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PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66468P Journal CASCT CA104000
HITS: PCB*

Environmental toxicology of PCB substitutes for capacitors. Saperstein, Mark D.; Faeder, Edward J. (South. California Edison Co., Rosemead, CA 91770 USA). Regul. Toxicol. Pharmacol. [RTOPDW] 1982, 2(3), 238-46 (Eng).

A review and discussion with 13 refs.

review PCB substitute capacitor toxicity
environment PCB substitute capacitor review

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66517D Journal CASCT CA104000
HITS: PCB*

Biological effects of PCB and related polychlorinated compounds. Kunita, Nobuharu; Kashimoto, Takashi (Osaka Pref. Inst. Pub. Health, Osaka, Japan 538). Saishin Igaku [SAIGAK] 1982, 37(12), 2378-83 (Japan).

A review with 18 refs. on the tissue levels of PCB in man, monkey, and rat exposed to Yusho causative oil and PCB.

review PCB metab
polychlorinated compd metab review

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66520Z Journal CASCT CA104000
HITS: PCB*

Relationship of structure to accumulation in liver of PCB isomers. Kawanishi, Shosuke; Seki, Yoshihiko; Sano, Seiyo (Fac. Med., Kyoto Univ., Kyoto, Japan 606). Saishin Igaku [SAIGAK] 1982, 37(12), 2384-7 (Japan).

A review with 19 refs.

review PCB metab liver structure

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66546N Journal CASCT CA104001
HITS: PCB*, *CHLOR*

Minimization of blank values of the miniature silica gel column. Picer, Nena; Picer, Mladen; Mikac, Nevenka (Cent. Mar. Res. Zagreb, "Rudjer Boskovic" Inst., Zagreb, Yugoslavia). Chemosphere [CMSHAF] 1982, 11(9), 825-32 (Eng).

A system of solvent and silica gel of the lowest blank values for the sepn. of PCBs from chlorinated insecticides was developed. PCBs elution was performed with pentane, while the chlorinated insecticides eluated with Et2O, acetone, MeOH, and benzene. The elution of pesticides [DDT [50-29-3], p,p'-DDE [72-55-9], p,p'-TDE [72-54-8], dieldrin (I) [60-57-1]] gave the best results for the following solvent systems: Et2O + hexane (1:1), acetone + hexane (1:4), MeOH + pentane (1:8) and benzene. Sepn. of pesticides from PCB's found in a synthetic mixt. was also examd. All solvent systems used gave similar results of sepn. However, only if benzene is used as eluent, the silica gel column can be used for 4 successive sepns. after the on column regeneration. To obtain the lowest blank values, silica gel was cleaned with several solvents. The eluates after the silica gel sepn. were also cleaned up by means of deactivation alumina and concd. H_2SO_4.

(This abstract has a structure in the CA issue.)
ABSTRACT CONTINUED

CA98(9):66546N

chlorinated insecticide PCB silica gel chromatog

CA98(9):66624M
still .apprx.1% of the dose. Unchanged 6-CB predominated in feces, whereas urine contained polar metabolites only. During the fasting period, the 6-CB released from adipose tissue (46 of the 47% of the dose stored at the beginning of the fasting period) appeared in skin (29-55%) and in the fecal excretion (5-36%). Thus, the apparently irreversibly stored 6-CB in adipose tissue of normal rats can be released by decreasing this storage or deep compartment. In the absence of adipose tissue, skin takes over the characteristics of an alternative storage compartment.

(This abstract has a structure in the CA issue.)

chlorobiphenyl pharmacokinetics
biphenyl chloro metab food restriction

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66624M Journal CASCT CA104003
HITS: *CHLOR*, *CHLOR* *BIPHENYL* /WORD

Pharmacokinetics of 2,2',4,4',5,5'-hexachlorobiphenyl (6-CB) in rats with decreasing adipose tissue mass. I. Effects of restricting food intake two weeks after administration of 6-CB. Wyss, P. A.; Muehlebach, S.; Bickel, M. H. (Dep. Pharmacol., Univ. Berne, CH-3010 Bern, Switz.). Drug Metab. Dispos. [DMDSAI] 1982, 10(6), 657-61 (Eng).

The tissue distribution and excretion of 2,2',4,4',5,5'-hexachlorobiphenyl (6-CB)(I) [35065-27-1] was studied in rats with decreasing adipose tissue mass. Single doses of 6-CB (0.6 mg/kg, i.v.) were administered to adult rats on an ad libitum diet, and 2 wk later their food intake was restricted to 25% of the original daily intake for an addnl. 6 wk. Body wts. decreased up to the 4th wk of fasting by .apprx.1/2 before they became stabilized when adipose tissues had almost disappeared. In the liver, lung, brain, skeletal muscle, and blood, 6-CB concns. increased up to the 4th wk of fasting and then decreased with half-lives of 8-13 days. In contrast, the concn. did not decrease in skin throughout the fasting period, and the decrease in adipose tissue concn. was not preceded by an increase. During the fasting period, cumulative fecal excretion increased 10-fold as compared with control animals fed ad libitum. Urinary excretion was slightly enhanced but
ABSTRACT CONTINUED

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66627Q Journal CASCT CA104003
HITS: *CHLOR*, *CHLOR* *BIPHENYL* /WORD

Enhancement of sulfanilamide N4-hydroxylase activity in kidney and liver microsomes of rats by pretreatment with 3-methylcholanthrene type-polychlorinated biphenyl. Eyanagi, Reiko; Shigematsu, Hidenari; Yoshida, Kazuo; Yoshimura, Hidetoshi (Daiichi Coll. Pharm. Sci., Fukuoka, Japan 815). J. Pharmacobio-Dyn. [JOPHDQ] 1982, 5(11), 853-8 (Eng).

N4-Hydroxylation of sulfanilamide (I) [63-74-1] was studied with kidney and liver microsomes of rats by means of high-performance liq. chromatog. In kidney microsomes, both contents of cytochrome P 450 [9035-51-2] (448 [9035-50-1]) and activity of sulfanilamide N4-hydroxylase (II) [84419-08-9] were increased by pretreatment with 3,4,5,3',4'-pentachlorobiphenyl (PenCB) [57465-28-8] (.apprx.4 times), although neither was increased by 3-methylcholanthrene (3-ME) [56-49-5] and phenobarbital (PB) [50-06-6] pretreatments. In liver microsomes, on the other hand, both II activity and cytochrome P 450 (448) contents were increased by either PenCB or 3-MC pretreatment, whereas by PB pretreatment, II activity was not changed although cytochrome P 450 contents was increased 2-fold.

(This abstract has a structure in the CA issue.)
ABSTRACT CONTINUED

CA98(9):66627Q

sulfanilamide hydroxylation kidney liver
hydroxylase kidney liver sulfanilamide
PCB sulfanilamide hydroxylase liver kidney
methylcholanthrene sulfanilamide hydroxylase liver kidney

CA98(9):66862N
the high-dose group was significantly higher than that in the controls. The hemangiosarcoma seen in female mice were quite rare with only 6/816 (0.7%) previously seen in controls at the same lab. and .ltoreq.3 in any group of 50. Hemangiosarcoma also occurred in male mice with a significant pos. trend, with incidences of 0/50 (0%), 2/50 (4%), and 3/50 (6%) in control, low-dose, and high-dose groups, resp. The development of hemangiosarcoma in the high-dose male mice might have been curtailed by the significantly reduced survival time in this group.

(This abstract has a structure in the CA issue.)

biphenylamine hydrochloride carcinogenicity

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66862N Journal CASCT CA104006
HITS: *CHLOR*, BIPHENYL*

Carcinogenesis bioassay in rats and mice fed diets containing 2-biphenylamine hydrochloride. Abdo, Kamal M.; Murthy, A. S. K.; Haseman, Joseph K.; Dieter, Michael P.; Hilderbrandt, P.; Huff, J. E. (Natl. Toxicol. Program, Natl. Environ. Health Sci., Research Triangle Park, NC 27709 USA). Fundam. Appl. Toxicol. [FAATDF] 1982, 2(5), 201-10 (Eng).

Diets contg. 0.1-0.3% 2-biphenylamine-HCl (I) [2185-92-4] were fed to groups of 50 rats and 50 mice of each sex for 104-106 wk. Mean body wts. of high-dose rats of both sexes and of low-dose male rats were slightly lower than those of controls. No significant differences in survival times were obsd. between dosed and control groups. In dosed male rats, there was a compd.-related increased incidence of kidneys with inflammatory cells and interstitial fibrosis. No tumors in dosed rats were assocd. with the chem. Mean body wts. of high-dose male mice were slightly lower than those of controls, and survival of high-dose male mice was also significantly reduced relative to controls. Hemangiosarcoma of the circulatory system occurred in female mice with a significant pos. trend. The obsd. incidences of hemangiosarcoma were 0/49 (0%), 1/50 (20%), and 7/50 (14%) in controls, low-, and high-dose groups, resp. In individual group comparisons, the incidence in
ABSTRACT CONTINUED

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66884W Journal CASCT CA104006
HITS: 1 1"'" BIPHENYL, TETRACHLORO

Assessment of environmental compounds by carcinogenspecific tests. Part 1. Formation of carcinogenic and inactive chrysene metabolites by rat liver microsomes of various monooxygenase activities. Jacob, Juergen; Schmoldt, Achim; Grimmer, Gernot (Biochem. Inst. Umweltcarcinogene, D-2070 Ahrensburg, Fed. Rep. Ger.). Arch. Toxicol. [ARTODN] 1982, 51(3), 255-65 (Eng).

Microsomal oxidn. of chrysene (I) [218-01-9] in rat liver occurs at various positions (1,2-; 3,4-; 5,6-). This was verified by gas chromatog./mass spectrometry (GC/MS) and comparison with synthetic ref. substances. After various rat pretreatments with inducers of the monooxygenase system, the oxidn. at the 3,4-position predominated in isolated microsomes. The formation of the ultimate carcinogen of I, 1,2-dihydroxy-3,4-epoxy-1,2,3,4-tetrahydrochrysene [67252-82-8], was not detectable in untreated rats. However, it was obsd. as 1,2,3-trihydroxy-1,2,3,4-tetrahydrochrysene [84498-37-3] -TMS-ether formed under workup and derivatization conditions after pretreating the rats with phenobarbital [50-06-6], PCB, 5,6-benzoflavone [6051-87-2], or various polycyclic arom. hydrocarbons. PCB and benzoflavone were the most potent inducers for the formation of this metabolite.
ABSTRACT CONTINUED

CA98(9):66884W

(This abstract has a structure in the CA issue.)

chrysene metab liver carcinogen

CA98(9):66920E

partly due to cell hypertrophy, as indicated by detn. of cell size. The mitogenic activity of Clophen A 50 was evaluated by measurement of the mitotic index of unaltered hepatocytes at 24, 48 h, and 7 days after application of a single dose (100 mg/kg) of Clophen A 50. The mitotic index in control animals was .apprx.0.3%, and enhanced .apprx.8-fold in males, 24 h PCB treatment. In females, only a slight, nonsignificant increase was obsd. Thus, the sex-dependent promoting effect of Clophen A 50 is independent from its mitogenic action.

PCB enzyme altered island sex
nitrosamine enzyme altered island sex
liver neoplasm nitrosamine PCB sex

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):66920E Journal CASCT CA104006
HITS: PCB*

Sex-dependent promoting effect of polychlorinated biphenyls on enzyme-altered islands induced by diethylnitrosamine in rat liver. Deml, Erhard; Oesterle, Doris (Inst. Toxikol. Biochem., Ges. Strahlen- und Umweltforsch., D-8042 Neuherberg, Fed. Rep. Ger.). Carcinogenesis (London) [CRNGDP] 1982, 3(12), 1449-52 (Eng).

The promoting effect of Clophen A 50 [8068-44-8], a com. mixt. of PCBs on preneoplastic islands, initiated diethylnitrosamine (DEN) [55-18-5], was studied in rats. The islands were identified histochem. by loss of ATPase [9000-83-3] and/or emergence of .gamma.-glutamyltranspeptidase (GGTase) [9046-27-9]. Treatment with 12 .times. 8 mg DEN/kg /day initiated a similar no. and total area of islands. Addnl. weekly applications of Clophen A 50 (50 or 100 mg/kg/wk, for 7 wk) enhanced the no. of ATPas-deficient islands 3-fold in males and 9-fold in females. The total area was increased 4-fold in males and 15-fold in females. No. and area of GGTase-pos. islands were similarly enhanced. The emergence of a small no. of islands after application of Clophen A 50 alone may indicate a weak carcinogenic potency. PCB treatment caused an increase in liver wt., which amounted to .apprx.55% in males and 20% in females compared to controls. This increase is

ABSTRACT CONTINUED

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):70375Y Journal CASCT CA117000 CCR 105
HITS: *CHLOR*, BIPHENYL*

Residual pesticides and polychlorobiphenyls in foods. Iwaida, Masahiro (Osaka Branch, Natl. Inst. Hyg. Sci., Osaka, Japan 540). Rakuno Kagaku Shokuhin no Kenkyu [RKSKD8] 1982, 31(6), A271-A276 (Japan).

A review presented at the 1982 Japanese Dairy Science Assocn. meeting.

review pesticide food
polychlorinated biphenyl food review

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):70486K Tech Rep CASCT CA117005 CCR 104
HITS: PCB*

Compliance program report of findings: FY 77 pesticides and metals program(7320.79). Food and Drug Administration (Bur. Foods, Washington, DC USA). Report [D8REP4] 1981, FDA/BF-82/87; Order No. PB82-260605, 28 pp. (Eng). From Gov. Rep. Announce. Index (U. S.) 1982, 82 (26), 5385.

PCBs, pesticides, Pb, Cd, and Zn were detd. in several foods and Hg in fish.

pesticide food
PCB food
trace element food
mercury fish

CA98(9):70749Y
diphenyliodonium Lagopus protein plasma urate
salicylate Lagopus protein plasma urate
willow Lagopus protein plasma urate
blueberry Lagopus protein plasma urate

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):70749Y Journal CASCT CA118003 CCR 114
HITS: *CHLOR*, DIPHENYL*

Effect of natural feed, antibiotics, tannin, diphenyliodonium chloride and salicylic acid supplement on plasma uric acid concentration in captive willow ptarmigans (Lagopus l. lagopus). Hanssen, Ingolf (Inst. Med. Biol., Univ. Tromso, Tromsoe, Norway). Acta Vet. Scand. [AVSCA7] 1982, 23(3), 468-70 (Eng).

Captive willow ptarmigans fed a protein-high (28%) diet, which causes nephritis and an elevated blood plasma uric acid [69-93-2] level, were given a diet contg. antibiotic prepns. or substances known to inhibit gut microflora and N metab. and which occur in their natural feeds. The plasma uric acid decreased from 0.78 to 0.48 mM/L when blueberry plants and willow twigs were added to the diet. Addn. of neomycin [1404-04-2] (0.01%), oxytetracycline [79-57-2] (0.015%), tannin (0.2%, in drinking water), diphenyliodonium chloride [1483-72-3] (0.5 mM), or salicylic acid [69-72-7] (0.25%) had no effect on blood uric acid levels. Apparently, N compds. of gut microbial origin are not the factor responsible for nephritis and uric acid diathesis of willow ptarmigan.

Lagopus protein feed urate plasma
antibiotic Lagopus protein plasma urate
tannin Lagopus protein plasma urate

ABSTRACT CONTINUED

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71158S Journal CASCT CA122004 CCR 175
HITS: *CHLOR*, DIPHENYL*

Cycloaddition reactions of allenyl cations with cyclopentadiene. Mayr, Herbert; Halberstadt-Kausch, Inge K. (Inst. Org. Chem., Univ. Erlangen-Nuernberg, D-8520 Erlangen, Fed. Rep. Ger.). Chem. Ber. [CHBEAM] 1982, 115(11), 3479-515 (Ger).

Propargyl halides RC.tplbond.CCR1R2X [R = H, Me, Et, aryl; R1 = R2 = Me, Et; R1 = Ph, R2 = H or R1R2 = (CH2)4, X = Cl or Br] underwent Zn halide-catalyzed cycloaddn. reactions with cyclopentadiene in ether/CH2Cl2. The products I and II were formed by stepwise [3 + 4]- and [2 + 4]-cycloaddns. of intermediate allenyl cations, proceeding via propargylcyclopentenyl and bicyclic vinyl cations. Quenching products of all postulated intermediates were isolated. The relative energies of the intermediate carbenium ions were estd. on the basis of force field calcns. and of gas phase stabilities of simple carbocations. The reaction of PhC.tplbond.CCMe2Cl with cyclopentadiene gave, in addn. to II (R = Ph, R1 = R2 = Me, X = Cl), the 2:1 product III, whose structure was assigned by x-ray anal.

(This abstract has a structure in the CA issue.)

cycloaddn allenyl cation cyclopentadiene
energy carbenium ion

ABSTRACT CONTINUED

CA98(9):71158S
transition state cycloaddn allenyl cation
mol structure pentacyclotridecene deriv
crystal structure pentacyclotridecene deriv

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71396T Journal CASCT CA122013
HITS: 1 1"'" BIPHENYL, DICHLORO

Selectivity of oxidative coupling of arenes under the action of thallium(III) trifluoroacetate in the presence of palladium(II) acetate. Deiko, S. A.; Ryabov, A. D.; Yatsimirskii, A. K.; Berezin, I. V. (Mosk. Gos. Univ., Moscow, USSR). Dokl. Akad. Nauk SSSR [DANKAS] 1982, 266(4), 874-8 [Chem.] (Russ).

The oxidative coupling of PhR (R = Me, Et, Cl, OMe) was examd. in the title system, which leads to the highest selectivity for para-coupling discovered so far. Correlation of the logarithm of the partial rate factors for para-coupling with .sigma.+ consts. yielded .delta. = -6.2, indicating an electrophilic mechanism of substrate activation.

coupling benzene deriv palladium thallium
LFER oxidative coupling benzene deriv

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71583B Journal CASCT CA125014
HITS: *CHLOR*, DIPHENYL*, *PHEN*

Thermolysis and acylation of diaryltellurium diacylates. Sadekov, I. D.; Rivkin, B. B.; Maksimenko, A. A. (NII Fiz.-Org. Khim., Rostov. Gos. Univ., Rostov, USSR). Izv. Sev.-Kavk. Nauchn. Tsentra Vyssh. Shk., Estestv. Nauki [ISTVAY] 1982, (2), 54-7 (Russ).

(p-RC6H4)2TeO (R = H, Me, MeO, Me2N) in Me2CHOH reacted with 99.5% HCO2H at 60.degree. and with CCl3CO2H at room temp. to give 61-98% (p-RC6H4)2Te(O2CR1)2 (I; same R; R1 = H, CCl3, resp.). Thermolysis of I (same R, R1 = H) in refluxing p-xylene gave 95-100% (p-RC6H4)2Te, CO2 and HCO2H. Analogous treatment of I (same R, R1 = CCl3) gave 57-68% (p-RC6H4)2TeCl2 (II; same R), CO2 and :CCl2, the latter identified by the formation of 23-30% 7,7-dichloronorcarane in the presence of cyclohexene. Substitution of I (R = H, R1 = Me; R = MeO, R1 = Ph, Pr) with the corresponding R1COCl in refluxing abs. CHCl3 gave 87-90% II (same R) and 81-7% (R1CO)2O (same R1). Attempted prepn. of mixed anhydrides by this method was unsuccessful, but I (R1 = Me) reacted with MeI at 100.degree. in a sealed ampul to give (p-RC6H4)2TeI2 (R undefined) and 88-90% MeOAc.

aryltellurium diacylate prepn thermolysis substitution
tellurium diaryl diacylate thermolysis substitution
alkylation diaryltellurium diacetate

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71598K Journal CASCT CA125018 CCR 175
HITS: *CHLOR*, BIPHENYL*

Synthesis and study of liquid-crystal properties of some optically active derivatives of biphenyl and phenylcyclohexane. Abdulin, A. Z.; Bezborodov, V. S.; Bubel, O. N.; Rachkevich, V. S. (Nauchno-Issled. Inst. Prikl. Fiz. Probl. im. Sevchenko, Minsk, USSR). Zh. Org. Khim. [ZORKAE] 1982, 18(10), 2170-3 (Russ).

P-MeC6H4C6H4CO2H-p was reduced with excess Li-EtOH in abs. Et2O and then hydrogenated over 10% Pd/C to give 60% trans-4-p-tolylcyclohexanecarboxylic acid, which was converted to the acid chloride and esterified with optically active p-HOC6H4CO2CH2CHMeEt in abs. Et2O contg. pyridine to give 40% p-RC6H4CO2CH2CHMeEt (I; R = trans-4-p-tolylcyclohexanecarbonyloxy). I [R = p-C5H11OC6H4, p-C10H21OC6H4, p-(p-MeC6H4)C6H4CO2, p-(4-methylcyclohexyl)benzoyloxy] were prepd. analogously in 47-58% yield. Phase-transition temps. were given for I. The spectral reflection of the chiral nematic phase of I appeared in the IR region.

liq crystal biphenyl phenylcyclohexane ester

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71823E Patent CASCT CA126005
HITS: *CHLOR*, DIPHENYL*, *ETH*, *PHEN*

2-Oxo-1-[([substituted sulfonyl]amino)carbonyl]azetidines. Koster, William H.; Cimarusti, Christopher M. (Squibb, E. R., and Sons, Inc.) (USA). Eur. Pat. Appl. EP 61,765 (Cl. C07F9/65, A61K31/675), 06 Oct 1982, US Appl. 248,929, 30 Mar 1981; 135 pp. (Eng).

Bactericidal (no data) azetidines I [R = acyl; R1 = H; OMe; R2, R3 = H, (un)substituted alkyl, cycloalkyl, (un)substituted Ph, CO2H, substituted OH, SH; R2R3 = alkylene; R4 = H, (un)substituted alkyl, Ph; R5 = OH, (un)substituted alkoxy, alkyl, OPh, Ph, NH2, alkylthio, SPh] were prepd. Thus, treating (S)-3-(benzyloxycarbonylamino)-2-azetidinone with ClP(O)(OMe)2 gave I (R = CO2CH2Ph, R1-R3 = H, R4 = Me, R5 = OMe) which was hydrogenolyzed and acylated to give II.

(This abstract has a structure in the CA issue.)

azetidinylphosphonate prepn bactericide
azetidinylphosphinate

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):72079D Patent CASCT CA128002 CCR 101
HITS: *CHLOR*, DIPHENYL*

5-Phenyl-1,3-alkano-1,2,3,4,4a,9b-hexahydropyrido[4,3-b]indoles. Berger, Joel G.; Tahbaz, Pirouz (Schering Corp.) (USA). U.S. US 4,360,673 (Cl. 546-70; C07D471/18, A61K31/40), 23 Nov 1982, Appl. 136,016, 31 Mar 1980; 5 pp. (Eng).

The antidepressant (no data) title compds. I (R = H, alkyl; R1, R2 = H, HO, alkoxy, alkyl, m = 2, 3) and their quaternary addn. salts were prepd. Thus, Ph2NNH2 was treated with N-(2,2,2-trichloroethoxycarbonyl)tropinone followed by redn. to give 5-(2,2-diphenylhydrazono)-1,3-ethanopiperidine, which was cyclized by HCl to give 1,2,3,4-tetrahydro-1,3-ethano-5-phenylpyrido[4,3-b]indole-HCl (II). II was neutralized, reduced with Na-NH3 to give (.+-.)-I (R = R1 = H, n = 2). The (+)- and (-)-isomer were also prepd.

(This abstract has a structure in the CA issue.)

pyridoindole alkano phenyl hexahydro
ethanopyridoindole phenyl hexahydro
antidepressant hexahydroethanopyridoindole

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):71987M Journal CASCT CA128007
HITS: *CHLOR*, DIPHENYL*

The synthesis and the reactivity of 3,5-disubstituted 1,2,4-dithiazolium salts. Shibuya, Isao (Natl. Chem. Lab. Ind., Ibaraki, Japan 305). Nippon Kagaku Kaishi [NKAKB8] 1982, (9), 1518-22 (Japan).

Arom. thioamide S-oxides, prepd. by treating arom. thioamides with H2O2, reacted with different arom. thioamides in strongly acidic media to give 1,2,4-dithiazolium salts (I; R, R1 = aryl, X = anion). The reaction of I (R = R1 = Ph, X = ClO4) with o-substituted anilines, benzoylhydrazine, and benzamidine gave benzoheterazoles (II; Z = O, NH, S, CONH), III, and IV, resp.

(This abstract has a structure in the CA issue.)

dithiazolium salt synthesis reaction
cyclocondensation thiobenzamide oxide
triazole
triazine

PROFILE ID 12217F QUERY NUMBER 001
CA98(9):72255H Journal CASCT CA129007
HITS: *CHLOR*, DIPHENYL*

Synthesis of diphenyl-2,3-butadienylphosphine through phase-transfer catalysis. Khachatryan, R. A.; Sayadyan, S. V.; Indzhikyan, M. G. (Inst. Org. Khim., Yerevan, USSR). Arm. Khim. Zh. [AYKZAN] 1982, 35(10), 690-1 (Russ).

The title compd. was prepd. in 60.7% yield by addn. of Ph2PH to CH2:CHC.tplbond.CH in the presence of Katamin AB.

addn diphenylphosphine butenyne
phosphine butadienyl diphenyl

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):72848D Journal CASCT CA135008
HITS: *CHLOR*, DIPHENYL*

Torsional braid analysis of vinyl chloride-vinyl acetate-vinyl alcohol terpolymer and its crosslinked system with 4,4'-diphenylmethane diisocyanate. Ma, Dezhu; Zhu, Qingren; Zhou, Yinfang; Chen, Shunxi; Luo, Xiaoli; Hou, Jianguo (Dep. Mod. Chem., China Univ. Sci. Technol., Hefei, Peop. Rep. China). Gaodeng Xuexiao Huaxue Xuebao [KTHPDM] 1982, 3(4), 533-9 (Ch).

The thermomech. spectra for vinyl acetate-vinyl alc.-vinyl chloride copolymer (I) [25086-48-0] and I crosslinked with 4,4'-diphenylmethane diisocyanate [101-68-8] were detd.; the OH group content of I had a definite effect on the glass-transition temp. (Tg), but the effect of crosslinking on Tg was larger. For I crosslinked at the stoichiometric ratio of OH to NCO groups, the crosslink d. and Tg had a linear relation, but the relation was more complex for I crosslinked at a nonstoichiometric ratio.

torsional braid analysis vinyl polymer
vinyl alc copolymer isocyanate crosslinking
glass temp polymer crosslinking

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):74998B Tech Rep CASCT CA151008 CCR 159
HITS: *CHLOR*, BIPHENYL*

Reclamation of PCB-contaminated transformer oils by the Sunohio PCBX process. Chen, K. (Office Power, Tennessee Valley Auth., Chattanooga, TN USA). Report [D3REP3] 1982, TVA/OP/EDT-82-45; Order No. DE82906112, 91 pp. (Eng). Avail. NTIS. From Energy Res. Abstr. 1982, 7(20), Abstr. No. 52684.

The Sunohio PCBX chem. destruction process removes polychlorinated biphenyls (PCBs) from oils. The untreated oils studied contained 51-1100 ppm PCB. The treatment was carried out in storage tanks and in the de-energized transformers. The PCBX process effectively removed PCBs to a concn. of .ltoreq.2 ppm; however, only 2 of the treated oil quality parameters, interfacial tension and color, improved. Liq. waste, a by-product of the process, was hazardous according to EPA regulations, but the PCBX process was not hazardous to public health.

transformer oil decontamination polychlorinated biphenyl
safety polychlorinated biphenyl decompn process

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):77380E Journal CASCT CA159002 CCR 119, 161,180
HITS: 1 1"'" BIPHENYL, PENTACHLORO

A rapid method for the estimation of the environmental parameters octanol/water partition coefficient, soil sorption constant, water to air ratio, and water solubility. Swann, R. L.; Laskowski, D. A.; McCall, P. J.; Vander Kuy, K.; Dishburger, H. J. (Agric. Products Dep., Dow Chem. Co., Midland, MI 48640 USA). Residue Rev. [RREVAH] 1983, 85, 17-28 (Eng).

Equations were derived for calcg. solid sorption consts., C8H17OH/water partition coeffs., bioconcn. factors, water solys., and water-to-air ratios from reverse phase high performance liq. chromatog. studies. These coeffs. are combined to show the migratory behavior of chems. in the environment, i.e., potential leaching, volatilization, and bioaccumulation.

migration chem air soil water
partition coeff chem environment model
leaching volatilization bioaccumulation chem

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):77626Q Journal CASCT CA160005 CCR 161
HITS: *CHLOR*, BIPHENYL*

Public health aspects of the culture of the Japanese oyster Crassostrea gigas (Thunberg) in a waste recycling aquaculture system. Mann, Roger; Taylor, Rodman E., Jr. (Woods Hole Oceanogr. Inst., Woods Hole, MA 02543 USA). Aquaculture [AQCLAL] 1983, 30(1-4), 311-27 (Eng).

A study of 24 wk duration was carried out in which oysters (Crassostrea gigas) were grown using 4 procedures: using phytoplankton cultured in a mixt. of secondary treated sewage effluent and seawater for a period of 12 wk followed by a 2nd 12-wk period of feeding on phytoplankton cultured in a clean, org. enriched regime; the same procedure except that the secondary effluent was sand filtered prior to use; the same procedure except that the effluent was charcoal filtered prior to use; and using clean inorg. enriched phytoplankton food for the 24-wk duration. At 2-wk, intervals populations of oysters were removed for assay for trace metals (Cd, Cr, Cu, Hg, Ni, Pb, and Zn) and org. contaminants (hydrocarbons and polychlorinated biphenyls). No significant accumulation or depuration of any metal or org. contaminant was evident in any of the regimes. In terms of these contaminants all oysters are within acceptable edible stds. as set by the U.S. Food and Drug Administration.

ABSTRACT CONTINUED

CA98(10):77626Q
oyster cultivation sewage recycling
trace metal oyster sewage recycling
polychlorinated biphenyl oyster sewage recycling
hydrocarbon oyster sewage recycling

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):80301K Tech Rep CASCT CA171011 CCR 159, 160
HITS: PCB*

Incineration facility for radioactively contaminated polychlorinated biphenyls (PCBs) and other wastes. Oak Ridge Gaseous Diffusion Plant (Oak Ridge, TN USA). Report [D3REP3] 1982, DOE/EIS-0084; Order No. DE82021911, 429 pp. (Eng). Avail. NTIS. From Energy Res. Abstr. 1982, 7(22), Abstr. No. 59280.

The environmental impacts were assessed which were assocd. with the construction of an incineration facility and related support facilities for the disposal of hazardous org. waste materials (including PCBs) which are contaminated with trace quantities of low-assay enriched U. Impacts assessed include the effects of the project on air and water quality, on socioeconomic conditions, on public and occupational health and safety, and on ecol. Addnl., the statement presents an assessment of the potential impacts from accidents at the incineration facility or during transportation of the waste materials to the facility. The major impact identified was the potential for short-term occupational exposure to high concns. of PCBs in smoke during the worst credible accident. Alternatives which were assessed include no action, chem. destruction processes, and alternative transportation routes; all would have greater adverse impact or would increase the risk of an
ABSTRACT CONTINUED

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):77778R Tech Rep CASCT CA161002 CCR 117
HITS: PCB*

Investigation of the cause and extent of PCB contamination of Petit-de-Grat Harbor Nova Scotia. Ernst, B.; Hawkins, V.; Tay, K. L. (Environ. Prot. Serv., Environ. Canada, Can.). Surveill. Rep. EPS (Can., Environ. Prot. Serv.) [SRESDM] 1982, EPS-5-AR-82-2, 52 pp. (Eng).

Polychaetes, clams, and periwinkles collected in the Petit-de-Grat Harbor, Canada, contained fairly high concns. of polychlorinated biphenyls (PCBs) as compared with a control area. This suggests a probable uptake of PCBs by benthic communities. High concns. of PCBs in wastewaters from a fish processing plant suggest that these effluents are the major source of harbor contamination by PCBs and that the existing load in harbor sediments can be attributed to the plant discharges over 30 yr. The highest PCB residue concns. in these effluents were in tissues and biol. oil fractions.

polychlorinated biphenyl pollution harbor Canada
biphenyl polychlorinated sediment harbor Canada
benthos polychlorinated biphenyl harbor Canada

CA98(10):80301K
accident with the potential for adverse impact.

org radioactive waste incineration safety
PCB uranium contaminated incineration safety
health physics PCB radioactive incineration

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):80418D Journal CASCT CA172002 CCR 166, 168,179
HITS: *CHLOR*, DIPHENYL*

Studies on electroanalytical chemistry of rare earths. II. Mechanism of the adsorptive-complex wave of the scandium(3+)-ammonium chloride-cupferron-diphenylguanidine system. Gao, Xiaoxia; Jiao, Kui (Chem. Dep., Beijing Univ., Beijing, Peop. Rep. China). Huaxue Xuebao [HHHPA4] 1982, 40(7), 611-20 (Ch).

In the title system, the mechanism for the adsorptive-complex catalytic wave was investigated by comparing the waves in a single sweep polarogram with those in a d.c. polarogram. Electrocapillarity, cyclic voltammetry, etc., indicated the wave is due to an adsorptive complex. The complex compn. is Sc3+:Cl-:cupferron:diphenylguanidine in 1:2:1:1 ratio and the stability const. .beta. = 1.22 .times. 107. The electrode process consists of the following steps: complex formation of Sc3+ with cupferron and diphenylguanidine, adsorption of the complex by the electrode, dissocn. of the complex, and redn. of cupferron on the electrode.

scandium cupferron diphenylguanidine complex polarog
phenylguanidine scandium cupferron complex polarog
electroredn cupferron scandium complex polarog
adsorption scandium complex mercury electrode

PROFILE ID 12217F QUERY NUMBER 001
CA98(10):81396G Tech Rep CASCT CA174001
HITS: *CHLOR*, DIPHENYL*

Radiolytic investigations of solutions of organophosphorus compounds in cyclohexane and benzene. Otrebski, W. (Vienna Univ., Vienna, Austria). Report [D2REPU] 1981, INIS-mf-7209, 190 pp. (Ger). Avail. INIS. From INIS Atomindex 1982, 13(20), Abstr. No. 702129.

Several organophosphorus compds. were used as model substrates in cyclohexane or benzene soln. The systems were investigated by pulse radiolysis technique and steady-state irradn. methods. Diphenylphosphinous chloride, diphenylmethylphosphine, and triphenylphosphine were chosen as representative solutes. Spectroscopic and kinetic data for characterization of the various transients were obtained. The final radiolytic products were analyzed following steady-state and multipulse radiolysis. Reaction mechanism of diphenylphosphinous chloride/cyclohexane system was elucidated. Diphenylphosphorus radical was identified as a primary species. The reactions of diphenylmethylphosphine involved the same radical, but to a lesser extent. The reactions of the primary radiolysis products with triphenylphosphine yielded mainly adducts.

org phosphorus compd radiolysis

ABSTRACT CONTINUED

CA98(10):81396G
diphenylphosphinous chloride cyclohexane radiolysis
diphenylmethylphosphine cyclohexane radiolysis
triphenyl phosphine cyclohexane radiolysis

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