00-0
EM - 8103
- 72 SI - CA/094/052937W
TI - Materials for methyl salicylate packaging
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 95564 07/19/80 (Toppan Printing Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Poultices contg. Me salicylate (I) are packed in Al and other metal foils by using a compn. contg. emulsified ethylene-acrylic acid copolymer and poly(vinylene chloride) as adhesive agent. (119-36-8 Me salicylate)(9010-77-9 ethylene-acrylic acid copolymer)(9002-86-2 poly(vinylene chloride))
RN - 119-36-8; 9010-77-9; 9002-86-2
EM - 8103
- 73 SI - CA/094/052889G
AU - Frosin VN ; Tsibikov BV ; Izvekova GI ; Rabin'kii BY ; Pakhomov SV
AU - Ramkova NV ; Alekseeva MI ; Kareev NV ; Likhtman TV ; et al
AD - Nauchno-Proizvod. Ob'edin. "Medoborudovanie", Moscow
TI - Selection of conditions for formaldehyde gas sterilization
SO - Med. Tekh.; ISS 5, 1980,35-9
LA - RUS
CD - MEDTB
AB - CBAC COPYRIGHT: CHEM ABS A 100-L chamber is described for the sterilization of surgical goods made from polyethylene, PVC, and

polypropylene using H₂CO as the disinfecting gas. (9002-88-4 Polyethylene)(9002-86-2 PVC)(9003-07-0 Polypropylene)(50-00-0 Formaldehyde) Also included is the study on various factors which affect sterilization with H₂CO. Air pressure in the chamber should be <326 mm and 16-20% H₂CO is suitable for total sterilization. Efficiency of H₂CO sterilization depends to a great extent on the type of packaging material. Polyethylene materials are less permeable to H₂CO vapors and thus coarse calico or kraft paper is recommended. The effect of NH₃, used for the removal of H₂CO after sterilization which may cause toxic effects, is also included, together with the amts. necessary to bring about such neutralization.

RN - 9002-88-4; 9002-86-2; 9003-07-0; 50-00-0
EM - 8103

- 74 SI - CA/094/052880X
AU - Chaigneau M
AD - Lab. Gaz, Univ. Rene-Descartes, Paris
TI - Action of ethylene oxide on plastic materials, silicones and rubbers: absorption and combination
SO - Ann. Pharm. Fr.; VOL 38, ISS 4, 1980,315-21
LA - FRE
CD - APFRA
AB - CBAC COPYRIGHT: CHEM ABS The kinetics of sorption of ethylene oxide (I) by different plastics and elastomers varied according to the type of the polymer and the additive (e.g. plasticizer) used. (75-21-8 Ethylene oxide) Thus, the presence of plasticizers in PVC retarded the rate of absorption of I and increased the satn. value. (9002-86-2 PVC) Nylon 6, nylon 66, nylon 610, and nylon 11 had similar rate of absorption of I, but the absorption power was different except in nylon 610 and 11. (25038-54-4 nylon 6)(32131-17-2 nylon 66)(9008-66-6 nylon 610)(25035-04-5 nylon 11) Polypropylene, ABS and poly(tetrafluoroethylene) were different in their behavior towards I. (9003-07-0 Polypropylene)(9003-56-9 ABS)(9002-84-0 Poly(tetrafluoroethylene)) Additives affected I absorption by silicones. ABS, poly(tetrafluoroethylene), and silicones were stable towards I. Sterilization of plastics and rubbers by I is discussed.

RN - 75-21-8; 9002-86-2; 25038-54-4; 32131-17-2; 9008-66-6;
25035-04-5; 9003-07-0; 9003-56-9; 9002-84-0; 9002-88-4;
9003-22-9; 9003-53-6; 9011-14-7; 24936-68-3; 24937-78-8
EM - 8103

- 75 SI - CA/094/052857V
AU - Novotny Z ; Mirejovsky P
AD - Otolaryngol. Klin., Karlovy Univ., Prague
TI - Tolerance of alloplastic materials in experiment
SO - Cesk. Otolaryngol.; VOL 29, ISS 4, 1980,202-7
LA - CZE
CD - CEOTA
AB - CBAC COPYRIGHT: CHEM ABS Ag, Fe, PVC, polyethylene, rubber platelets (5 .times. 5 mm), and silicone rubber balloons (diam. 5

mm) were implanted under the skin of guinea pigs. (9002-86-2 PVC)(9002-88-4 Polyethylene) The no. of mononuclear macrophages surrounding the implants was maximal after 2 wk and decreased afterwards esp. around the silicone balloons. The thickness of collagenous deposits around the implants was not related to the compn. of the implants. Apparently, silicone rubber is more suitable for implants than the other materials.

RN - 9002-86-2; 9002-88-4; 7439-89-6; 7440-22-4
EM - 8103

- 76 SI - CA/094/042197R
AU - Herpol C
AD - Dep. Zoophysiol., State Univ. Gent, Ghent
TI - Biological evaluation of toxicity caused by combustion of building materials
SO - Fire Mater.; VOL 4, ISS 3, 1980,127-43
LA - ENG
CD - FMATD
AB - CBAC COPYRIGHT: CHEM ABS Tests performed on 35 materials, including woods, synthetics, and textile materials, which were submitted to thermal degrdn. at 3 different combustion temps., were studied. In addn., the interpretation and limitations of toxicol. test results are discussed more generally.
RN - 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6
EM - 8103
- 77 SI - CA/094/007247K
AU - Rudi VP ; Orynyak MV ; Sidenko ZS
AD - Chernovits. Univ., Chernovtsy
TI - Effect of cationic surfactants on poly(vinyl chloride) precipitation from wastewater
SO - Kolloidn. Zh.; VOL 42, ISS 3, 1980,589-91
LA - RUS
CD - KOZHA
AB - CBAC COPYRIGHT: CHEM ABS Wastewaters contg. colloidal PVC can be clarified by adding $[Me_2RN(CH_2)_nNRMe_2]_2 + 2Br-(I)$ where R are C5-12 alkyls and n is 2-20 as the coagulants. (9002-86-2 PVC) Thus, the addn. of I 1.0-1.5 mmole/L to 8% PVC latex contg. Na alkyl sulfate as the emulsifier produced 100% coagulation in .apprx.80 min. The coagulation proceeded in 2 stages, each preceded by induction periods (τ) depending on R and n. Large R and n decreased τ ; when R contained >7 carbon atoms there was no coagulation.
RN - 9002-86-2; 6309-01-9; 18464-23-8; 18507-15-8
EM - 8102

PVC

- 78 SI - CA/094/020460U
AU - Kline WM
TI - Thrombo-resistant non-thrombogenic objects formed from a uniform mixture of a particulate resin and colloidal graphite
SO - U.S. PATENT NO. 4219520 08/26/80 (Medical Evaluation Devices and Instruments Corp.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS Thromboresistant materials for vascular assist devices (such as catheters) are prepd. from a polymer-graphite composite with random particles of the colloidal graphite exposed on the surface; the surfaces are etched with Na dispersed with naphthalene in a solvent if the material is a halo hydrocarbon or with a hot oxidizing acid if the material is a polyolefin, polyurethane, silicone, or vinyl polymer. After cleaning, the material is coated with a cationic surfactant (e.g. Zephiran) to form a heparin-receptive surface, and a coating of heparin is applied over the surfactant. (9005-49-6 Heparin) Catheter tubing thus prepd. is both thromboresistant and nonthrombogenic.
RN - 9005-49-6; 7782-42-5; 9002-86-2; 9002-88-4; 9003-07-0; 25067-11-2; 25135-99-3
EM - 8102

- 79 SI - CA/094/020364R
AU - Mathot F ; Bonnard J ; Hans P ; Bosly J
AD - Pharm. Hop. Baviere, Liege
TI - Perfusions of nitroglycerin. Study of absorption by different plastic materials
SO - J. Pharm. Belg.; VOL 35, ISS 5, 1980,389-93
LA - FRE
CD - JPBEA
AB - CBAC COPYRIGHT: CHEM ABS The use of PVC and silicone tubes for infusion of nitroglycerin (I) solns. (0.656 mgI/mL) resulted in marked redn. (69-84%) of I initial concns. due to the absorption of I by these plastics. (9002-86-2 PVC)(55-63-0 Nitroglycerin) Teflon, high-d. polyethylene and polypropylene were recommended to be used in the infusion system since they did not change I concn. (9002-84-0 Teflon)(9002-88-4 Polyethylene)(9003-07-0 Polypropylene) I concn. was detd. by gas chromatog. and high-performance liq. chromatog. in an infusion system comprising a disposable polypropylene syringe (60 mL), a polyethylene tubing, and an elec. pump.
RN - 9002-86-2; 55-63-0; 9002-84-0; 9002-88-4; 9003-07-0
EM - 8102

- 80 SI - CA/094/020351J
AU - Jacobson MS ; Kevy SV ; Parkman R ; Wesolowski JS
AD - Dep. Med., Child. Hosp. Med. Cent., Boston
TI - An in vitro evaluation of a new plasticizer for poly(vinylchloride) medical devices
SO - Transfusion (Philadelphia); VOL 20, ISS 4, 1980,443-7
LA - ENG
CD - TRANA
AB - CBAC COPYRIGHT: CHEM ABS The rate of Hatcol-200 (H-200) leaching from polyvinyl chloride (PVC) by serum is 1/100 that of di-2-ethylhexyl phthalate (DEHP) as detd. by radioassay. (75882-00-7 Hatcol-200)(9002-86-2 Polyvinyl chloride) There is a proportional decrease in leachability of DEHP but not of H-200 as the plasma proteins are dild. Saline exts. of DEHP demonstrated a low but progressive rate of leaching with an accumulation of 11 mug/mL after 7 wk whereas H-200 showed only a const. residue of 0.35 mug/mL. Normal human serum incubated for 3 wk at 37.degree. with PVC strips plasticized with DEHP produced significant growth-inhibition of human diploid fibroblasts. Human serum incubated in an identical manner with PVC plasticized with H-200 for up to 4 wk demonstrated no effect on tissue culture. Thus, H-200 deserves further evaluation as a replacement for DEHP in PVC biomedical devices.
RN - 75882-00-7; 9002-86-2
EM - 8102
- 81 SI - CA/094/007704G
AU - Gilding DK ; Reed AM ; Baskett SA
AD - Univ. Liverpool, Liverpool
TI - Ethylene oxide sterilization: effect of polymer structure and sterilization conditions on residue levels
SO - Biomaterials (Guildford, Engl.); VOL 1, ISS 3, 1980,145-8
LA - ENG
CD - BIMAD
AB - CBAC COPYRIGHT: CHEM ABS A modified Sterivit cycle using 15 M% ethylene oxide-85% M CO2 mixt. and heating to 70.degree. with vacuum and air rinsing gave excellent kill of Bacillus subtilis with minimal effects on the properties of hydrophilic and biodegradable polymers studied and left residues of <400 ppm. (75-21-8 ethylene oxide) Plasticized PVC and polypropene fibers showed higher residues than others after gassing. (9002-86-2 PVC)
RN - 75-21-8; 9002-86-2; 124-38-9; 9002-84-0; 9003-05-8
EM - 8102
- 82 SI - CA/093/031110K
AU - Roed-Petersen J
AD - Dep. Dermatol., Gentofte Hosp., Hellerup
TI - Allergic contact dermatitis from butyl acetate
SO - Contact Dermatitis; VOL 6, ISS 1, 1980,55
LA - ENG
CD - CODED
AB - CBAC COPYRIGHT: CHEM ABS A worker, in pharmaceutical manufg.

developed dermatitis from BuAc presumably because of its attack on PVC gloves. (123-86-4 Butyl acetate)(9002-86-2 PVC)

RN - 123-86-4; 9002-86-2
EM - 8008

83 SI - CA/092/203102G

AU - Teraoka R ; Muraoka M ; Kobayashi M ; Hirano T
TI - Waste solution treatment
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 80 03828 01/11/80 (Shinnippon Koa K. K.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Wastewater is treated in a contact-oxidn. app. The app. consists of a series of flat vertical chambers contg. honeycomb filler. The inlet and outlet are placed on the bottom of each chamber, and all of the inlets are connected to 1 pump. An optional storage tank is placed under the app. Thus, a contact-oxidn. app. consisting of 6 7-m³ tanks contg. 6-m³ PVC honeycomb filler was used to treat fish-processing wastewater at 72 m³/day. (9002-86-2 PVC) The BOD removal was 60%. The app. uses less power and time than a rotating disk app.

RN - 9002-86-2
EM - 8007

84 SI - CA/092/203564J

AU - Malakhova ZN ; Artem'ev AI
AD - Vses. Nauchno-Issled. Inst. Farm., Moscow
TI - Study of the possibility of using contour packaging for validol tablets
SO - Khim.-Farm. Zh.; VOL 14, ISS 1, 1980,89-93
LA - RUS
CD - KHFZA
AB - CBAC COPYRIGHT: CHEM ABS Of several packaging materials examd. for packaging of validol (menthyl valerate) tablets at elevated temps. (20-70.degree.), Servak made from PVC films and lacquered Al foil and noncellular packaging from lacquered Al foil were quite satisfactory. (28221-20-7 Validol)(9002-86-2 PVC) Lacquered cellophane and combined polyethylene-cellophane films are not satisfactory because of soly. of the film materials in the validol vapors and stratification problems. (9002-88-4 Polyethylene)

RN - 28221-20-7; 9002-86-2; 9002-88-4; 7429-90-5
EM - 8007

85 SI - CA/092/158568A

AU - Hilado CJ ; Cumming HJ ; Casey CJ
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco
TI - Toxicity of pyrolysis gases from foam plastics
SO - SAMPE Q.; VOL 11, ISS 2, 1980,32-5
LA - ENG
CD - SAMQA
AB - CBAC COPYRIGHT: CHEM ABS Twenty-three samples of flexible foams and 12 samples of rigid foams were evaluated for toxicity of

pyrolysis gases, using the University of San Francisco toxicity screening test method. Polychloroprene among the flexible foams and polystyrene among the rigid foams exhibited the least toxicity under the test conditions. Increasing char yield was accompanied by decreased flammability, and by decreased toxicity in some materials.

RN - 74-82-8; 541-59-3; 630-08-0; 9002-86-2; 9002-88-4; 9003-53-6;
25585-20-0

EM - 8006

86 SI - CA/092/158469U

AU - Birky MM ; Paabo M ; Brown JE

AD - Cent. Fire Res., NBS, Washington

TI - Correlation of autopsy data and materials involved in the
Tennessee jail fire

SO - Fire Saf. J.; VOL 2, ISS 1, 1980,17-22

LA - ENG

CD - FSJOD

AB - CBAC COPYRIGHT: CHEM ABS In the Maury County, Tennessee jail fire of 1977, 4 materials (consisting of foam and fabric covering) were involved and because of the limited no. of materials involved it was possible to correlate the toxicol. data with the materials involved. The toxicol. significance of elevated HCN in fire fatalities was not resolved, since both CO and HCN were elevated in the victims, however, in no case could cyanide be identified as the principle or sole cause of death. The distribution and pos. correlation between HCN and CO in the blood of various victims may reflect the variation of individual ability to withstand anoxic shock.

RN - 74-90-8; 630-08-0; 9002-86-2

DTG - BLOOD CONCENTRATIONS ; HEMATOLOGY ; LETHAL DOSAGE

EM - 8006

87 SI - CA/092/122565H

AU - Tawaratani T ; Inui Y ; Shibasaki I

AD - Fac. Eng., Osaka Univ., Osaka

TI - Effect of coexisting substances on the sporicidal activity of
gaseous propylene oxide toward Bacillus subtilis var. niger

SO - Hakko Kogaku Kaishi; VOL 58, ISS 1, 1980,1-9

LA - JPN

CD - HKOKD

AB - CBAC COPYRIGHT: CHEM ABS The mechanism of the protective action of coexisting substances, i.e. milk casein, agar powder, cellulose powder, polyvinyl chloride powder, teflon powder, and glass beads, against the sporicidal activity of gaseous propylene oxide (PO) toward B. subtilis niger 4380 spores was studied. (9002-18-0 Agar)(9004-34-6 Cellulose)(9002-86-2 Polyvinyl chloride)(9002-84-0 Teflon)(75-56-9 Propylene oxide) The 1st 4 substances showed remarkable protective action, whereas the others had no effect. The isothermal PO absorption curve of spores was of the Henry's type, so the D value of spores was dependent on the amt. of adsorbed PO. But the amt. of PO adsorbed by spores decreased with increasing water content of

spores. When spores were exposed to gaseous PO, the amt. of PO adsorbed by spores was decreased in the presence of coexisting protective substances. Although spores lost the water during the gaseous PO treatment, loss of water from spores was suppressed by the coexistence of protective substances. Apparently, the protective effect of coexisting substances is not due to the redn. of gaseous PO concn. but to the suppression of water loss from spores during the gaseous treatment.

RN - 9002-18-0; 9004-34-6; 9002-86-2; 9002-84-0; 75-56-9
EM - 8005

- 88 SI - CA/092/082376P
AU - Lindon JN ; Collins RE C ; Coe NP ; Jagoda A ; Brier-Russell D
AU - Merrill EW ; Salzman EW
AD - Dep. Surg., Beth Israel Hosp., Boston
TI - In vivo assessment in sheep of thromboresistant materials by determination of platelet survival
SO - Circ. Res.; VOL 46, ISS 1, 1980,84-90
LA - ENG
CD - CIRUA
AB - CBAC COPYRIGHT: CHEM ABS The thromboresistance of 13 potentially blood-compatible polymers was assessed in sheep by detg. survival of ⁵¹Cr-labeled platelets. Polymer tubing (120-150 cm .times. 2.3 mm i.d.) coiled around the neck was incorporated into the circulation through silicone rubber connectors as a carotid artery-external jugular vein shunt. The mean platelet half-life in control animals (shunt control) was 78.2 h. Eleven of the 13 polymers tested significantly shortened platelet half-life. PVC (T_{1/2} = 45.4 h), polyperfluoroethylene (T_{1/2} = 47.0 h), and Me acrylate-acrylonitrile copolymer (T_{1/2} = 50.7 h) produced the greatest shortening. (9002-86-2 PVC)(9002-84-0 Polyperfluoroethylene)(24968-79-4 Me acrylate-acrylonitrile copolymer) Only silica-free polydimethyl siloxane (T_{1/2} = 74.7 h) and poly(Me acrylate) (PMA) (T_{1/2} = 81.5 h) were indistinguishable from shunt controls. (9003-21-8 Poly(methyl acrylate)) Pretreatment of PMA tubing with autologous plasma in a paired trial significantly increased platelet half-life (P < 0.05 vs. untreated PMA). This system offers an economical reproducible, sensitive, and biol. relevant method for assessment of the reactivity of artificial surfaces with platelets.

RN - 9002-86-2; 9002-84-0; 24968-79-4; 9003-21-8; 9003-20-7;
9003-42-3; 9003-53-6; 9011-14-7; 25609-74-9; 28825-23-2
EM - 8003

- 89 SI - CA/092/116462F
AU - Sako E
TI - Plasticized polyvinyl chloride material
SO - Brit. PATENT NO. 1550260 08/08/79 (Green Cross Corp.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Plasticized PVC, useful in the manuf. of blood-compatible prosthetics and containers and as a packaging material for foods, comprises 1 part PVC and 0.5-1.0

parts of a polyurethane of OH no. 50-60 and softening point 68-72.degree. which is chromatog. pure. (9002-86-2 PVC) The polyurethane is derived from an alkylene or oxyalkylene diisocyanate and an ester of a carboxylic acid and an alc., both of which have .gtoreq.6 C atoms. Thus, Medidex was transparent, withstood sterilization by ethylene oxide or high-pressure steam, showed good mech. properties esp. at low temps., and gave no toxic effect as a packaging material for food nor as a prosthetic material.

RN - 9002-86-2

EM - 8010

90 SI - CA/091/050898Y

AU - Hilado CJ ; Brauer DP

AD - Fire Saf. Cent., Univ. San Francisco, San Francisco

TI - Concentration-time data in toxicity tests and resulting relationships

SO - J. Combust. Toxicol.; VOL 6, ISS MAY, 1979,136-49

LA - ENG

CD - JCTOD

AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Periodic analyses for CO and CH4 in the animal exposure chamber during pyrolysis of polyethylene at 800.degree. without forced air flow showed that the concns. of these compds. increased with exposure time. (74-82-8 Methane) These observations, and similar observations for polyurethane flexible foam, permitted the calcn. of CO toxicity in terms of death product concn. (DP) value, in addn. to flammability CO value. Obsd. DP exceeding the crit. DPCO of 47,200 ppm-min for CO may indicate that lethal exposures were reached earlier but not immediately manifested because of the time delay involved in physiol. processes. On the basis of DPCO, CO may be the sole toxicant in the case of polyethylene, polypropylene, polyoxymethylene, polystyrene, polycarbonate, ethylene-propylene-diene rubber, and wood.

RN - 74-82-8; 630-08-0; 9002-81-7; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9; 9010-98-4; 9011-14-7; 25038-54-4; 25585-20-0; 25766-59-0; 27026-93-3; 62238-79-3

EM - 8007

91 SI - CA/091/050498T

AU - Hilado CJ ; Cummings HJ ; Casey CJ

AD - Fire Saf. Cent., Univ. San Francisco, San Francisco

TI - Toxicity of pyrolysis gases from plastics and elastomers

SO - J. Elastomers Plast.; VOL 11, ISS 1, 1979,3-14

LA - ENG

CD - JEPLA

AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Toxicity test data on 95 samples of plastics and elastomers, pyrolyzed in accordance with the University of San Francisco toxicity screening test method, were presented. The samples consisted of 50 solid polymers, 16 solid elastomers, 12 rigid cellular polymers, and 17 flexible cellular polymers. Data were obtained using the rising temp. program from 200.degree.-800.degree., and less extensive data

- were obtained using a fixed temp. of 800.degree..
- RN - 9002-81-7; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9;
9008-66-6; 9010-98-4; 9011-14-7; 9016-75-5; 9041-80-9;
24936-68-3; 25038-54-4; 25585-20-0; 27026-93-3; 32131-17-2;
62238-79-3
- EM - 8007
- 92 SI - CA/091/044481R
AU - Chuang HY K ; Crowther PE ; Mohammad SF ; Mason RG
AD - Coll. Med., Univ. South Florida, Tampa
TI - Interactions of thrombin and antithrombin III with artificial
surfaces
SO - Thromb. Res.; VOL 14, ISS 2-3, 1979,273-82
LA - ENG
CD - THBRA
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Thrombin adsorption onto
Cuprophane surfaces was not saturable at thrombin concns. of
.1toeq.1 mg/mL and gave adsorption isotherms distinct from those
for 4 other proteins: albumin, fibrinogen, IgG, and antithrombin
III. (9002-04-4 Thrombin)(9000-94-6 antithrombin III) Kinetic
analyses suggested 2 types of binding sites with
thrombin-Cuprophane apparent dissocn. consts. (Kd) of 300 nM and
7190 nM, resp. Data from the competitive adsorption of thrombin
on Cuprophane in the presence of albumin and IgG at both low and
high thrombin concns. and the absence of such types of adsorption
of thrombin on PVC support the concept of the presence of these 2
types of binding sites on Cuprophane. (9002-86-2 PVC) On the
other hand, thrombin-PVC interaction resulted in a Langmuir type
adsorption. IgG showed higher affinity for PVC (Kd = 35 nM) than
did the other 4 proteins (Kd = 300-900 nM). A hypothesis that
multiple types of binding sites that are specific for certain
plasma proteins may exist on various artificial surfaces is
proposed.
- RN - 9002-04-4; 9000-94-6; 9002-86-2
- EM - 8007
- 93 SI - CA/095/208972N
AU - Ohuchi J ; Mizuno R ; Miyo H ; Ohtsuka K ; Mochizuki Y
AU - Furusawa A
AD - Power React. and Nucl. Fuel Dev. Corp., Tokai
TI - Acid digestion of chlorine-containing wastes
SO - Tokai Works Semi-Annu. Prog. Rep.; ISS PNCT831-79-02,, 1979,80-6
LA - ENG
CD - TWSRD
AB - CBAC COPYRIGHT: CHEM ABS Acid digestion process has been
developed for Cl-contg. wastes such as PVC and neoprene rubber
gloves, whose ratio to the Pu-contaminated wastes is 40% at the
Pu-fuel facilities. (9002-86-2 PVC) Dechlorination values in
the preliminary and 20 L-scale expts. almost agreed with each
other. The dechlorination rate of PVC in H2SO4 depends on the
temp. and stirring rate. The effect of H2SO4 concn. on PVC
decompn. was negligible.
- RN - 9002-86-2; 7664-93-9

- EM - 8112
- 94 SI - CA/095/155736E
AU - Ahling B
AD - IVL, Stockholm
TI - The emission of organic substances from waste incineration
SO - Conf. Int. Trade Fair Recycling, Refuse Collect. Waste Treat.
"ELMIA-AVFALL 79"; 1979,139-61
LA - ENG
CD - 46ASA
AB - CBAC COPYRIGHT: CHEM ABS The emission of HCB from the
incineration of polychlorinated biphenyl and poly(vinyl chloride)
waste, the destruction time of DDT and DDE, and the presence of
CH4 and chloroorgs. in flue gas from waste incineration are
described. (118-74-1 HCB)(9002-86-2 PVC)(50-29-3 DDT)(72-55-9
DDE)(74-82-8 Methane)
RN - 118-74-1; 9002-86-2; 50-29-3; 72-55-9; 74-82-8; 92-52-4
EM - 8111
- 95 SI - CA/095/102249S
AU - Knoll JE ; Midgett MR
AD - Environ. Monitoring and Support Lab., Environ. Prot. Agency,
Research Triangle Park
TI - Quality assurance aspects of the collaborative testing of EPA
Method 106 - determination of vinyl chloride from stationary
sources
SO - Spec. Conf.: Qual. Assur. Air Pollut. Meas., [Proc.]; 1979,442-7
LA - ENG
CD - 45QDA
AB - CBAC COPYRIGHT: CHEM ABS Quality assurance procedures were
applied to improve the value of data obtained in the
collaborative testing of the EPA method 106, which is used at
plants manufg. ethylene dichloride, vinyl chloride, and polyvinyl
chloride and involves the extn. of an integrated gas sample from
an effluent stream and the measurement of the vinyl chloride
content by gas chromatog. (107-06-2 Ethylene dichloride)(75-01-4
Vinyl chloride)(9002-86-2 Polyvinyl chloride) The techniques
used in organizing the test, in the acquisition of data, and in
data anal. are described. The results of both a lab. and a field
test are presented, and the applicability is discussed.
RN - 107-06-2; 75-01-4; 9002-86-2
EM - 8110
- 96 SI - CA/095/037134J
AU - Gilbert B ; Da Silva Netto JA
TI - Slow release insecticidal composition
SO - Braz. Pedido PI PATENT NO. 79 01868 11/20/79 (Instituto de
Pesquisas da Marinha)
LA - POR
AB - CBAC COPYRIGHT: CHEM ABS Slow-release formulations are prepd.
by incorporating insecticides into PVC or rubber. (9002-86-2
PVC) Thus, a compn. is given, contg. PVC (0.005-0.03 mm particle
size) 25 kg, polyoxyethylated nonylphenol 1.65 L, water 18 L, and

- organophosphorus insecticide emulsion conc. 6.25 kg.
- RN - 9002-86-2
EM - 8109
- 97 SI - CA/094/109425J
AU - Wynn M ; Roohk HV ; Salimbeni J ; Bartlett RH
AD - Irvine Med. Cent., Univ. California, Orange
TI - Platelet destruction as an ex vivo correlate of in vitro
fibrinogen and platelet surface interaction
SO - Artif. Organs; VOL 3, ISS Suppl., Proc. Meet. Int. Soc. Artif.
Organs, 2nd, 1979,222-5
LA - ENG
CD - ARORD
AB - CBAC COPYRIGHT: CHEM ABS Large New Zealand white rabbits were
placed on a simple veno-arterial bypass system without oxygenator
or heat exchanger using PVC graphite-coated PVC-polyurethane, and
latex rubber surfaces for tubing. The animal was heparinized and
51Cr-platelets were injected. Vascular access, anticoagulation,
flow parameters, and elapsed exptl. time were chosen to simulate
both clin. conditions and the previous in vitro model (R. et al.
1976, 1977). Platelet turnover was measured during bypass, and
final changes in platelet count and function noted. After 1 h
the animal was sacrificed, and organ and tubing wall counts were
obtained and compared to heart tissue as background. Relative
activity in spleen correlated better with in vitro fibrinogen
adsorption on the above surfaces than either in vitro or ex vivo
platelet adherence. The fibrinogen adsorption is a much better
index of surface thrombogenicity in moderate-to-high flow bypass
than platelet adherence.
- RN - 9002-86-2
EM - 8104
- 98 SI - CA/094/109288S
AU - Chuang H ; Sharma N ; Mohammad S ; Mason R
AD - Coll. Med., Univ. South Florida, Tampa
TI - Adsorption of thrombin onto artificial surfaces and its detection
by an immunoradiometric assay
SO - Artif. Organs; VOL 3, ISS Suppl., Proc. Meet. Int. Soc. Artif.
Organs, 2nd, 1979,226-32
LA - ENG
CD - ARORD
AB - CBAC COPYRIGHT: CHEM ABS Adsorption of .1 μ eq.1 mg/mL human
alpha-thrombin onto Cuprophane PT-150 did not reach satn.,
although its adsorption onto PVC showed satn. of thrombin binding
at .1 μ eq.0.2 mg/mL. (9002-04-4 .alpha.-thrombin)(9002-86-2
PVC) A modified Langmuir plot confirmed the nonsatn. of thrombin
adsorption on Cuprophane. In quant. studies of detn. of adsorbed
thrombin, the data obtained with PVC were more reproducible than
those with Cuprophane. A modification of the procedure of M. A.
Shuman, et al. (1976) was used to produce antihuman
alpha-thrombin antibodies. The antigen thrombin was inactivated
by N-alpha-p-tosyl-L-lysine chloromethyl ketone (Glover G.; Shaw
E., 1971). Antithrombin IgG was isolated from rabbit antiserum

by salt pptn., DE 22 column chromatog., and immunoabsorption on thrombin-Sepharose. Uptake of ¹²⁵I-labeled antithrombin IgG by PVC or PVC coated with human albumin was much less than by PVC coated with alpha-thrombin, which could be used for quant. measurement. This immunoradiometric procedure should be useful in detection and quantitation of thrombin adsorbed to, or generated on, various biomaterials during in vivo or in vitro use of artificial organs.

RN - 9002-04-4; 9002-86-2
EM - 8104

- 99 SI - CA/094/090291P
AU - Herzog V ; Horn H ; Opitz B
AD - Inst. Allg. Hyg. Med. Akad., Erfurt
TI - Desorption of ethylene oxide from gas-sterilized plastics and elastomers
SO - Z. Gesamte Hyg. Ihre Grenzgeb.; VOL 25, ISS 5, 1979,386-9
LA - GER
CD - ZHYGA
AB - CBAC COPYRIGHT: CHEM ABS Thermolabile materials and equipment employed in practical medical work are sterilized mainly with ethylene oxide. (75-21-8 Ethylene oxide) The toxic properties of this gas make it necessary to store the equipment sterilized in this manner in order to remove any traces of the gas adsorbed by the articles. Expts. with PVC, silicone rubber, polyethylene, ball catheters and latex rubber gloves show that PVC has the highest adsorption rate. (9002-86-2 PVC)(9002-88-4 Polyethylene) As a result, the alpha-value is highest in characterizing the removal process. The time required for removing the gas depends largely on the level at which the gas is considered medically harmless. The suggested level is 10 ppm, but this has not as yet been confirmed by bioassays. At room temp. and with forced ventilation, PVC should be stored for 7 days to reach this level. A change in the sterile packing or in the ambient temp. can reduce this time substantially.

RN - 75-21-8; 9002-86-2; 9002-88-4
EM - 8104

- 100 SI - CA/094/019850Q
AU - Crider LB ; O'Mara MM ; Bowles RL
AD - Avon Lake Tech. Cent., BFGoodrich Chem. Div., Avon Lake
TI - A model for the diffusion of vinyl chloride monomer from PVC under various conditions of storage
SO - J. Vinyl Technol.; VOL 1, ISS 3, 1979,168-71
LA - ENG
CD - JVTED
AB - CBAC COPYRIGHT: CHEM ABS A computer optimized exp. design involving 24 expts. was used to obtain a math. model of vinyl chloride (I) emission from granular PVC during storage in sealed 55 gal drums. (75-01-4 Vinyl chloride)(9002-86-2 PVC) The design variables were temp. (T in .degree.F), ventilation rate (V in turnover/h), loading [L, (PVC vol.)/(storage vol.)].times. 100], the initial concn. of I in resin (Co in ppm), and storage

time (t). Then $C = 0.147L0.37V - 1.56[16.0 \exp(-24.1 + .00031t)]$, where C is the ppb of I in the space above PVC. The model was used to predict C in 3 different warehouses. Excellent agreement between the calcd. and actual C was obtained.

RN - 75-01-4; 9002-86-2
EM - 8102

101 SI - CA/094/007334M

AU - Jozwik J ; Olszewski W ; Puziewicz S ; Roman M
TI - Multistream settling tank for separating solids from liquids
SO - Pol. PATENT NO. 106296 12/31/79 (Politechnika Warszawska)
LA - POL
AB - CBAC COPYRIGHT: CHEM ABS The title tank, which is used for sedimentation of solids from water and wastewater, contains baffles which divide liq. charged into the tank into several streams. The baffles are made from poly(vinyl chloride) sheets. (9002-86-2 Poly(vinyl chloride))

RN - 9002-86-2
EM - 8102

102 SI - CA/094/020304W

AU - Rhee GJ ; Yu BS
AD - Natl. Inst. Health, Seoul
TI - Effect of synthetic resin container on the stability of FAD solution
SO - Yakhak Hoe Chi; VOL 23, ISS 3-4, 1979,147-52
LA - KOR
CD - YAHOA
AB - CBAC COPYRIGHT: CHEM ABS The interaction between FAD soln. and synthetic resin containers made of PVC, polyethylene (PE), and polycarbonate (PC), was detd. and the effect of glycyrrhizin or malic acid on stabilization of FAD in aq. soln. was detd. by accelerated stability anal. (146-14-5 FAD)(9002-86-2 Poly(vinyl chloride))(9002-88-4 Polyethylene)(25766-59-0 Polycarbonate)(1405-86-3 Glycyrrhizin)(6915-15-7 Malic acid) FAD was detd. by spectrometry and by sepn. on paper chromatog. and metal ions were detected by at. absorption spectrophotometry; the ions were extd. from containers by means of Food and Additive Regulation Std. The thermal decompn. of FAD in aq. soln. was pseudo first-order reaction and it was inhibited by adding glycyrrhizin or malic acid to the soln. PVC, PE and PC containers accelerated the decompn. of FAD in soln. It is assumed that bivalent heavy metals in resin containers may catalyze the hydrolysis of FAD. The metals detected from the containers were Ca, Zn, Cu, Fe, Pb and Cd. The total amts. of detected metals from PVC were 6.2, PE, 5.5, and PC, 2.7 $\mu\text{g}/\text{cm}^2$ which were proportional to the rate const. of FAD decompn. in aq. soln.

RN - 146-14-5; 9002-86-2; 9002-88-4; 25766-59-0; 1405-86-3; 6915-15-7; 7439-89-6; 7439-92-1; 7440-43-9; 7440-50-8; 7440-66-6; 7440-70-2
EM - 8102

- 103 SI - CA/093/224970Z
AU - Hasegawa H ; Sato M ; Okonogi K ; Shimaoka A ; Tsuruta H
AD - Natl. Inst. Ind. Health, Kawasaki
TI - Examination of workers in polymerization process of vinyl chloride monomer (VCM)
SO - Ind. Health; VOL 17, ISS 3, 1979,153-85
LA - ENG
CD - INHEA
AB - CBAC COPYRIGHT: CHEM ABS Data are given on the effects of occupational exposure to vinyl chloride monomer on blood pressure; serum guanosine triphosphate; blood catalase; blood platelets; reticulocytes; glutamic-oxalacetic transaminase, glutamic-pyruvic transaminase, alk. phosphatase, lactic dehydrogenase activity, lactic dehydrogenase isozyme activity, and lipids in the serum; vinyl chloride monomer in the blood; glycerides, free and total cholesterol; beta-lipoproteins; and fatty acids. (75-01-4 Vinyl chloride)(86-01-1 Guanosine triphosphate)(9001-05-2 Catalase)(9000-97-9 Glutamic-oxalacetic transaminase)(9000-86-6 Glutamic-pyruvic transaminase)(9001-78-9 Alk. phosphatase)(9001-60-9 Lactic dehydrogenase)(57-88-5 cholesterol)
RN - 75-01-4; 86-01-1; 9001-05-2; 9000-97-9; 9000-86-6; 9001-78-9; 9001-60-9; 57-88-5; 9002-86-2
EM - 8101
- 104 SI - CA/093/191284Y
AU - Haguenoer JM ; Frimat P ; Cantineau A ; Pollard F ; Bobowski R
AD - Inst. Med. Trav., Fac. Med., Lille
TI - Risks associated with vinyl chloride (MVC) and their prevention in a polymerization unit
SO - Arch. Mal. Prof. Med. Trav. Secur. Soc.; VOL 40, ISS 12, 1979,1115-30
LA - FRE
CD - AMPMA
AB - CBAC COPYRIGHT: CHEM ABS The concns. of vinyl chloride (I) in the air of a factory which went on stream in 1976 were, during the 1977-8 period, 0.30-0.40 ppm near the polymn. reactors, 0.05-2.75 ppm near I recovery units, and 0.06-1.60 ppm near the poly(vinyl chloride) driers. (75-01-4 Vinyl chloride)(9002-86-2 PVC) The high I concns. were due to tech. malfunctions. The factory workers, at that point, had not been affected by exposure to these I levels.
RN - 75-01-4; 9002-86-2
EM - 8012

PVC

- 105 SI - CA/093/137475Y
AU - Takenishi S
TI - Wastewater treatment
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 79162845 12/24/79 (Nisshin Spinning Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Wastewater is treated with a water sol. salts, flocculated by adjusting to weakly alk. pH, then the floc is filtered out. Thus, Fe ammonium sulfate was added (500 ppm as Fe3+) to kitchen wastewater. NaOH was added to pH 9 to form Fe hydroxide floc, then filtered through a PVC membrane. (9002-86-2 PVC) Hexane extractables were reduced from 1300 ppm to 1.5 ppm.
RN - 9002-86-2; 10402-23-0
EM - 8012
- 106 SI - CA/093/108395S
AU - Nishimaru Y ; Tsuda Y ; Saito F
AD - Sch. Med., Yokohama City Univ., Yokohama
TI - Evaluation of acute toxicity of smoke and gases from smoldering and burning plastic foams
SO - Yokohama Med. Bull.; VOL 30, ISS 1-4, 1979,47-60
LA - ENG
CD - YMBUA
AB - CBAC COPYRIGHT: CHEM ABS Mice became incapacitated from exposure to smoke and gases from burning polystyrene (PS), PVC, polyurethane, and urea resin foams or lauan wood. (9003-53-6 Polystyrene)(9002-86-2 PVC) The incapacitation times for PS were longer than those for lauan, and that for PVC were shorter than those for PS or lauan. The incapacitation time was much shorter at 550.degree. or 750.degree. for polyurethane foam or urea resin foam, resp., than at any heating temp. for the others. Cyanide was detected in blood in rabbits exposed to gases from polyurethane or urea resin foams. Abnormalities in the wave patterns of electrocardiograms and pneumatograms were most obsd. in the rabbits exposed to urea resin foam and PS foam gases.
RN - 9003-53-6; 9002-86-2; 57-13-6
EM - 8010
- 107 SI - CA/093/100798E
AU - Shevchenko AM ; Shkurko GA ; Grebtsov VN
TI - Biological evaluation of the chronic effect of dust from a poly(vinyl chloride) mix
SO - Gigiena i Toksikol. Plastmass, Kiev; 1979,145-8
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Polyvinyl chloride dust exposure evaluation Occupational exposure PVC dust evaluation
RN - 9002-86-2
EM - 8009

- 108 SI - CA/093/079127Y
AU - Toth O ; Latorczai J
AD - Borsodi Vegyi Komb., Kazinebarcika
TI - Borsodi Vegyi Kombinat's role in environmental protection
SO - Magy. Kem. Lapja; VOL 34, ISS 9, 1979,474-9
LA - HUN
CD - MGKLA
AB - CBAC COPYRIGHT: CHEM ABS Measures are described for the prevention of air and water pollution. Disposal and processing of wastes from the manuf. of N fertilizer and PVC are discussed. (9002-86-2 PVC) Future research activities are outlined.
RN - 9002-86-2
EM - 8009
- 109 SI - CA/093/078751K
AU - Miura T ; Nakamura S ; Matsunaga I ; Hayashi M ; Suenaka T
AU - Hirata M ; Hara I
AD - Osaka Prefect. Inst. Public Health, Osaka
TI - Industrial hygienic survey of factories processing poly(vinyl chloride) resin in Osaka
SO - Osaka-furitsu Koshu Eisei Kenkyusho Kenkyu Hokoku, Rodo Eisei Hen; VOL 17,, 1979,45-53
LA - JPN
CD - OFKIA
AB - CBAC COPYRIGHT: CHEM ABS The title survey covered extrusion, paste-processing, and injection molding plants over the Apr.-Dec. period in 1977. Contamination of environmental air by vinyl chloride monomer was .1toeq.26 ppm. (75-01-4 Vinyl chloride)
RN - 75-01-4; 9002-86-2
EM - 8009
- 110 SI - CA/093/089772U
AU - Shkurko GA
TI - Study of granule formation of pulmonary macrophages exposed to poly(vinyl chloride) plastic dust
SO - Gigiena i Toksikol. Plastmass, Kiev; 1979,149-55
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. PVC lung macrophage
RN - 9002-86-2
EM - 8009
- 111 SI - CA/093/089771T
AU - Borisenko NF ; Pushkar MP ; Goryachkovskii VS
TI - Participation of an immune component in the mechanism of the damaging action of epoxy and poly(vinyl chloride) compounds
SO - Gigiena i Toksikol. Plastmass, Kiev; 1979,119-25
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. PVC compd volatile material immunity Epoxy compd volatile material

- immunity Immunity PVC epoxy compd volatile compd
RN - 9002-86-2
EM - 8009
- 112 SI - CA/093/089633Z
AU - Malinovskii IF
TI - Some hematological and biochemical blood indexes in rats poisoned with anticorrosion coatings prepared from perchlorinated poly(vinyl chloride) resins
SO - Tr Belorus. NII Eksperim. Vet.; ISS 17, 1979,154-6
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Perchlorinated polyvinyl chloride resin blood
RN - 9002-86-2; 39322-32-2; 67556-82-5
EM - 8009
- 113 SI - CA/093/053929M
AU - Barber TA ; Lambrecht LK ; Mosher DL ; Cooper SL
AD - Dep. Pathol., Univ. Wisconsin, Madison
TI - Influence of serum proteins on thrombosis and leukocyte adherence on polymer surfaces
SO - Scanning Electron Microsc.; ISS 3, 1979,881-90
LA - ENG
CD - SEMYB
AB - CBAC COPYRIGHT: CHEM ABS The effects of serum protein preadsorption on short-term thrombosis on polymeric surfaces were investigated with an ex vivo shunt model in concert with radiolabeling, immunolabeling, and scanning (SEM) and transmission electron microscopy. Serum proteins preadsorbed onto silicone rubber (SR) and poly(vinyl chloride) (PVC) surfaces included: fibronectin (FN), anti-fibronectin (AFN), von Willebrand factor (vWF), alpha2-macroglobulin (alpha2M), albumin (Alb), IgG, mixed gamma-globulins (gammaIg), and FN followed by anti-FN IgG (FN-AFN). Thrombotic responses to preadsorbed serum proteins differed notably in regard to the total amts. of thrombus formed on shunt surfaces, role of fibrin in initiating thrombosis, and the participation of leukocytes other than platelets, i.e., monocytes (MN) and polymorphonuclear neutrophils (PMN) in thrombosis. Both Alb and alpha2M pre-adsorbed onto the PVC surface decreased total amts. of thrombus deposited and modulated the leukocyte response with respect to that seen on uncoated PVC. Pre-coating of the SR test surface with FN, AFN, FN-AFN, vWF, IgG, and gammaIg produced variable increases in total amts. of thrombus detectable by SEM and altered the patterns of initial leukocyte adherence. Both gammaIg and IgG pre-coatings enhanced the response of MN to this surface and decreased relative nos. of platelets contained in thrombi. In vitro assays of the effect of the tested proteins on the migration, chemotactic response, and aggregation of mixed canine leukocyte suspensions indicated that the role of MN and PMN in thrombosis in this model is related to some extent to the ability of surface-adsorbed proteins to modulate these classical

leukocyte functions. Apparently, the complex response of flowing blood to polymeric surfaces may be influenced by the ability of serum proteins to modify leukocyte as well as platelet activity in thrombosis and are suggestive of the application of modulators of leukocyte function in regulating thrombotic reactions on polymeric surfaces.

RN - 9001-27-8; 9002-86-2
EM - 8009

- 114 SI - CA/093/031128X
AU - Sarkos CP
AD - Natl. Aviat. Facil. Exp. Cent., Fed. Aviat. Adm., Atlantic City
TI - Recent test results from the FAA/NAFEC cabin fire safety program
SO - NBS Spec. Publ. (U. S.); VOL 540,, 1979,589-623, 712
LA - ENG
CD - XNBSA
AB - CBAC COPYRIGHT: CHEM ABS The smoke prodn. tests for 3 kinds of materials used in aircraft seat cushions show the smokiest material is urethane foam, and the least smoky polysulfone, when the heat fluxes are at 2.2 and 5 Btu/ft² s. At 7.5 and 10 Btu/ft² s, polysulfone is the smokiest material; wool, the least-smoky. In the toxic gas emission tests for fabrics, a cotton rayon blend, cotton, and rayon produce CO 348, 255, and .apprx.150 mg/g, resp.; the modacrylic drape, the wool, and wool/nylon blends produce HCN 64, 42, and 37 mg/g, resp.; for flooring materials, wool carpets produce HCN .apprx.15 mg/g; for thermoplastics, and the polycarbonates produce CO 400 mg/g with HBr yield but no HCN. The ABS/PVC CO .apprx.50 mg/g have high HCl and low HCN yields; for cargo liners, the polyesters produce HCN <10 mg/g; and for transparencies, polycarbonate produce CO 345 mg/g. The test conditions in the combustion tube furnace are furnace temp. 600.degree., sample wt. 250 mg, airflow rate 2 L/min, and test duration 5 min.

RN - 74-90-8; 630-08-0; 7647-01-0; 9002-86-2; 9003-56-9; 10035-10-6
EM - 8008

- 115 SI - CA/093/030943X
AU - Handa T ; Suda K ; Nagashima T ; Kaneko K ; Yamamura T
AU - Takahashi Y ; Suzuki H ; Saito F
AD - Fac. Sci., Sci. Univ. Tokyo, Tokyo
TI - Instrumentation for the size determination of submicron particulates systems by the sideways light scattering method and the characteristics of smokes from polymerized materials in fire
SO - NBS Spec. Publ. (U. S.); VOL 540,, 1979,626-712
LA - ENG
CD - XNBSA
AB - CBAC COPYRIGHT: CHEM ABS The design of the smoke detector using the low output He-Ne laser particle counter and the sideways light scattering optical system is discussed. The instrument with 9 channels detects 0.1-10 μ m particles at .1toreq.1010 without coincidence loss; and <1013 particles/m³ with the loss correction. Simultaneous measurements of the environmental atm. and the welding samples by this system and the com. counter show

good agreements in the size distribution for particulates >0.3 μm . The scattering cross sections of polypropylene smokes measured by the turbidities and estd. from the size distribution also show a good agreement.

RN - 7440-01-9; 7440-59-7; 9002-86-2; 9003-07-0
EM - 8008

116 SI - CA/093/031741S

AU - Ohba T

AD - Kokuritsu Eisei Shikenjo

TI - Qualities of plastic containers and rubber stoppers for blood infusion solution and their tests

SO - Koen Yoshishu - Nippon Yakugakkai Kanto Shibu Taikai, 23rd; 1979,76-80

LA - JPN

CD - 42PXA

AB - CBAC COPYRIGHT: CHEM ABS Tests were designed for the examn. and standardization of the quality of plastic containers and rubber stoppers. Rubber stoppers and containers made of polyethylene, polypropylene, polyvinyl chloride, and contg. di-2-ethylhexyl phthalate should be tested for the contents of heavy metals, small particles, and sol. substances by taking UV spectra of the solns. (9002-88-4 Polyethylene)(9003-07-0 Polypropylene)(9002-86-2 Polyvinyl chloride)(117-81-7 Di-2-ethylhexyl phthalate) The concns. of Cd, Pb, and Zn should not exceed 0.2, 1, or 0.2 $\mu\text{g}/\text{mL}$. However, normally the solns. contain 0.3-0.4 μg of Zn/ mL .

RN - 9002-88-4; 9003-07-0; 9002-86-2; 117-81-7
EM - 8008

117 SI - CA/093/013061R

AU - Izgu E ; Canefe K

AD - Eczacilik Fak., Ankara Univ., Ankara

TI - The sorption of pharmaceuticals by plastics produced in Turkey

SO - Bilim Kongr. Tip Arastirma Grubu Tebligleri, Turk. Bilimsel Tek. Arastirma Kurumu, 6th; 1979,237-46

LA - TUR

CD - 42ROA

AB - CBAC COPYRIGHT: CHEM ABS The sorption of vitamin B, atropine sulfate, diphenhydramine-HCl, procaine, chloramphenicol, $(\text{NH}_4)_2\text{CO}_3$, AcOH and NaClO in aq. solns. by polyethylene, polystyrene, and PVC was studied. (68-19-9 vitamin B)(55-48-1 Atropine sulfate)(147-24-0 Diphenylhydramine hydrochloride)(59-46-1 Procaine)(56-75-7 Chloramphenicol)(10361-29-2 Ammonium carbonate)(64-19-7 Acetic acid)(9002-88-4 Polyethylene)(9003-53-6 polystyrene)(9002-86-2 PVC) At 25.degree. and 40.degree. for a storage time of 90 and 63 days, resp., appreciable sorption of these pharmaceuticals by different plastics was not obsd. The wt. loss of pharmaceuticals obsd. in solns. in the presence of plastics was attributed to decompn. of these compds. during storage.

RN - 68-19-9; 55-48-1; 147-24-0; 59-46-1; 56-75-7; 10361-29-2; 64-19-7; 9002-88-4; 9003-53-6; 9002-86-2; 7681-52-9

- EM - 8007
- 118 SI - CA/092/203554F
AU - Zalewski W ; Zabojszcz WM ; Brzezicka-Bak M
AD - Zakl. Mater. Med., Inst. Lekow, Warsaw
TI - Physicochemical and biological studies of plastic materials intended for long-term contact with blood
SO - Acta Haematol. Pol.; VOL 10, ISS 4, 1979,259-73
LA - POL
CD - AHPLB
AB - CBAC COPYRIGHT: CHEM ABS Natural and silicone rubber tubes in contact with blood caused considerable protein adhesions and Hb release from the erythrocytes, and were more thrombogenic than PVC although they complied with the required quality stds. (9002-86-2 PVC) Adhesion increased with the roughness of the surface, and depended on the migration of components specific to each material from the tubes into the serum, and was higher for PVC and lower for silicone rubber after cleaning with EtOH.
RN - 9002-86-2; 7440-66-6; 9002-88-4
EM - 8007
- 119 SI - CA/092/203413J
AU - Kataeva SE
TI - Sanitary-chemical studies of poly(vinyl chloride) compositions intended for the production of packaging for household chemicals
SO - Khim. Prom-st., Ser.: Toksikol. Sanit. Khim. Plastmass; ISS 4, 1979,22-3
LA - RUS
CD - KSTPD
AB - CBAC COPYRIGHT: CHEM ABS Thin-layer and gas-liq. chromatog. confirmed the migration of plasticizers and stabilizers from PVC packaging materials into distd. water or hexane. (9002-86-2 Polyvinyl chloride) At pH 7-8.5 the migration of org. compds. into distd. water after 30 days at 40.degree. was: dioctyl phthalate 0.12, org. tin compds. 0.025-0.04 mg/L, cadmium stearate 0.13-0.25 mg/L. (117-81-7 Dioctyl phthalate)(2223-93-0 cadmium stearate) In hexane after 3-10 days the results were: dioctyl phthalate 1.5-50, org. tin stabilizers 0.18-0.24 and cadmium stearate 0.23-0.28 mg/L.
RN - 9002-86-2; 117-81-7; 2223-93-0
EM - 8007
- 120 SI - CA/092/185040D
AU - Ducloux M
AD - Cent. Rech. Croix Berny, Rhone Poulenc Ind., Antony
TI - Methods for the evaluation of the reactions of materials in a fire
SO - Ber. Int. Kolloq. Verhuetung Arbeitsunfaellen Berufskr. Chem. Ind.; VOL 6th,, 1979,299-310
LA - FRE
CD - BIKID
AB - CBAC COPYRIGHT: CHEM ABS The combustion of 16 fire-resistant synthetic wall coverings demonstrated a simultaneous max. in toxic emissions, e.g., heat, smoke, and CO. The behavior of a

product in a fire cannot be predicted from the main constituent, e.g. certain PVC-based wall coverings were very dangerous while others showed excellent overall behavior. The materials were ranked by flammability tests, by heat release rates and pollutant levels generated, and by the toxic effects of the combustion gases on rabbits.

RN - 630-08-0; 9002-86-2
EM - 8006

- 121 SI - CA/092/184996H
AU - Kenson RE
AD - Oxy-Catal., West Chester
TI - Engineered systems for the control of toxic chemical emissions
SO - Proc., Annu. Meet. - Air Pollut. Control Assoc.; VOL 72nd, ISS 2, 1979, Paper No. 17.4, 15 pp.
LA - ENG
CD - PRAPA
AB - CBAC COPYRIGHT: CHEM ABS The design of engineered systems for control of vinyl chloride emissions in PVC plants and for benzene control in petrochem. operations is described. (75-01-4 Vinyl chloride)(9002-86-2 PVC)(71-43-2 Benzene) Using the engineered systems approach, toxic emission control systems which readily meet stringent emission stds. were developed which are more cost-effective than std. systems.
RN - 75-01-4; 9002-86-2; 71-43-2
EM - 8006
- 122 SI - CA/092/184914E
AU - Ruiz Alonso C
TI - Vinyl chloride, its harmful effects and analytical control
SO - Rev. Fac. Farm. Univ. Cent. Venez.; VOL 44,, 1979,37-64
LA - SPA
CD - RFFVA
AB - CBAC COPYRIGHT: CHEM ABS The manuf. and uses of poly(vinyl chloride) plastics and air pollution, carcinogenicity, and anal. detection of vinyl chloride by gas chromatog. are reviewed with 18 refs. (9002-86-2 Poly(vinyl chloride))(75-01-4 Vinyl chloride)
RN - 9002-86-2; 75-01-4
EM - 8006
- 123 SI - CA/092/168468G
AU - Okada T
TI - Incineration of organic substance containing chlorine
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 79124894 09/28/79 (Hitachi, Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Org. substances contg. Cl, e.g., waste poly(vinyl chloride, are mixed with C particles as a combustion aid and incinerated in fluidized beds, e.g., of sand, while water is sprayed on the bed to form HCl, which is recovered. (9002-86-2 Poly(vinyl chloride)
RN - 9002-86-2; 7647-01-0; 7782-50-5
EM - 8006

- 124 SI - CA/092/169179A
AU - McRea JC ; Kim SW
AD - Dep. Pharm., Univ. Utah, Salt Lake City
TI - Prostaglandin releasing polymers for nonthrombogenic surfaces
SO - Plast. Med. Surg.; VOL 3rd., 1979, Paper No. 31, 7 pp.
LA - ENG
CD - PMSUD
AB - CBAC COPYRIGHT: CHEM ABS Platelet adhesion and aggregation at the blood/polymer interface result in thrombus formation. Utilizing the concept of controlled release delivery of prostaglandins from polymer matrices an immediate approach can be applied to reduce adhesive activity of platelets approaching the polymer surface. The development for fabrication of dispersed monolithic prostaglandin/polymer systems, the characterization of release behavior, the comparison of mech. properties of the monolithic system to control polymers as well as the efficacy of these systems to prevent platelet adhesion and their duration of activity are described.
RN - 745-65-3; 9002-86-2; 35121-78-9; 41598-07-6
EM - 8006
- 125 SI - CA/092/169176X
AU - Biggs MS ; Baldwin J
AD - PVC Div., Br. Ind. Plast. Ltd., Aycliffe/Durham
TI - A flexible PVC compound for long-term contact with human tissue
SO - Plast. Med. Surg.; VOL 3rd., 1979, Paper No. 7, 11 pp.
LA - ENG
CD - PMSUD
AB - CBAC COPYRIGHT: CHEM ABS An alternative PVC formulation using polyadipate as plasticizer was developed for medical disposable devices. (9002-86-2 PVC) This has improved resistance to plasticizer extn. While it appears tech. satisfactory, evidence is still being gathered to confirm its toxicol. suitability.
RN - 9002-86-2; 77-90-7; 88-99-3; 117-81-7; 124-04-9; 528-44-9; 24937-78-8; 25085-46-5; 25119-90-8
EM - 8006
- 126 SI - CA/092/152568D
AU - Moeckel W ; Friedrich W ; Steffers F ; Haeussler G ; Niklas N
AU - Seifert A ; Voigt K
TI - Treatment of wastewaters containing polymer dispersions
SO - Ger. (East) PATENT NO. 138057 10/10/79 (VEB Chemische Werke Buna)
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS In the title process, power plant fly ash is added to break the emulsion and sep. the polymer, and the resulting sediment is burned for power or used as a soil amendment. Thus, 1.0 m3 wastewater from nonwoven fabric prepn. contg. .apprx.0.6% carboxylated nitrile rubber is stirred with 28.0 kg brown coal filter ash contg. 21% CaO and allowed to stand for .apprx.30 min, giving a clear, essentially polymer-free supernatant which is discharged to sewers, and a friable, nontacky residue which can be filtered from residual water.

- RN - 9002-86-2
EM - 8005
- 127 SI - CA/092/134649B
AU - Staab J
AD - Hartmann und Braun A.-G., Frankfurt
TI - Extraction grating for sampling wastewater heavily contaminated with solids
SO - Gewässerschutz, Wasser, Abwasser; VOL 39, ISS Ionensel. Elektroden Messung Wasser Abwasser, 1979,279-84
LA - GER
CD - GWABD
AB - CBAC COPYRIGHT: CHEM ABS The design and operating parameters of the title app., consisting of a frame of rigid PVC, are described. (9002-86-2 PVC)
RN - 9002-86-2
EM - 8005
- 128 SI - CA/092/134540J
AU - Kasaj M
AD - Vysk. Ustav Dopravný, Zilina
TI - Inflammable dusts and their physical properties from the point of view of fire protection
SO - Chem. Prum.; VOL 29, ISS 12, 1979,653-5
LA - SLO
CD - CHPUA
AB - CBAC COPYRIGHT: CHEM ABS The explosive properties of dusts and aerosols of flour, cocoa, tobacco, wood, cork, tea, S, starch, sugarr, Al, cellulose acetate, phenol-formaldehyde resin, urea-formaldehyde resin, polyacrylonitrile, polyamides, polyethylene, polystyrene, poly(vinyl alc.), poly(vinyl chloride), synthetic rubber, and ebonite are discussed. (9005-25-8 Starch)(57-50-1 Sucrose)(9004-35-7 Cellulose acetate)(9003-35-4 Phenol-formaldehyde copolymer)(9011-05-6 Urea-formaldehyde copolymer)(25014-41-9 Polyacrylonitrile)(9002-88-4 Polyethylene)(9003-53-6 Polystyrene)(9002-89-5 Poly(vinyl alcohol))(9002-86-2 Poly(vinyl chloride)) Flash points and lower concn. limits of explosive aerosols of these materials are given.
RN - 9005-25-8; 57-50-1; 9004-35-7; 9003-35-4; 9011-05-6; 25014-41-9; 9002-88-4; 9003-53-6; 9002-89-5; 9002-86-2; 7429-90-5; 7704-34-9
EM - 8005
- 129 SI - CA/092/153252H
AU - Semler M
TI - Ion-selective electrode
SO - Czech. PATENT NO. 176578 01/15/79
LA - CZE
AB - CBAC COPYRIGHT: CHEM ABS An ion-selective electrode with an active component embeded in a polymeric membrane was prepd. by fixation and sealing of the membrane was prepd. by fixation and sealing of the membrane in an electrode body. Thus, a poly(vinyl chloride (I) membrane contg. a soln. of valinomycin in dipentyl

phthalate was glued to a I sealing ring and fixed between a threaded cap and the threaded hollow electrode body made of Teflon. The inner surface a membrane was coated with agar and the K-selective electrode, contg. a ref. electrode, was filled with 0.1 M KCl.

RN - 2001-95-8; 9002-86-2
EM - 8005

- 130 SI - CA/092/153121Q
AU - Handlos V
AD - R. Dan. Sch. Pharm., Copenhagen
TI - Distribution and determination of gas residuals in formaldehyde-steam sterilized materials
SO - Plast. Med. Surg.; VOL 3rd., 1979, Paper No. 21, 10 pp.
LA - ENG
CD - PMSUD
AB - CBAC COPYRIGHT: CHEM ABS HCHO-steam sterilization was examd. with special ref. to gas residuals in materials sterilized in Danish hospitals. (50-00-0 Formaldehyde) Two exptl. autoclaves were constructed to study the effects of the construction and the process design on the HCHO residuals. The distribution of HCHO and the permeability of different plastic materials to HCHO was measured.

RN - 50-00-0; 9002-86-2; 9002-88-4; 9003-07-0; 25014-41-9; 25038-54-4; 25038-59-9
EM - 8005

- 131 SI - CA/092/153096K
AU - Wilsnack RE ; Bernadyn SA
AD - Huntingdon Res. Cent., Div. Becton Dickinson Co., Brooklandville
TI - Blood compatibility of medical device materials as measured by lymphocyte function
SO - Biomater., Med. Devices, Artif. Organs; VOL 7, ISS 4, 1979, 527-46
LA - ENG
CD - BMDOA
AB - CBAC COPYRIGHT: CHEM ABS Bovine lymphocyte compatibility of a variety of device materials was assessed by quantification of their effect on phytohemagglutinin-mediated lymphocyte activation in a whole blood assay. Samples of polypropylene, polyethylene, stainless steel, Teflon, polycarbonate, silicone rubber, and some polyurethane proved compatible with lymphocytes. (9003-07-0 Polypropylene)(9002-88-4 Polyethylene)(9002-84-0 Teflon) PVC plastics and rubber yielded the largest proportion of lymphosuppressive samples. (9002-86-2 Polyvinyl chloride) The lymphocyte inactivation manifested characteristics suggestive of specific receptor alteration, demonstrated typical dose response kinetics, and proved a more sensitive indicator of specific aspects of blood compatibility than hemolysis. Most lymphosuppressive materials failed to induce hemolysis under the defined test parameters.

RN - 9003-07-0; 9002-88-4; 9002-84-0; 9002-86-2; 11107-04-3
EM - 8005

- 132 SI - CA/092/153013F
AU - Huettnerrauch R ; Jacob J
AD - Wiss. Lab., VEB Jenapharm, Jena
TI - Molecular galenics. 42. Combination of various modes of binding in tablets
SO - Pharmazie; VOL 34, ISS 9, 1979,572
LA - GER
CD - PHARA
AB - CBAC COPYRIGHT: CHEM ABS Tablets were prepd. from poly(vinyl chloride) (PVC) and cellulose (I) mixts. (9002-86-2 Polyvinyl chloride)(9004-34-6 Cellulose) The hardness of the tablets was min. at 10% I, whereas the disintegration time decreased exponentially to 40% I. Thus H bond breaking had more effect on disintegration than the breaking of van der Waals bonds. Low concns. of I caused a decrease in tablet hardness by disrupting the van der Waals bonds in PVC, whereas at higher concns. the H bonds in I were stronger than their van der Waals bonds.
RN - 9002-86-2; 9004-34-6
EM - 8005
- 133 SI - CA/092/141321S
AU - Hilado CJ ; Cumming HJ ; Casey CJ
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco
TI - Relative flammability and toxicity of pyrolysis gases from cellular plastics
SO - J. Cell. Plast.; VOL 15, ISS 4, 1979,205-10
LA - ENG
CD - JCUPA
AB - CBAC COPYRIGHT: CHEM ABS Cellular plastic of different generic types were evaluated for the toxicity of pyrolysis gases, and the HC value of these gases were used in the comparison of their relative flammability on the same basis of lethality as reported previously. Polyester and polyether urethane flexible foams appeared to be more of a flammable hazard than a toxicity hazard, in comparison to other materials. Among flexible foams, polychloroprene was the least toxic under the exptl. conditions tested. (9010-98-4 Polychloroprene) Polystyrene was the least toxic among rigid foams tested. (9003-53-6 polystyrene) Imide-type foams seemed to exhibit the greatest toxicity among both flexible and rigid forms. In general, increasing char yield appeared to result in decreased flammability and in decreased toxicity in the case of some materials.
RN - 9010-98-4; 9003-53-6; 9002-86-2; 9002-88-4; 27026-93-3; 53112-45-1; 62238-79-3
EM - 8005

- 134 SI - CA/092/135482D
AU - Tasch RJ ; Patolia NP
TI - Peelable packaging
SO - Brit. PATENT NO. 1548306 07/11/79 (Acme Backing Corp.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS A heat sealed peelable package, useful for surgical dressings and goods, comprises 2 sheets of impermeable material, e.g. metal foil, secured together by an adhesive coating contg. nitrocellulose (I) and poly(vinyl acetate) (II) or PVC. (9003-20-7 Poly(vinyl acetate))(9004-70-0 Nitrocellulose)(9002-86-2 PVC) The adhesive coating remains peelable after exposure to heat sterilization temps. (.gtoreq.250.degree.F). Thus, metal foil panels were coated about their peripheries with a compn. contg. 17.5 parts of a 70.6% soln. of II and 7.28 parts of a 29.4% soln. of I in toluol/MeCOEt. The coated foils were heat-sealed together to form a leakproof package which remained peelable after autoclaving at 250-275.degree.F.
RN - 9003-20-7; 9004-70-0; 9002-86-2
EM - 8005
- 135 SI - CA/092/135350J
AU - Wildevuur CR H ; Ten Duis HJ ; Van den Dungen JJ A ; De Jong JC F
AD - Dep. Exp. Surg., Univ. Groningen, Groningen
TI - Improvements in Hemocompatibility of extracorporeal circuits
SO - Plast. Med. Surg.; VOL 3rd., 1979, Paper No. 36, 8 pp.
LA - ENG
CD - PMSUD
AB - CBAC COPYRIGHT: CHEM ABS In a single PVC tubing circuit for extracorporeal circulation for open heart surgery little effect was seen on erythrocytes during perfusion. (9002-86-2 PVC) Decrease of erythrocyte nos. postoperatively, however, showed an early elimination of affected erythrocyte. A severe momentary drop both in platelet and leukocyte nos. reflected the initial effect of blood-surface contact; this effect is partly reversible. This drop was quickly restored in a group with Si-free silicone rubber tubing compared to PVC. During perfusion small hemolysis occurred with roller and rotor pumps while higher values were obsd. in centrifugal pumps. Postoperatively, erythrocyte nos. decreased most in roller and centrifugal pump while were less with the rotor pump. Platelets were sensitive to blood/gas contact and improvement of hemostasis in open heart surgery can be obtained by using a membrane oxygenator and by applying controlled suction. Treatment with a continuous PGE1 infusion during bypass inhibited platelet adhesion. (745-65-3 PGE1)
RN - 9002-86-2; 745-65-3
DTG - BLOOD CONCENTRATIONS
EM - 8005

- 136 SI - CA/092/135349R
AU - Sederel LC ; Van der Does L ; Beugeling T ; Van Duijl J
AU - Bantjes A
AD - Dep. Chem. Technol., Twente Univ. Technol.
TI - Anticoagulant activity of polyelectrolytes and their behavior in surface coatings
SO - Plast. Med. Surg.; VOL 3rd., 1979, Paper No. 35, 8 pp.
LA - ENG
CD - PMSUD
AB - CBAC COPYRIGHT: CHEM ABS Polyelectrolyte (PE) anticoagulants were prep'd. by modifying poly(cis-1,4-isoprene) with addn. of chlorosulfonyl isocyanate followed by reaction with NaOH to give $-\text{[CH}_2\text{CMe(NHSO}_3\text{Na)CH(CO}_2\text{Na)CH}_2\text{]}_n\text{-}$ with .apprx.60% double bond conversion. The sulfonate groups were not stable to acid but heating in 2 M NaOH did not result in large differences in chem. structure of PE; decrease in mol. wt. resulted, however. No change in anticoagulant activity was obsd. Surfaces of unrouted PVC showed longer clotting times than glass. (9002-86-2 PVC) Coating PVC with a highly purified tridodecylmethylammonium chloride-PE complex increased clotting time. Release of PE occurred on coated PVC tubes in contact with plasma. Thus, the coating was not stable so covalent coupling of PE to polymer surfaces should be investigated.
RN - 9002-86-2; 1189-71-5; 9003-31-0
EM - 8005
- 137 SI - CA/092/135249H
AU - Carli F ; Italiano P
AD - Pharm. Technol. Lab., Carlo Erba Inst. Therap. Res., Milan
TI - Effect of microstructure on liquid capillary penetration into porous drug carriers
SO - Charact. Porous Solids, Proc. Symp.; 1979,369-74
LA - ENG
CD - 42EBA
AB - CBAC COPYRIGHT: CHEM ABS The relevance of capillary penetration into the pore network of drug delivery systems based on porous carriers is emphasized. Exptl. data include the investigation of water penetration into model porous drug carriers prep'd. by embedding aspirin in inert polymer matrices. (50-78-2 Aspirin) Mercury porosimetry measurements showed that the kinetics of the capillary process was strongly affected not only by the wettability and mean pore size of the matrix, but also by its pore size distribution. By heating the matrices, their pore structure was profoundly modified and thereby their capillary penetrability, both as degree of pore vol. satn. and as rate of penetration. An example is also given of how the capillary characteristics influence the drug diffusion from the porous carrier.
RN - 50-78-2; 9002-86-2; 9003-22-9; 25135-99-3; 39301-09-2
EM - 8005

- 138 SI - CA/091/128579S
AU - Stief K
AD - Umweltbundesamt Berlin, Berlin
TI - Sealing of landfill bases - new research results
SO - Beih. Muell Abfall; VOL 15,, 1979,71-85
LA - GER
CD - BMUAD
AB - CBAC COPYRIGHT: CHEM ABS After 1 yr. sealing compns. contg. asphalt lost pressure resistance but retained impermeability. Leaks occurred because of inhomogeneities in the mixt. Asphalt layers remained impermeable. Polymer sheets did not lose resiliency, tear resistance, or permeability, even when swollen.
RN - 9002-86-2; 9002-88-4; 9003-07-0; 9003-29-6; 9008-08-6
EM - 7910
- 139 SI - CA/091/128578R
AU - Woebken K
AD - Wasserwirtsch., Brake
TI - Experiences in waterproofing the landfills at Rahd and Galing with PVC and HDPE
SO - Beih. Muell Abfall; VOL 15,, 1979,37-9
LA - GER
CD - BMUAD
AB - CBAC COPYRIGHT: CHEM ABS Leachate-resistant linings of poly(vinyl chloride) and high-d. polyethylene were joined by welding and used to seal ore tailings contg. jarosite. (9002-86-2 Polyvinyl chloride)(9002-88-4 Polyethylene)(12207-14-6 Jarosite) The linings prevented leaching of heavy metals and SO42-.
RN - 9002-86-2; 9002-88-4; 12207-14-6
EM - 7910
- 140 SI - CA/091/128266N
AU - Hilado CJ ; Cumming HJ ; Murphy RM
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco
TI - Smoke density of materials by various methods
SO - SAMPE Q.; VOL 10, ISS 3, 1979,42-5
LA - ENG
CD - SAMQA
AB - CBAC COPYRIGHT: CHEM ABS Various synthetic and cellulosic materials were evaluated for smoke d., using the gravimetric method of the Arapahoe smoke chamber and the optical method for the Natl. Bureau of Stds. (NBS)-Aminco smoke chamber. Arapahoe smoke data are presented on the basis of both initial wt. and wt. loss, and NBS-Aminco smoke data are presented on the basis of both nonpiloted (smoldering) and piloted (flaming) conditions.
RN - 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-54-7; 9003-56-9; 9011-14-7; 27837-76-9; 63798-89-0; 69771-69-3
EM - 7910

- 141 SI - CA/091/128947K
AU - Suess W ; Seidel I
AD - Klin. Hubertusburg, Wermsdorf
TI - Effect of the nature of polymers on the release of water-soluble active principles from active principle-polymer embeddings
SO - Pharmazie; VOL 34, ISS 3, 1979,195-6
LA - GER
CD - PHARA
AB - CBAC COPYRIGHT: CHEM ABS The release of KCl with H2O from polystyrene, poly(vinyl chloride), vinyl chloride-vinyl acetate copolymer, poly(Me methacrylate), poly(vinyl acetate), and poly(vinyl butyral) embeddings was studied. (9003-53-6 Polystyrene)(9002-86-2 Poly(vinyl chloride))(9003-22-9 Vinyl chloride-vinyl acetate copolymer)(9011-14-7 Poly(methyl methacrylate))(9003-20-7 Poly(vinyl acetate)) KCl (<80 mu) was treated with polymer solns. or gels, the org. solvent removed, and the KCl-polymer mixt. milled. Release studies indicated the org. solvent had no effect, that the rate of release was proportional to the H2O absorption of the polymer and inversely proportional to the glass transition temp., and the active principle release was influenced by the microstructure of the embedding medium.
RN - 9003-53-6; 9002-86-2; 9003-22-9; 9011-14-7; 9003-20-7
EM - 7910
- 142 SI - CA/091/112427E
AU - Gilman B
AD - Medtronic, Inc., Minneapolis
TI - Measurement of surface contamination using a contact angle goniometer
SO - NBS Spec. Publ. (U. S.); VOL 400-50,, 1979,101-3
LA - ENG
CD - XNBSA
AB - CBAC COPYRIGHT: CHEM ABS A contact angle goniometer was used to evaluate org. contamination on implantable pulse generators. Wettability and surface contamination are important in the context of adhesive bonding and encapsulating and soldering and welding. By measuring contact angles of liqs. a crit. surface tension for the surface can be detd. Expts. were performed using Pt as a substrate for cleaning. The crit. surface tension of a no. of polymer surfaces were also detd.
RN - 7440-06-4; 9002-84-0; 9002-86-2; 9002-88-4; 9003-53-6; 9011-14-7; 25038-59-9
EM - 7910

- 143 SI - CA/091/112420X
AU - Ihlenfeld JV ; Cooper SL
AD - Dep. Chem. Eng., Univ. Wisconsin, Madison
TI - Transient in vivo protein adsorption onto polymeric biomaterials
SO - J. Biomed. Mater. Res.; VOL 13, ISS 4, 1979,577-91
LA - ENG
CD - JBMRB
AB - CBAC COPYRIGHT: CHEM ABS The adsorption of albumin, gamma-globulin, and fibrinogen was measured on 3 ex vivo polymeric shunt surfaces [poly(vinyl chloride) (PVC), Silastic, and segmented polyether urethane (Biomer)] exposed to flowing heparinized, canine blood in vivo. (9002-86-2 [Poly(vinyl chloride)]) A time-dependent phase of thrombus deposition followed by thromboembolism was obsd. on the PVC and Silastic shunt surfaces but not on the Biomer surface. Fibrinogen adsorption was found to predominate initially on PVC and Silastic though it subsequently desorbed somewhat and was replaced by albumin and gamma-globulin. On Biomer, the adsorption of all three proteins increased with time following initial blood contact and fibrinogen was less prominent initially. The PVC surface became passivated with respect to further thrombogenesis after 60-min exposure to flowing blood, at which time a higher fraction of albumin was present on the surface compared to that at earlier blood contact times. Rearrangement of adsorbed protein species occurs with time on polymer surfaces exposed to flowing blood in vivo. Early and predominant fibrinogen adsorption appears to be an important factor in the thrombogenic and embolic events obsd. on the PVC and Silastic shunt surfaces in vivo.
- RN - 9002-86-2
EM - 7910
- 144 SI - CA/091/112407Y
AU - Hellwig G
AD - Inst. Grenzflaechen- und Bioverfahrenstech., Stuttgart
TI - Measurement of adsorption of proteins on solid surfaces by means of dielectric and electron-spectroscopic methods
SO - Chem.-Ing.-Tech.; VOL 51, ISS 5, 1979,530-1
LA - GER
CD - CITEA
AB - CBAC COPYRIGHT: CHEM ABS To characterize the thrombogenic properties of solid surfaces, the adsorption of fibrinogen to different plastic tubes was measured. From studies of adsorption behavior by dielec. relaxation measurements, a term was found that was concn. dependent and could be used to det. the amt. of adsorbed fibrinogen. The charge state of an adsorbed fibrinogen layer also was studied by photoelectronic methods using various different solid surfaces. Similar materials such as PVC and polyurethane showed different adsorptive and surface properties which are described. (9002-86-2 PVC) Various theories of thrombus formation are considered esp. in relation to the use of temporary or permanent artificial organs.

- RN - 9002-86-2
EM - 7910
- 145 SI - CA/091/112395T
AU - Zakrzewski Z ; Sosnowski J
AD - Inst. Nauk. Lek., Akad. Med., Warsaw
TI - Development of a method for producing benzhydramine hydrochloride tablets of prolonged action
SO - Farm. Pol.; VOL 35, ISS 4, 1979,223-5
LA - POL
CD - FAPOA
AB - CBAC COPYRIGHT: CHEM ABS Sustained-release tablets of benzhydramine-HCl (I) were manufd. in a matrix of PVC alone or with Et cellulose (II). (147-24-0 Benzhydramine hydrochloride)(9002-86-2 PVC)(9004-57-3 Ethylcellulose) Addn. of II retarded I release, relative to a pure PVC matrix.
RN - 147-24-0; 9002-86-2; 9004-57-3
EM - 7910
- 146 SI - CA/091/103158R
AU - Kishitani K ; Yusa S
AD - Dep. Archit., Univ. Tokyo, Tokyo
TI - Study of evaluation of relative toxicities of combustion products of various materials
SO - J. Fac. Eng., Univ. Tokyo, Ser. B; VOL 35, ISS 1, 1979,1-17
LA - ENG
CD - JETBA
AB - CBAC COPYRIGHT: CHEM ABS The toxicity to mice of the combustion products of various materials, evaluated from the relation between collapse time and the wt. of material required to cause collapse during combustion, was higher when the materials were heated to 850.degree. than to 550.degree.. At the higher temp., polyamide, polyacrylonitrile, and urea resin foam products were .apprx.20-fold more toxic than those of lumber, wool products .apprx.10-fold more toxic, products from melamine resin-impregnated sheets and polyurethane foam .apprx.5-fold more toxic, and those from PVC foam slightly more toxic. Polystyrene foam and PVC A sheet products were lower in toxicity than those of lumber.
RN - 57-13-6; 108-78-1; 9002-86-2; 9003-53-6; 25014-41-9
EM - 7910
- 147 SI - CA/091/095906R
AU - Gideon JA
AD - Cent. Dis. Control, Natl. Inst. Occup. Saf. Health, Cincinnati
TI - Engineering control technology in polyvinyl chloride polymerization plants
SO - J. Environ. Pathol. Toxicol.; VOL 2, ISS 5, 1979,285-318
LA - ENG
CD - JEPTD
AB - CBAC COPYRIGHT: CHEM ABS A discussion is given on control of vinyl chloride pollution of the air of plants where PVC is manufd. (75-01-4 Vinyl chloride)(9002-86-2 PVC)

- RN - 75-01-4; 9002-86-2
EM - 7909
- 148 SI - CA/091/078404H
AU - Taylor W ; Scott KA C
AD - Plast. Rubber Inst., London
TI - Toxic gases in plastics fires
SO - Cah. Notes Doc.; VOL 95,, 1979,259-66
LA - FRE
CD - CNDIB
AB - CBAC COPYRIGHT: CHEM ABS Pyrolysis and combustion products of various plastic and some common materials, e.g., wood, rubber, etc, are presented.
RN - 57-13-6; 100-21-0; 108-78-1; 108-80-5; 9002-84-0; 9002-85-1; 9002-86-2; 9002-89-5; 9003-05-8; 9003-53-6; 9004-70-0; 9011-14-7; 25014-41-9; 25038-54-4; 32131-17-2; 54830-67-0
EM - 7909
- 149 SI - CA/091/096558R
AU - Honda K ; Itoh H ; Hoshi I ; Sasakawa S
AD - Cent. Blood Cent., Jap. Red Cross Soc., Tokyo
TI - Effects of container materials on platelet preservation
SO - Kobunshi Ronbunshu; VOL 36, ISS 4, 1979,203-7
LA - JPN
CD - KBRBA
AB - CBAC COPYRIGHT: CHEM ABS The effect of polymer container material on blood platelet aggregation was detd. The rate of decrease in the no. of single blood platelets exposed to polymeric material increased in the following order: silicone, poly(vinyl chloride), glass, ionene polymer. (9002-86-2 Poly(vinyl chloride)) The no. of single platelets decreased rapidly on a Na polyacrylate surface as well as on a ionene polymer surface. (9003-04-7 Sodium polyacrylate) Blood platelets on a silicon surface showed discoid shapes, whereas platelets on an ionene polymer surface were multiple pseudopods and on poly(vinyl chloride) were spread out.
RN - 9002-86-2; 9003-04-7
EM - 7909
- 150 SI - CA/091/085297D
AU - Greenberg J
TI - Slow-release insecticidal bodies
SO - Ger. Offen. PATENT NO. 2852794 06/07/79 (Robins, A. H., Co., Inc.)
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS Slow-release Naled-contg. PVC bodies, characterized by a high surface-to-vol. ratio, are described. (300-76-5 Naled)(9002-86-2 PVC) The plastic mass also contains SiO2 and a C14-20 fatty acids or a salt or ester thereof. Haloacetaldehydes are used as pore-forming agents during the curing of the plastic at 127-204.degree.. The Naled content is 20-35%.
RN - 300-76-5; 9002-86-2; 7631-86-9
EM - 7909

- 151 SI - CA/091/078916B
AU - Ackers S
TI - Compositions for controlled availability of medically-useful organophosphorus compounds
SO - U.S. PATENT NO. 4153682 05/08/79 (Shell Oil Co.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS Organophosphorus drugs are incorporated into poly(vinyl chloride) (PVC) resins and styrene-maleic anhydride polymer (SMA) resins for administration to animals to kill parasites in the gastrointestinal tract, increase the vitality of the fetus and newborn young of a pregnant mammal and to kill fly larvae feeding upon excreted feces of the animal. (9002-86-2 Polyvinyl chloride))(9011-13-6 Styrene-maleic anhydride polymer) Dichlorvos 45 and Mark QT stabilizer 2.25 g were mixed with 252.75 g PVC at 175.degree. F. (62-73-7 Dichlorvos) The particles were cooled and a soln. of 90 g SMA (1:1), in which the maleic acid to (maleic anhydride-maleic acid) ratio was about 0.33:1 in 350 mL Me2CO, was added with mixing to distribute the soln. evenly over the particles. The powder then was heated to 145.degree. F for 3 h to remove solvent.
RN - 9002-86-2; 9011-13-6; 62-73-7; 17196-88-2
EM - 7909
- 152 SI - CA/091/078872J
AU - Ihlenfeld JV ; Mathis TR ; Riddle LM ; Cooper SL
AD - Dep. Chem. Eng., Univ. Wisconsin, Madison
TI - Measurement of transient thrombus deposition on polymeric materials
SO - Thromb. Res.; VOL 14, ISS 6, 1979,953-67
LA - ENG
CD - THBRA
AB - CBAC COPYRIGHT: CHEM ABS A method developed to measure transient thrombus deposition from arterial blood on polymeric surfaces involves infusion of small amts. of 125I-labeled fibrinogen and 51Cr-labeled platelets into the circulation of anesthetized mongrel dogs. Radioactivity adsorbed to the walls of femoral A-V shunts was counted to measure fibrin and platelet deposition with time following initial blood-polymer contact. Shunt segments were obtained at each datum for SEM of adhered thrombus material. Plasticized poly(vinyl chloride), recognized as having poor blood compatibility, elicited rapid platelet and fibrin activation resulting in a transient max. of thrombus deposition after 10 to 15 min of blood contact. (9002-86-2 Poly(vinyl chloride)) Adherent thrombi subsequently left the surface. Contact of blood with segmented polyether urethane (BIOMER) resulted in minimal platelet and fibrin deposition. Morphol. anal. by electron microscopy confirmed these observations. This method can be used to det. the thrombogenic and embolic potential of polymeric surfaces and may be used to elucidate the mechanisms of artificial surface induced thrombosis.
RN - 9002-86-2
EM - 7909

- 153 SI - CA/091/062179C
AU - Mathe A ; Molnar J
TI - Plastic packing material for biological trickling device for wastewater purification apparatus
SO - Ger. Offen. PATENT NO. 2747769 04/26/79 (Hungaria Muanyagfeldolgozo Vallalat)
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS The title materials, which can be prepd. readily and satisfactorily from PVC, consist of transmission channels having wavy walls, the channels forming a uniform, hexagonal cross section in a horizontal plane and having a zigzag arrangement in the vertical plane. (9002-86-2 PVC)
RN - 9002-86-2
EM - 7908
- 154 SI - CA/091/061896X
AU - Zolkin GA
AD - Vses. Nauchno-Issled. Inst. Tr. Stroit., Moscow
TI - Hygienic assessment of the high-temperature treatment of poly(vinyl chloride) finishing materials
SO - Gig. Sanit.; ISS 4, 1979,76-7
LA - RUS
CD - GISAA
AB - CBAC COPYRIGHT: CHEM ABS The atm. surrounding workers employed in welding PVC linoleum averaged above the permissible concns. of CH₂:CHCl and di-Bu phthalate. (9002-86-2 PVC)(75-01-4 Vinyl chloride)(84-74-2 Dibutyl phthalate) This was true for both processes studied, IR heating and direct contact with hot electrodes.
RN - 9002-86-2; 75-01-4; 84-74-2
EM - 7908
- 155 SI - CA/091/044116A
AU - Schorr W ; Duschner H ; Starke K
AD - Kernchem. Fachber. 14, Philipps-Univ. Marburg, Marburg
TI - The generation of radiolysis gases from low- and medium-level radioactive waste solidification products
SO - Atomkernenerg./Kerntech.; VOL 33, ISS 4, 1979,265-9
LA - ENG
CD - ATKED
AB - CBAC COPYRIGHT: CHEM ABS The amt. and compn. of radiolysis gases evolved from bitumen, polyethylene, and concrete as well as from their mixts. with simulated waste components were detd. by mass spectrometry. Irresp. of the additive, the main component of the induced gases is H. Though its rate of generation is low it should be taken into account with respect to the design of optimum underground storage conditions.
RN - 1333-74-0; 7727-37-9; 7782-44-7; 9002-86-2; 9002-88-4
EM - 7908

- 156 SI - CA/091/026872Q
AU - Hoketsu H
TI - Separation of oil on water
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 79 33887 03/12/79 (Sumitomo Metal Industries, Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Polar plastic coated rice hulls are spread over oil films on water, and stirred to remove the oil. Thus, a PVC-xylene soln. was sprayed on rice hulls. (9002-86-2 PVC)(1330-20-7 Xylene) The coated hulls was sprayed on oil spills, and aggregated to 50-60 mm diam. lumps in 30-50 s. The treated water contained <10 ppm fuel oil.
RN - 9002-86-2; 1330-20-7
EM - 7908
- 157 SI - CA/091/027213N
AU - Pik J ; Braier J ; Kalman MZ ; Jozef MP
AD - Inst. Exp. Med., Budapest
TI - Determination of bis(2-ethylhexyl) phthalate (BEHP) in blood preparations stored in poly(vinyl chloride) bags
SO - Probl. Gematol. Pereliv. Krovi; VOL 24, ISS 2, 1979,49-51
LA - RUS
CD - PGPKA
AB - CBAC COPYRIGHT: CHEM ABS The concn. of bis(2-ethylhexyl) phthalate in whole blood stored 20 days in PVC bags manufd. by Medicor (Hungary) and Biopack P (Fed. Rep. Ger.) was 7.5 and 10.9 mg/100 mL, resp. (117-81-7 Bis(2-ethylhexyl) phthalate)(9002-86-2 PVC)
RN - 117-81-7; 9002-86-2
DTG - BLOOD CONCENTRATIONS
EM - 7908
- 158 SI - CA/090/209415S
AU - Vulikh AI ; Zagorskaya MK ; Fokina NA ; Nikandrov GA
AU - Reznichenko LA ; Zverev MP ; Barash AN ; Surkova VI ; Mavrin AM
AU - et al
AD - USSR
TI - Purification of gases
SO - Ger. Offen. PATENT NO. 2737070 03/08/79
AB - CBAC COPYRIGHT: CHEM ABS HCl and/or HF are removed from gases by adsorption on fibrous anion exchangers contg. vinylpyridine or amine groups, followed by aq. regeneration of the exchangers. Thus, epoxy resin-sized 65:35 acrylonitrile-2-methyl-5-vinylpyridine copolymer fibers (intrinsic viscosity (DMF, 25.degree.) 1.5, denier 0.3, tenacity 18 g/denier, elongation 20%, HCl exchange capacity 2.4 mequiv./g) are formed into a nonwoven sheet with wt. 500 g/m² and thickness 6 mm. (26100-50-5 Acrylonitrile-2-methyl-5-vinylpyridine copolymer) Passing air contg. 50 mg/m³ HF through this sheet at a linear velocity of 2.2 cm/s requires passage of 1360 L air before breakthrough of traces of HF, with absorption of 68 mg HF. Passing 30 mL H₂O over the spent filter desorbs 60 mg HF.

- RN - 26100-50-5; 7647-01-0; 7664-39-3; 9002-86-2; 9002-98-6;
24937-79-9; 25038-86-2; 25684-76-8; 25748-98-5; 26836-60-2;
26913-06-4; 32236-74-1
EM - 7907
- 159 SI - CA/090/192633M
AU - Fukamachi K ; Ishibashi N
AD - Fukuoka Environ. Res. Cent., Fukuoka, Japan
TI - Testing and characteristics of a clobutinol-sensitive electrode
SO - Yakugaku Zasshi; VOL 99, ISS 2, 1979,126-30
LA - JPN
CD - YKKZA
AB - CBAC COPYRIGHT: CHEM ABS An ion-selective electrode was developed with a PVC membrane matrix responsive to clobutinol (I). (9002-86-2 PVC)(14860-49-2 clobutinol) The I ion-selective electrode exhibited a Nernstian response to I ion from 10^{-1.5} to 10^{-4.5}M. The membrane potential of the electrode was independent of pH from 3.0-8.0. Na, K, NH₄, and Ca ion interference was extremely small in the detn. of I. Ephedrine, methylephedrine, caffeine, antipyrine, etc., usually contained in common drugs did not interfere at pH 5-7, whereas chlorpheniramine, diphenhydramine and tripelenamine interfered. (113-92-8 Chlorpheniramine)(58-73-1 Diphenhydramine)(91-81-6 Tripelenamine) The developed PVC membrane electrode is useful as an indicator electrode not only for direct potentiometry of I, but also for the pptn. titrn. with Na tetraphenylborate. Method of prepn. of the PVC matrix membrane is given.
- RN - 9002-86-2; 14860-49-2; 113-92-8; 58-73-1; 91-81-6
EM - 7906
- 160 SI - CA/090/181072B
AU - Shevchenko AM ; Shkurko GA ; Medvedev VN
AD - Kiev. Med. Inst., Kiev, USSR
TI - Biological effect of dust from poly(vinyl chloride) production
SO - Vrach. Delo; ISS 2, 1979,93-5
LA - RUS
CD - VRDEA
AB - CBAC COPYRIGHT: CHEM ABS Six months of inhalation of 80-150 mg/m³ of dust of a mixt. used for manuf. of synthetic leather and contg. 100 wt. parts poly(vinyl chloride), 25 wt. parts enriched chalk, 4 wt. parts PbSiO₃, 2 wt. parts Ca stearate, and 10 wt. parts di-Bu phthalate (I) increased the oxyproline level in rat lungs by 69%, i.e. 1.5-fold as much as did pure poly(vinyl chloride). (9002-86-2 Polyvinyl chloride)(84-74-2 Dibutyl phthalate)(51-35-4 Oxyproline) The increased pneumoconiotic activity (formation of polymorphic cellular exudate) was due to the presence of PbSiO₂, whereas increased general toxicity was due to action of I. The increased general toxicity consisted in hyperdemia of liver capillaries, discomplexation of hepatocytes with vacuolar dystrophy of cytoplasm, and increased mitotic activity. Renal microcirculation was disturbed and granular dystrophy of the epithelium of proximal glomeruli occurred. Pericapillary swelling was obsd. in the heart muscle. Max.

permissible concn. of the manufg. dust contg. toxic additives should be lower than that of the pure poly(vinyl chloride) dust.

RN - 9002-86-2; 84-74-2; 51-35-4; 7439-92-1; 11120-22-2

DTG - MAXIMUM PERMISSABLE LIMIT

EM - 7906

161 SI - CA/092/115960E

AU - Lopushanskaya AI ; Rudi VP ; Orynyak MV ; Khaber NV

AU - Vatananyuk VI ; Denisenko VP ; Sklyarskaya LB

TI - Removal of poly(vinyl chloride) from waste waters

SO - U.S.S.R. PATENT NO. 688442 09/30/79 ("Khlorvinil" Kaluga Industrial Enterprises)

LA - RUS

AB - CBAC COPYRIGHT: CHEM ABS The coagulant $(Me_2N+(CH_2CO_2R)(CH_2)_nN+(CH_2CO_2R)Me_2) 2Cl-$ ($n = 2, 6, 7$; $R = C_9H_{19}-C_{16}H_{33}$) is added to the wastewater while mixing and the poly(vinyl chloride) coagulum is then removed by filtration. (9002-86-2 PVC)

RN - 9002-86-2; 7369-18-8; 73025-07-7; 73025-08-8

EM - 8004

162 SI - CA/092/098944H

AU - Poranek A ; Winnicki T ; Wisniewski J

AD - Inst. Inz. Ochr. Srodowiska, Politech. Wroclawska, Wroclaw

TI - Membrane separation of product in biological transformation process

SO - Metody Fizykochem. Oczyszczania Wody Sciekow, Mater. Konf. Nauk., Miedzynar. Konf., 2nd; VOL 1, 1979, Paper No. 1, 12 pp.

LA - POL

CD - 41JYA

AB - CBAC COPYRIGHT: CHEM ABS The effectiveness of permeable membranes contg. immobilized Rhodotorula mucilaginosa in reducing toxic PhCHO to less toxic PhCH₂OH was studied. (100-52-7 Benzaldehyde)(100-51-6 Benzenemethanol) The membranes were prepd. by sintering powd. PVC and then depositing thin films of Polysulfone P3500 (I) on its surface. (9002-86-2 PVC)(50958-07-1 Polysulfone P3500) The permeability of these membranes could be changed by changing the temp. of I solns. in DMF used for the deposition of the films. The highest permeability of water, 0.45 m³/m²-day, was obtained with I films 25 μ thick obtained from I solns. at 333 K. When a mixt. of PhCHO, water, and MeOH contg. suspended fungi was pressure-forced through I membranes on sintered PVC, the filtrate contained PhCH₂OH, water, and MeOH. The fungi were deposited on the membrane slowing down the filtration rate by 10%. Similar ultrafiltration systems could be used to reduce the toxicity of wastewaters.

RN - 100-52-7; 100-51-6; 9002-86-2; 50958-07-1

EM - 8004

- 163 SI - CA/092/116402M
AU - Friocourt MP ; Picart D ; Saleun JP ; Floch HH
AD - Lab. Biochim., Fac. Med., Brest
TI - Release of di[2-ethylhexyl] phthalate into blood stored in contact with poly(vinyl chloride)
SO - Rev. Fr. Transfus. Immuno-Hematol.; VOL 22, ISS 4, 1979,343-58
LA - FRE
CD - RFTID
AB - CBAC COPYRIGHT: CHEM ABS Leaching of bis(2-ethylhexyl) phthalate (I) from poly(vinyl chloride) blood bags plasticized with I was detd. using 14C-labeled I. (117-81-7 Di(2-ethylhexyl)phthalate)(9002-86-2 Polyvinyl chloride) The leaching is independent of the lipid concn. of the blood, but is increased by heat sterilization of the plastic and shaking of the blood bag. I is not metabolized in blood at 4.degree. but is tightly bound to proteins of mol. wt. >10,000 which must be hydrolyzed with HClO4 and H2O2 to ext. I.
RN - 117-81-7; 9002-86-2
EM - 8004
- 164 SI - CA/092/099597J
AU - Tritten P
TI - Bone prosthesis
SO - U.S. PATENT NO. 4179485 12/18/79 (Cera-ver S. A.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS A bone prosthesis was formed from substantially pure porous alumina and has a porosity of .apprx.30% and pore size of .apprx.100-200 .mu.. The alumina powder is granulated with an org. binder such as poly(vinyl alc.) into 0.5-1.5 mm grains and the grains heated to .gtoreq.1400.degree. but lower than sintering temp. (9002-86-2 poly(vinyl alc.)) The resulting bulk is compressed at .gtoreq.1 metric ton/cm2 into a 1 st pressed mass and this mass is sintered at .apprx.1650-1700.degree. to form the porous alumina. This prosthetic can enable connection with natural bone by rebuilding of the bone.
RN - 9002-86-2
EM - 8004
- 165 SI - CA/092/081835A
AU - Alonso Breton A
TI - Problems derived from incineration of vinyl plastics
SO - Rev. Plast. Mod.; VOL 38, ISS 279, 1979,332-5
LA - SPA
CD - RPMOA
AB - CBAC COPYRIGHT: CHEM ABS The incineration of solid urban wastes contg. 7.7% plastics has induced corrosion of the 15Mo3 steel pipes in afterburner units of the Barcelona refuse-burning elec. power generating plant. (39439-20-8 15Mo3) Analyses of particulate emissions show abundant S (9.35) and levels of Cl (20.0), Na (11.63), and K (16.79%), which are .apprx.200% greater than av. values reported for other urban-waste incineration

plants. Surface deposits on the corroded pipes contain 2-5% Cl and abundant S (as sulfates and bisulfates). The corrosion is attributed to the interaction of excessive amts. of Cl, S, Na, and K at the high (.apprx.400.degree.) afterburner temps. Increased PVC input (principally as mineral-water bottles and plasticized milk cartons) is the probable source of excess Cl. Fruit and vegetable wastes are the probable sources of Cl, Na, and K.

RN - 39439-20-8; 9002-86-2
EM - 8003

- 166 SI - CA/092/081580P
AU - Laatsch HD
AD - Volkswagenwerk A.-G., Wolfsburg
TI - Safety aspects of foam plastic production
SO - Kunstst.-Plast. (Solothurn, Switz.); VOL 26, ISS 9, 1979,37-40
LA - GER
CD - KUPLA
AB - CBAC COPYRIGHT: CHEM ABS Threshold limits for substances in workroom air and other safety factors in the prepn. of foams from polystyrene, PVC, polyethylene, polyoxyphenylenes, polycarbonates, polyureas, and unsatd. polyesters are discussed. (9003-53-6 Polystyrene)(9002-86-2 PVC)(9002-88-4 Polyethylene)
RN - 9003-53-6; 9002-86-2; 9002-88-4
EM - 8003

- 167 SI - CA/092/081497S
AU - Graedel TE ; Franey JP
AD - Bell Lab., Murray Hill
TI - Gaseous hydrogen sulfide determination by discoloration of lead-stabilized PVC
SO - Am. Ind. Hyg. Assoc. J.; VOL 40, ISS 11, 1979,947-54
LA - ENG
CD - AIHAA
AB - CBAC COPYRIGHT: CHEM ABS PVC stabilized with 20% tribasic Pb sulfate showed color degrdn. when exposed to H2S (8-5000 ppb) at different temps. and humidities. (9002-86-2 PVC) This color degrdn. effect was used for monitoring ambient H2S. The color degrdn. depended on humidity and temp. of the environment. The PVC discoloration technique is insensitive to interferences from ambient SO2 and MeSH. Thermomech. and mechanism of PVC discoloration is discussed. Concns. of H2S exceeding accepted health limits were detected in .ltoreq.5 min by visual means at .gtoreq.40% humidity.
RN - 9002-86-2; 7783-06-4; 12202-17-4
EM - 8003

- 168 SI - CA/092/064213D
AU - Bregulla EP
AD - Nukem G.m.b.H., Hanau
TI - Mobile LLW and ILW solidification unit and treatment of TRU-bearing, combustible waste
SO - Waste Manage. '79 [Seventy-Nine]: State Waste Disposal Technol. Soc. Polit. Implic., Proc. Symp.; 1979,493-508
LA - ENG
CD - 41TPA
AB - CBAC COPYRIGHT: CHEM ABS A mobile unit is described for the fixation, in concrete, of radioactive liqs., sludges, and spent resins. Pu-contg. waste neoprene, paper, polyethylene, PVC, and rubber were pyrohydrolyzed by a process in which 90% of the Pu was extractable from the ashes. (9002-88-4 polyethylene)(9002-86-2 PVC)
RN - 9002-88-4; 9002-86-2; 7440-07-5
EM - 8003
- 169 SI - CA/092/063975S
AU - Fomenko VN ; Zaeva GN ; Katosova LD ; Pavlenko GI
TI - Results of studying oncological morbidity and the cytogenetic effects in workers employed in vinyl chloride polymerization
SO - Toksikol. Nov. Prom. Khim. Veshchestv; VOL 15,, 1979,17-21, 145-50
LA - RUS
CD - TPKVA
AB - CBAC COPYRIGHT: CHEM ABS The concn. of vinyl chloride in the air of working areas was 1.8-111 mg/m³ as measured in the course of 2 yr, and in 20% of the cases was 3 times higher than the max. permissible concn. (30 mg/m³). (75-01-4 Vinyl chloride) The long-term occupational contact with vinyl chloride causes the increased chromosome aberrations in lymphocyte cultures of the peripheral blood. The leading role of vinyl chloride poisoning in chromosome mutation is shown.
RN - 75-01-4; 9002-86-2
EM - 8003
- 170 SI - CA/092/082383P
AU - Gendreau RM ; Jakobsen RJ
AD - Battelle Columbus Lab., Columbus
TI - Blood-surface interactions: Fourier Transform infrared studies of protein surface adsorption from flowing blood plasma and serum
SO - J. Biomed. Mater. Res.; VOL 13, ISS 6, 1979,893-906
LA - ENG
CD - JBMRB
AB - CBAC COPYRIGHT: CHEM ABS The adsorption of blood proteins onto various surfaces in contact with flowing blood plasma or serum was investigated using IR spectroscopy coupled with attenuated total reflection. The comparison of adsorption from a static vs. a flowing blood plasma system showed that a greater amt. of protein was adsorbed when the static system was employed, whereas desorption was obsd. with the static system and not in the flowing system. When plasma and serum were compared in terms of

amt. and type of protein adsorbed, little difference was noted in the kinetics of adsorption or stability of the adsorbed layers. Variations in the ratios of IR adsorption bands (from either plasma or serum) indicated that changes occurred during the adsorption process in the protein layers. A comparison of poly(vinyl chloride) to Ge as the protein adsorbing surface in the static system showed differences in terms of the compn. of the adsorbed layers. (9002-86-2 Poly(vinyl chloride))

RN - 9002-86-2; 7440-56-4
EM - 8003

- 171 SI - CA/092/082353D
AU - Offeman RD ; Williams MC
AD - Chem. Eng. Dep., Univ. California, Berkeley
TI - Material effects in shear-induced hemolysis
SO - Biomater., Med. Devices, Artif. Organs; VOL 7, ISS 3, 1979,359-91
LA - ENG
CD - BMDOA
AB - CBAC COPYRIGHT: CHEM ABS A rotating-disk app. for shearing blood was employed to compare 22 materials for their tendency to cause hemolysis during standardized low-stress (130 dynes/cm² max.) laminar flow conditions. Rigid plastics, hydrogels, and carbons were among the materials tested. Time-independent ranking of the materials was possible for 75% of the data; these rankings correlated linearly (for polymers with the crit. surface tension gammac over the range 20-46 dyne/cm, with low gammac being assocd. with low hemolysis. Surface morphol. was also found to influence hemolysis. Roughness in the 1-15 mu range had a distinct effect on hemolysis kinetics for polyethylene surfaces. (9002-88-4 Polyethylene) Failure to find time-independence in 25% of the material rankings can be attributed to inadequate control of the roughness variable. The importance of surface morphol., as well as surface chem., as a biocompatibility parameter was emphasized.

RN - 9002-88-4; 7440-44-0; 9002-84-0; 9002-86-2; 9003-05-8; 9003-07-0; 9011-14-7; 12597-68-1; 25038-54-4; 28214-29-1; 52627-33-5
EM - 8003

- 172 SI - CA/092/052932Z
AU - Hilado CJ
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco
TI - Carbon monoxide as the principal toxicant in the pyrolysis gases from materials
SO - J. Combust. Toxicol.; VOL 6, ISS Aug., 1979,177-84
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS Total conc.-time exposure to CO was estd. for toxicity screening tests on 93 materials, using death-product values based on the CO anal. at the end of the tests. CO was the sole or principal toxicant in the gases from the majority of materials evaluated.

RN - 630-08-0; 9002-81-7; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9; 9010-98-4; 9011-14-7; 25038-54-4; 25585-20-0;

- 25667-42-9; 27026-93-3; 31833-61-1; 62238-79-3
EM - 8003
- 173 SI - CA/092/046773G
AU - Petersen O ; Schmidt HD
TI - Detection of gas traces
SO - Ger. Offen. PATENT NO. 2812613 09/27/79 (Bayer A.-G.)
LA - GER
AB - CBAC COPYRIGHT: CHEM ABS Traces of NO2 are detd. in gases by an electrochem. cell equipped with a cathodically-polarized, ion-selective, AgI-coated, Ag working electrode, a ref. electrode, and an Ag auxiliary electrode in an org. electrolyte. The electrolyte contains di-Et phthalate 40-60, propylene carbonate 25-35, PVC 15-20%, and additives to increase cond. and pH stability. (84-66-2 Diethyl phthalate)(108-32-7 Propylene carbonate)(9002-86-2 PVC) The sensor can be used to detn. traces of acrylonitrile. (107-13-1 acrylonitrile)
RN - 84-66-2; 108-32-7; 9002-86-2; 107-13-1; 7440-22-4; 7783-96-2; 10102-44-0
EM - 8002
- 174 SI - CA/092/046724S
AU - Hansteen IL
AD - Lab. Genet., Telemark Cent. Hosp., Porsgrunn
TI - A follow-up study of PVC workers two years after exposure. Preliminary results using sister chromatid exchange frequency as an assay of genetic damage
SO - Genet. Damage Man Caused Environ. Agents, [Proc. Conf.]; 1979,279-85
LA - ENG
CD - 41RGA
AB - CBAC COPYRIGHT: CHEM ABS There is no significant difference in the frequency of sister chromatid exchanges (SCEs) between PVC workers and their matched controls 2 yr after exposure to 1 ppm vinyl chloride. (9002-86-2 PVC)(75-01-4 Vinyl chloride) The mean SCEs of exposed workers is 7.6 (range 4.7-10.5), as compared to 7.5 (range 5.1-11.1) for the control.
RN - 9002-86-2; 75-01-4
EM - 8002
- 175 SI - CA/092/028092E
AU - Hemming ML
AD - Spec. Proj. Group, ICI Ltd.
TI - General biological aspects of waste-water treatment including the deep-shaft process
SO - Water Pollut. Control (Maidstone, Engl.); VOL 78, ISS 3, 1979,312-25
LA - ENG
CD - WPOCA
AB - CBAC COPYRIGHT: CHEM ABS Wastewater treatment is described using plastic media in roughing and fining stages of biol. filtration. Floccor E (PVC) is compared to mineral media. (9002-86-2 PVC) Biol. oxidn. in deep-shaft facilities is

- described.
- RN - 9002-86-2
EM - 8002
- 176 SI - CA/092/035280T
AU - Arnold CJ ; Trujillo RE
AD - Sandia Lab., Albuquerque
TI - Composition stability and degradation products of selected materials for solar heating and cooling
SO - Report; ISS SAND-78-0681,, 1979,36 pp.
LA - ENG
CD - D3REP
AB - CBAC COPYRIGHT: CHEM ABS The compn., stability and thermal degn. products of a variety of structural plastics, heat transfer fluids, thermal storage media and sealants, which have been proposed for use in solar heating and cooling applications, were either defined generically by anal. or obtained by surveying the literature. This information will be used to aid in the assessment of the environmental impact of these materials. By gas chromatog.-mass spectrometry (GC-MS), beta-phenylnaphthylamine, a suspected carcinogen, was tentatively identified, arom. components which might be toxic were detected in all of the heat transfer fluids that were derived from petroleum sources. (135-88-6 .beta.-Phenylnaphthylamine) By thermogravimetric anal. it was found that polysulfide, Neoprene, poly(vinyl chloride), and poly(vinyl fluoride) were the least stable solar heating and cooling materials. In the event of a solar system failure, these materials would be expected to thermally degrade and evolve such toxic substances as H2S, HCl and HF. Other solar heating and cooling materials were found to be more thermally stable and hence should not outgas if the solar system fails.
- RN - 135-88-6; 7647-01-0; 7664-39-3; 7783-06-4; 9002-86-2; 9080-49-3; 24981-14-4
EM - 8002
- 177 SI - CA/092/028536C
AU - Yu R ; Koran A
AD - Sch. Dent., Univ. Michigan, Ann Arbor
TI - Dimensional stability of elastomers for maxillofacial applications
SO - J. Dent. Res.; VOL 58, ISS 9, 1979,1908-9
LA - ENG
CD - JDREA
AB - CBAC COPYRIGHT: CHEM ABS Of 4 types of maxillofacial prosthetic elastomers, silicones, under conditions of accelerated aging, were more stable than PVC and polyurethanes. (9002-86-2 Poly(vinyl chloride)) PVC had the largest permanent deformation and the value changed only slightly after accelerated aging. The polyurethane had good elastic recovery with little permanent deformation but demonstrated severe degn. when exposed to conditions of accelerated aging. Among silicone elastomers, the largest vol. change was obsd. for Silastic 399. Silastic 44210 demonstrated excellent stability in vol. change.

- RN - 9002-86-2
EM - 8002
- 178 SI - CA/092/028382Z
AU - Watson JR ; Lawrence RC ; Lovering EG
AD - Pharm. Chem. Div., Drug Res. Lab., Ottawa
TI - A gas chromatographic (GC) headspace method for monitoring vinyl chloride in liquid drug and cosmetic products
SO - Can. J. Pharm. Sci.; VOL 14, ISS 3, 1979,57-60
LA - ENG
CD - CNJPA
AB - CBAC COPYRIGHT: CHEM ABS A gas chromatog. method is described for monitoring vinyl chloride levels in liq. drug and cosmetic preps. packaged in poly(vinyl chloride) containers. (75-01-4 Vinyl chloride)(9002-86-2 Poly(vinyl chloride)) A weighed aliquot of the com. product in a tightly septum-sealed vial with accurately known headspace vol. is heated to 50.degree. for 30 min. A portion of the warm headspace gas is then injected into a gas chromatog. equipped with a flame ionization detector and a styrene-divinylbenzene porous polymer column. The vinyl chloride is eluted isothermally at 125.degree. and is quantitated by simple computation relative to a response factor detd. daily using a std. vinyl chloride-air calibration gas mixt. The procedure was subjected to collaborative study by 5 analysts. Two mouthwash products, 2 com. shampoos, 2 large vol. parenteral solns. and 2 baby oil preps. were analyzed. Statistical evaluation of the results of the study showed that the method had an overall coeff. of variation of about 17%. The limit of detectability of the procedure is about 0.1 ppb in the sample soln.
- RN - 75-01-4; 9002-86-2
EM - 8002
- 179 SI - CA/092/016329Z
AU - Bleehen T
AD - Dep. Pharmacol. Ther., Middlesex Hosp. Med. Sch., London
TI - The effect of plasticizers on responses mediated by cholinceptors at the neuromuscular junction
SO - Br. J. Pharmacol.; VOL 66, ISS 1, 1979,76P
LA - ENG
CD - BJPCB
AB - CBAC COPYRIGHT: CHEM ABS The stabilizers Lankro Q152 and Abrac A had no effect on the responses mediated by cholinceptors at the neuromuscular junction of a frog rectus muscle prepn. in Ringer soln. (72231-61-9 Lankro Q152)(39427-38-8 Abrac A) When the plasticizer Citroflex A4 (I) (.gtoreq.2.7 .times. 10-5M) was added to the Ringer soln., the max. response to carbachol was reduced, and the effect of dithiothreitol was enhanced. (77-90-7 Citroflex A) Both effects were reversed by washing. I in concns. which reduced the max. response to carbachol by 98% had no effect on caffeine-induced contractions. When I was replaced in PVC tubes by a phthalate plasticizer, the product did not interfere with the responses to carbachol, or the action of

dithiothreitol on it.

RN - 72231-61-9; 39427-38-8; 77-90-7; 9002-86-2
EM - 8002

- 180 SI - CA/091/198177H
AU - Vulikh AI ; Zagorskaya MK ; Fokina NA ; Nikandrov GA
AU - Reznichenko LA ; Zverev MP ; Barash AN
TI - Treatment of a gas containing a hydrogen halide
SO - Fr. Demande PATENT NO. 2400942 03/23/79
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS Hydrogen halides, particularly HF and HCl, are removed from gases by contact with fibrous anion exchangers consisting of vinylpyridine or aliph. amine groups on org. polymers, which are regenerated by H2O. Thus, offgas from HF manuf. contg. 50 mg HF/m3 at 20.degree. and 50% relative humidity is passed at 2 L/min over a 500 g/m2 fabric of 65:35 acrylonitrile-2-methyl-5-vinylpyridine copolymer, which absorbs 9% HF (1360 L air) before the HF concn. in the offgas exceeds the limit of detection (0.5 mg/m3). (26100-50-5 Acrylonitrile-2-methyl-5-vinylpyridine copolymer) Passing 30 mL H2O over the filter removes 60 mg of the 68 mg HF absorbed.
RN - 26100-50-5; 7647-01-0; 7664-39-3; 9002-86-2; 9002-98-6; 24937-79-9; 25038-86-2; 25684-76-8; 25748-98-5; 32236-74-1
EM - 8001
- 181 SI - CA/092/011175M
AU - Huettneraich R
AD - Wiss. Lab., VEB Jenapharm Jena, Jena
TI - Molecular galenics. 40. Effect of capillary forces on the strength of compressed tablets
SO - Pharmazie; VOL 34, ISS 7, 1979,437
LA - GER
CD - PHARA
AB - CBAC COPYRIGHT: CHEM ABS The compression strength of NaCl, lactose, and polyvinyl chloride tablets decreased with tableting solvent in the order hexane > cyclohexane > EtOAc > 90% EtOH > H2O. (63-42-3 Lactose)(9002-86-2 Polyvinyl chloride)(110-54-3 Hexane)(110-82-7 Cyclohexane)(141-78-6 Ethyl acetate)(64-17-5 Ethanol) Thus, soln. processes, crusting, gumming, surface tension, and wetting ability of the solvent all have practically no effect on tablet strength.
RN - 63-42-3; 9002-86-2; 110-54-3; 110-82-7; 141-78-6; 64-17-5; 7647-14-5; 7732-18-5
EM - 8001
- 182 SI - CA/091/198911T
AU - Korzeniowski A ; Domeracki S
AD - Zakl. Przechowalnictwa, Inst. Gospod. Magazynowej, Poznan
TI - Effect of blister-pack packages on the stability of tetracycline antibiotics under tropical conditions
SO - Farm. Pol.; VOL 35, ISS 5, 1979,265-7
LA - POL
CD - FAPOA

- AB - CBAC COPYRIGHT: CHEM ABS Tetracycline-HCl and oxytetracycline-HCl decompn. under high-temp. and -humidity conditions in blister-pack packages was proportional to the permeability of H2O through the packaging material. (64-75-5 Tetracycline hydrochloride)(2058-46-0 Oxytetracycline hydrochloride) PVC (0.290 mm) film coated with 80 g/m2 poly(vinylidene chloride) was recommended. (9002-86-2 PVC)(9002-85-1 Poly(vinylidene chloride))
- RN - 64-75-5; 2058-46-0; 9002-86-2; 9002-85-1; 7429-90-5
- EM - 8001
- 183 SI - CA/091/187851X
- AU - Gubbels GH
- AD - Res. Stn., Agric. Canada, Morden
- TI - Yield and weight per seed in buckwheat after foliar applications of growth regulators and antitranspirants
- SO - Can. J. Plant Sci.; VOL 59, ISS 3, 1979,857-9
- LA - ENG
- CD - CPLSA
- AB - CBAC COPYRIGHT: CHEM ABS Neither growth regulators, e.g. daminozide (1000-4000 ppm), chlormequat (1000-4000 ppm), BAS 0660-W (50-450 ppm), NAA (5-125 ppm), gibberellic acid (5-125 ppm), and BA (5-125 ppm), nor antitranspirants, e.g. PMA (50-150 ppm), ABA (5-45 ppm), or WP, were effective in improving buckwheat yield. (1596-84-5 Daminozide)(999-81-5 Chlormequat)(23165-19-7 BAS 0660-W)(86-87-3 NAA)(77-06-5 Gibberellic acid)(1214-39-7 BA)(62-38-4 PMA)(21293-29-8 ABA)(9002-86-2 WP) Daminoside increased wt. per seed.
- RN - 1596-84-5; 999-81-5; 23165-19-7; 86-87-3; 77-06-5; 1214-39-7; 62-38-4; 21293-29-8; 9002-86-2
- EM - 8001
- 184 SI - CA/091/180838Q
- AU - Bond WH ; Doty JW ; Koenst JW Jr ; Luthy DF
- AD - Mound Facil., Miamisburg
- TI - Volume reduction of low-level, combustible, transuranic waste at Mound Facility
- SO - Proc. DOE Nucl. Air Clean. Conf.; VOL 15, ISS 1, 1979,117-30
- LA - ENG
- CD - PDNCD
- AB - CBAC COPYRIGHT: CHEM ABS Low-level combustible waste (<100 nCi/g/wastes), generated during plutonium-238 processing, has an approx. compn. of paper 32, plastic 46, rubber and cloth 16, and metal 6%. This waste is burned in the Mound Cyclone Incinerator, which consists of a burning chamber, deluge tank, venturi scrubber, and blower. An av. emission of 0.23 g particles/kg feed at the venturi outlet was detd. Analyses of the off-gas and the scrubber soln. from the combustion of PVC show that .apprx.87% of the produced Cl was captured by the scrubber soln. and approx. 0.6% remained in the off-gas after the venturi scrubber. (9002-86-2 PVC) Measurements of the amt. of NOx present in the off-gas showed that an av. of .apprx.200 ppm NOx was produced during each incinerator run. Immobilization of the

incinerator ash is being studied with regard to long-term behavior of the product. The immobilization matrix which looks most promising is ash mixed with Portland 1A cement in a 65/35 wt.% ash-to-cement ratio. This matrix exhibits good mech. properties while maintaining a max. vol. redn.

RN - 9002-86-2; 7782-50-5; 11104-93-1; 13981-16-3
EM - 7912

- 185 SI - CA/091/180665F
AU - Fomenko VN ; Zaeva GN ; Katosova LD ; Pavlenko GI
TI - Results of a study of oncological morbidity and cytogenetic effects in workers occupied in processes for polymerizing vinyl chloride
SO - Toksikol. Nov. Prom. Khim. Veshchestv, (Moskva); ISS 15, 1979,17-21
LA - RUS
CD - D4JOU
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Vinyl chloride occupational exposure cancer Cytogenetics vinyl chloride occupational exposure
RN - 75-01-4; 9002-86-2
EM - 7912
- 186 SI - CA/091/162456J
AU - Woodard RW ; Terada K ; Buttedahl OI
AD - Rocky Flats Plant, Rockwell Int., Golden
TI - Studies on prolonging HEPA filter service in chemical applications
SO - Proc. DOE Nucl. Air Clean. Conf.; VOL 15, ISS 2, 1979,1100-21
LA - ENG
CD - PDNCD
AB - CBAC COPYRIGHT: CHEM ABS Expts. are discussed in which HEPA (high-efficiency particulate air) filter materials were exposed to HNO3 and HF vapors under controlled conditions in a specially constructed test chamber. In addn., observations are presented on filters tested in actual service. Finally, work on cleanable prefilters is reviewed.
RN - 7429-90-5; 7664-39-3; 7697-37-2; 9002-86-2; 12001-28-4; 24937-79-9; 61105-31-5
EM - 7912
- 187 SI - CA/091/181320B
AU - Homrowski S
AD - Wojsk. Inst. Hig. Epidemiol., Warsaw
TI - Problems in the use of poly(vinyl chloride) containers and devices for health service
SO - Farm. Pol.; VOL 35, ISS 6, 1979,325-30
LA - POL
CD - FAPOA
AB - CBAC COPYRIGHT: CHEM ABS A review with 48 refs. Review PVC health service
RN - 9002-86-2
EM - 7912

- 188 SI - CA/091/169408D
AU - Eitingon AI ; Poddubnaya LT ; Gribunova GP ; Naumova LS
AU - Kozlova LD
TI - Comparative toxicity of the thermal degradation products of polymers
SO - Toksikol. Nov. Prom. Khim. Veshchestv; VOL 15., 1979,105-9, 145-50
LA - RUS
CD - TPKVA
AB - CBAC COPYRIGHT: CHEM ABS Fire hazards of polymers used in furniture manuf. and construction was assessed by detn. of the quantity of the material/ m^3 of inhalation chamber vol. which upon combustion caused 50% mortality of mice. For combustion of polyamide, polyimide, foamed polyurethane, poly(vinyl chloride), capron, poly(vinylidene fluoride), lavsan, and undefined plastic products at 600.degree. and 850.degree., the above values were 0.04-0.27 and 0.007-0.16 kg/m^3 , resp. (9002-86-2 Poly(vinyl chloride))(25038-54-4 Capron)(24937-79-9 Poly(vinylidene fluoride))(25038-59-9 Lavsan) The acute toxicity agents were CO and HCN. Increasing the combustion temp. increased the output of HCN, but not of CO. The N-contg. polymers showed higher toxicity of combustion products than did N-free plastics.
RN - 9002-86-2; 25038-54-4; 24937-79-9; 25038-59-9; 74-90-8; 630-08-0
EM - 7912
- 189 SI - CA/091/152215R
AU - Popivanova I ; Rudenko SD
AD - Med. Akad., Sofia
TI - Sanitary-chemical assessment of some polymer construction materials based on poly(vinyl chloride) produced in Bulgaria
SO - Khig. Zdraveopaz.; VOL 22, ISS 2, 1979,172-4
LA - BUL
CD - KHZDA
AB - CBAC COPYRIGHT: CHEM ABS Poly(vinyl chloride) panels stored at 40.degree. without air exchange released initially 4.26 mg ethylbenzene/ m^3 . (9002-86-2 Poly(vinyl chloride))(100-41-4 Ethylbenzene) After 51 days, the concn. of ethylbenzene had decreased to 0.21 mg/m^3 . The panels also released 2 other substances. Artificial leather used for wall paneling released 8 substances and the release ceased within 6 days. Linoleum released 7 compds., mainly toluene. (108-88-3 Toluene) The release ceased within 30 days for linoleum without textile base and within 25 days for linoleum with a textile base. The decrease in the concn. of the volatile substances released by the above poly(vinyl chloride) products followed an exponential curve.
RN - 9002-86-2; 100-41-4; 108-88-3
EM - 7912

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- 190 SI - CA/091/145602M
AU - Hollo J ; Toth J ; Tengerdy RP ; Johnson JE
AD - Univ. Tech. Sci., Budapest
TI - Denitrification and removal of heavy metals from waste water by immobilized microorganisms
SO - ACS Symp. Ser.; VOL 106, ISS Immobilized Microb. Cells, 1979,73-86
LA - ENG
CD - ACSMC
AB - CBAC COPYRIGHT: CHEM ABS Fixed-bed bioreactors, using immobilized *P. aeruginosa* cells are suitable for the simultaneous or sep. removal of nitrates and heavy metals from very dild. solns. The availability of a large amt. of plastic waste makes it attractive as a cheap carrier for waste removal. The choice of plastic depends on the intended application: for denitrification polyvinyl chloride is adequate (max. viability of cells but less stability), for Pu removal polypropylene is better (max. stability, lessened viability). The plastic based bioreactors are highly competitive with others both in performance and in economy.
RN - 7440-07-5; 9002-86-2; 9003-07-0
EM - 7911
- 191 SI - CA/091/134961B
AU - Dyshinevich NE
AD - Vses. Nauchno-Issled. Inst. Gig. Toksikol. Pestits. Polim. Plast. Mass, Kiev
TI - An experimentally based hygienic standard proposed for trimethylbenzenes contained in polymeric building materials
SO - Gig. Sanit.; ISS 5, 1979,15-18
LA - RUS
CD - GISAA
AB - CBAC COPYRIGHT: CHEM ABS The recommended max. concn. of mesitylene (I) and pseudocumene in the atm. over poly(vinyl chloride) linoleum etc. is 0.01 mg/m³. (108-67-8 Mesitylene)(95-63-6 Pseudocumene)(9002-86-2 Polyvinyl chloride) These materials are cumulative poisons affecting the central nervous system and liver. A 4 mo const. exposure to 20 mg/m³ produced several physiol. effects in rats. A concn. of 0.2 mg/m³ appeared to be close to the threshold for activity.
RN - 108-67-8; 95-63-6; 9002-86-2
EM - 7911
- 192 SI - CA/096/057557Y
CC - CA/161005
AU - Manda Y ; Yonekawa M ; Uzawa H
TI - Apparatus for drinking water preparation
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 78 88666 08/04/78 (Tokyo Electric Co., Ltd.)
PT - PATENT
CY - Japan
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Drinking water prepn app Purifn

drinking water app; Water purification Alk. drinking-water manuf.
by, app. for Electrochem. filtration; Waters Alk., manuf. of app.
for electrochem. Potable, drinking

RN - 9002-86-2

EM - 8204

- 193 SI - CA/093/039326F
AU - Dryakhlov AI
TI - Cobex herbicide in soybean plantings
SO - Byul. NTI po Maslich. Kul'turam; ISS 2, 1978, 42-4
LA - RUS
CD - D3RAP
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Soybean Cobex
RN - 9002-86-2
EM - 8009
- 194 SI - CA/092/168389G
AU - Carnes RA
AD - EPA, Cincinnati
TI - Combustion characteristics of hazardous waste streams
SO - Proc., Annu. Meet. - Air Pollut. Control Assoc.; VOL 71st. Vol. 3., 1978, Paper 78-37.5, 15 pp.
LA - ENG
CD - PRAPA
AB - CBAC COPYRIGHT: CHEM ABS Pilot-plant coincineration of sewage sludge with the pesticide Kepone (I) in a rotary kiln at 500.degree. and an afterburner at 1093-1260.degree. showed I destruction efficiency of 99.999%, I emissions below the 25 ng/m³ std., particulate emissions below national stds., and no process water was discharged to any stream. (143-50-0 Kepone) The similar results from incineration of polychlorinated biphenyls or PVC in various types of industrial incinerators are reviewed. (9002-86-2 PVC)
RN - 143-50-0; 9002-86-2; 92-52-4
EM - 8006
- 195 SI - CA/092/168321D
AU - Li C ; Wang S
AD - Inst. Zool., Acad. Sin.
TI - Problem of cadmium pollution in Taiwanese industries
SO - K'o Hsueh Yueh K'an; VOL 9, ISS 10, 1978, 36-7
LA - CHI
CD - KHYKD
AB - CBAC COPYRIGHT: CHEM ABS Sources of Cd pollution in Taiwan including wastes and wastewater from PVC processing and electroplating plants are discussed. (9002-86-2 Polyvinyl chloride)
RN - 9002-86-2; 7440-43-9
EM - 8006

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- 196 SI - CA/092/070435U
AU - Anderson R ; Alarie Y
AD - Grad. Sch. Public Health, Univ. Pittsburgh, Pittsburgh
TI - Screening procedure to recognize "supertoxic" decomposition products from polymeric materials under thermal stress
SO - Proc. Int. Conf. Fire Saf.; VOL 3,, 1978,157-70
LA - ENG
CD - PCFSD
AB - CBAC COPYRIGHT: CHEM ABS Mice were exposed in a special chamber to the pyrolysis products of various polymeric materials. The LC50 (lethal concn. required to cause 50% mortality with LC being expressed as sample wt.) for each polymer was detd. Douglas fir which was relatively nontoxic was used as the ref. material. More toxic than douglas fir after 30 min exposure and 10 min recovery (LC50 2-20 g) were poly(vinyl chloride), polyurethane, and polytetrafluoroethylene which was extremely toxic (LC50 <2 g). (9002-86-2 Poly(vinylchloride))(9002-84-0 Polytetrafluoroethylene)
RN - 9002-86-2; 9002-84-0
DTG - LETHAL CONCENTRATIONS
EM - 8003
- 197 SI - CA/091/216792M
AU - Brown IM ; Kaplan MM ; Szabocsik JM
AD - Bausch and Lomb Inc., Rochester
TI - An improved in vitro screening method for cytotoxicity
SO - Dev. Ind. Microbiol.; VOL 19,, 1978,299-307
LA - ENG
CD - DIMCA
AB - CBAC COPYRIGHT: CHEM ABS An improved in vitro method was developed for detn. of cytotoxicity. Comparisons were made with existing tissue culture biocompatibility screening procedures of medical devices. The method was designed to increase assay sensitivity and reliability through modification of the std. agar overlay technique. Modifications included: suspension of cells in an agar-media matrix free of interference from vital stains or indicators; direct contact between cells and test materials; and macro- and microscopic evaluation of cytotoxicity by monitoring cell integrity and cell growth. These alterations eliminate the limitations in sensitivity caused by diffusion dependency and interactions of media components with test samples. Increased sensitivity and test reproducibility were demonstrated by evaluation of numerous toxic agents. Predictions of subthreshold or chronic toxicity may be possible by virtue of direct cellular observations over an extended incubation period. Cytotoxicity of a variety of ophthalmic preservatives and their interaction with Soflens (polymacon) contact lenses were evaluated using the modified technique. (25053-81-0 Soflens)
RN - 25053-81-0; 54-64-8; 55-68-5; 60-00-4; 62-38-4; 94-13-3; 3697-42-5; 9002-86-2; 9011-14-7; 25249-16-5
EM - 8001

- 198 SI - CA/091/198987X
AU - Bajda A ; Pokorski Z ; Skipor M ; Wypych J
TI - Materials for surgical dressings
SO - Pol. PATENT NO. 98867 10/30/78 (Centralne Laboratorium Technicznych Wyrobow Wlokiennicznych, Lodz)
LA - POL
AB - CBAC COPYRIGHT: CHEM ABS The surface of supporting synthetic and/or natural fibers for surgical dressings was treated with a layer of a material which absorbs x-rays. Thus, a 280-dtex, 90-twist polyester-fiber material was coated (0.5 mm) with PVC compn. contg. PVC 50, dioctyl phthalate 40, BaSO4 20 and Ca-Zn stabilizer 1 wt. part and heated at 463 K for 15 s. (9002-86-2 PVC)
RN - 9002-86-2; 7727-43-7
EM - 8001
- 199 SI - CA/091/180654B
AU - Grebtsova AS ; Grebenyuk LI ; Goldovskaya MK
AD - Vses. Nauchno-Issled. Inst. Gornospasetel. Dela, Donetsk
TI - Study of the composition of toxic gaseous products of the thermal degradation of polymer materials used in mines
SO - Probl. Kontrolya Zashch. Atmos. Zagryaz.; VOL 4,, 1978,50-2
LA - RUS
CD - PKZZD
AB - CBAC COPYRIGHT: CHEM ABS The nature and concn. of toxic gases were detd. from the thermal decompn. of latex, poly(vinyl chloride) polyurethane, styrene polymers, and urea resins, phenol-formaldehyde resins, and epoxy resins and other polymer materials during an accidental fire in a mine. (9002-86-2 Poly(vinylchloride))(9003-35-4 Phenolformaldehyde resins) The max. evolution of toxic gases was obsd. at 400-600.degree.. The most dangerous are poly(vinyl choride) materials which decomp. to CO, HCN, and HCl. The concns. of CO, HCN, and HCl may exceed the max. permissible concns. by factors of 6, 2, and 25, resp. The danger of elevated HCN and HCl concns. is esp. emphasized, since the respiratory filtering systems in mines are not designed for the removal of these gases.
RN - 9002-86-2; 9003-35-4; 57-13-6; 74-90-8; 100-42-5; 630-08-0; 7647-01-0
EM - 7912
- 200 SI - CA/091/152569J
AU - Egan H ; Editor
TI - IARC [International Agency for Research on Cancer] Scientific Publications, No. 22: Environmental Carcinogens. Selected Methods of Analysis, Vol. 2: Methods for the Measurement of Vinyl Chloride in Poly(Vinyl Chloride), Air, Water, and Foodstuffs
SO - 1978,142 pp.
LA - ENG
CD - BOOKA
AB - CBAC COPYRIGHT: CHEM ABS A book. Book vinyl chloride detn Air vinyl chloride detn book Water vinyl chloride detn book Food

- vinyl chloride detn book
RN - 75-01-4; 7732-18-5; 9002-86-2
EM - 7912
- 201 SI - CA/091/152238A
AU - Costa V ; Frongia N
AD - Univ. Cagliari, Cagliari
TI - Histological and ultrastructural study of the peritoneal changes induced by the endoabdominal inoculation of a single dose of poly(vinyl chloride) powder (PVC) in rats
SO - Rass. Med. Sarda; VOL 81, ISS 4, 1978,217-35
LA - ITA
CD - RMSAA
AB - CBAC COPYRIGHT: CHEM ABS In rats i.p. administration of PVC resulted in granulomas of the peritoneum. (9002-86-2 Poly(vinyl chloride)) No neoplastic or preneoplastic alterations were obsd. Histopathol. changes of the lung, liver, and spleen, were also obsd.
RN - 9002-86-2
EM - 7912
- 202 SI - CA/091/135115R
AU - Aksenova LP ; Belyaev VV ; Soldatchenkova TP ; Vinogradova LA
TI - Study of some hygienic properties of new polymeric furniture covers
SO - Sovrem. Gigen. Probl. Okhrany Okruzh. Sredy Gorodov, M.; 1978,49-50
LA - RUS
CD - D4JOU
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. PVC furniture Escherichia Escherichia PVC furniture Furniture cover polymer Escherichia Leather substitute furniture Escherichia
RN - 9002-86-2
EM - 7911
- 203 SI - CA/091/135114Q
AU - Belyaev VV ; Aksenova LP ; Soldatchenkova TP
TI - Sanitary-hygienic study of polymer materials, used for the manufacture of boxes for kitchen furniture
SO - Sovrem. Gigen. Probl. Okhrany Okruzh. Sredy Gorodov, M.; 1978,51-2
LA - RUS
CD - D4JOU
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. PVC container toxicity
RN - 9002-86-2
EM - 7911

- 204 SI - CA/091/135113P
AU - Druzhinina VA ; Aksenova LP
TI - Toxicological study of "Vinilelastik" poly(vinyl chloride) linoleum taking into account its age-related reactivity
SO - Sovrem. Gigien. Probl. Okhrany Okruzh. Sredy Gorodov, M.; 1978,59-62
LA - RUS
CD - D4JOU
AB - CBAC COPYRIGHT: CHEM ABS Title only translated. Polyvinyl chloride toxicity linoleum PVC toxicity linoleum
RN - 51-45-6; 9002-86-2; 9074-82-2
EM - 7911
- 205 SI - CA/091/096123V
AU - Ohtsuka K ; Miyo H ; Ohuchi J ; Shiga K ; Muto T
AD - Power React. Nucl. Fuel Dev. Corp., Ibaraki
TI - Developments in the treatment of solid alpha-bearing wastes at the PNC plutonium fuel facilities
SO - Report; ISS PNCT-841-78-09., 1978,15 pp.
LA - ENG
CD - D2REP
AB - CBAC COPYRIGHT: CHEM ABS Some results of expts. done at PNC are presented on vol. redn. techniques for alpha-contg. wastes. A pilot wood milling machine automatically mills the plywood frames of nipple-connected high-efficiency particulate air (HEPA) filters, which result in fine sized wooden chips, 2 nipples, and the filter components. The filter components are melted in an induction furnace to homogeneous solids. These methods and incineration of wooden chips reduce the stored vol. of HEPA filters to 1/50-1/100 of the original. Poly(vinyl chloride) and neoprene rubber are decompd. in concd. H2SO4, followed by oxidn. with HNO3. (9002-86-2 PVC) The acid digestion process generates Cl-rich gas, from which only Cl is selectively absorbed in water. An alpha-contg. vessel and a glovebox are cut at their installed places without spread of Pu contamination outside the greenhouses.
RN - 9002-86-2; 7440-07-5
EM - 7909
- 206 SI - CA/091/026462F
AU - Maleev A ; Konstantinova N ; Stanoev M ; Danev S ; Deredzhyan S
AU - Vasileva Z ; Shipkov T
AD - Inst. Intern. Dis. Ther., Sofia
TI - Study of liver damage in poly(vinyl chloride) production workers
SO - Probl. Vutr. Med.; VOL 6, ISS 2-3, 1978,92-7
LA - BUL
CD - PBVMA
AB - CBAC COPYRIGHT: CHEM ABS Examin. of 72 workers from a PVC prodn. plant showed no clear relationship between liver damage and work seniority at the plant (even in the case of workers with a seniority >10 yr); although increased bromosulfophthalein retention (up to 3.2%), reduced thrombocyte counts (220,000) and enlargement of the liver were found in several workers, no actual

pathol. occurrences were found, and the anomalies could also be related to excessive consumption of alc. drinks. (9002-86-2 PVC)

RN - 9002-86-2; 75-01-4

EM - 7908

207 SI - CA/091/027280G

AU - Inoue M

AD - Inoue Biodeterioration Lab., Tokyo

TI - Study of film or sheet material having antibacterial and antifungal activities

SO - Proc. - Int. Symp. Contam. Control, 4th; 1978,104-6

LA - ENG

CD - 39IDA

AB - CBAC COPYRIGHT: CHEM ABS 2-(4-Thiazolyl)benzimidazole (I) and N-(fluorodichloromethylthio)phthalimide (II), when incorporated at 0.3% by wt. concn. of each in a poly(vinyl chloride) (PVC) sheet, exhibited bactericidal and fungicidal activity against a no. of microorganisms. (148-79-8 2-(4-Thiazolyl)benzimidazole)(719-96-0 N-(Fluorodichloromethylthio)phthalimide)(9002-86-2 Poly(vinyl chloride)) The effect was synergistic, requiring lower concns. of each compd. than that required for each compd. incorporated sep. into the sheet. I and N,N-dimethyl-N'-phenyl-N'-(fluorodichloromethylthio)sulfamide, incorporated at a concn. of 0.4% by wt. each in PVC also exhibited good bactericidal and fungicidal activity. (1085-98-9 N,N-Dimethyl-N'-phenyl-N'-(fluorodichloromethylthio)sulfamide) These films or sheets offer utility in houses, processing rooms of food and pharmaceutical industries, and in hotels, restaurants and in hospitals.

RN - 148-79-8; 719-96-0; 9002-86-2; 1085-98-9

EM - 7908

208 SI - CA/090/209437A

AU - Carosello TF

AD - USA

TI - Absorbing liquids using a preparation of expanded silicate-based aggregates

SO - U.S. PATENT NO. 4131543 12/26/78 (Progressive Research Products, Inc.)

AB - CBAC COPYRIGHT: CHEM ABS An expanded silicate-based aggregate as a 10 mesh powder, a paste prepd. by mixing the aggregate with a 5-7% soln. of PVC in 15:85 DMSO-Me Et ketone, or nets or blocks prepd. by congealing the PVC-silicate-based aggregate blend will absorb 10-15 times its wt. of hazardous liq., e.g., HCl, HNO₃, Me Et ketone, ketones, polychlorinated biphenyl slurries, petroleum, fuel oil, gasoline, solvents, etc., either from land spills or water spills to give a solid relatively harvestable product for disposal. (9002-86-2 PVC)

RN - 9002-86-2; 1343-98-2

EM - 7907

- 209 SI - CA/090/191777Z
AU - Luxa J
AD - Czech.
TI - Suitability of some plastics in aviation from the toxicological standpoint
SO - Zpr. VZLU; ISS 5, 1978,225-34
LA - CZE
CD - ZVZLA
AB - CBAC COPYRIGHT: CHEM ABS The behavior of plastics used for the construction of airplanes with respect to evolution of toxic substances at elevated temps. was studied. The max. recommended operation temps. for use of plastics in cabins of planes were detd. to be polystyrene 70, polyethylene 100, PVC 70, softened PVC 40, poly(Me methacrylate) 100, aminoplasts 80-100, polyesters 100-110, polyurethane 120, poly(tetrafluoroethylene) 240, and silicones 120.degree.. (9003-53-6 Polystyrene)(9002-88-4 Polyethylene)(9002-86-2 PVC)(9011-14-7 Poly(methyl methacrylate))(9002-84-0 Poly(tetrafluoroethylene))
RN - 9003-53-6; 9002-88-4; 9002-86-2; 9011-14-7; 9002-84-0
EM - 7906
- 210 SI - CA/090/1917230
AU - Krynska A ; Posniak M ; Grabowski Z
AD - Cent. Inst. Work Prot., Warsaw, Pol.
TI - Emission of volatile substances in processing plasticized poly(vinyl chloride)
SO - Pr. Cent. Inst. Ochr. Pr.; VOL 28, ISS 96, 1978,71-85
LA - POL
CD - PCIOA
AB - CBAC COPYRIGHT: CHEM ABS The amt. and compn. of volatile substances emitted during processing of plasticized PVC were studied in manuf. PVC-coated elec. cables. (9002-86-2 PVC) The expts. showed that the main volatile product emitted in amts. 0.03-0.1 g/kg of raw material was dioctyl phthalate used as plasticizer. (117-81-7 Dioctyl phthalate) The volatile products contained also trace amts. of C6H6, PhMe, and xylene, whereas HCl and CH2:CHCl were practically absent.
RN - 9002-86-2; 117-81-7
EM - 7906
- 211 SI - CA/090/174039T
AU - Kudo S ; Haga N
AD - Seibu Polym. Kasei Co. Ltd., Japan
TI - Biological nitrogen removal by the plastic filter medium
SO - Yosui to Haisui; VOL 20, ISS 10, 1978,1245-51
LA - JPN
CD - YOHA
AB - CBAC COPYRIGHT: CHEM ABS A 2-stage reactor, consisting of nitrification and denitrification tanks filled with poly(vinyl chloride) filter medium (sp. surface area 88.4 m2/m3 filter), was used to treat wastewater contg. NH4+ 5.8, NO3- 18.4, and BOD 18.5 mg/L. (9002-86-2 Poly(vinyl chloride)) When the loadings of

BOD, NH₄⁺, and NO₃⁻ were 39-75, 58, and 122.7 g/m³/day, resp., the removals were 93.1 and 97.1%, resp., at 14-20.degree. and pH 7.3-8.0, with detention time 8 h.

RN - 9002-86-2
EM - 7906

- 212 SI - CA/090/173936W
AU - Frohreich RA ; Scamehorn JF
AD - USA
TI - Incomplete drying of activated carbon in a process for vinyl chloride monomer reduction in vapors
SO - U.S. PATENT NO. 4128405 12/05/78 (Continental Oil Co.)
AB - CBAC COPYRIGHT: CHEM ABS Adsorption of vinyl chloride (I) from PVC reactor effluent vapors on incompletely dried activated C, under essentially adiabatic conditions with the heat of adsorption of I desorbing water instead of heating the C bed, results in adsorbing greater amts. of I/lb C, less drying needed after regeneration, and less likelihood of undesirable high temp. reactions occurring. (75-01-4 Vinyl chloride)(9002-86-2 PVC)
RN - 75-01-4; 9002-86-2; 7440-44-0
EM - 7906
- 213 SI - CA/090/173840K
AU - Krasnoshchekov NA ; Machula VY ; Kozhukhov NI
AD - USSR
TI - New individual protective agents in the production of glass fiber and glass-fiber reinforced plastics
SO - Plast. Massy; ISS 11, 1978,60-1
LA - RUS
CD - PLMSA
AB - CBAC COPYRIGHT: CHEM ABS Properties of protective aprons manufd. from thin layer material OS-39, special footwear made from synthetic leather SK-2, protective gloves manufd. from plastisized PVC and also of silicone latex PMS-30, used for individual protection from paraffin lubrication agent and synthetic binder of the phenol-formaldehyde copolymer type were tested. (69900-06-7 OS-39)(12712-66-2 SK-2)(9002-86-2 PVC)(9003-35-4 Phenol-formaldehyde copolymer) All these products were recommended for use in the glass fiber and glass fiber reinforced plastics prodn. plants.
RN - 69900-06-7; 12712-66-2; 9002-86-2; 9003-35-4
EM - 7906
- 214 SI - CA/090/192509A
AU - Barber TA ; Mathis T ; Ihlenfeld JV ; Cooper SL ; Mosher DF
AD - Dep. Pathol., Univ. Wisconsin, Madison, Wis.
TI - Short-term interactions of blood with polymeric vascular graft materials: protein adsorption, thrombus formation, and leukocyte deposition
SO - Scanning Electron Microsc.; ISS 2, 1978,431-40
LA - ENG
CD - SEMYB
AB - CBAC COPYRIGHT: CHEM ABS Radiolabeling and ultrastructural data

showed that rates of thrombus deposition and embolization depended upon the polymeric compn. of the blood-contg. surface. Thus, while thrombi rapidly built up and embolized from the PVC surface, little embolization was obsd. with poly(hydroxyethyl methacrylate), although radiolabeling indicated the latter to adhere more thrombus than PVC. (9002-86-2 PVC)(25249-16-5 poly(hydroxyethyl methacrylate)) The immunolabeling data suggested interactions between fibrinogen and fibronectin (preadsorbed to tubing) adsorbed from flowing blood and formed blood elements. Biomer consistently proved the least thrombogenic of the polymer surfaces tested, adsorbing lower amts. of fibrinogen from blood, and adhering smaller thrombi. (52503-89-6 Biomer) Thrombi seen on this surface were invariably small and firmly adherent at the end of 2 h blood exposure. Fibronectin preadsorbed to PVC surface increased its thrombogenicity. Thus, the nature of a specific polymer surface, expressed through selective adsorption of plasma proteins, is the key determinant of the thrombogenicity of the surface and the mechanism of thrombus formation on it, as well as its thromboembolic characteristics.

RN - 9002-86-2; 25249-16-5; 52503-89-6; 9003-05-8
DTG - HEMATOLOGY
EM - 7906

215 SI - CA/090/141629G
AU - Semenov GN ; Malinin VM ; Kuznetsov AV
AD - USSR
TI - Reducing the size of the electrostatic charges on PVC resin pneumatic transport lines by humidifying the operating air
SO - Proizvod. Pererab. Plastmass Sint. Smol; ISS 2, 1978,42-4
LA - RUS
CD - PPPSD
AB - CBAC COPYRIGHT: CHEM ABS Humidifying of air to 40% of the relative humidity caused redn. of the elec. charges from 2500 V/cm to a safe level. This satn. consumed 120 kg/h of steam per 10,000 m³/h of operating air. Existing regulations of humidifying to 70% consume 600-650 kg/h of steam.

RN - 9002-86-2
EM - 7905

216 SI - CA/090/157100P
AD - USA
TI - Package of moisture-sensitive material
SO - Brit. PATENT NO. 1528239 10/11/78 (Ethicon, Inc.)
AB - CBAC COPYRIGHT: CHEM ABS A water vapor-impervious package for surgical sutures consisted of 2 panels of metal foil coated round the periphery with a heat-sealable polymer; after removing all traces of moisture from the package it was heat-sealed by a method which gave a bubble-free seal. E.g., over a 10-wk period the cumulative permeation through a rectangular package consisting of a laminate of Al foil (0.035 mm thick) and ionomer film (0.025 mm thick and 0.95 cm wide on 3 sides and 0.63 cm wide on the fourth side) with a bubble-free seal was 0.37 mug H₂O/wk

compared with 4.22 mug H2O/wk with the same laminate with conventional seal.

RN - 7429-90-5; 9002-86-2; 9003-07-0
EM - 7905

- 217 SI - CA/090/157027V
AU - Carli F ; Simioni L
AD - Pharm. Technol. Lab., Carlo Erba Res. Inst., Milan, Italy
TI - Kinetics of liquid capillary penetration into inert polymer matrixes
SO - Pharm. Acta Helv.; VOL 53, ISS 11, 1978,320-6
LA - ENG
CD - PAHEA
AB - CBAC COPYRIGHT: CHEM ABS The kinetics of H2O penetration into inert polymer matrixes contg. 10% aspirin was studied. PVC and vinyl acetate-vinyl chloride copolymer (I) matrixes were satd. within tens of seconds, whereas the I + PTFE and acrylic matrixes within hours. (9002-86-2 PVC)(9003-22-9 Vinyl acetate-vinyl chloride copolymer)(9002-84-0 PTFE) The vols. of satn. were different, with polyethylene matrixes not penetrated at all. (9002-88-4 Polyethylene) A modified Washburn equation and Hg porosimetry showed that H2O penetration into plastic matrix tablets strictly depended not only on the matrix wettability and mean pore radius, but also on its pore-size distribution. The Hg porosimetry data also demonstrated that not all the pores can be filled by liq. Finally the drug diffusion from these matrixes depended on the penetration kinetics. The lag time in achieving a const. release was related to the time necessary for the satn. of the capillaries by the penetrating liq., whereas the rate of release was influenced by the pore vol. effectively penetrated by H2O.
- RN - 9002-86-2; 9003-22-9; 9002-84-0; 9002-88-4; 39301-09-2
EM - 7905

- 218 SI - CA/090/142140C
AU - Yamamoto N ; Yamashita I ; Hayashi K
AD - Gov. Ind. Res. Inst., Osaka, Japan
TI - Biostability of synthetic polymeric materials
SO - Osaka Kogyo Gijutsu Shikensho Kiho; VOL 29, ISS 3, 1978,203-12
LA - JPN
CD - OKGKA
AB - CBAC COPYRIGHT: CHEM ABS The following polymers were tested: polytetrafluoroethylene (PTFE), polyMe methacrylate (PMMA), polystyrene (PST), polyvinyl acetate (PVAc), polyvinyl chloride (PVC), polyacrylonitrile (PAN), vinyl chloride carbon monooxide copolymer (PVC-CO), polyethylene terephthalate (PET), polycarbonate (PC), polyether-polyester (PEPE), poly-epsilon-caprolactone (PCL), Nylon-6 (NY), partially methoxymethylated Nylon-6 (MNY), polygamma-methyl-L-glutamate (PMG), polyether polyurethane (PU), and cellulose acetate (CeAc). (9002-84-0 Polytetrafluoroethylene)(9011-14-7 Polymethylmethacrylate)(9003-53-6 Polystyrene)(9003-20-7 Polyvinylacetate)(9002-86-2 Polyvinylchloride)(25014-41-9

Polyacrylonitrile)(31763-26-5 vinyl chloride carbon monooxide copolymer)(25038-59-9 Polyethyleneterephthalate)(25766-59-0 Polycarbonate)(24980-41-4 Poly-.epsilon.-caprolactone)(25038-54-4 Nylon-6)(25038-54-4 methoxymethylated Nylon-6)(25086-16-2 Poly.gamma.-methyl-L-glutamate)(9004-35-7 Cellulose acetate) Films prepd. from the polymers without additives were implanted s.c. into dogs for 1 yr (in vivo test). The samples were immersed in pseudo-extracellular fluid (PECF) at 37.degree. for comparative purpose (in vitro test). Biostability of these polymers was checked by viscometry and mech. testing. The results of the in vitro tests were fairly consistent with those of the corresponding in vivo ones. It was found that the main chain of PTFE, PMMA, PST, and PVAc was actually stable. PAN, PVC, and PVC-CO became partly insol. in the original solvents and their mech. properties were considerably changed from those of the original films. On the other hand, data of the intrinsic viscosity indicated that most of the condensation polymers were not stable. The orders of the biostability of the polymers tested were found to be PET.gtoreq.PC>PEPE>>PCL for polyesters, and NY>MNY>>PMG for polyamides. The IR spectra of CeAc showed that the side chain was partly hydrolyzed. In the case of PVC, PVC-CO, and CeAc, a trace of org. compds. eluted to PECF was detected by the IR spectrometry. Thus, the in vitro method is convenient for the screening of polymeric biomedical materials from the viewpoint of the biostability.

RN - 9002-84-0; 9011-14-7; 9003-53-6; 9003-20-7; 9002-86-2;
25014-41-9; 31763-26-5; 25038-59-9; 25766-59-0; 24980-41-4;
25038-54-4; 25038-54-4; 25086-16-2; 9004-35-7
EM - 7905

219 SI - CA/090/133761D
AU - Draganov I ; Raichev R ; Radeva M
AD - Med. Akad., Sofia, Bulg.
TI - Studies on the synblastomogenic effect of poly(vinyl chloride) and 20-methylcholanthrene
SO - Onkologiya (Sofia); VOL 15, ISS 3, 1978,132-7
LA - BUL
CD - ONKLA
AB - CBAC COPYRIGHT: CHEM ABS S.c. implantation of 2 .times. 2 cm poly(vinyl chloride) plates, followed after 30 days by a s.c. injection of 10 mg 20-methylcholanthrene (I) increased the frequency of tumors to 68% from 17.5-20% for rats treated with poly(vinyl chloride) alone and 42% for rats treated with I alone. (9002-86-2 Poly(vinyl chloride))(56-49-5 20-Methylcholanthrene) I shortened the latent period of tumor development without affecting the size of the tumors. Poly(vinyl chloride) failed to alter the effect of I on the latent period of tumor development.
RN - 9002-86-2; 56-49-5
EM - 7905

- 220 SI - CA/089/151897M
AU - Petersen O.; Schmidt HD
AD - Ger.
TI - Electrochemical cell for determination of hydrogen sulfide in a gas mixture
SO - Ger. Offen. PATENT NO. 2657570 06/22/78 (Bayer A.-G.)
AB - CBAC COPYRIGHT: CHEM ABS The electrochem. cell has Ag/Ag₂S working and ref. electrodes and Cu sheet auxiliary electrodes surrounded by a PbO₂ electrolyte. The electrolyte for the working electrodes is a gel-type sheet of poly(vinyl chloride) 10-20, propylene carbonate 20-30, di-Et phthalate 20-30, and potassium hexafluorophosphate .apprx.1 wt.%. (9002-86-2 Polyvinyl chloride)(108-32-7 Propylene carbonate)(84-66-2 di-Et phthalate)(17084-13-8 potassium hexafluorophosphate)
RN - 9002-86-2; 108-32-7; 84-66-2; 17084-13-8; 1309-60-0; 7440-22-4; 7440-50-8; 7783-06-4; 30695-60-4
EM - 7811
- 221 SI - CA/089/151718D
AU - Morikawa T
AD - Fire Res. Inst. Japan, Tokyo, Japan
TI - Evolution of soot and polycyclic aromatic hydrocarbons in combustion
SO - Shobo Kenkyusho Hokoku; VOL 45,, 1978,13-24
LA - ENG
CD - SHKHB
AB - CBAC COPYRIGHT: CHEM ABS Polymers, e.g. polyethylene (I), polystyrene (II), PVC, poly(Me methacrylate), polypropylene, polyacrylonitrile (III), and cellulose, were burned or pyrolyzed in a furnace under different temp. and air supply conditions and the emission of soot and polycyclic arom. hydrocarbons detd. (9002-88-4 Polyethylene)(9003-53-6 Polystyrene)(9002-86-2 PVC)(9011-14-7 Poly(methyl methacrylate))(9003-07-0 Polypropylene)(25014-41-9 Polyacrylonitrile)(9004-34-6 cellulose) Evolution of soot and benzo(a)pyrene (IV) increased with increasing temp. (50-32-8 Benzo(a)pyrene) At high temps. with relatively low air supply rate, more IV was evolved from I than from II, while 3-4 times greater amt. of soot was evolved from II. Evolution of IV was small from PVC, III and from I in halogenated hydrocarbon-contg. air. No direct relation was obsd. between soot and IV prodn.
RN - 9002-88-4; 9003-53-6; 9002-86-2; 9011-14-7; 9003-07-0; 25014-41-9; 9004-34-6; 50-32-8; 56-55-3; 120-12-7; 129-00-0; 192-97-2; 198-55-0; 206-44-0; 218-01-9; 612-71-5; 9049-86-9; 25038-54-4
EM - 7811

- 222 SI - CA/089/141862G
AU - Mulla MS ; Darwazeh HA
AD - Dep. Entomol., Univ. California, Riverside, Calif.
TI - Effectiveness and residual activity of polymer formulations of mosquito larvicides
SO - Proc. Pap. Annu. Conf. Calif. Mosq. Vector Control Assoc.; VOL 46,, 1978,123-5
LA - ENG
CD - PCMVD
AB - CBAC COPYRIGHT: CHEM ABS Dursban (I) formulation in poly(vinyl chloride) and temephos formulation in polyethylene were examd. in the lab. and field for their control of mosquito larvae. (2921-88-2 Dursban)(9002-86-2 Poly(vinyl chloride))(3383-96-8 Temephos)(9002-88-4 Polyethylene) In the lab. I formulation at the rate of 1 ppm released sufficient toxicant to cause complete larval mortality of *Culex pipiens quinquefasciatus* exposed for 24 h. The lower rates of 0.5 and 0.25 ppm resulted in complete mortality after 7 and 14 days, resp. The temephos formulations were inactive in the lab. expts. In the 2 field studies where the mosquito populations were *C. tarsalis* and *C. tarsalis* + *Culiseta inornata* + *Anopheles franciscanus*, I (1 and 2 lb/acre) and temephos (1.25 and 2.5 lb/acre) formulations failed to give adequate larval control in ponds where the water flow into the ponds was >4 gal/min. When the flow was <1 gal/min, I (1 and 2 lb/acre) prevented larval breeding for 35 days. Temephos (2 lb/acre) formulation with the smaller size polymer particle had good larvicidal action for 21 days. However 5 wk after treatment with either compd., when the ponds were dried for 3 mo and then reflooded, mosquito larval breeding began within 10 days after reflooding.
RN - 2921-88-2; 9002-86-2; 3383-96-8; 9002-88-4
EM - 7811
- 223 SI - CA/089/141362U
AU - Anderson RC ; Alarie YC
AD - Grad. Sch. Public Health, Univ. Pittsburgh, Pittsburgh, Pa.
TI - Approaches to the evaluation of the toxicity of decomposition products of polymeric materials under thermal stress
SO - J. Combust. Toxicol.; VOL 5, ISS 2, 1978,214-21
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS Thermal decompn. products from several polymeric materials were investigated using death as an index of toxicity. The data were analyzed in several ways. A concn.-response relation was absolutely essential to make valid comparisons between materials and the time to a toxic effect approach was not broad enough to permit such comparisons.
RN - 7723-14-0; 9002-84-0; 9002-86-2; 9003-35-4; 9011-05-6; 67760-64-9; 67760-65-0
DTG - LETHAL CONCENTRATIONS
EM - 7811

- 224 SI - CA/089/124033V
AU - Boudene C ; Jouany JM ; Truhaut R
AD - Fac. Sci. Pharm. Biol., Univ. Paris-Sud, Chatenay-Malabry, Fr.
TI - Study of the toxicity of combustion products and pyrolysis of materials used in the building industry. Study of acute toxicity, by pulmonary route, of the gases and vapors of combustion and pyrolysis of a chlorinated polymer
SO - Arch. Mal. Prof. Med. Trav. Secur. Soc.; VOL 39, ISS 1-2, 1978,3-24
LA - FRE
CD - AMPMA
AB - CBAC COPYRIGHT: CHEM ABS The toxicity symptoms obsd. in rats and rabbits following exposure to gases and vapors from pyrolysis of poly(vinyl chloride) were similar to those caused by HCl, but the latter was not totally responsible for the toxicity of polymer pyrolysis products. (9002-86-2 Polyvinyl chloride) Products from 800.degree. pyrolysis were more toxic than those from 400.degree. pyrolysis. Traps for HCl decreased the toxicity of the pyrolysis products.
RN - 9002-86-2
DTG - LETHAL DOSAGE ; BLOOD CONCENTRATIONS
EM - 7810
- 225 SI - CA/089/117307J
AU - Deuschel W
AD - Ger.
TI - Treatment of tetrahydrofuran solutions containing poly(vinyl chloride)
SO - Ger. Offen. PATENT NO. 2701352 07/20/78 (BASF A.-G.)
AB - CBAC COPYRIGHT: CHEM ABS THF is sepd. from PVC solns. by distn. in the presence of a surfactant to give a PVC solid which is completely free of THF and can be disposed of without danger to the environment. (109-99-9 THF)(9002-86-2 PVC) The surfactant prevented deposition of PVC on the app. during distn. Thus, 8000 kg THF contg. 1% PVC and 6.5% water was added to a mixt. of water 2000, Na tetradecanesulfonate 25, and 80:20 THF-water mixt. 1000 kg, and the mixt. was distd. to remove THF, leaving a mixt. of water and powd. PVC contg. no THF. (27175-91-3 Sodium tetradecanesulfonate)
RN - 109-99-9; 9002-86-2; 27175-91-3
EM - 7810
- 226 SI - CA/089/117306H
AU - Iiyama S ; Hara S
AD - Japan
TI - Removal of dispersed components from sewages
SO - Japan. Kokai PATENT NO. 78 63759 06/07/78 (Mitsui Toatsu Chemicals, Inc.)
AB - CBAC COPYRIGHT: CHEM ABS Sewage contg. dispersed components is clarified by aeration in the presence of a peroxide and a peroxide-decomp. transition metal compd. Thus, sewage contg. 700 ppm emulsified fuel oil and 30 ppm Na dodecylbenzenesulfonate

was mixed with 1900 ppm H2O2 and 3600 ppm FeSO4, aerated, treated with CaCO3, and passed through a PVC bead-packed column. (25155-30-0 Sodium dodecylbenzenesulfonate)(9002-86-2 Poly(vinyl chloride) The treated water was colorless and transparent.

RN - 25155-30-0; 9002-86-2; 471-34-1; 7720-78-7; 7722-84-1
EM - 7810

227 SI - CA/089/135018V

AU - Zhurkov VS

AD - USSR

TI - Apparatus for the electrochemical purification of waste waters from polymer production

SO - Plast. Massy; ISS 2, 1978,58-60

LA - RUS

CD - PLMSA

AB - CBAC COPYRIGHT: CHEM ABS An electrodialyzer for electrochem. purifn. of wastewaters from polymer prodn. is described. Wastewaters from PVC prodn., after treatment in the app. for 6 min at 0.4 A/dm2 had pH 6.9, dissolved solids 340 mg/L and vinyl chloride content 12.5 mg/L, as compared with the initial values of 5.5, 9870, and 68.5, resp. (9002-86-2 PVC) Treatment of wastewater from poly(Me methacrylate) prodn., for 8 min at 0-0.4 A/dm2, changed the pH from 6.5 to 7.5, COD from 9600 to 380 mg O/L, dissolved solids from 8600 to 800 mg/L, Me methacrylate content from 190 to 90-110 mg/L and the polymer from 900 to 0 mg/L. (9011-14-7 Poly(methyl methacrylate))

RN - 9002-86-2; 9011-14-7

EM - 7810

228 SI - CA/089/117531C

AU - Balueva LV ; Vinnikov YY ; Divakova NA

AD - Vses. Nauchno-Issled. Proekt. Inst. Khim. Prom., Sverdlovsk, USSR

TI - Permeation of mixtures of organic substances in polymer membranes

SO - Maslo-Zhir. Prom-st.; ISS 7, 1978,41

LA - RUS

CD - MZPYA

AB - CBAC COPYRIGHT: CHEM ABS High-d. polyethylene and poly(vinyl chloride) were essentially impermeable to a CO2 ext. contg. a terpene mixt. (9002-88-4 Polyethylene)(9002-86-2 poly(vinyl chloride))(124-38-9 Carbon dioxide) However, low-d. polyethylene showed a selective permeability to alpha-pinene, camphene, DELTA3-carene, and limonene. (80-56-8 .alpha.-Pinene)(79-92-5 Camphene)(13466-78-9 .DELTA.3-Carene)(138-86-3 Limonene) The percentage of terpenoids passing through the membranes as well as their rate of penetration depended on their concns. in CO2 ext. Permeation through the polymers was monitored by gas chromatog. The data are useful for packing and storing of CO2 exts. of material (e.g. fir) useful in chem. and cosmetic industry.

RN - 9002-88-4; 9002-86-2; 124-38-9; 80-56-8; 79-92-5; 13466-78-9; 138-86-3

EM - 7810

- 229 SI - CA/089/101971K
AU - Fukuda T ; Shibata T ; Hosokawa K
AD - Japan
TI - Ant and termite control
SO - Japan. Kokai PATENT NO. 78 59032 04/27/78 (Furukawa Electric Co., Ltd.)
AB - CBAC COPYRIGHT: CHEM ABS Formulations contg. insect repellents and plastic carrier materials are described for control of ants and termites. Thus, pellets made from a dieldrin-aldrin mixt. and poly(vinyl chloride) applied to soil in which pine rods were buried prevented termite infestation for 2 yr. (8017-73-0 dieldrin-aldrin mixt.)(9002-86-2 Poly(vinyl chloride))
RN - 8017-73-0; 9002-86-2; 3734-48-3; 67585-75-5
EM - 7810
- 230 SI - CA/089/101965M
AU - Pasarela NR
AD - USA
TI - Acaricidal agent on a poly(vinyl chloride) carrier
SO - Ger. Offen. PATENT NO. 2754700 06/15/78 (American Cyanamid Co.)
AB - CBAC COPYRIGHT: CHEM ABS Acaricidal collars for pets are described, made of 3,3-dimethyl-alpha-cyano-m-phenoxybenzyl spiro(cyclopropane-1,1'-indene)-2-carboxylate (I) incorporated into PVC. (60148-52-9 3,3-dimethyl-.alpha.-cyano-m-phenoxybenzyl spiro(cyclopropane-1,1'-indene)-2-carboxylate)(9002-86-2 PVC) Collars for flea control are made of 0,0,0',0'-tetramethyl 0,0',0'-thiodi-p-phenylene phosphorothioate in PVC. (3383-96-8 0,0,0',0'-Tetramethyl-0,0'-thiodi-p-phenylenephosphorothioate) Thus, collars made of PVC 43.9, di-octyl phthalate 25, Thermolite-831 0.9, and I 24.75 parts kept dogs free of *Dermacentor variabilis* and *Rhipicephalus sanguineus* for 12 wk in artificial infestation expts.
RN - 60148-52-9; 9002-86-2; 3383-96-8
EM - 7810
- 231 SI - CA/089/101125N
AU - Hilado CJ ; Cumming HJ ; Casey CJ
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco, Calif.
TI - Toxicity of pyrolysis gases from natural and synthetic materials
SO - Fire Technol.; VOL 14, ISS 2, 1978,136-46
LA - ENG
CD - FITCA
AB - CBAC COPYRIGHT: CHEM ABS Toxicity data (mice) for various natural (wood, cotton, silk, etc.) and synthetic materials (polymers, elastomers, etc.) under simulated fire conditions are provided, together with comparisons between these materials. The most toxic wood, synthetic polymer, and elastomer evaluated were beech, poly(phenylene sulfide), and acrylonitrile rubber, resp.
RN - 9002-86-2; 9002-88-4; 9003-53-6; 9003-56-9; 9010-98-4; 9011-14-7; 9016-75-5; 9041-80-9; 24936-68-3; 24937-79-9; 24981-14-4; 25037-45-0; 25189-22-4; 27026-93-3; 67183-98-6
EM - 7810

- 232 SI - CA/089/079525U
AU - Kincius EJ
AD - Halstab Div., Hammond Lead Prod., Inc., Hammond, Indiana
TI - Safe handling of powdered lead stabilizers for PVC
SO - Soc. Plast. Eng., Tech. Pap.; VOL 24,, 1978,769-72
LA - ENG
CD - SPEPA
AB - CBAC COPYRIGHT: CHEM ABS Safety measures for handling Pb heat stabilizers, e.g. tribasic lead sulfate and basic lead carbonate, for PVC are discussed. (12202-17-4 Tribasic lead sulfate)(12326-84-0 Basic lead carbonate)(9002-86-2 PVC) A limit of 200 mg Pb/m³ air and 60 mug Pb/100 g blood was established.
RN - 12202-17-4; 12326-84-0; 9002-86-2
EM - 7809
- 233 SI - CA/089/094729G
AU - Tsuji S
AD - Japan
TI - Thermal decomposition of carbohydrate wastes
SO - Japan. Kokai PATENT NO. 78 12773 02/04/78 (Hitachi Plant Engineering and Construction Co., Ltd.)
AB - CBAC COPYRIGHT: CHEM ABS Carbohydrate wastes are mixed with Cl-contg. wastes (e.g., poly(vinyl chloride)) and compd(s). of Ca, Mg, Fe, and Zn, and dry-distd. at >500.degree. to give decompn. gases, tar-like components, and active carbides. (9002-86-2 Poly(vinyl chloride) The decompn. gases are condensed, and the resulting condensation liq. is contacted with the active carbides to remove COD components from the condensation liq.
RN - 9002-86-2; 7439-89-6; 7439-95-4; 7440-66-6; 7440-70-2
EM - 7809
- 234 SI - CA/089/094668M
AU - Hirotsuka T ; Fujii T
AD - Japan
TI - Utilization of industrial dusts
SO - Japan. Kokai PATENT NO. 78 18679 02/21/78 (Kubota, Ltd.)
AB - CBAC COPYRIGHT: CHEM ABS Metal-contg. dusts (such as Fe oxide dusts) collected in dust removers are blended with liq. thermoplastic substances (such as resins and rubbers) and a plasticizer, then the mixt. is cured to give flexible materials having high specific wt. Thus, Fe oxide dust 100, PVC 100, and a plasticizer 60 parts were kneaded and extruded into a flexible sheet whose tensile strength, elongation, hardness, and d. were 137 kg/cm², 223%, 91, and 1.70, resp. (9002-86-2 PVC) The sheet had abrasion resistance and sound proofing properties.
RN - 9002-86-2; 1332-37-2
EM - 7809

- 235 SI - CA/089/094295N
AU - Ball GW ; Parker RB ; Stevens K
AD - G.W.B. Electron. Ltd., Hayes/Middlesex, Engl.
TI - The mass spectrometer as a continuous monitor for pollutants and toxic hazards
SO - Adv. Mass Spectrom.; VOL 7B,, 1978,1687-90
LA - ENG
CD - AMSPA
AB - CBAC COPYRIGHT: CHEM ABS Air pollution by vinyl chloride in the prodn. of PVC was monitored by a transportable mass spectrometer (EMI monitor). (75-01-4 Vinyl chloride)(9002-86-2 PVC)
RN - 75-01-4; 9002-86-2
EM - 7809
- 236 SI - CA/089/094251V
AU - Khavezov I ; Tamnev BK
AD - Inst. Gen. Inorg. Chem., Sofia, Bulg.
TI - Flameless atomic absorption determination of beryllium in air filters
SO - Fresenius' Z. Anal. Chem.; VOL 291, ISS 2, 1978,127
LA - ENG
CD - ZACFA
AB - CBAC COPYRIGHT: CHEM ABS Be (0.5-30 .times. 10⁻⁷ g) was detd. with at. absorption spectrophotometer with C cup atomizer at 234.9 nm. The air was filtered through a PVC filter. (9002-86-2 PVC) A mixt. of Ar and propane when used as a purge gas through the C cup atomizer increased the sensitivity of the detn. 2 times.
RN - 9002-86-2; 7440-41-7
EM - 7809
- 237 SI - CA/089/094923R
AU - Guven KC ; Gulhan S ; Altinkurt T
AD - Eczacilik Fak., Istanbul Univ., Istanbul, Turk.
TI - The stability of belladonna extract
SO - Eczacilik Bul.; VOL 20, ISS 1, 1978,9-12
LA - ENG
CD - ECBUA
AB - CBAC COPYRIGHT: CHEM ABS Polyethylene (I) capped brown glass containers were the best for storing belladonna exts., preventing moisture adsorption of samples stored for 6 mo at different relative humidities at room temp. (9002-88-4 Polyethylene) Other containers tested for storage stability of the exts. were I capped I containers, I capped polystyrene tubes, and polyvinylchloride bags covered with Al foil. (9003-53-6 Polystyrene)(9002-86-2 Polyvinylchloride) For some glass containers plastic caps were used. The atropine sulfate and scopolamine-HBr content of the samples were identified by paper chromatog. and detn. by thin-layer chromatog. (55-48-1 Atropine sulfate)(114-49-8 Scopolamine hydrobromide) Degrdsn. products were not identified.
RN - 9002-88-4; 9003-53-6; 9002-86-2; 55-48-1; 114-49-8; 7429-90-5
EM - 7809

- 238 SI - CA/089/080214Y
AU - Bernhard WN ; Yost LC ; Turndorf H ; Cottrell JE ; Paegle RD
AD - Dep. Anesthesiol., New York Univ. Med. Cent., New York, N. Y.
TI - Physical characteristics of and rates of nitrous oxide diffusion into tracheal tube cuffs
SO - Anesthesiology; VOL 48, ISS 6, 1978,413-17
LA - ENG
CD - ANESA
AB - CBAC COPYRIGHT: CHEM ABS Phys. characteristics and time-related vol. changes in air-inflated tracheal tube cuffs exposed to N2O were measured in an environmental chamber. Cuff wall diam., thickness, residual vol., and length were also measured. Gas vols. in most air-inflated tracheal tube cuffs increased 1.7 to 7 mL <30 min of exposure to pure N2O. Diffusion rates into most cuffs varied inversely with cuff thickness and directly with the partial pressure of N2O. There were significant differences in diffusion rates among cuffs of the same compn. with different ds. or porosities as well as among cuffs of different compns. Cuff diams. ranged from 13.8 to 32 mm; thicknesses from .033 to .55 mm; residual vols. from .22 to 19.4 mL; lengths from 23.1 to 49.1 mm. Intracuff vol. and pressure increase related to gas diffusion into air-inflated cuffs should be periodically adjusted or pressure automatically controlled during nitrous oxide anesthesia. Large-diam., thin-walled cuffs are recommended.
RN - 9002-86-2; 10024-97-2
EM - 7809
- 239 SI - CA/089/065307N
AU - Fukamachi K ; Ishibashi N
AD - Fukuoka Environ. Res. Cent., Fukuoka, Japan
TI - Chlorpheniramine sensitive electrode
SO - Bunseki Kagaku; VOL 27, ISS 3, 1978,152-5
LA - JPN
CD - BNSKA
AB - CBAC COPYRIGHT: CHEM ABS An ion-sensitive electrode with a poly(vinyl chloride) (PVC) matrix membrane responsive to chlorpheniramine (I) was developed. (9002-86-2 Poly(vinyl chloride))(132-22-9 Chlorpheniramine) PVC (12.5%)-tetrahydrofuran soln., 1,2-dichloroethane soln. of I tetraphenylborate salt (18.75%), and dioctyl phthalate were mixed in wt. ratio of 8:4:2, spread over a glass plate, and left for 2 days to evap. to dryness. A sheet of the membrane was affixed to a PVC tube which contained an Ag/AgCl electrode. The ion-selective electrode exhibited a Nernstian response to the I ion in the concn. range from 10-1.5 to 10-4.5 M. The potential was independent of pH from 4.5 to 8.0. Interferences of Na+, K+, NH4+, and Ca++ were sufficiently low for the detn. of I. Ephedrine, methylephedrine, caffeine, and antipyrine did not interfere at pH from 5 to 7, whereas diphenhydramine and triptelenamine ions did. (299-42-3 Ephedrine)(552-79-4 Methylephedrine)(58-08-2 Caffeine)(60-80-0 Antipyrine)(58-73-1 Diphenhydramine)(91-81-6 Triptelenamine) The electrode was useful

- as an indicator electrode for the pptn. titrn. of I with NaBPh₄.
- RN - 9002-86-2; 132-22-9; 299-42-3; 552-79-4; 58-08-2; 60-80-0;
58-73-1; 91-81-6; 7440-09-7; 7440-70-2; 14798-03-9
- EM - 7809
- 240 SI - CA/089/065234M
AU - Sako E
AD - Green Cross Corp., Tokyo, Japan
TI - Phthalic acid ester-free poly(vinyl chloride) (PVC) for medical use, medidex
SO - Plast. Age; VOL 24, ISS 3, 1978,75-82
LA - JPN
CD - PLA0A
AB - CBAC COPYRIGHT: CHEM ABS Medidex, a mixt. of PVC with polyurethane as a plasticizer, was prepd. and was stronger than polyurethane and could be ethylene oxide sterilized (with medical data). (9002-86-2 medidex)
- RN - 9002-86-2
EM - 7809
- 241 SI - CA/089/054757H
AU - Greenberg J
AD - USA
TI - Slow-release insecticide
SO - Ger. Offen. PATENT NO. 2750145 05/18/78 (Robins, A. H., Co., Inc.)
AB - CBAC COPYRIGHT: CHEM ABS Naled, eventually combined with another insecticide, is incorporated into a polymer, such as PVC, and processed by extrusion to give slow-release insecticidal plastic bodies, such as collars for domestic animals. (300-76-5 Naled)(9002-86-2 PVC) It is essential to have all the app. which is in contact with the compn. made of acid-resistant stainless steel, in order to prevent degradn. of the insecticide and carbonization of the polymer. Thus, a compn. is given, contg. PVC dispersion resin 40, PVC mixed resin 15, dioctyl phthalate 20.5, epoxidized octyl tallate 25, Ca-Zn stabilizer 1, Naled 21, and bromodichloroacetaldehyde 2 parts by wt.
- RN - 300-76-5; 9002-86-2
EM - 7809
- 242 SI - CA/089/054484S
AU - Anderson RC ; Alarie YC
AD - Grad. Sch. Public Health, Univ. Pittsburgh, Pittsburgh, Pa.
TI - Screening procedure to recognize "supertoxic" decomposition products from polymeric materials under thermal stress
SO - J. Combust. Toxicol.; VOL 5, ISS 1, 1978,54-63
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS In order to illustrate a simple procedure for identification of materials releasing highly toxic decompn. products under thermal stress, the LC50 were detd. for each of a series of materials. Concn. response curves were obtained by exposing mice to pyrolysis products of weighted samples (heated at 20.degree./min) and recording the no. of

deaths at each sample wt. In both long (30 min exposure, 10 min recovery) and short (10 min exposure, 5 min recovery) expts., there was a factor of 100 between the LC50 of the most toxic pyrolysis products and that of the least. In each case, polytetrafluoroethylene was the most toxic material tested. Using a 30 min exposure, Douglas Fir as a ref. material, and groups sepd. by 1 order of magnitude, the following classification of materials is suggested: less toxic than Douglas Fir, as toxic as Douglas Fir, more toxic than Douglas Fir, and supertoxic.

RN - 9002-84-0; 9002-86-2; 9010-98-4; 9011-05-6

DTG - LETHAL CONCENTRATIONS

EM - 7809

243 SI - CA/089/054229N

AU - Kourtidis DA ; Gilwee WJ Jr ; Hilado CJ

AD - Ames Res. Cent., NASA, Moffett Field, Calif.

TI - Relative toxicity of the pyrolysis products from some thermoplastic and thermoset polymers

SO - Polym. Eng. Sci.; VOL 18, ISS 8, 1978,674-6

LA - ENG

CD - PYESA

AB - CBAC COPYRIGHT: CHEM ABS When 1 g samples of 25 thermoplastic and thermoset polymers were tested for the toxicity of their pyrolysis products to mice, with times to death ranged from 10.26 and 10.57 min for the S-contg. polymers polyether sulfone and polyphenylene sulfide, to 24.80 and 21.76 for the Cl-contg. polymers chlorinated polyethylene and chlorinated PVC. (9016-75-5 Polyphenylene sulfide)(9002-88-4

Polyethylene)(9002-86-2 PVC) However, the latter 2 polymers showed the shortest times to incapacitation, 7.50 and 6.29 min, resp. Poly(vinyl fluoride), poly(vinylidene fluoride), and chlorinated PVC were among the materials with the apparent highest lethal concns. (ALC50) required to produce death in 50% of the animals within 30 min. (24981-14-4 Poly(vinyl fluoride))(24937-79-9 Poly(vinylidene fluoride)) A toxic threat index calcd. as the product of time to death and ALC50 divided by 10,000 gave values ranging from 69.06 and 60.53 for Nylon 6 and polyethylene to 2.10 and 6.39 for cured fluorene polycarbonate and poly(vinylidene fluoride), resp. (25038-54-4 Nylon 6)

RN - 9016-75-5; 9002-88-4; 9002-86-2; 24981-14-4; 24937-79-9;

25038-54-4; 9003-53-6; 9003-56-9; 9008-66-6; 9010-98-4;

9011-14-7; 9041-80-9; 24936-68-3; 25037-45-0; 27754-75-2;

32131-17-2; 62238-79-3

EM - 7809

- 244 SI - CA/089/048921R
AU - Asai M ; Tsuda K ; Okada A
AD - Japan
TI - Prevention of leaching of additives from poly (vinyl chloride)
SO - Japan. Kokai PATENT NO. 78 16085 02/14/78 (Agency of Industrial Sciences and Technology)
AB - CBAC COPYRIGHT: CHEM ABS The surface of the biomedical material poly(vinyl chloride) is treated with fluorohydrocarbons in the presence of inert gases to prevent the leaching of additives from the material. (9002-86-2 Poly(vinyl chloride)) Thus, poly(vinyl chloride) together with bis(ethylhexyl) phthalate and Ca stearate (stabilizer) were made into sheets. (117-81-7 bis(ethylhexyl) phthalate) The sheets were pretreated with Ar at 0.2 Torr and then treated with tetrafluoroethylene at 0.05 Torr for 45 min. (116-14-3 Tetrafluoroethylene) After immersion in bovine blood plasma for 64 h, only <0.008 mg plasticizer/50 mL was detected in the plasma compared with 2.67 mg plasticizer/50 mL for untreated sheets.
RN - 9002-86-2; 117-81-7; 116-14-3; 116-15-4
DTG - BLOOD CONCENTRATIONS
EM - 7808
- 245 SI - CA/089/048866B
AU - Takamatsu T
AD - Inst. Phys. Chem. Res., Tokyo, Japan
TI - Blood compatibility of biopolymer materials
SO - Igaku No Ayumi; VOL 105, ISS 5, 1978,342-51
LA - JPN
CD - IGAYA
AB - CBAC COPYRIGHT: CHEM ABS The Raynauld coeff., and surface tension of poly(ethylene chloride), polyethylene phthalate, Nylon 66, Kel F, poly(Me methacrylate), poly(vinylidene fluoride), polystyrene, and segmented polyurethane are summarized. (9002-86-2 Polyethylene chloride)(25248-17-3 polyethylene phthalate)(32131-17-2 Nylon 66)(9002-83-9 Kel F)(9011-14-7 Poly(methyl methacrylate))(24937-79-9 Polyvinylidene fluoride)(9003-53-6 Polystyrene) The physicochem. properties and anticoagulant potency of chem. modified (polar group-bearing) synthetic polymers are presented.
RN - 9002-86-2; 25248-17-3; 32131-17-2; 9002-83-9; 9011-14-7; 24937-79-9; 9003-53-6
EM - 7808
- 246 SI - CA/089/030822Z
AU - Walter W
AD - Labor Packungspruef., Ciba-Geigy A.-G., Stein, Switz.
TI - Experience with IR [spectroscopy] in the identification of synthetic materials
SO - Acta Pharm. Technol.; VOL 24, ISS 1, 1978,91-104
LA - GER
CD - APTED
AB - CBAC COPYRIGHT: CHEM ABS Pharmaceutical packaging materials

were identified by routine IR-spectroscopy as part of quality control procedures. Methods and techniques were discussed. Elastomers, glass samples, polymer films, foils, etc. were tested and evaluated.

- RN - 75-35-4; 9002-83-9; 9002-85-1; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9004-35-7; 9004-70-0; 24937-78-8; 37226-48-5
- EM - 7808
- 247 SI - CA/089/030611E
AU - Rinaldi E ; Moldovanyi L
AD - Switz.
TI - Solid, shape-retaining air-improving preparation with evaporating action
SO - Swiss PATENT NO. 594415 01/13/78 (Ciba-Geigy A.-G.)
AB - CBAC COPYRIGHT: CHEM ABS An air deodorizing prepn. consists of a gel which does not shrink or disintegrate during use, contg. perfume and an olefinic alc. or other unsatd. compd. which reacts with odorous compds. in the air to convert them to nonodorous compds. The gel consists of a hydrophobic paraffin gelated with SiO₂, Al soap, and an org. hydrophobic bentonite deriv., on a polymer resin. For example, 3.5 parts aluminum distearate was added to 56 parts liq. paraffin at 95.degree.. (300-92-5 Aluminum distearate) The mixt. was gelated by heating to 115.degree. for 15 min., and cooled to 90.degree.. Then linalool 20, diethyl fumarate 12, citral 3.5, and diphenyl ether 21 parts were added and the mixt. was cooled to 80.degree., poured into molds, and cooled to 20.degree.. (78-70-6 Linalool)(623-91-6 Diethyl fumarate)(5392-40-5 citral)(101-84-8 diphenyl ether) The product was a hollow cylinder, 10 cm high, 4.5 cm in outer and 2.0 cm in inner diam., weighing 100 g. This product removed unpleasant odors from a 33 L space within 2 min even after 3 mo of use.
- RN - 300-92-5; 78-70-6; 623-91-6; 5392-40-5; 101-84-8; 89-83-8; 98-55-5; 98-86-2; 104-54-1; 105-85-1; 106-22-9; 106-23-0; 106-24-1; 122-78-1; 470-82-6; 515-69-5; 543-39-5; 588-67-0; 624-49-7; 639-99-6; 1604-34-8; 4602-84-0; 7212-44-4; 7631-86-9; 8000-41-7; 9002-86-2; 9002-88-4; 11050-62-7; 12001-31-9; 24937-78-8; 42238-15-3
- EM - 7808
- 248 SI - CA/089/017840J
AU - Kopec RJ ; Washington WD ; Midkiff CR Jr
AD - Bur. Alcohol, Tob. Firearms, U. S. Treas. Dep., Washington, D. C.
TI - Forensic applications of sapphire cell-infrared spectroscopy: companion to the diamond cell in explosive and leg wire identification
SO - J. Forensic Sci.; VOL 23, ISS 1, 1978,57-65
LA - ENG
CD - JFSCA
AB - CBAC COPYRIGHT: CHEM ABS IR spectra of samples contained in a sapphire cell, which allowed examn. of the 4000 to 1600 cm⁻¹ region, allowed identification of 4 types of blasting cap leg wire insulation. Nylon and Teflon could be distinguished from

the above 4 insulations but could not be discriminated in the sapphire cell (they could be discriminated in a diamond cell). (9002-84-0 Teflon) Four explosives and an explosive mixt. were discriminated on the basis of the sapphire cell spectra alone.

RN - 9002-84-0; 78-11-5; 118-96-7; 121-82-4; 2691-41-0; 9002-86-2; 9002-88-4; 9003-53-6; 9004-57-3; 9010-79-1

EM - 7808

249 SI - CA/089/011734F

AU - Kataoka A ; Takahashi T ; Yagi K ; Matsuda K ; Kamota M

AD - Japan

TI - Chelate ion-exchange resin for heavy metal absorption

SO - Japan. Kokai PATENT NO. 78 33988 03/30/78 (Sumitomo Chemical Co., Ltd.)

AB - CBAC COPYRIGHT: CHEM ABS Heavy metals, e.g. Cd, were removed from water by an ion exchange resin, prepd. by treating a halogen contg. resin, e.g. PVC, with an amine and then with ClCH₂CO₂H. (9002-86-2 PVC)(79-11-8 Chloroacetic acid) Thus, 62 parts of emulsion-polymd. PVC were reacted with 120 parts ethylenediamine and 7.1 parts ClCH₂CO₂H to give an ion exchanger (I). (107-15-3 Ethylenediamine) Water contg. 0.1 g/L of CdCl₂ and 39.3 g/L of NaCl and having pH 6 when shaken with 0.5 parts I for 1 h, the Cd content was reduced to 2.3 ppm, as compared to 51 ppm with Uniselec UR-10.

RN - 9002-86-2; 79-11-8; 107-15-3; 7440-43-9

EM - 7807

250 SI - CA/089/012198W

AU - Asai M ; Tsuda K ; Oka H

AD - Japan

TI - Prevention of elution of additives from PVC

SO - Japan. Kokai PATENT NO. 78 08669 01/26/78 (Agency of Industrial Sciences and Technology)

AB - CBAC COPYRIGHT: CHEM ABS The surface of poly(vinyl chloride) is treated with inert gases (such as Ar) and gaseous org. silicates (such as triethylsilane, chloromethyldimethylchlorosilane) to prevent the leakage of additives from the polymer. (9002-86-2 Poly(vinyl chloride))(617-86-7 Triethylsilane)(1719-57-9 Chloromethyldimethylchlorosilane) Poly(vinyl chloride) is a commonly used material for artificial organs and blood vessels, and the leakage of additives may have adverse effects in patients. Thus, sheets contg. poly(vinyl chloride) 100, and the additives dioctyl phthalate 5.0, tin di-Bu dilaurate 2.0, calcium stearate 0.4 and polyethylene glycol monostearate 1.0 part were treated with Ar and chloromethyldimethylchlorosilane. Treated sheets were immersed in blood plasma at 37.degree. for 22 h. Only <0.01 mg plasticizers/50 mL plasma were detected by gas chromatog.

RN - 9002-86-2; 617-86-7; 1719-57-9

DTG - BLOOD CONCENTRATIONS

EM - 7807

- 251 SI - CA/089/012131U
AU - Figge K
AD - Ges. Naturwissenschaftl.-Tech. Dienste m.b.H., Hamburg, Ger.
TI - Migration of low-molecular-weight constituents of packaging materials - radioanalytical methods of determination and results
SO - Acta Pharm. Technol.; VOL 24, ISS 1, 1978,47-90
LA - GER
CD - APTED
AB - CBAC COPYRIGHT: CHEM ABS The migration of Irgastab 17 MOK [di-n-octyltin bis(2-ethylhexyl) thioglycolate(I), BHT, Irganox 1076 [3-[3,5-di(tert-butyl)-4-hydroxyphenyl]propionic acid stearyl ester] and stearyl alc. from rigid PVC and low d. polyethylene films into olive oil, a fat simulant, H2O, dil. AcOH, EtOH and 7 pharmaceutical preps. was followed by labeling the additives and measuring the radioactivity transferred into the example food and drug products. (15571-58-1 Irgastab 17 MOK)(128-37-0 BHT)(2082-79-3 Irganox 1076)(112-92-5 Stearyl alcohol)(9002-86-2 PVC)(9002-88-4 Polyethylene) Methods for measurement of the sp. migrate (1-sided exposure of packaging) and esp. for detn. of the global migrate (2-sided exposure of packaging) in a fat simulant are described. I showed an esp. high degree of migration from high-d. polyethylene film into solid drug preps.
RN - 15571-58-1; 128-37-0; 2082-79-3; 112-92-5; 9002-86-2; 9002-88-4; 117-81-7
EM - 7807
- 252 SI - CA/088/184662P
AU - Kydonieus AF ; Hyman S
AD - USA
TI - Control of agricultural pests using particles with retarded release
SO - Ger. Offen. PATENT NO. 2740497 03/16/78 (Herculite Protective Fabrics Corp.)
AB - CBAC COPYRIGHT: CHEM ABS Slow-release insecticide formulations are prepd. using laminated PVC films. (9002-86-2 PVC) The insecticide is incorporated into an 0.5 mm inner PVC plastisol layer and covered by 0.1 mm PVC films on each side. Thus, diazinon formulated as above controlled Diabrotica balteata for 15 wk, whereas usual diazinon granules had a much shorter activity. (333-41-5 Diazinon)
RN - 9002-86-2; 333-41-5; 298-02-2; 2921-88-2
EM - 7807
- 253 SI - CA/088/165305H
AU - Anderson JE ; Kreith F
AD - Dep. Biol., Idaho State Univ., Pocatello, Idaho
TI - Effects of film-forming and silicone antitranspirants on four herbaceous plant species
SO - Plant Soil; VOL 49, ISS 1, 1978,161-73
LA - ENG
CD - PLSOA

PVC

- AB - CBAC COPYRIGHT: CHEM ABS In the lab., the silicone antitranspirants Mobileaf, Wilt Pruf, XEF-4-3561, and Mobileaf-XEF-4-3561 mixt. decreased transpiration and photosynthesis in *Achillea millefolium*, *Agropyron cristatum*, *Elymus canadensis* and *Melilotus officinalis*. (11130-61-3 Mobileaf)(9002-86-2 Wilt Pruf)(65997-73-1 Mobileaf-XEF-4-3561 mixt.) The effect lasted 10-14 days. The water-use efficiency (Downes, R. W., 1969) was slightly improved by Mobileaf in *A. millefolium* for 6 days, and in *A. cristatum* and *M. officinalis* for 2-3 days, but was not altered by any treatment in *E. canadensis*.
- RN - 11130-61-3; 9002-86-2; 65997-73-1
EM - 7806
- 254 SI - CA/089/141337Q
AU - Hilado CJ ; Cumming HJ
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco, Calif.
TI - Relative toxicity of pyrolysis gases from materials: effects of chemical composition and test conditions
SO - Fire Mater.; VOL 2, ISS 2, 1978,68-79
LA - ENG
CD - FMATD
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Relative toxicity data are given under pyrolysis conditions (conditions to simulate different types of fire situations) on 270 materials (fabrics, plastics, building materials, etc.), and the effects of chem. compn. are discussed for some materials. Wool, silk and polyester fabrics exhibited the shortest times to incapacitation and death in mice. Changing from a rising temp. to a fixed temp. program, and from no forced air flow to 1 L/min air flow, generally resulted in shorter times to incapacitation and death. The relative rankings of materials tended to remain the same in spite of changes in test conditions and methods; however, some reversals in rankings were obsd.
- RN - 108-80-5; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9; 9008-66-6; 9010-98-4; 9011-14-7; 9016-75-5; 9041-80-9; 14808-60-7; 24936-68-3; 24937-79-9; 24981-14-4; 25037-45-0; 25038-54-4; 27681-98-7; 27754-75-2; 28554-73-6; 28760-06-7; 32131-17-2; 62238-79-3
EM - 8007
- 255 SI - CA/089/124042X
AU - Kaisina OV ; Krasnikova II ; Gadalina ID
AD - Inst. Gig. DeteiPodrostkov, Moscow, USSR
TI - Features of the age-related sensitivity of white rats to the effects of chemical factors
SO - Gig. Sanit.; ISS 7, 1978,59-62
LA - RUS
CD - GISAA
AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Continuous exposure of rats from birth to PE 246, wood-chip tiles (MF 17), or PVC linoleum plasticized with poly(di-Bu maleate) inhibited growth and development and impaired normal body functions (respiration,

adrenal gland, liver, nervous system, heart). (26588-55-6 PE 246)(9011-05-6 MF 17)(9002-86-2 PVC)(29014-72-0 poly(di-Bu maleate)) The rats were most sensitive to the volatile products of these preps. at 1-3 wk of age. The volatile substances migrating from PE 246 decreased with time (styrene was present in the air at 0.06-1.5 mg/m³ during the 1st 10 days, at 0.01 mg/m³ after 30 days, and at 0.005 mg/m³ after 60 days). (100-42-5 Styrene)

RN - 26588-55-6; 9011-05-6; 9002-86-2; 29014-72-0; 100-42-5
EM - 8007

256 SI - CA/089/080208Z

AU - Engelbart RH ; Bartone FF ; Gardner P ; Hutson J

AD - Coll. Med., Univ. Nebraska, Omaha, Nebr.

TI - Urethral reaction to catheter materials in dogs

SO - Invest. Urol.; VOL 16, ISS 1, 1978,55-6

LA - ENG

CD - INURA

AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM The reaction of the urethra of dogs to 2 new polyurethane polymers was compared with those produced by materials currently used in the manuf. of urethral catheters. The comparison included silicone, latex rubber, tetrafluoroethylene polymer (Teflon) coated latex, and poly(vinyl chloride). (9002-86-2 Poly(vinyl chloride)) There were no significant differences in the reaction of the urethra to the various materials. The study was carried out in the absence of bacterial contamination.

RN - 9002-86-2; 9002-84-0

EM - 8007

257 SI - CA/089/079549E

AU - Edgerley PG ; Pettett K

AD - Plast. Div., ICI Ltd., Welwyn Garden City/Hertfordshire, Engl.

TI - The effect of pyrolysis and combustion temperatures on smoke density

SO - Fire Mater.; VOL 2, ISS 1, 1978,11-17

LA - ENG

CD - FMATD

AB - CBAC COPYRIGHT: CHEM ABS ADDENDUM Use of the small-scale smoke-testing app. now proposed as a std. in France (under the designation NF-T51-073) showed that, although (like other small-scale fire tests) it is not claimed to be relevant to real fire situations, varying the temp. over a wide range (200-900.degree.) gives plots of sp. optical d. for various materials which broadly correspond to general experience and certain smoke tests; the plots show that nearly all flammable substances give a rapid rise in smoke opacity in the 350-500.degree. region, above which there is always a step drop, sometimes to smoke densities of virtually zero. Some for 1 or 2 synthetic materials showing a very low smoke d. throughout, there is no general trend obsd. in comparing natural and synthetic substances. O depletion, which often occurs in a real fire situation, has an effect, but not a major one, on smoke d.;

however, in some cases reheating of the smoke can have a dramatic effect, probably because of further pyrolysis and combustion.

- RN - 108-80-5; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9;
9004-34-6; 9011-05-6; 9011-14-7; 32131-17-2
EM - 8007

- 258 SI - CA/090/127048K
AU - Warren JH ; Hootman HE
AD - Savannah River Lab., E. I. du Pont de Nemours and Co., Aiken, S.
C.
TI - Operation of a pilot alpha waste incinerator at the Savannah
River Laboratory
SO - Report; ISS DP-MS-78-38, CONF-780654-1,, 1978,31 pp.
LA - ENG
CD - D3REP
AB - CBAC COPYRIGHT: CHEM ABS The pilot incinerator was built and
operated successfully at design throughput with simulated wastes.
Operating ranges of stable incinerator performance were defined
as a function of air and waste feed rates for different materials
and mixts. of materials. The complete range of waste materials
can be burned without producing tar or soot. The limiting
capacity of this incinerator is 0.5 kg/h if all latex rubber is
charged or approx. 0.84 kg/h with a waste mixt. Offgas
particulate sampling prior to scrubbing indicates negligible
solid carryover. The only material which may present off-gas
cleaning problems is a light white smoke which accompanies the
burning of PVC. (9002-86-2 PVC)
RN - 9002-86-2
EM - 7904

- 259 SI - CA/090/126999J
AU - Van de Voorde N
AD - SCK/Cent. Etude Energ. Nucl., CEN, Mol, Belg.
TI - Treatment of alpha radioactive wastes from CEN-SCK from Mol,
Belgium
SO - Proc. Tech. Semin. Treat., Cond. Storage Solid Alpha-Bear. Waste
Cladding Hulls; 1978,221-38
LA - FRE
CD - 39LYA
AB - CBAC COPYRIGHT: CHEM ABS Radioactive residues are compacted,
cut, and encapsulated in hot bitumen. Residues are also
incinerated with various reactor wastes such as glass, metal,
rubber, etc. to an insol. granular mass. An incinerator for low
Pu level wastes has a capacity of 150 kg/h, and another, for >2 g
Pu/L, has a capacity of 10 kg/h. Pu is recovered from the latter
unit. Waste is packed in 25 L metallic boxes with sealed covers,
placed in plastic bags and disposed in 220 L drums which are then
sealed in PVC. Small amts. of fly ash were produced during
operation of the large incinerator for 1500 h.
RN - 7440-07-5; 9002-86-2
EM - 7904

- 260 SI - CA/090/126755B
AU - Staschik G ; Winter K
AD - Ger.
TI - Exhaust air purification with adsorption
SO - Oberflaeche JOT; VOL 18, ISS 12, 1978,775-7
LA - GER
CD - OBJTD
AB - CBAC COPYRIGHT: CHEM ABS The Adsox process for offgas purifn. consists of adsorption of impurities on active C, desorption in a hot, inert gas stream, and incineration of the concd. pollutants and/or recovery of useful components. The use of the process in the purifn. of offgas from a dryer for PVC flooring and from an automobile spray painting plant with solvent recovery is discussed. (9002-86-2 PVC)
RN - 9002-86-2; 7440-44-0
EM - 7904
- 261 SI - CA/090/126557P
AU - Kotlyar IB ; Seregina AI
AD - USSR
TI - Protection of the environment from vinyl chloride contamination in poly(vinyl chloride) production
SO - Plast. Massy; ISS 10, 1978,58-61
LA - RUS
CD - PLMSA
AB - CBAC COPYRIGHT: CHEM ABS A review with 99 refs. Review vinyl chloride environment protection PVC manuf environment protection review
RN - 75-01-4; 9002-86-2
EM - 7904
- 262 SI - CA/090/109085R
AU - Kohl EG ; Pruggmeyer D
AD - Battelle-Inst. e. V., Frankfurt/Main, Ger.
TI - Air pollution caused by vinyl chloride from PVC factories
SO - Ber. - Umweltbundesamt (Ger.); ISS 5, 1978,23 pp.
LA - GER
CD - BEUMD
AB - CBAC COPYRIGHT: CHEM ABS The vinyl chloride (I) content of German PVC samples (emulsion, suspension, bulk) was substantially <10 ppm, except for 3 samples from the same firm, in which I concns. were 44, 81, and 82 ppm. (75-01-4 Vinyl chloride)(9002-86-2 PVC) In foreign PVC, I concns. were generally <10 ppm, but 20% of the samples contained substantially >100 ppm I. In 67 finished products, I concns. were <0.1 ppm for 50 and <5 ppm for 5, with the exception of insulating panels, of which 9 contained 20-50 ppm I and 3 contained 109-973 ppm I. The concn. and emission of I for a given sample of PVC during various stages of processing are discussed, and a simple method for monitoring the I content, particularly at >10 ppm in PVC raw materials, is described.
RN - 75-01-4; 9002-86-2

- EM - 7904
- 263 SI - CA/090/127568E
AD - Italy
TI - Biologically compatible porous fibers and materials for encasing biological materials
SO - Neth. Appl. PATENT NO. 78 03101 09/26/78 (SNAM Progetti S.p.A.)
AB - CBAC COPYRIGHT: CHEM ABS Synthetic fibers and polymer films are rendered suitable for use in contact with blood by formulation with anticoagulants. For example, 10 g cellulose triacetate was dissolved in 133 g CH₂Cl₂, the soln. was cooled to 0.degree., 1 g 4,5-diphenyl-2-bis(2-hydroxyethyl)aminooxazole (I) was added followed by 20 g 30% aq. glycerol, and the mixt. was emulsified by stirring and spun into fibers into a PhMe bath. (9012-09-3 Cellulose triacetate)(18471-20-0 4,5-Diphenyl-2-bis(2-hydroxyethyl)aminooxazole) An i.v. catheter was coated with a film of cellulose triacetate contg. 10% I and wrapped in the I-contg. fiber. When this catheter was implanted in the femoral vein of a dog for 90 days, no signs of fibrinogenesis, platelet aggregation, or thrombosis were obsd.
RN - 9012-09-3; 18471-20-0; 9002-86-2; 9003-22-9; 69621-79-0
DTG - BLOOD CONCENTRATIONS ; HEMATOLOGY
EM - 7904
- 264 SI - CA/090/127511F
AU - Chaigneau M ; Chastagnier M
AD - Lab. Gaz, Univ. Rene Descartes, Paris, Fr.
TI - Absorption and desorption of fluoroalkanes by plastics and elastomers
SO - Sci. Tech. Pharm.; VOL 7, ISS 8, 1978,439-43
LA - FRE
CD - STQPA
AB - CBAC COPYRIGHT: CHEM ABS Desorption of dichlorodifluoromethane from plastics and elastomers (following satn.) was rapid and total regardless of the nature of the material involved. (75-71-8 Dichlorodifluoromethane) Desorption of trichlorofluoromethane varied with the nature of the material and was so slow from plasticized PVC, polypropylene, and polycarbonate that it was not terminated even after a 4-6-mo aeration. (75-69-4 Trichlorofluoromethane)(9002-86-2 PVC)(9003-07-0 Polypropylene) Sterilization with a mixt. contg. 44.5% of each fluoroalkane and 11% ethylene oxide resulted in varied rates of desorption. (75-21-8 Ethylene oxide) In some cases, desorption appeared to have stopped while the wt. of the samples had not returned to its original value, evidently indicating the formation of stable complexes. Desorption of fluoroalkanes after sterilization is important in view of the possible toxic action of these compds.
RN - 75-71-8; 75-69-4; 9002-86-2; 9003-07-0; 75-21-8; 9002-84-0; 9002-88-4; 9003-56-9; 24936-68-3; 24937-78-8; 25587-80-8
EM - 7904

- 265 SI - CA/090/091844A
AU - Chovanec M ; Kosik M
AD - Chemickotechnol. Fak., Slov. Vys. Sk. Tech., Bratislava, Czech.
TI - Utilization of solid wastes by pyrolysis and combustion
SO - Chem. Prum.; VOL 28, ISS 7, 1978,360-3
LA - SLO
CD - CHPUA
AB - CBAC COPYRIGHT: CHEM ABS Toxicity of products from the pyrolysis of polymers, e.g. poly(Me methacrylate), polyethylene, polypropylene, polystyrene, PVC, poly(vinylidene chloride), Teflon, epoxy resins, and polyamides is discussed. (9011-14-7 Poly(methyl methacrylate))(9002-88-4 Polyethylene)(9003-07-0 Polypropylene)(9003-53-6 Polystyrene)(9002-86-2 PVC)(9002-85-1 Poly(vinylidene chloride))(9002-84-0 Teflon)
RN - 9011-14-7; 9002-88-4; 9003-07-0; 9003-53-6; 9002-86-2; 9002-85-1; 9002-84-0
EM - 7903
- 266 SI - CA/090/091644K
AU - Rasbash DJ ; Phillips RP
AD - Dep. Fire Saf. Eng., Univ. Edinburgh, Edinburgh, Scot.
TI - Quantification of smoke produced at fires. Test methods for smoke and methods of expressing smoke evolution
SO - Fire Mater.; VOL 2, ISS 3, 1978,102-9
LA - ENG
CD - FMATD
AB - CBAC COPYRIGHT: CHEM ABS The smoke producing properties of fiber insulating board, chipboard, hardboard, plywood, paper, PVC, ABS polymer, polyurethane foam, and plasterboard. (9002-86-2 PVC)(9003-56-9 ABS polymer) The smoke potential of (Do) of these materials is expressed in terms of ob m³/g, where 1 ob = 1dB light attenuation/ m³/g of light path. Methods available for measuring smoke from burning materials are reviewed. Methods which allow smoke to become dild. and to accumulate gave reproducible results.
RN - 9002-86-2; 9003-56-9
EM - 7903
- 267 SI - CA/090/076013K
AU - Sudduth JR ; Keyworth DA
AD - USA
TI - Purification of gas streams
SO - U.S. PATENT NO. 4104146 08/01/78 (Tenneco Chemicals, Inc.)
AB - CBAC COPYRIGHT: CHEM ABS The gas stream, contg. 10-1000 ppm vinyl chloride (I) from heating of a polymn. slurry, is passed at specific rates through a silent elec. discharge zone in an O₃-generating app. to destroy .gtoreq.95% of the I content and result in a stream contg. .ltoreq.10 ppm I. (75-01-4 Vinyl chloride) Thus, when an air stream (contg. 282 ppm I) was passed at 0.33 L/min through a silent elec. discharge zone in an ozonator, 99.3% of the I content was destroyed 1 min after emergence from the ozonator (the I content was further reduced by

- reaction with O3 formed in the ozonator).
- RN - 75-01-4; 9002-86-2; 10028-15-6
EM - 7903
- 268 SI - CA/090/075932X
AU - Morikawa T
AD - Fire Def. Agency, Minist. Home Aff., Mitaka, Japan
TI - Evolution of soot and polycyclic aromatic hydrocarbons in combustion
SO - J. Combust. Toxicol.; VOL 5, ISS 4, 1978,349-60
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS When polyethylene (I), polystyrene (II), PVC, poly(Me methacrylate), polypropylene, polyacrylonitrile (III), or cellulose were pyrolyzed, the evolution of both soot and benzo[a]pyrene (IV) increased with increasing temp. (9002-88-4 Polyethylene)(9003-53-6 Polystyrene)(9002-86-2 PVC)(9011-14-7 Poly(methyl methacrylate))(9003-07-0 Polypropylene)(25014-41-9 Polyacrylonitrile)(9004-34-6 Cellulose)(50-32-8 Benzo[a] pyrene) The increase of air supply did not decrease soot evolution, unless the air supply rate was very high. A large amt. of soot was produced from burning PVC, II, and III. Soot from I contained 3-4 times more IV than I soot. No direct relation existed between soot and IV prodn.
- RN - 9002-88-4; 9003-53-6; 9002-86-2; 9011-14-7; 9003-07-0; 25014-41-9; 9004-34-6; 50-32-8
EM - 7903
- 269 SI - CA/090/060450Q
AU - Khan ZS ; Hughes TW
AD - Monsanto Res. Corp., Dayton, Ohio
TI - Source assessment: polyvinyl chloride
SO - Report; ISS EPA/600/2-78/0041, MRC-DA-700; Order No. PB-283395,, 1978,107 pp.
LA - ENG
CD - D8REP
AB - CBAC COPYRIGHT: CHEM ABS This report summarizes data on air emissions from the PVC industry. (9002-86-2 PVC) PVC is manufd. by 20 companies at 35 plants. Each plant uses .gtoreq.1 of 4 possible polymn. processes: (1) suspension polymn.; (2) emulsion polymn.; (3) bulk polymn.; and (4) soln. polymn. A representative PVC plant was defined to assess the severity of emissions from this industry. Source severity, defined as the ratio of the time-averaged max. ground level concn. of a pollutant to a hazard potential, was calcd. for 16 chem. species emitted from a representative plant. The 2 largest severities were 970 for vinyl chloride and 1.9 for PVC. (75-01-4 Vinyl chloride) Control technol. for hydrocarbons includes adsorption, absorption, refrigeration, incineration, stripping, purging of equipment with inert gas or water, and control of fugitive emissions.
- RN - 9002-86-2; 75-01-4

- EM - 7903
- 270 SI - CA/090/092368K
AU - Sugitachi A ; Takagi K
AD - Dep. Surg., Osaka Natl. Hosp., Osaka, Japan
TI - Antithrombogenicity of immobilized urokinase - clinical application
SO - Int. J. Artif. Organs; VOL 1, ISS 2, 1978,88-92
LA - ENG
CD - IJAOD
AB - CBAC COPYRIGHT: CHEM ABS Four different urokinase-immobilized polymer substances, i.e., nylon-6, poly(vinyl chloride), silicone rubber, and polyester, had plasminogen-activating activity, in vitro and in vivo. (9039-53-6 Urokinase) The in vitro thrombus formation time (TFT) of the enzyme-immobilized nylon tubes was >45 min, which was the longest time for all materials tested. The TFT of the silicone rubber enzyme tubes was much longer than that of the untreated ones. Clin. use of the urokinase-immobilized nylon tubes showed excellent antithrombogenicity.
RN - 9039-53-6; 9002-86-2; 25038-54-4
EM - 7903
- 271 SI - CA/090/061209E
AU - Wang PY ; Llewellyn-Thomas E
AD - Inst. Biomed. Eng., Univ. Toronto, Toronto, Ont.
TI - Adhesion of synthetic organic polymer to soft tissue. III. Effect of some monofunctional compounds
SO - J. Biomed. Mater. Res.; VOL 12, ISS 6, 1978,831-41
LA - ENG
CD - JBMRB
AB - CBAC COPYRIGHT: CHEM ABS Several acyl or aroyl anhydrides, chlorides, and a triaryl chloroalkane improved to varying degrees the adhesion of fast-setting polyurethane prepolymer to tissue. The isomers of methylphenyl isocyanate and chlorobenzoyl chloride gave the same extent of improvement in adhesion of the prepolymer as the parent compd. without the Me or Cl substituents. Among all the reactive monofunctional compds. studied, benzoyl chloride and its chlorobenzoyl derivs. were the most effective. (98-88-4 Benzoyl chloride) When primed on tissue or admixed with .1toeq.3% additive in some prepolymer preps., these aroyl chlorides promoted the adhesion of many ordinary adhesives to internal tissue. The effectiveness was attributed to the modification of hydrophilic tissue surface by the hydrophobic benzoyl group attached to tissue after reaction. The prosthetic benzoyl group makes the tissue/polymer interface more compatible and the compatibility results in good adhesion.
RN - 98-88-4; 75-36-5; 76-83-5; 93-97-0; 98-59-9; 103-71-9; 108-24-7; 111-64-8; 614-68-6; 618-46-2; 621-29-4; 622-58-2; 9002-86-2; 9003-53-6; 9011-14-7
EM - 7903

- 272 SI - CA/090/049449A
AU - Bochkareva GG ; Ovchinnikov YV ; Kurganova LN ; Beirekhova VA
AD - USSR
TI - Study of the fungal resistance of plasticized poly(vinyl chloride)
SO - Biopovrezhdeniya Mater. Zashch. Nikh; 1978,151-3
LA - RUS
CD - 39NJA
AB - CBAC COPYRIGHT: CHEM ABS Penicillium funiculosum decompd. the protective dioctyl adipate coating supplied as the only C source, forming fumaric acid. (123-79-5 Dioctyl adipate)(110-17-8 Fumaric acid) The fungus also decompd. dioctyl sebacinate, but not dioctyl phthalate which was resistant even in the presence of sugar. (2432-87-3 Dioctyl sebacinate)(117-84-0 Dioctyl phthalate) The availability of sugar enhanced formation of enzymes by fungi and stimulated decompn. of PVC foils. (9002-86-2 PVC) The destruction of the protective coating by mold decreased the frost resistance of the foils. Only the foils contg. dioctyl phthalate retained their frost resistance after exposure to mold. Opaque clear PVC foils were protected from mold by captan, phthalan, 0.5-1% pentachloronitrobenzene (I), or 1-2% cetylpyridinium chloride (II), while transparent foils were protected by 0.1-0.3% bis(tributyltin oxide) or tributyltin acetate. (133-06-2 Captan)(496-14-0 Phthalan)(82-68-8 Pentachloronitrobenzene)(123-03-5 Cetylpyridinium chloride)(56-35-9 Bis(tributyltin oxide))(56-36-0 Tributyltin acetate)
RN - 123-79-5; 110-17-8; 2432-87-3; 117-84-0; 9002-86-2; 133-06-2; 496-14-0; 82-68-8; 123-03-5; 56-35-9; 56-36-0
EM - 7903
- 273 SI - CA/090/049226A
AU - Anderson RC ; Dierdorf J ; Stock MF ; Matijak M ; Sawin R
AU - Alarie Y
AD - Grad. Sch. Public Health, Univ. Pittsburgh, Pittsburgh, Pa.
TI - Use of experimental materials to assess toxicological tests for rating polymeric materials under thermal stress
SO - Fire Mater.; VOL 2, ISS 3, 1978,136-40
LA - ENG
CD - FMATD
AB - CBAC COPYRIGHT: CHEM ABS In order to evaluate the performance of the indices of toxicity which have been developed, thermal decompn. products of 3 polymers, poly(vinyl chloride), polychloroprene, and polycarbonate were tested for sensory irritation, physiol. stress induction, and acute lethality. (9002-86-2 Poly(vinyl chloride))(9010-98-4 Poly(chloroprene)) Each polymer was contrasted with the same polymer contg. 5% Zn ferrocyanide. (14883-46-6 Zinc ferrocyanide) The most irritating and the most stressful pyrolysis products were those from poly(vinyl chloride). The least irritation and stress were assocd. with polycarbonate decompn. products. The acute lethality for polychloroprene was higher than that of the other 2 polymers by a factor of 4. The

addn. of Zn ferrocyanide had a variable effect, depending on the polymer and the index of toxicity being evaluated. Sensory irritation was lessened by the presence of Zn ferrocyanide in polycarbonate. The sample wt. required to cause death of 50% of the animals was reduced for the 2 HCl-generating polymers, poly(vinyl chloride) and polychloroprene. However, the acute lethality of polycarbonate did not change with addn. of Zn ferrocyanide. By itself, Zn ferrocyanide decompd. very slowly during heating, caused almost no irritation or stress, and no deaths.

RN - 9002-86-2; 9010-98-4; 14883-46-6
DTG - LETHAL CONCENTRATIONS
EM - 7903

- 274 SI - CA/090/043356W
AU - Trubitskaya GP ; Boiko AN ; Komarova RF ; Cherednichenko NP
AD - Med. Inst., Rostov-on-Don, USSR
TI - Effect of a low-intensity chemical factor on children under conditions of the use of polymeric materials in construction
SO - Pediatriya (Moscow); ISS 8, 1978,26-9
LA - RUS
CD - PEDTA
AB - CBAC COPYRIGHT: CHEM ABS The study was made, in winter, on 3 groups of children: 2-3 yr, 4-5 yr, and 6-7 yr of age. The construction materials to which children were exposed were: linoleum, PVC linoleum, wood fiber and wood shaving boards, and putty. (9002-86-2 PVC) These materials cause chem. air pollution. HCHO, phthalates, and NH₃, were detd. in the air. (50-00-0 Formaldehyde) The blood of the subjects was analyzed, and changes in the leukocyte counts are described. Children exposed to the construction materials displayed high susceptibility to exudative diathesis, angina, and respiratory distress.
RN - 9002-86-2; 50-00-0; 88-99-3; 7664-41-7
EM - 7902

- 275 SI - CA/090/043308G
AU - Anderson HA ; Snyder J ; Lewinson T ; Woo C ; Lilis R
AU - Selikoff IJ
AD - Mt. Sinai Sch. Med., City Univ. New York, New York, N. Y.
TI - Levels of CEA among vinyl chloride and poly(vinyl chloride)-exposed workers
SO - Cancer (Philadelphia); VOL 42, ISS 3, Suppl., 1978,1560-7
LA - ENG
CD - CANCA
AB - CBAC COPYRIGHT: CHEM ABS In 1974, vinyl chloride (VC) exposed workers had an increased risk of malignant disease (hemangiosarcoma of the liver). (75-01-4 Vinyl chloride) Thus 1147 workers exposed to VC monomer in 3 VC/poly(vinyl chloride) (PVC) . plants and 269 workers from a PVC extrusion plant manufg. PVC textile product, exposed to much lower concns. of VC were examd. (9002-86-2 Poly(vinyl chloride)) Included among the comprehensive clin. and lab. studies conducted was the CEA

(carcinoembryonic antigen) titer. The investigation demonstrated that occupational exposures in VC/PVC plants can cause elevations in the CEA titers of otherwise healthy individuals. Prospective follow-up is necessary before conclusions can be drawn concerning the usefulness of the CEA titer as a predictive indicator of possible increased risk.

RN - 75-01-4; 9002-86-2
EM - 7902

276 SI - CA/090/028976E

AU - McRea JC ; Kim SW
AD - Dep. Pharm., Univ. Utah, Salt Lake City, Utah
TI - Characterization of controlled release of prostaglandin from polymer matrices for thrombus prevention
SO - Trans., Am. Soc. Artif. Intern. Organs; VOL 24,, 1978,746-52
LA - ENG
CD - TAIOA
AB - CBAC COPYRIGHT: CHEM ABS Av. plots of total release of active agent (PGE1, cAMP, and its ammonium salt) from each combination of polymer (PVC and Biomer)/active agent vs. time1/2 showed a linear relation in .ltoreq.45 days. (745-65-3 PGE1)(60-92-4 CAMP)(9002-86-2 PVC)(52503-89-6 Biomer) Plots of two systems, PVC/cAMP acid and Biomer/PGE1 had significantly different slopes during the 1st 24 h and 48 h, resp., indicating distinct diffusion mechanisms occurring at early time release as opposed to the later steady-state conditions. For the same systems rates of release were different. However, all the systems eventually achieved steady-state-release conditions of approx. the same order of magnitude. ADP-induced platelet aggregation studies comparing the relative potency of PGE1, PGD2, and PGI2 showed PGD2 had inhibitory effect twice as great as PGE1 in human platelet-rich plasma (PRP). (58-64-0 ADP)(41598-07-6 PGD2)(35121-78-9 PGI2) However, in bovine PRP, PGD2 showed similar and PGE1 .apprx.2 times more inhibition compared to that in human PRP. PGI2 had the greatest antiaggregation effect of all in both bovine and human PRP. PRP exposed to polymer-PGE1 system demonstrated 82% inhibition of ADP-induced aggregation compared to control unexposed PRP. Prostaglandins, combined with currently available polymers, could be utilized for the prevention of thrombus formation.

RN - 745-65-3; 60-92-4; 68407-13-6; 9002-86-2; 52503-89-6; 58-64-0;
41598-07-6; 35121-78-9
EM - 7902

277 SI - CA/090/017176T

AU - Bucci TJ ; Hilado CJ ; Marcussen WH ; Furst A
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco, Calif.
TI - Two-week studies of survivors from exposures to pyrolysis gases
SO - J. Combust. Toxicol.; VOL 5, ISS 3, 1978,278-89
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS Male mice which had survived near-lethal concns. of the pyrolysis gases from a variety of

polymeric materials were sacrificed 2 wk after exposure and necropsied, and the lungs, heart, liver, kidneys, and spleen were subjected to patholog. examn. The polymeric materials were polyethylene, acrylonitrile-butadiene-styrene copolymer, polycarbonate, poly(aryl sulfone), poly(ether sulfone), poly(phenylene sulfide), modified poly(phenylene oxide), chlorinated poly(vinyl chloride), poly(vinylidene fluoride), and fluorene polycarbonate. Microscopic examn. of the tissues indicated that there was no significant effect on the liver, kidney, and spleen in animals 2 wk after exposure to the pyrolysis gases from these materials. It was not possible to detn. whether the pyrolysis gases had a significant effect on the lungs of the exposed animals because of a high level of pathol. in both control and exposed animals. Detailed patholog. examn. of surviving animals after 2 wk does not appear to be cost-effective because after that time interval any acute injuries would be in the healing phase and would be difficult to distinguish from chronic preexisting pathol. Patholog. examn. after 24 or 48 h may be more cost-effective.

RN - 9002-86-2; 9002-88-4; 9003-56-9; 9041-80-9; 24937-79-9
EM - 7902

278 SI - CA/090/017133B

AU - Hilado CJ ; Cumming HJ ; Schneider JE ; Solis AN ; Furst A
AD - Inst. Chem. Biol., Univ. San Francisco, San Francisco, Calif.
TI - ALC50 values for materials under pyrolysis conditions
SO - Proc. West. Pharmacol. Soc.; VOL 21, 1978,167-70
LA - ENG
CD - PWPSA
AB - CBAC COPYRIGHT: CHEM ABS Apparent lethal concn. values for 50% of the animals (ALC50) from 50 pyrolyzed materials ranged 8-240 mg/L. Materials such as wool, nylon, polyurethane had low ALC50 values, whereas synthetic resins, such as benzyl and fluorene polycarbonate showed high values after being cured.

RN - 86-73-7; 783-81-3; 9002-86-2; 9002-88-4; 9003-56-9; 9016-75-5; 9041-80-9; 24937-79-9; 24981-14-4; 25038-54-4; 27100-33-0; 31799-17-4; 68675-82-1

DTG - LETHAL CONCENTRATIONS
EM - 7902

279 SI - CA/090/043849J

AU - Hirschhorn L
AD - USA
TI - Constructing porcelain-metal dental restorations
SO - U.S. PATENT NO. 4107348 08/15/78
AB - CBAC COPYRIGHT: CHEM ABS An opaque coating consisting of an evaporable liq. of varying proportions of alc. and water and a small quantity of dissolved resinous binder for application directly to the exposed surfaces of base metal surfaces of individual prosthetic teeth was described. The use of the evaporable coating eliminates baking steps before the application of subsequent porcelain coating. E.g., 3-5 parts poly(vinyl chloride) dispersion in 95-7 parts water or water-alc. were mixed

with known and opaque coatings in powd. frit form, applied to the metallic tooth surface by brush or aerosol dispenser, and air dried to give a tooth with the coating particles in position and ready for subsequent further particle coat or porcelain enamel coat. (9002-86-2 Poly(vinyl chloride))

RN - 9002-86-2
EM - 7902

- 280 SI - CA/090/043777J
AU - Craig RG ; Koran A ; Yu R ; Spencer J
AD - Sch. Dent., Univ. Michigan, Ann Arbor, Mich.
TI - Color stability of elastomers for maxillofacial appliances
SO - J. Dent. Res.; VOL 57, ISS 9-10, 1978,866-71
LA - ENG
CD - JDREA
AB - CBAC COPYRIGHT: CHEM ABS The color stability of poly(vinyl chloride) (PVC), polyurethane, and silicone polymers for maxillofacial applications was detd. after accelerated aging using reflectance spectrophotometry. (9002-86-2 Poly(vinyl chloride) The PVC material was slightly yellow after processing and became lighter in color after 100 h of aging. Variation in processing conditions resulted in variation in the intensity of the color. The polyurethane material increased slightly in intensity of color. The main problem with the polyurethane, however, was the severe degrdn. of mech. properties with aging in the UV light-water spray environment. All silicone elastomers showed good color stability. The selection of particular silicone would depend on the opacity desired, the phys. and mech. properties of the polymer, and whether heat or chem.-initiated polymn. is desired. In general, all color changes obsd. were small. Other factors, such as the color stability of pigments and the stain resistance of the elastomers, may be partly responsible for the color degrdn. experienced in clin. situations.
- RN - 9002-86-2
EM - 7902
- 281 SI - CA/090/043773E
AU - Mori Y ; Nagaoka S ; Masubuchi Y ; Itoga M ; Tanzawa H ; Kikuchi T
AU - Yamada Y ; Yonaha T ; Watanabe H ; Idezuki Y
AD - Basic Res. Lab., Toray Ind. Inc., Kamakura, Japan
TI - The effect of released heparin from the heparinized hydrophilic polymer (HRSD) on the process of thrombus formation
SO - Trans., Am. Soc. Artif. Intern. Organs; VOL 24,, 1978,736-45
LA - ENG
CD - TAI OA
AB - CBAC COPYRIGHT: CHEM ABS In clin. studies, heparinized RSD polymer-coated catheter showed excellent antithrombogenicity for .ltoreq.85 days of implantation. (25085-46-5 RSD) Teflon, silastic, polyethylene, and poly(vinyl chloride) catheters showed poor antithrombogenicity. (9002-84-0 Teflon)(9002-88-4 Polyethylene)(9002-86-2 Poly(vinylchloride)) In addn., the scanning electron microscopic observations have shown that for the Teflon and the Silastic catheters, the thrombus formation

PVC

developed to Phase IV 3-25 days after their use. On the other hand, for the RSD catheter, the thrombus formation stayed in Phase I even after 60 days of clin. use while the no. of adherent platelets was min.

RN - 25085-46-5; 9002-84-0; 9002-88-4; 9002-86-2
EM - 7902

- 282 SI - CA/090/028492U
AU - Sawabe T
AD - Japan
TI - Waste gas treatment
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 78 90157 08/08/78 (Sumitomo Bakelite Co., Ltd.)
AB - CBAC COPYRIGHT: CHEM ABS Waste gas contg. vapor, org. solvent, tars, or other contaminants are heat exchanged and the contaminants are condensed. The solvent in the condensate is used to clean the heat exchanger. The solvent is MeOH, Me₂CO, or toluene. The process is used for treating waste gases from impregnating and drying of PVC.
RN - 67-64-1; 9002-86-2
EM - 7902
- 283 SI - CA/090/028414V
AU - Konietzko H ; Elster I ; Reill G
AD - Inst. Arbeitsmed., Univ. Tuebingen, Tuebingen, Ger.
TI - Lead loading-lead disease. An industrial hygiene study
SO - Zentralbl. Arbeitsmed., Arbeitsschutz Prophyl.; VOL 28, ISS 6, 1978,163-5
LA - GER
CD - ZAAPD
AB - CBAC COPYRIGHT: CHEM ABS Pb in the blood of 7 workers at a mixing station using PVC varied between 120 and 160 initially and fell to an av. of 20 µg/100 mL after sanitary measures had been taken. (9002-86-2 PVC)
RN - 9002-86-2; 7439-92-1
EM - 7902
- 284 SI - CA/090/028367G
AU - Anon
AD - Engl.
TI - Removal of vinyl chloride monomer from gases
SO - Res. Discl.; VOL 175,, 1978,5
LA - ENG
CD - RSDSB
AB - CBAC COPYRIGHT: CHEM ABS Vinyl chloride vapors were selectively removed from waste gases from PVC prodn. by treating the gas with ether acetates, diacetates, or triacetates. (75-01-4 Vinyl chloride)(9002-86-2 PVC)
RN - 75-01-4; 9002-86-2; 64-19-7
EM - 7902

- 285 SI - CA/090/011909N
AU - Saito Y ; Nogita S ; Shimada K ; Komuro T ; Haga T
AD - Japan
TI - Removal of heavy metals from dust and residual char
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 78102272 09/06/78 (Agency of Industrial Sciences and Technology)
AB - CBAC COPYRIGHT: CHEM ABS Heavy metals-contg. dust and residual char from thermal decompn. of city garbage are immersed in acidic wastewaters produced by thermal decompn. of PVC-contg. waste. (9002-86-2 PVC) Heavy metals are effectively removed from the dust and residual char.
RN - 9002-86-2
EM - 7901
- 286 SI - CA/089/220414R
AU - Hirose S ; Shimizu A ; Kajiuchi T
AD - Cent. Res. Inst., Mitsubishi Petrochem. Co., Japan
TI - Decline in filtration rate of membrane separation
SO - Mizu Shori Gijutsu; VOL 19, ISS 7, 1978,631-6
LA - JPN
CD - MSYGA
AB - CBAC COPYRIGHT: CHEM ABS PVC membrane was used for treatment of oil emulsion. (9002-86-2 PVC) The effects of the sepn. conditions, such as the pore size of the membrane, oil concn., the operation pressure, and the stirring rate on the filtration rate were examd. The sepn. rate decreased rapidly just after the beginning of the operation, and then gradually due to the gel formation of the emulsified oil on the membrane surface.
RN - 9002-86-2
EM - 7901
- 287 SI - CA/089/220194U
AU - Sittig M
AD - USA
TI - Vinyl Chloride and PVC Manufacture: Process and Environmental Aspects
SO - 1978,354 pp.
CD - BOOKA
AB - CBAC COPYRIGHT: CHEM ABS A book. Book vinyl chloride PVC environment Polyvinyl chloride manuf environment book
RN - 75-01-4; 9002-86-2
EM - 7901
- 288 SI - CA/089/220176Q
AU - Hilado CJ ; Machado AM
AD - Fire Saf. Cent., Univ. San Francisco, San Francisco, Calif.
TI - Char yield and toxicity of pyrolysis gases from materials
SO - J. Fire Flammability; VOL 9, ISS July, 1978,367-76
LA - ENG
CD - JFFLA
AB - CBAC COPYRIGHT: CHEM ABS Char yield and toxicity of pyrolysis gases from rigid and flexible cellular polymers, plastics, and

elastomers were detd. The toxicity of pyrolysis gases from N-contg. cellular polymers and S-contg. plastics increased with increasing char yield. Increased char yield is not necessarily assocd. with reduced toxicity.

RN - 108-80-5; 9002-86-2; 9002-88-4; 9003-53-6; 9003-56-9; 9010-98-4; 9011-14-7; 9016-75-5; 25014-12-4; 25038-54-4; 62238-79-3; 67183-98-6

EM - 7901

289 SI - CA/089/203761J

AU - Osaka T

AD - Japan

TI - Decomposition of polyvinyl chloride base waste

SO - Japan. Kokai PATENT NO. 78 60974 05/31/78 (Fuji Chemical Machinery Co., Ltd.)

AB - CBAC COPYRIGHT: CHEM ABS PVC-contg. waste is fed to a rotating retort at .ltoreq.350.degree.. (9002-86-2 PVC) The decompd. products, HCl and org. distillate are collected. The resulting carbonaceous residue is crushed and steamed to remove org. matter. The method is useful for treating waste PVC film.

RN - 9002-86-2; 7647-01-0

EM - 7901

290 SI - CA/089/203701Q

AU - Iwai N ; Okumura T

AD - Japan

TI - Apparatus for treatment of wastewater

SO - Ger. Offen. PATENT NO. 2806415 08/17/78 (Sekisui Chemical Co., Ltd.)

AB - CBAC COPYRIGHT: CHEM ABS The app. is composed of several rotating blades of noncellular synthetic resin, e.g., PVC or polyethylene, mounted on a common shaft . (9002-86-2 PVC)(9002-88-4 Polyethylene) Aerobic microorganisms are grown on the <3 mm-thick blades which are then partially dipped in the wastewater. The app. features high wastewater treatment capacity, long service life, and small dimensions and wt.

RN - 9002-86-2; 9002-88-4

EM - 7901

291 SI - CA/089/203384P

AU - Hilado CJ ; Machado AM

AD - Fire Saf. Cent., Univ. San Francisco, San Francisco, Calif.

TI - Smoke studies with the Arapahoe chamber

SO - J. Fire Flammability; VOL 9, ISS April, 1978,240-4

LA - ENG

CD - JFFLA

AB - CBAC COPYRIGHT: CHEM ABS Tests on a no. of materials, e.g., poly(Me methacrylate), poly(vinyl chloride), and linoleum, indicate that comparison of materials on the basis of smoke as a percentage of initial wt. may be the most broadly useful approach for screening purposes over the long term with the Arapahoe smoke chambers. (9011-14-7 Poly(methyl methacrylate))(9002-86-2 Poly(vinyl chloride))

- RN - 9011-14-7; 9002-86-2; 9003-07-0; 9003-53-6; 9003-56-9
EM - 7901
- 292 SI - CA/089/203368M
AU - Gough TA ; Webb KS ; McPhail MF
AD - Lab. Gov. Chem., London, Engl.
TI - Diffusion of nitrosamines through protective gloves
SO - IARC Sci. Publ.; VOL 19, ISS Environ. Aspects N-Nitroso Compd., 1978,531-4
LA - ENG
CD - IARCC
AB - CBAC COPYRIGHT: CHEM ABS N-nitrosopyrrolidine permeated PVC and rubber gloves more rapidly than the other nitrosamines tested. (930-55-2 N-nitrosopyrrolidine)(9002-86-2 PVC) N-nitrosodibutylamine permeated rubber gloves to a small extent (2.5% in 2 h). (924-16-3 N-Nitrosodibutylamine)
RN - 930-55-2; 9002-86-2; 924-16-3; 55-18-5; 62-75-9; 100-75-4; 621-64-7
EM - 7901
- 293 SI - CA/089/203367K
AU - Sansone EB ; Tewari YB
AD - Frederick Cancer Res. Cent., Frederick, Md.
TI - The permeability of laboratory gloves to selected nitrosamines
SO - IARC Sci. Publ.; VOL 19, ISS Environ. Aspects N-Nitroso Compd., 1978,517-29
LA - ENG
CD - IARCC
AB - CBAC COPYRIGHT: CHEM ABS Lab. gloves made from PVC, nitrile rubber, neoprene and(or) natural, rubber of varied thickness (0.2-0.5 mm) provide no full protection from nitrosamine solns. in Me2CO, CH2Cl2, EtOH, and H2O. (9002-86-2 PVC) The permeability of glove materials to dimethylnitrosamine, ethylmethylnitrosamine, diethylnitrosamine, butylmethylnitrosamine, dipropylnitrosamine, diisopropylnitrosamine, and di-sec-butylnitrosamine was detd. (62-75-9 Dimethylnitrosamine)(10595-95-6 Ethylmethylnitrosamine)(55-18-5 Diethylnitrosamine)(7068-83-9 Butylmethylnitrosamine)(621-64-7 Dipropylnitrosamine)(601-77-4 Diisopropylnitrosamine)(5350-17-4 di-sec-butylnitrosamine)
RN - 9002-86-2; 62-75-9; 10595-95-6; 55-18-5; 7068-83-9; 621-64-7; 601-77-4; 5350-17-4
EM - 7901
- 294 SI - CA/089/203257Z
AU - Neu NP
AD - Comput. Cent., Solvay et Cie S. A., Brussels, Belg.
TI - Minicomputer connected to process-chromatographs for monitoring air pollutants in working areas
SO - Textes Conf. Cadre Congr. Int. "Contrib. Calc. Electron. Dev. Genie Chim. Chim. Ind."; VOL D., 1978,44-9
LA - ENG
CD - 39EYA

- AB - CBAC COPYRIGHT: CHEM ABS Air pollution by vinyl chloride during the prodn. of PVC was monitored by a gas chromatograph equipped with a minicomputer. (75-01-4 Vinyl chloride)(9002-86-2 PVC)
- RN - 75-01-4; 9002-86-2
- EM - 7901
- 295 SI - CA/089/203134G
- AU - Babicka L
- AD - Vyzk. Ustav Energ., Prague, Czech.
- TI - Use of plastics for air sampling
- SO - Ochr. Ovzduši; VOL 10, ISS 4, 1978,62-4
- LA - CZE
- CD - OCOVA
- AB - CBAC COPYRIGHT: CHEM ABS Plastic foil bags made from vinyl chloride-vinylidene chloride copolymer and poly(ethylene terephthalate) are the most suitable, among different plastics tested, for air sampling. (9011-06-7 Vinyl chloride-vinylidene chloride copolymer)(25038-58-8 poly(ethylene terephthalate)) Due to permeability of these plastic to halogenated hydrocarbons, the samples should not be stored in the bags for .apprxq. 10 h.
- RN - 9011-06-7; 25038-58-8; 9002-83-9; 9002-86-2; 9002-88-4; 9003-18-3; 9011-17-0; 24981-14-4; 28412-31-9
- EM - 7901
- 296 SI - CA/090/012340G
- AU - Asai M ; Tsuda K ; Okada A
- AD - Japan
- TI - Prevention of elution of plasticizers from poly(vinyl chloride) for medical use
- SO - Jpn. Kokai Tokkyo Koho PATENT NO. 78114875 10/06/78 (Agency of Industrial Sciences and Technology)
- AB - CBAC COPYRIGHT: CHEM ABS The elution of plasticizers from poly(vinyl chloride) for medical use can be prevented by treatment of the surface of polymers with gases (e.g., Ar) (which are incapable of promoting plasma polymn.) under vacuum. (9002-86-2 Poly(vinyl chloride)) Thus, poly(vinyl chloride) contg. the plasticizer diethylhexyl phthalate was treated with Ar plasma for 5-30 min at 10-3-10-1 Torr and 13.56 MHz. (117-81-7 Diethylhexyl phthalate) Only 0.01 mg plasticizer/50 mL bovine blood serum was found after immersing a disk (400 mu thickness; 10 cm diam.) in bovine blood serum for 30 min.
- RN - 9002-86-2; 117-81-7; 630-08-0; 1333-74-0; 7440-37-1; 7664-41-7
- DTG - BLOOD CONCENTRATIONS
- EM - 7901
- 297 SI - CA/090/012268Q
- AU - Ihlenfeld JV ; Mathis TR ; Barber TA ; Mosher DF ; Riddle LM
- AU - Hart AP ; Updike SJ ; Cooper SL
- AD - Dep. Chem. Eng., Univ. Wisconsin, Madison, Wis.
- TI - Transient in vivo thrombus deposition onto polymeric biomaterials: role of plasma fibronectin
- SO - Trans., Am. Soc. Artif. Intern. Organs; VOL 24,, 1978,727-35
- LA - ENG

PVC

CD - TAIOA

AB - CBAC COPYRIGHT: CHEM ABS Of the 5 polymers examd., poly(hydroxyethyl methacrylate) (HEMA) and poly(acrylamide) (AM) surfaces surprisingly showed high thrombus deposition in spite of their reported thromboresistance. (25249-16-5 Poly(hydroxyethyl methacrylate))(9003-05-8 Poly(acrylamide)) This was attributed to monomer purity and grafting technol. used to make the hydrogel-grafted shunts. Both thrombogenic and embolic events occurred on the AM surface. Thrombus adherent on HEMA remained attached during 2 h observation. However, fibrin and platelet radioactivity began to drop after between 90 min and 120 min of blood contact, suggesting that the embolic events began at that point. In a 2nd part of the expt., it was found that the human fibrinogen preadsorbed to poly(vinyl chloride) (PVC) contained no fibronectin (FN; a glycoprotein, also known as cold insol. globulin). (9002-86-2 Poly(vinyl chloride)) Thrombogenesis on this surface was markedly enhanced over that on the uncoated PVC consistent with reported platelet adhesion enhancement in vitro. However, the enhancement of thrombogenesis on FN-coated PVC and Silastic indicated that FN present in the fibrinogen preps. influenced the results. Contrary to the earlier reports albumin-coated PVC showed that initial platelet deposition was not inhibited. Rather the activation of initially deposited platelets in a manner predisposing to thrombogenesis was prevented. The thrombogenic enhancement on FN-coated surfaces indicates that it may play a role in foreign surface-induced thrombosis. Preventing or minimizing the initial adsorption of FN and fibrinogen is presumably an important strategy in developing biocompatible polymer surfaces.

RN - 25249-16-5; 9003-05-8; 9002-86-2; 52503-89-6

EM - 7901

298 SI - CA/090/012229C

AU - Stepniewska E ; Stepniewski M

AD - Oddzialu Chirurg. Gastroenterol., Univ. Adama Mickiewicza, Krakow, Pol.

TI - Composition of some fluids used for intravenous infusions

SO - Przegl. Lek.; VOL 35, ISS 8, 1978,679-82

LA - POL

CD - PRLKA

AB - CBAC COPYRIGHT: CHEM ABS The amt. of insulin recovered after simulated i.v. infusion using glass containers increased, but not proportionally, with increases in the amt. of hormone added to the glucose in the container, whereas recovery of insulin from PVC containers was almost the same regardless of the amt. added. (9004-10-8 Insulin)(50-99-7 glucose)(9002-86-2 PVC) Insulin is evidently adsorbed to both plastic and glass containers. Electrolyte levels were detd. in penicillin G and amino acid injection solns. and the importance of knowing such levels in order to regulate administration of other electrolyte-contg. solns. is emphasized. (61-33-6 Penicillin G)

RN - 9004-10-8; 50-99-7; 9002-86-2; 61-33-6; 16887-00-6; 17341-25-2; 24203-36-9

EM - 7901

- 299 SI - CA/090/001711C
AU - Okada Y ; Igarashi Y ; Watanabe K
AD - Japan
TI - Microencapsulation of agrochemicals containing organophosphorus compounds
SO - Ger. Offen. PATENT NO. 2815139 10/19/78 (Kureha Chemical Industry Co., Ltd.)
AB - CBAC COPYRIGHT: CHEM ABS Microcapsules contg. org. P compds. were prepd. by using polymers as provisional capsule envelopes, dissolving chem in capsule-contg. org. P substance consisting of DDVP or di-Me 1,2-dibromo-2,2-dichloroethyl phosphate at 0.1-10 wt. parts per 100 wt. parts of capsule-contg. compds., and dispersion of the soln. formed in an aq. system (e.g. of gelatin). (62-73-7 DDVP)(300-76-5 Dimethyl 1,2-dibromo-2,2-dichloroethylphosphate) Microdrops formed in the system are covered with a thin film of the envelope-forming substance. From this film-covered drops a permanent capsule is further formed according to known complex-coacervation processes. The microcapsules having a double envelope composite structure are removed from the coacervation-dispersion bath and dried. After automatic decompn. of the provisional envelope, dry capsules o org. P compds. with a permanent one-layer envelope are obtained.
RN - 62-73-7; 300-76-5; 9000-01-5; 9002-86-2; 9003-20-7; 9003-53-6; 9011-05-6; 9011-14-7
EM - 7901

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