Monsanto

J. C. Weber - B2SK (St. Louis)

July 15, 1976 G. J. Levinskas

PCBS - NIOSH LITERATURE SEARCH

TO P. L. Wright

→ PCB

Attached is a copy of the NIOSH Literature Search we received from Washington. Please note on page 6 the article from the NCI Journal.

Cole mg

J. Coleman Weber

mg

Enclosure

MONS 207401

SEARCH FOR P FOLEY ON PCBS)

ACCESS: CIS 75-757
SOURCE:
AUTHOR: SCHMOLDT, A., H. F. BENTHE, AND W. BURGENER
TITLE: CHANGES OF LIPID CONTENTS IN RAT LIVER AFTER EXPOSURE TO AEROSOLS OF POLYCHLORINATED BIPHENYLS (PCB)
REFER1: INTERNATIONALES ARCHIV FUR ARBEITSMEDIZIN = INTERNATIONAL ARCHIVES OF OCCUPATIONAL HEALTH, VOL. 33, NO. 3, PAGES 183-197, 27 REFERENCES
REFER2:
PUBDATE: 74/09/16

DETAILED STUDY OF NUCLEIC ACIDS CONTENT, PHOSPHOLIPIDS, TRIGLYCERIDES, CHOLESTEROL, AND MICROSOMES IN THE LIVER OF RATS AFTER SINGLE EXPOSURE TO AEROSOLS OF POLYCHLORINATED BIPHENYLS (PCB) OF DIFFERENT DEGREE OF CHLORINATION (DI-, TETRA, PENTACHLOROBIPHENYL). THE EXTENT OF THE LIPID INCREASE, ESPECIALLY TRIGLYCERIDES, DEPENDED ON THE CHLORINATION DEGREE OF THE BIPHENYLS, THE MAXIMUM EFFECT BEING FOUND FOR PENTACHLOROBIPHENYL. AFTER EXPOSURE TO DI- OR TETRACHLOROBIPHENYL, LEVELS FOR CHOLESTEROL, TRIGLYCERIDES AND PHOSPHOLIPIDS WERE ATTAINED AFTER 2-3 DAYS AND DECREASED UP TO THE SEVENTH DAY. THE CONSIDERABLY HIGHER CONCENTRATIONS FOLLOWING PENTACHLOROBIPHENYL APPLICATION REMAINED UNCHANGED FOR A LONGER PERIOD AND WERE STILL MARKEDLY INCREASED AFTER 14 DAYS. FURTHER INDICATIONS OF LIVER CELL HYPERTROPHY WERE AN INCREASE IN RELATIVE LIVER WEIGHT AND RNA CONTENT. THE MECHANISM OF INCREASED TRIGLYCERIDE AND PHOSPHOLIPID CONTENT IS DISCUSSED. (GERMAN)

MONS 207402

SEARCH FOR P FOLEY ON PCBS)

FINDINGS OF RENAL AND HEPATIC DAMAGE, HEMATOLOGICAL EFFECTS, PORPHYRIA, REDUCED PLASMA GLUCOSE AND CORTICOSTEROID CONCENTRATIONS AND HEPATIC MICROSOMAL ENZYME ACTIVITY INDUCTION FOR EXTENDED PERIODS OF TIME INDICATE THAT POLYCHLORINATED BIPHENYLS AFFECT A WIDE VARIETY OF BIOLOGICAL PARAMETERS. DOSE-RESPONSE RELATIONSHIPS ARE DISCUSSED.

49455 A3
CONTROL: NIOSH-00047096
ACCESS:
SOURCE:
AUTHOR: STALLING, D. L., AND F. L. MAYER, JR.
TITLE: TOXICITIES OF PCBS TO FISH AND ENVIRONMENTAL RESIDUES
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, NO. 1, PAGES 159-164, 28 REFERENCES
REFER2:
PUBDATE: 72/04/00

A DISCUSSION OF THE TOXIC EFFECTS OF POLYCHLORINATED BIPHENYLS (PCBS) ON AQUATIC ORGANISMS AND ENVIRONMENTAL RESIDUES. THE HIGHEST CONCENTRATIONS OF PCB RESIDUES (OCCURRING AS COMPLEX MIXTURES OF AROCLOR FORMULATIONS) IN FRESHWATER FISH ARE FOUND IN RIVERS WHICH ARE ASSOCIATED WITH INDUSTRIALIZED AREAS. PCBS MAY HAVE ADVERSE EFFECTS ON REPRODUCTION OR MAY CAUSE DEATH, DEPENDING UPON CONCENTRATION LEVELS.

49760 A3
CONTROL: NIOSH-00048333
ACCESS:
SOURCE:
AUTHOR: LONGHURST, A. R., AND P. J. RADFORD
TITLE: PCB CONCENTRATIONS IN NORTH ATLANTIC SURFACE WATER
REFER1: NATURE, VOL. 256, PAGES 239-240, 8 REFERENCES
REFER2:
PUBDATE: 75/07/17

A MEAN RESIDENCE TIME FOR POLYCHLORBIPHENYLS IN NORTH ATLANTIC SEAWATER IS DERIVED USING THE REPORTED 40-FOLD DECLINE IN POLYCHLORINATED BIPHENYL CONCENTRATION AND A MODEL BASED ON A SIMPLE EXPONENTIAL LOSS RATE. THE DATA SUGGEST THAT EARLIER INTERPRETATIONS PRESENTED BY OTHERS ARE INSUFFICIENT EVIDENCE ON WHICH TO BASE THE DEDUCTION THAT RECENT PARTIAL CONTROLS ON USES OF POLYCHLORINATED BIPHENYLS HAVE ALREADY DECREASED THE CONTAMINATION OF THE UPPER LAYERS OF THE OPEN ATLANTIC OCEAN. A LETTER TO THE EDITOR DISAGREES WITH THE CONTENTION OF THE AUTHORS REGARDING THE ACCURACY OF THE ANALYTICAL RESULTS PERTAINING TO THE LEVELS OF POLYCHLORBIPHENYLS IN THE WATER, BUT CONCEDES THAT PREVIOUS EXTRAPOLATIONS ON THE MATTER WERE NOT JUSTIFIED.

50115 A3
CONTROL: NIOSH-00048603

SEARCH FOR P FOLEY ON PCBS;

1, PAGES 51-54, 11 REFERENCES

REFER2:
PUBDATE: 72/04/00

DATA ARE REPORTED ON STUDIES OF THE LEVELS AND SOURCES OF POLYCHLORINATED BIPHENYLS IN RIVERS DISCHARGING INTO THE GREEN BAY REGION OF LAKE MICHIGAN. CONCENTRATIONS IN SEVERAL RIVERS HAVE DECREASED IN RECENT YEARS, POSSIBLY REFLECTING THE RESTRICTIONS ON SALE OF PCBS.

48832 A3
CONTROL: NIOSH-00048390
ACCESS:
SOURCE:
AUTHOR: DZIDIC, I., D. I. CARROLL, R. N. STILLWELL, AND E. C. HORNING
TITLE: ATMOSPHERIC PRESSURE IONIZATION (API) MASS SPECTROMETRY: FORMATION OF PHENOXIDE IONS FROM CHLORINATED AROMATIC COMPOUNDS
REFER1: ANALYTICAL CHEMISTRY, VOL. 47, NO. 8, PAGES 1308-1312, 19 REFERENCES
REFER2:
PUBDATE: 75/07/00

PHENOXIDE IONS ARE FORMED BY ION-MOLECULE REACTIONS WHEN CERTAIN CHLORINATED AROMATIC COMPOUNDS ARE IONIZED IN AN ATOMIC PRESSURE IONIZATION SOURCE IN THE PRESENCE OF NITROGEN CONTAINING APPROXIMATELY 0.5 PPM OF OXYGEN AND ALSO IN AIR. WHILE O-CHLORONITROBENZENE AND P-CHLORONITROBENZENES FORM MAINLY CHLORIDE AND NITROPHENOXIDE IONS, M-CHLORONITROBENZENE IONIZES UNDER THE SAME CONDITIONS TO FORM A NEGATIVE MOLECULAR ION. CHLOROBENZENE AND O-DICHLOROBENZENE YIELD ONLY CHLORIDE IONS, WHILE MORE HIGHLY SUBSTITUTED POLYCHLOROBENZENES FORM PHENOXIDE IONS. SUBPICOGRAM DETECTION OF 2,3,4,5,6-PENTACHLOROBIPHENYL IS DEMONSTRATED BY SELECTIVE MONITORING OF THE CORRESPONDING PHENOXIDE ION.

48855 A3
CONTROL: NIOSH-00047506
ACCESS: CIS 74-1918
SOURCE:
AUTHOR: BRUCKNER, J. V., K. L. KHANNA, AND H. H. CORNISH
TITLE: POLYCHLORINATED BIPHENYL-INDUCED ALTERATION OF BIOLOGICAL PARAMETERS IN THE RAT
REFER1: TOXICOLOGY AND APPLIED PHARMACOLOGY, VOL. 28, NO. 2, PAGES 189-199, 25 REFERENCES
REFER2:
PUBDATE: 74/05/00

TO GAIN BETTER INSIGHT INTO THE TOXIC NATURE OF POLYCHLORINATED BIPHENYLS A STUDY WAS MADE OF THE EFFECT ON RATS OF ADMINISTRATION OF AROCLOR 1242, A COMMERCIAL PCB MIXTURE. THE

SEDIMENTS, WITH A SLOW TRANSFER WITHIN THE ENVIRONMENT EXPECTED THROUGH SEDIMENT TRANSPORT, AERIAL TRANSPORT AND VOLATILIZATION. ENVIRONMENTAL LEVELS ARE EXPECTED TO DECLINE GRADUALLY AS EXISTING PRODUCTS CONTAINING PCBS ARE SCRAPPED.

47806 A3
CONTROL: NIOSH-00046710
ACCESS:
SOURCE:
AUTHOR: HUTZINGER, O., S. SAFE, AND V. ZITKO
TITLE: PHOTOCHEMICAL DEGRADATION OF CHLORODIPHENYLS (PCBS)
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 15-20, 15 REFERENCES
REFER2:
PUBDATE: 72/04/00

GAS CHROMATOGRAPHIC INVESTIGATION OF THE PHOTOCHEMICAL DEGRADATION OF POLYCHLORINATED BIPHENYLS, INCLUDING 2,2,5,5'-TETRACHLOROBIPHENYL, HEXANE, AND AROCLOR 1254, REVEALS DECOMPOSITION OF PCBS BY BOTH OXIDATIVE AND REDUCTIVE PATHWAYS.

47808 A3
CONTROL: NIOSH-00046712
ACCESS:
SOURCE:
AUTHOR: FRIES, G. F.
TITLE: POLYCHLORINATED BIPHENYL RESIDUES IN MILK OF ENVIRONMENTALLY AND EXPERIMENTALLY CONTAMINATED COWS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 55-59, 9 REFERENCES
REFER2:
PUBDATE: 72/04/00

INVESTIGATION IS REPORTED OF FARMS WITH POLYCHLORINATED BIPHENYL TREATED SILOS AND OF CONTROLLED FEEDING OF AROCLOR 1254 TO COWS. RESULTS INDICATE THAT SILOS TREATED WITH PCB-CONTAINING PAINTS HAVE HIGH LEVELS OF PCB RESIDUES IN MILK. CONTROL MEASURES ARE LIMITED TO DECONTAMINATION OF THESE SILOS OR TOTAL DISCONTINUANCE OF USE. INGESTION EXPERIMENTS SHOW THAT THERE ARE NO PRACTICAL PROCEDURES TO MINIMIZE TRANSFER OF PCBS FROM THE DIET TO MILK OR TO SPEED UP THE ELIMINATION OF PCBS FROM COWS.

47809 A3
CONTROL: NIOSH-00046713
ACCESS:
SOURCE:
AUTHOR: VEITH, G. D.
TITLE: RECENT FLUCTUATIONS OF CHLORODIPHENYLS (PCBS) IN THE GREEN BAY, WISCONSIN, REGION
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO.

SEARCH FOR P FOLEY ON PCBS;

MATERIALS TO NONHAZARDOUS LEVELS.

47802 A3
CONTROL: NIOSH-00046706
ACCESS:
SOURCE:
AUTHOR: KURATSUNE, M., AND Y. MASUDA
TITLE: POLYCHLORINATED BIPHENYLS IN NON-CARBON COPY PAPER
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 61-67
REFER2:
PUBDATE: 72/04/00

USE OF POLYCHLORINATED BIPHENYLS IN THE MANUFACTURE OF NON-CARBON COPY PAPER IS STUDIED, REVEALING THAT THE PAPER CONTAINS LARGE AMOUNTS OF PCBS WHICH EASILY TRANSFER TO THE FINGERS DURING HANDLING, AND WHICH CANNOT BE REMOVED BY ORDINARY WASHING.

47803 A3
CONTROL: NIOSH-00046707
ACCESS:
SOURCE:
AUTHOR: DAHLGREN, R. B., R. L. LINDER, AND C. W. CARLSON
TITLE: POLYCHLORINATED BIPHENYLS: THEIR EFFECTS ON PENNED PHEASANTS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 89-101, 25 REFERENCES
REFER2:
PUBDATE: 72/04/00

INVESTIGATION OF POLYCHLORINATED BIPHENYLS IS CONDUCTED ON PHEASANTS TO DETERMINE PATTERNS OF ABSORPTION, STORAGE, AND EXCRETION, AND EFFECTS ON REPRODUCTION, BEHAVIOR, AND SURVIVAL. PCBS ARE FOUND TO BE RAPIDLY ABSORBED, STORED IN LIPIDS, AND SLOWLY EXCRETED IN FECES AND EGGS. SIGNIFICANT CHANGES ARE NOTED IN BEHAVIOR AND SURVIVAL OF CHICKS.

47805 A3
CONTROL: NIOSH-00046709
ACCESS:
SOURCE:
AUTHOR: NISBET, I. C. T., AND A. F. SAROFIM
TITLE: RATES AND ROUTES OF TRANSPORT OF PCBS IN THE ENVIRONMENT
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 21-38, 85 REFERENCES
REFER2:
PUBDATE: 72/04/00

RESULTS OF ENVIRONMENTAL INVESTIGATION OF POLYCHLORINATED BIPHENYLS INDICATE THAT MOST PCBS ARE BURIED OR ATTACHED TO

SEARCH FOR P FOLEY ON PCBS;

3'-METHYL-4-DIMETHYLAMINOAZOBENZENE,
N-2-FLUORENYLACETAMIDE, AND DIETHYLNITROSAMINE
REFER1: JOURNAL OF THE NATIONAL CANCER INSTITUTE, VOL. 53, NO. 5, PAGES 1253-1259, 29 REFERENCES
REFER2:
PUBDATE: 74/11/00

THE EFFECTS ARE STUDIED OF POLYCHLORINATED BIPHENYLS (PCB) ON LIVER CARCINOGENESIS IN RATS TREATED WITH THE HEPATIC CARCINOGENS 3'-METHYL-4-DIMETHYLAMINOAZOBENZENE (3-ME-DAB), N-2-FLUORENYLACETAMIDE (2-FAA) AND DIETHYLNITROSAMINE (DEN). ANIMALS ARE EXAMINED HISTOPATHOLOGICALLY AFTER 20 WEEKS OF TREATMENT WITH 3-ME-DAB. RATS RECEIVING 0.05% PCB ONLY DO NOT DEVELOP LIVER TUMORS. MULTIPLE LIVER TUMORS DEVELOP AFTER TREATMENT WITH ALL THREE CARCINOGENS BUT WHEN ADMINISTERED PCB ALONG WITH THE CARCINOGENS, NO LIVER-TUMORS DEVELOP. HISTOLOGIC EXAMINATION SHOWS THAT PCB ALSO INHIBITS DEVELOPMENT OF NODULAR HYPERPLASIAS, OVAL CELL INFILTRATION, AND BILE DUCT PROLIFERATION INDUCED IN THE LIVER BY THE CARCINOGENS.

47797 A3
CONTROL: NIOSH-00046701
ACCESS:
SOURCE:
AUTHOR: BERGLUND, F.
TITLE: LEVELS OF POLYCHLORINATED BIPHENYLS IN FOODS IN SWEDEN
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 67-71, 9 REFERENCES
REFER2:
PUBDATE: 72/04/00

ANALYSIS OF POLYCHLORINATED BIPHENYLS IN FOODS IN SWEDEN INDICATES THAT THE PRIMARY INTAKE IS THROUGH FISH. RECOMMENDATIONS TO AVOID FURTHER FOOD CONTAMINATION INCLUDE THE USE OF PCBS ONLY IN CLOSED SYSTEMS AND UNDER CAREFUL SUPERVISION, AND SUBSTITUTION OF LESS DANGEROUS SUBSTANCES.

47801 A3
CONTROL: NIOSH-00046705
ACCESS:
SOURCE:
AUTHOR: TROUT, P. E.
TITLE: PCB AND THE PAPER INDUSTRY - A PROGRESS REPORT
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 63-65, 5 REFERENCES
REFER2:
PUBDATE: 72/04/00

A REDUCTION IN THE USE OF RECYCLED PAPER ORIGINALLY PROCESSED WITH POLYCHLORINATED BIPHENYLS AND THE PROHIBITION OF SALE OF PCBS FOR USE IN OTHER THAN CLOSED SYSTEMS ARE CITED AS HAVING REDUCED LEVELS IN CURRENTLY MANUFACTURED PAPER FOOD PACKAGING

SEARCH FOR P FOLEY ON PCBS:

AUTHOR: WELBORN, W. E., R. E. FORCHARD, L. G. HANSEN, AND R. L. METCALF
TITLE: EXTRACTION AND ANALYSIS OF AROCLOR 1254 COMPONENTS IN BLOOD
REFER1: JOURNAL OF THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, VOL. 57, NO. 6, PAGES 1248-1252, 18 REFERENCES
REFER2:
PUBDATE: 74/00/00

EXTRACTION, CLEANUP, AND QUANTITATION METHODS FOR POLYCHLORINATED BIPHENYLS (PCBS) ARE DISCUSSED WITH REFERENCE TO THE ANALYSIS OF INDIVIDUAL CHROMATOGRAPHIC PEAKS AS WELL AS TOTAL PCBS. EXTRACTION OF BLOOD SAMPLES MAINTAINS THE INTEGRITY OF THE BIOLOGICALLY MODIFIED PCB PROFILE AND PERMITS ACCURATE DESCRIPTION OF PHARMACOKINETIC PARAMETERS. INDIVIDUAL COMPONENTS ARE QUANTITATED BY MEASURING PEAK HEIGHTS IN VARYING CONCENTRATIONS OF AROCLOR SO THAT RESIDUES CAN BE REPORTED RELATIVE TO THE PARENT MIXTURE. ABSOLUTE QUANTITATION OF COMPONENT PEAKS CAN BE ACCOMPLISHED BY USING THESE RELATIVE VALUES AND THE PERCENTAGE COMPOSITION OF THE AROCLOR.

07699 A3
CONTROL: NIOSH-00046529
ACCESS:
SOURCE:
AUTHOR: GREENWALD, L., AND W. E. CAREY
TITLE: PRODUCTION OF CL-36-LABELED POLYCHLORINATED BIPHENYLS BY NEUTRON ACTIVATION: A REEVALUATION
REFER1: JOURNAL OF THE AOAC, VOL. 57, NO. 6, PAGES 1397-1398, 4 REFERENCES
REFER2:
PUBDATE: 74/00/00

ONE ATTEMPT TO PREPARE RADIOLABELED AROCLORS (COMMERCIAL MIXTURES OF POLYCHLORINATED BIPHENYLS (PCBS)) HAS INVOLVED NEUTRON IRRADIATION TO PRODUCE CL-36-PCBS FROM CL-35-PCBS VIA AN N,GAMMA REACTION. HOWEVER, BECAUSE OF THE LONG HALF LIFE OF CL-36, THE (N,P) REACTION FORMING S-35 FROM CL-35 WOULD PREDOMINATE, LEADING TO THE PRODUCTION OF BETWEEN 5000 AND 10,000 TIMES AS MUCH S-35 SUBSTITUTED PCBS AS CL-36-PCBS. ALSO, SIGNIFICANT AMOUNTS OF P-32 WOULD BE PRODUCED. THEREFORE, IT IS SHOWN THAT CL-36-PCBS CANNOT BE PRODUCED FROM CL-35-PCBS WITHOUT THE CONCOMITANT INTERFERENCE OF S-35 SUBSTITUTED PCBS.

07710 A3
CONTROL: NIOSH-00044626
ACCESS:
SOURCE:
AUTHOR: NAKIURA, S., H. ADE, S. SUGIHARA, K. HIRAO, M. ARAI, AND N. ITO
TITLE: INHIBITORY EFFECT OF POLYCHLORINATED BIPHENYLS ON LIVER TUMORIGENESIS IN RATS TREATED WITH

SEARCH FOR P FOLEY ON PCBS;

NO. 6, PAGES 1088-1092, 30 REFERENCES

REFER2:
PUBDATE: 70/12/00

EXPERIMENTS WITH PIGEONS HAVE ESTABLISHED THAT THE RATE OF METABOLISM OF POLYCHLORINATED BIPHENYLS (PCBS) COMPOSING AROCLOR 1254 IS DETERMINED PRINCIPALLY BY CHLORINE SUBSTITUTION PATTERNS RATHER THAN DEGREE OF CHLORINATION. CHEMICAL STRUCTURE OF PCBS DOES NOT AFFECT THEIR RATE OF MOBILIZATION FROM ADIPOSE TISSUE AND SUBSEQUENT MOVEMENT THROUGH THE CIRCULATION. THE FRACTIONAL TURNOVER OF ALL PCBS IS APPROXIMATELY EQUIVALENT TO THE FRACTIONAL TURNOVER OF THE LIPID POOL UNDER FULLY FED CONDITIONS AS WELL AS DURING PERIODS OF STARVATION INDUCED DEPLETION OF LIPID RESERVES. A NET MOVEMENT OF PCBS FROM ADIPOCYTES TO OTHER LIPID POOLS, PRINCIPALLY MUSCLE CELLS, OCCURRED DURING STARVATION. ON SUBSEQUENT REFEEDING, THE NET MOVEMENT OF PCBS FROM MUSCLE BACK INTO ADIPOSE TISSUE WAS SIMILAR TO THE NET MOVEMENT OUT OF ADIPOSE TISSUE. PCB METABOLITES TEND TO BE RAPIDLY EXCRETED AND DO NOT ACCUMULATE IN ADIPOSE TISSUE, MUSCLE, OR LIVER. BRAIN AND, TO A LESSER EXTENT, KIDNEY TISSUE APPEAR TO ACCUMULATE PCB METABOLITES, PARTICULARLY DURING THE REFEEDING STAGE IN A STARVATION/REFEEDING CYCLE.

47589 A3
CONTROL: NIOSH-00046165
ACCESS:
SOURCE:
AUTHOR: METCALF, R. L.
TITLE: A LABORATORY MODEL ECOSYSTEM TO EVALUATE COMPOUNDS PRODUCING BIOLOGICAL MAGNIFICATION
REFER1: ESSAYS IN TOXICOLOGY, VOL. 5, M. J. HAYES, JR., ED, ACADEMIC PRESS, NEW YORK, CHAPTER 2, PAGES 17-38, 22 REFERENCES
REFER2:
PUBDATE: 70/00/00

A LABORATORY MODEL ECOSYSTEM IS PRESENTED THAT CAN EVALUATE COMPOUNDS BY PRODUCING BIOLOGICAL MAGNIFICATION OF MICROPOLLUTANTS SUCH AS DDT, DIELDRIN, METHYLMERCURY COMPOUNDS, POLYCHLORINATED BIPHENYLS, AND DIALKYLPHTHALATE PLASTICIZERS. DEVELOPMENT OF A LABORATORY SYSTEM INCLUDES INFORMATION ON A LABORATORY MODEL ECOSYSTEM, RADIOLABELED COMPOUNDS FOR INVESTIGATION, OPERATION OF THE MODEL ECOSYSTEM, AND INTERPRETATION OF RESULTS. PROBLEMS INVESTIGATED INCLUDE PRINCIPLES OF BIODEGRADABILITY OF DDT-ANALOGS, DETERMINATION OF BIODEGRADABILITY OF CANDIDATE PESTICIDES, CHLORPYRIFOS AND CHLORPYRIFOS METHYL, INTERACTION OF PESTICIDES, OTHER ENVIRONMENTAL POLLUTANTS, AND REPRODUCIBILITY OF RESULTS.

47670 A3
CONTROL: NIOSH-00046513
ACCESS:
SOURCE:

SEARCH FOR P FOLEY ON PCBS:

ACCESS:
SOURCE:
AUTHOR: TAYLOR, J. S.
TITLE: CHLORACNE - A CONTINUING PROBLEM
REFER1: CUTIS, VOL. 13, PAGES 585-591, 46 REFERENCES
REFER2:
PUBDATE: 74/04/00

REVIEW OF THE PROBLEM OF CHLORACNE, AN EXTREMELY REFRACTORY FORM OF OCCUPATIONAL ACNE PRODUCED BY EXPOSURE TO CHLORONAPHTHALENES, POLYCHLORODIPHENYLS, POLYCHLORODIBENZOFURANS, CONTAMINANTS OF CHLOROPHENOLS, AND CHLORBENZENES. DETAILS ARE GIVEN OF THE CUTANEOUS AND SYSTEMIC CLINICAL PICTURE OF THE EFFECTS OF CHLORACNEGENIC COMPOUNDS, ENVIRONMENTAL ASPECTS, PATHOGENESIS, PREVENTION AND TREATMENT.

47516 A3
CONTROL: NIOSH-00046032
ACCESS:
SOURCE:
AUTHOR: BAUGHMAN, R., AND M. MESELSON
TITLE: AN ANALYTICAL METHOD FOR DETECTING TCDD (DIOXIN): LEVELS OF TCDD IN SAMPLES FROM VIETNAM
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, NO. 5, PAGES 27-35, 16 REFERENCES
REFER2:
PUBDATE: 73/09/00

A METHOD IS DESCRIBED FOR DETECTING 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD). HOMOGENIZED SAMPLES ARE SAPONIFIED IN ALCOHOLIC POTASSIUM HYDROXIDE AND EXTRACTED WITH HEXANE. THE EXTRACT IS SHAKEN WITH SULFURIC ACID AND CHROMATOGRAPHED ON ALUMINA. ELUTION WITH CARBON TETRACHLORIDE-HEXANE REMOVES MOST OF THE DDE AND POLYCHLORINATED BIPHENYLS. CHLORINATED DIOXINS ARE THEN ELUTED WITH DICHLOROMETHANE-HEXANE. THE TCDD-CONTAINING FRACTION IS FURTHER PURIFIED BY PREPARATIVE GAS-LIQUID CHROMATOGRAPHY AND ANALYZED BY MASS SPECTROSCOPY USING A MULTICHANNEL ANALYZER TO AVERAGE SUCCESSIVE SCANS. ALSO REPORTED ARE LEVELS OF TCDD FOUND IN A LIMITED NUMBER OF SAMPLES OF FISH AND CRUSTACEANS FROM LOCATIONS IN SOUTH VIETNAM NEAR AREAS HEAVILY EXPOSED TO 2,4,5-TRICHLOROPHENOXYACETIC ACID.

47583 A3
CONTROL: NIOSH-00046149
ACCESS:
SOURCE:
AUTHOR: DE FREITAS, A. S., AND R. J. NORSTROM
TITLE: TURNOVER AND METABOLISM OF POLYCHLORINATED BIPHENYLS IN RELATION TO THEIR CHEMICAL STRUCTURE AND THE MOVEMENT OF LIPIDS IN THE PIGEON
REFER1: CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, VOL. 52,

SEARCH FOR P FOLEY ON PCBS;

DATA ARE ALSO GIVEN FOR RETENTION TIME AND ELECTRON-CAPTURE DETECTOR RESPONSE, PHYSICAL PROPERTIES, RETENTION INDICES, CHLORINE NUMBERS AND STRUCTURES OF PCBS INCLUDING AROCLOR 1254, DIRECT AND INDIRECT TRANSFER OF PCBS TO FOOD, COMPARISON OF GAS CHROMATOGRAMS OF PCBS FROM SOME FOOD PRODUCTS AND MEAT OF CHICKEN, TURKEY, AND SWINE.

47049 A3
CONTROL: NIOSH-00046719
ACCESS:
SOURCE:
AUTHOR: VOS, J. G.
TITLE: TOXICOLOGY OF PCBS FOR MAMMALS AND FOR BIRDS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 105-117, 39 REFERENCES
REFER2:
PUBDATE: 72/04/00

THE TOXICOLOGY OF POLYCHLORINATED BIPHENYLS (PCBS) FOR MAMMALS AND FOR BIRDS IS PRESENTED WITH DATA ON MORTALITY, AND PATHOLOGIC OBSERVATIONS OF CHICKS FED 400 PPM PCB FOR 60 DAYS, CHICK-EMBRYO ASSAY OF THREE PCB SAMPLES AND THE 25% DIETHYLETHER FRACTION FROM SAMPLE II; MORTALITY, LIVER EFFECTS, EDEMA FORMATION AND OTHER EFFECTS; ACUTE AND SUBACUTE AND SEMICHRONIC ORAL TOXICITY STUDIES OF PCB PREPARATIONS, AND FORMATION OF DELTA-AMINOLEVULINIC ACID BY LIVER MITOCHONDRIA, LIVER RESIDUES, AND TISSUE FLUORESCENCE IN FEMALE JAPANESE QUAIL ORALLY DOSED WITH PCB FOR SEVEN DAYS.

47313 A3
CONTROL: NIOSH-00039894
ACCESS:
SOURCE:
AUTHOR: KAISER, K. L. E.
TITLE: MIREX: AN UNRECOGNIZED CONTAMINANT OF FISHES FROM LAKE ONTARIO
REFER1: SCIENCE, VOL. 185, PAGES 523-525, 15 REFERENCES
REFER2:
PUBDATE: 74/09/09

A PERCHLORINATED, CAGE-STRUCTURED HYDROCARBON, ALSO KNOWN AS MIREX OR DECHLORANE, HAS BEEN IDENTIFIED IN FISH SAMPLES FROM THE BAY OF QUINTE, LAKE ONTARIO, CANADA. THE COMPOUND COELUTES WITH POLYCHLORINATED BIPHENYLS, OR PCB'S IN RESIDUE CLEANUP PROCEDURES AND UNDER STANDARD GAS CHROMATOGRAPHIC CONDITIONS. UNDER STANDARD GAS CHROMATOGRAPHIC CONDITIONS ITS PEAK IS SUPER-IMPOSED ON THAT OF THE PCB'S, AND, AS A RESULT, THE PRESENCE OF MIREX MAY HAVE BEEN UNRECOGNIZED AND IT MAY THEREFORE HAVE BEEN MISINTERPRETED AS A PCB ISOMER.

47325 A3
CONTROL: NIOSH-00047744

SEARCH FOR P FOLEY ON PCBS)

1, PAGES 119-120, 21 REFERENCES

REFER2:
PUBDATE: 72/04/00

DESCRIPTIVE AND EPIDEMIOLOGIC STUDIES WERE CONDUCTED IN THE WESTERN PART OF JAPAN FOLLOWING THE WIDESPREAD OCCURRENCE OF YUSHO IN OCTOBER 1968. THE CAUSE OF YUSHO (OIL DISEASE) WAS SOON DEMONSTRATED TO BE THE INGESTION OF A BRAND OF RICE OIL CONTAMINATED BY KANECHLOR 400, A POLYCHLORINATED BIPHENYL. CLINICAL SYMPTOMS INCLUDED SWELLING OF EYELIDS, INCREASED EYE DISCHARGE, ACNE-FORM ERUPTION, FOLLICULAR ACCENTUATION, EDEMATOUS SWELLING OF LIMBS, LANGUISHMENT, DISTURBANCES IN DIGESTIVE CANAL, NUMBNESS AND OTHER NEUROLOGICAL SIGNS AND PIGMENTATION OF SKIN. FOLLOW-UP STUDIES IN 1970 INDICATE THAT RECOVERY FROM YUSHO IS EXTREMELY DIFFICULT.

47042 A3
CONTROL: NIOSH-00046697
ACCESS:
SOURCE:
AUTHOR: KOLBYE, A. C., JR.
TITLE: FOOD EXPOSURES TO POLYCHLORINATED BIPHENYLS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 85-88
REFER2:
PUBDATE: 72/04/00

A TOXICOLOGICAL STUDY IS MADE OF POLYCHLORINATED BIPHENYLS (PCBS) IN SELECTED FOOD COMMODITIES SUCH AS FISH, CHEESE, MILK, SHELL EGGS, AND FISH BY-PRODUCT, BASED ON REPORTS OF INVESTIGATIONS CONDUCTED BY THE FOOD AND DRUG ADMINISTRATION (FDA), MONSANTO COMPANY, AND THE UNITED STATES DEPARTMENT OF AGRICULTURE. PCBS ARE ENCOUNTERED MOST FREQUENTLY IN FISH INCLUDING FRESHWATER FISH, AND ALSO IN POULTRY, DAIRY, GRAIN AND CEREALS. CONTAMINATION OF FOOD CAN ALSO OCCUR DUE TO THE TRANSFER OF PCB FROM CARDBOARD AND OTHER PACKAGING MATERIALS TO THE CONTENTS. FDA'S CURRENT WORKING LEVELS OF PCB RESIDUE ARE 5 PPM IN THE EDIBLE PORTION OF FISH; 5 PPM ON A SEPARATE FAT BASIS FOR POULTRY; AND 0.2 PPM IN WHOLE MILK.

47045 A3
CONTROL: NIOSH-00046715
ACCESS:
SOURCE:
AUTHOR: COOK, J. W.
TITLE: SOME CHEMICAL ASPECTS OF POLYCHLORINATED BIPHENYLS (PCBS)
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 3-13, 8 REFERENCES
REFER2:
PUBDATE: 72/04/00

SOME CHEMICAL ASPECTS OF POLYCHLORINATED BIPHENYLS (PCBS) ARE PRESENTED WITH GAS CHROMATOGRAMS AND STRUCTURAL FORMULAS OF PCBS.

SEARCH FOR P FOLEY ON PCBS;

AUTHOR: ZITKO, V., O. HUTZINGER, AND P. M. K. CHOI
TITLE: CONTAMINATION OF THE BAY OF FUNDY - GULF OF MAINE AREA WITH POLYCHLORINATED BIPHENYLS, POLYCHLORINATED TERPHENYLS, CHLORINATED DIBENZODIOXINS, AND DIBENZOFURANS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 47-50, 7 REFERENCES
REFER2:
PUBDATE: 72/04/00

A PROCEDURE IS OUTLINED FOR THE DETERMINATION OF POLYCHLORINATED BIPHENYLS (PCBS), POLYCHLORINATED TERPHENYLS (PCTS), CHLORINATED DIBENZODIOXINS, AND CHLORINATED DIBENZOFURANS IN THE BAY OF FUNDY-GULF OF MAINE AREA. DATA ARE GIVEN FOR THE ANALYSIS OF SPIKED FISHMEAL SAMPLES, DETECTION LIMITS OF CHLORINATED DIBENZODIOXINS AND DIBENZOFURANS, PESTICIDES IN AQUATIC ANIMALS, AND THE FRACTION OF HEXACHLOROBIPHENYLS AT DIFFERENT TROPHIC LEVELS.

47040 A3
CONTROL: NIOSH-00046695
ACCESS:
SOURCE:
AUTHOR: PEAKALL, D. B., J. L. LINCER, AND S. E. BLOOM
TITLE: EMBRYONIC MORTALITY AND CHROMOSOMAL ALTERATIONS CAUSED BY AROCLOR 1254 IN RING DOVES
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 103-104, 6 REFERENCES
REFER2:
PUBDATE: 72/04/00

CYTOGENETIC STUDIES ARE PERFORMED ON 24 DOVE EMBRYOS AT 3 TO 6 DAYS OF INCUBATION; SIX EMBRYOS FROM DOVE PAIRS NOT FED AROCLOR (CONTROL), 17 EMBRYOS FROM AROCLOR-FED PAIRS AND ONE EMBRYO IRRADIATED WITH 155 X-RAYS. RELATIVE FREQUENCIES OF CHROMOSOME ABERRATIONS ARE RECORDED FOR THE LARGEST 8 CHROMOSOME PAIRS OCCURRING IN METAPHASE CELLS OF ALLANTOIC SAC AND LIMB BUD ORIGIN. RESULTS INDICATE A POSSIBLE CLASTOGENIC (CHROMOSOME BREAKING) ACTION OF POLYCHLORINATED BIPHENYLS (PCBS) IN DOVE EMBRYOS. FURTHER STUDIES ARE WARRANTED TO DEFINE MORE PRECISELY THE CONDITIONS UNDER WHICH PCBS MIGHT BE MUTAGENIC, CLASTOGENIC AND POSSIBLY TERATOGENIC TO AVIAN AND MAMMALIAN EMBRYOS.

47041 A3
CONTROL: NIOSH-00046696
ACCESS:
SOURCE:
AUTHOR: KURATSUNE, M., T. YOSHIMURA, J. MATSUZAKA, AND A. YAMAGUCHI
TITLE: EPIDEMIOLOGIC STUDY ON YUSHO, A POISONING CAUSED BY INGESTION OF RICE OIL CONTAMINATED WITH A COMMERCIAL BRAND OF POLYCHLORINATED BIPHENYLS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO.

AQUATIC FOOD CHAINS. SURFACE ABSORPTION OF PCB'S BY PLANKTON ALLOWS THESE SUBSTANCES TO REMAIN IN THE AQUATIC ENVIRONMENT FOR A LONG TIME WITHOUT SINKING TO THE BOTTOM. THE CONCENTRATIONS OF PCB'S IN THE SEDIMENT SAMPLES WERE RATHER LOW COMPARED TO THOSE IN PLANKTON.

47028 A3
CONTROL: NIOSH-00046682
ACCESS:
SOURCE:
AUTHOR: RISEBROUGH, R. W., AND B. DE LAPPE
TITLE: ACCUMULATION OF POLYCHLORINATED BIPHENYLS IN ECOSYSTEMS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 39-45, 32 REFERENCES
REFER2:
PUBDATE: 72/08/00

FACTS PERTAINING TO THE ACCUMULATION OF POLYCHLORINATED BIPHENYLS (PCB) IN ECOSYSTEMS ARE SUMMARIZED WITHIN THE FRAMEWORK OF A PRELIMINARY FORMULATION OF A MASS BALANCE EQUATION FOR THE GLOBAL DISTRIBUTION OF THE BIPHENYLS. DATA ARE GIVEN FOR THE QUANTITY OF PCB IN MARINE FISH AND IN FISH FROM AN ARCTIC TUNDRA LAKE, RESIDUES IN PETRELS AND SHEARWATERS, AND PCB RESIDUES IN EGGS OF THE BROWN PELICAN, PELECANUS OCCIDENTALIS, FROM NORTH AND SOUTH AMERICA. THE TWO MAJOR RESEARCH PROBLEMS ARE FOUND TO BE THE DETERMINATION OF THE ACCUMULATION RATES IN SINKS, AND THE EFFECTS OF PCBS OR PCB DERIVATIVES UPON ORGANISMS AND ECOSYSTEM AT EACH CONTAMINATION LEVEL.

47031 A3
CONTROL: NIOSH-00046665
ACCESS:
SOURCE:
AUTHOR: BITMAN, J., H. C. CECIL, AND S. J. HARRIS
TITLE: BIOLOGICAL EFFECTS OF POLYCHLORINATED BIPHENYLS IN RATS AND QUAIL
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, EXPERIMENTAL ISSUE NO. 1, PAGES 145-149, 9 REFERENCES
REFER2:
PUBDATE: 72/08/00

A STUDY IS MADE OF THE EFFECT OF POLYCHLORDBIPHENYLS (PCBS) ON ESTROGENIC ACTIVITY, LIVER BARBITURATE METABOLISM, LIVER VITAMIN A AND EGG PRODUCTION USING A LIMITED NUMBER OF PCB MATERIALS. RESULTS CONFIRM THAT THE BIOLOGICAL EFFECTS OF SPECIFIC PCB COMPOUNDS ARE DIFFERENT BECAUSE OF THE GREAT DIFFERENCES IN CHLORINE CONTENT, CHEMICAL PROPERTIES AND PHYSICAL PROPERTIES.

47035 A3
CONTROL: NIOSH-00046690
ACCESS:
SOURCE:

[SEARCH FOR P FOLEY ON PCBS]

TITLE: THE SEPARATION OF SOME POLYCHLORINATED BIPHENYLS, DDT, AND ANALOGS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 6, PAGES 710-716, 6 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE PURPOSE OF THIS STUDY WAS TO INVESTIGATE THE FEASIBILITY OF USING MINIATURE COLUMNS OF SILICA GEL (5 G IN A 300 X 10 MM I.D. CHROMATOGRAPHIC COLUMN) FOR SEPARATING PCB'S, DDT, AND ANALOGS WITH THE SOLVENT SYSTEM USED BY ARVOUR AND BURKE. PCB'S CONSISTING OF AROCLORS 1242, 1248, 1254, AND 1260 AND PESTICIDE COMPOUNDS CONSISTING OF P,P'-DDE, P,P'-TDE, AND P,P'-DDT WERE INDIVIDUALLY TESTED FOR RECOVERY FROM MINIATURE COLUMNS. MIXTURES CONSISTING OF EACH OF THE ABOVE PCBS INDIVIDUALLY COMBINED WITH P,P'-DDE, P,P'-TDE, AND P,P'-DDT WERE TESTED FOR SEPARATION AND RECOVERY ON MINIATURE COLUMNS. THIS STUDY SHOWS THAT MINIATURE SILICA GEL COLUMNS USED WITH THE DESCRIBED ELUTION SYSTEM ARE CAPABLE OF SEPARATING TOTAL PCB AND P,P'-DDE FROM P,P'-TDE AND P,P'-DDT. P,P'-DDE CAN BE QUANTITATED IN THE PRESENCE OF PCBS PROVIDED THE CONCENTRATIONS OF LATTER ARE NOT EXCESSIVE. BACKGROUND INTERFERENCE OF AROCLOR 1254 MUST BE TAKEN INTO ACCOUNT IF THE PCB CONCENTRATION IS MORE THAN TWICE THAT OF P,P'-DDE. THE MINIATURE SILICA GEL COLUMNS ARE EASILY PREPARED, RAPID TO USE, AND REQUIRE SMALL VOLUMES OF ELUTION SOLVENTS.

46185 A3
CONTROL: NIOSH-00044083
ACCESS:
SOURCE:
AUTHOR: LINKO, R[redacted]., P. RANTAMAKI, AND K. URPO
TITLE: PCB RESIDUES IN PLANKTON AND SEDIMENT IN THE SOUTHWESTERN COAST OF FINLAND
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 6, PAGES 733-738, 7 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE RESULTS OBTAINED IN THIS STUDY ON THE PCB LEVEL OF PLANKTON RESEMBLE THOSE ARRIVED AT BY OTHER INVESTIGATORS STUDYING DIFFERENT SEA AREAS. THERE WERE ALSO SURPRISINGLY HIGH CONCENTRATIONS OF PCB'S IN PLANKTON COLLECTED FROM THE OPEN NORTH AND SOUTH ATLANTIC RANGING FROM 0.02 TO 0.64 PPM ON A WET WEIGHT BASIS AND FROM 7 TO 120 PPM ON LIPID BASIS. THE RATIO OF PCB'S TO THE TOTAL DDT SUBSTANCES WAS COMPARATIVELY HIGH IN THEIR PLANKTON SAMPLES. IN THE PRESENT STUDY PLANKTON WAS ALSO FOUND TO CONTAIN VERY SMALL AMOUNTS OF DDT SUBSTANCES IN COMPARISON WITH PCB'S, IN CONTRAST TO THE RESULTS OBTAINED ON FISH. THE REASON WHY PLANKTON MAY BE EXPOSED TO PCB'S TO A GREATER EXTENT THAN FISH IS NOT KNOWN. MORE KNOWLEDGE MUST FIRST BE OBTAINED CONCERNING THE SOLUBILITY AND ABSORPTION PROPERTIES OF DIFFERENT PCB'S. IT IS APPARENT, HOWEVER, THAT PLANKTON IS AN IMPORTANT LINK IN THE INTRODUCTION OF PCB'S INTO

SEARCH FOR P FOLEY ON PCBS)

ACCESS:
SOURCE:
AUTHOR: ITO, N., H. NAGASAKI, M. ARAI, S. MAKIURA, S. SUGIHARA, AND K. HIRAO
TITLE: HISTOPATHOLOGIC STUDIES ON LIVER TUMORIGENESIS INDUCED IN MICE BY TECHNICAL POLYCHLORINATED BIPHENYLS AND ITS PROMOTING EFFECT ON LIVER TUMORS INDUCED BY BENZENE HEXACHLORIDE
REFER1: JOURNAL OF THE NATIONAL CANCER INSTITUTE, VOL. 51, NO. 5, PAGES 1637-1642, 34 REFERENCES
REFER2:
PUBDATE: 73/11/00

45901 A3
CONTROL: NIOSH-00032703
ACCESS:
SOURCE:
AUTHOR: BAGLEY, G. E., M. L. REICHEL, AND E. CROMARTIE
TITLE: IDENTIFICATION OF POLYCHLORINATED BIPHENYLS IN TWO BALD EAGLES BY COMBINED GAS-LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY
REFER1: JOURNAL OF THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, VOL. 53, NO. 2, PAGES 251-261, 11 REFERENCES
REFER2:
PUBDATE: 70/00/00

IN EXPERIMENTAL INVESTIGATIONS, IDENTIFICATION OF POLYCHLORINATED BIPHENYLS (PCB) IN 2 BALD EAGLES HAVE BEEN MADE BY COMBINED GAS-LIQUID CHROMATOGRAPHY (GLC). (IDENTIFICATION WAS NECESSARY SINCE PCB'S ARE NOT ONLY TOXIC BUT ALSO THEIR PRESENCE IN SAMPLES ALONG WITH THE COMMONLY OCCURRING ORGANOCHLORINE PESTICIDES COMPLICATED THE ANALYSIS TO A SERIOUS DEGREE, MAKING IDENTIFICATION OF PESTICIDE RESIDUES BY GLC WITHOUT PRELIMINARY SEPARATION EXTREMELY UNRELIABLE.) SAMPLES OF AROCLORS, A SERIES OF MULTIPLE-APPLICATION INDUSTRIAL PLASTICIZERS COMPRISING A COMPLEX MIXTURE OF CLOSELY RELATED PCB'S, WERE OBTAINED FROM THE MANUFACTURER FOR INVESTIGATION. THE GLC MASS SPECTROMETRY SPECTRA DATA SHOW CONCLUSIVELY THAT MOST CHEMICALS IN THE EAGLE SAMPLES WERE IDENTICAL TO AROCLOR 1254. THE SPECIMENS COLLECTED FOR THE STUDY FROM WIDELY SEPARATED AREAS CONTAINED ESSENTIALLY IDENTICAL PCB'S VARYING SLIGHTLY IN APPARENT CONCENTRATION OF SPECIFIC COMPOUNDS. ORGANOCHLORINE PESTICIDES MENTIONED INCLUDE: HEPTACHLOR, ALDRIN, DIELDRIN, ENDRIN, P,P'-DDT, O,P'-DDT, P,P'-DDD, AND O,P'-DDD.

46184 A3
CONTROL: NIOSH-00044002
ACCESS:
SOURCE:
AUTHOR: ERNEY, D. R.
TITLE: A FEASIBILITY STUDY OF MINIATURE SILICA GEL COLUMNS FOR

SEARCH FOR P FOLEY ON PCBS)

ASSOCIATION OF PCB WITH SEDIMENTING PARTICLES; EVAPORATIVE CODISTILLATION INTO THE ATMOSPHERE; AND BIOLOGICAL AND CHEMICAL DEGRADATION.

45723 A3
CONTROL: NIOSH-00039224
ACCESS:
SOURCE:
AUTHOR: DEN TONKELAAR, E. M., AND G. J. VAN ESCH
TITLE: NO-EFFECT LEVELS OF ORGANOCHLORINE PESTICIDES BASED ON INDUCTION OF MICROSOMAL LIVER ENZYMES IN SHORT-TERM TOXICITY EXPERIMENTS
REFER1: TOXICOLOGY, VOL. 2, PAGES 371-380, 29 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE INDUCTION OF MICROSOMAL LIVER ENZYMES BY DIFFERENT DOSE LEVELS OF A NUMBER OF PESTICIDES GIVEN IN THE DIETS IS STUDIED IN RATS AND A NON-EFFECT LEVEL IS ESTABLISHED FOR EACH PESTICIDE. THIS IS THEN COMPARED WITH NO-EFFECT LEVELS FROM THE LITERATURE, BASED ON HISTOPATHOLOGICAL ABNORMALITIES IN THE LIVER IN LONG-TERM EXPERIMENTS. THE CAPACITY FOR INDUCING ENZYMES IS FOUND TO DECREASE IN THE ORDER: HEPTACHLOR, DDT, CHLORFENSON, DIELDRIN, DICOFOL, CHLORDANE, TETRASUL, V-11C, HEXACHLOROBENZENE (HCB), LINDANE, ENDOSULFAN, POLYCHLORINATED BIPHENYL (PCB) IS FOUND TO HAVE A VERY HIGH ENZYME-INDUCING CAPACITY FOR ANILINE HYDROXYLASE, BUT ONLY A MEDIUM ONE FOR AMINOPYRINE DEMETHYLASE AND HEXOBARBITAL OXIDASE.

45030 A3
CONTROL: NIOSH-00039848
ACCESS:
SOURCE:
AUTHOR: HOM, W., R. W. RISEBROUGH, A. SOUTAR, AND D. R. YOUNG
TITLE: DEPOSITION OF DDE AND POLYCHLORINATED BIPHENYLS IN DATED SEDIMENTS OF THE SANTA BARBARA BASIN
REFER1: SCIENCE, VOL. 184, PAGES 1197-1199, 16 REFERENCES
REFER2:
PUBDATE: 74/06/14

ANALYSIS OF DATED OCEANIC SEDIMENTS FROM THE SANTA BARBARA BASIN OF THE SOUTHERN CALIFORNIA BIGHT HAS SHOWN THAT DEPOSITION OF POLYCHLORINATED BIPHENYLS (PCB) BEGAN ABOUT 1945 AND THAT DDE (1,1-DICHLORO-2-2-BIS(P-CHLOROPHENYL)ETHYLENE) FIRST APPEARED IN SEDIMENTS DEPOSITED ABOUT 1952. CONCENTRATIONS OF BOTH SHOW A PROGRESSIVE INCREASE THROUGH 1967) ESTIMATED DEPOSITION RATES (IN GRAMS PER SQUARE METER PER YEAR) IN 1967 OF DDE AND PCB WERE .00019 AND .00012, RESPECTIVELY.

45059 A3
CONTROL: NIOSH-00039831

SELN OBSERVED IN MAMMALS: LIVER DAMAGE AND SKIN LESIONS. ASPECTS OF SUBACUTE AND CHRONIC TOXICITY APPEAR TO BE OF GREATER CONCERN THAN ACUTE TOXICITY. ASPECTS OF TOXICITY OF PCB'S WHICH HAVE BEEN REPORTED AND INCREASING REPORTS OF THE UBIQUITY OF THE PRESENCE OF PCB'S IN HUMANS SUGGEST FURTHER NECESSARY STUDIES ON THE POTENTIAL TOXICITY OF THESE ENVIRONMENTAL POLLUTANTS. PCB'S USED IN THE STUDIES REPORTED INCLUDED AROCLOR 1221, AROCLOR 1232, AROCLOR 1242, AROCLOR 1248, AROCLOR 1260, AROCLOR 1262, AROCLOR 1268, AROCLOR 4465, AROCLOR 5442, AROCLOR 5460, AROCLOR 2565, PHENOCLOR DP6, AND CLOPHEN A60.

44099 A3
CONTROL: NIOSH-00041539
ACCESS:
SOURCE:
AUTHOR: SNYDER, D., AND R. REINERT
TITLE: RAPID SEPARATION OF POLYCHLORINATED BIPHENYLS FROM DDT AND ITS ANALOGUES ON SILICA GEL
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 5, PAGES 385-390, 9 REFERENCES
REFER2:
PUBDATE: 71/00/00

A RAPID MICRDANALYTICAL PROCEDURE IS DESCRIBED FOR THE SEPARATION OF POLYCHLORINATED BIPHENYLS (PCB'S) FROM DDT AND ITS ANALOGS BEFORE ANALYSIS WITH GAS-LIQUID CHROMATOGRAPHY. A SMALL SILICA GEL COLUMN IS USED FOR REMOVING TWO OF THE AROCLOR SERIES OF PCB'S FROM DDT. PENTANE IS ADDED TO THE FRESHLY OPENED SILICA GEL AND THE COLUMN PACKED TO KEEP IT FREE OF AIR BUBBLES. THE COLUMN IS WASHED WITH PENTANE AND AFTER THE SAMPLE AND RINSE HAVE BEEN ABSORBED, THE FOLLOWING SOLVENT FRACTIONS ARE COLLECTED SEPARATELY INTO TWO TUBES, PENTANE WITH THE PCB'S ELUTED AND BENZENE WITH DDT AND ITS ANALOGS ELUTED. SEPARATION IS ACHIEVED IN ABOUT ONE HOUR AND BECAUSE OF THE SMALL SIZE OF THE COLUMNS SEVERAL SAMPLES CAN BE RUN SIMULTANEOUSLY.

44422 A3
CONTROL: NIOSH-00039611
ACCESS:
SOURCE:
AUTHOR: HARVEY, G. R., W. G. STEINHAUER, AND H. P. MIKLAS
TITLE: DECLINE OF PCB CONCENTRATIONS IN NORTH ATLANTIC SURFACE WATER
REFER1: NATURE, VOL. 252, NO. 5482, PAGES 387-388, 8 REFERENCES
REFER2:
PUBDATE: 74/11/29

POLYCHLORDBIPHENYL (PCB) CONCENTRATIONS IN NORTH ATLANTIC SURFACE WATERS ARE FOUND TO HAVE DECLINED FORTYFOLD SINCE 1972, FOLLOWING THE CESSATION OF CERTAIN INDUSTRIAL USES OF THE COMPOUNDS. THE LOSS OF PCB MAY HAVE RESULTED FROM: APPARENT DILUTION OF DISSOLVED PCB BY VERTICAL AND HORIZONTAL ADVECTION AND DIFFUSION;

SEARCH FOR P FOLEY ON PCBS;

WERE NOT EFFECTIVE,

42425 A3
CONTROL: NIOSH-00038882
ACCESS:
SOURCE:
AUTHOR: BEDFORD, J. M.
TITLE: THE USE OF POLYURETHANE FOAM PLUGS FOR EXTRACTION OF POLYCHLORINATED BIPHENYLS (PCB'S) FROM NATURAL WATERS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 5, PAGES 622-625, 2 REFERENCES
REFER2:
PUBDATE: 74/00/00

TEN MICROGRAMS OF AROCLOR 1254, DISSOLVED IN ACETONE, ARE SPIKED IN 3-LITER QUANTITIES OF DISTILLED WATER AND LAKE WATER. IN ADDITION, 10 MICROGRAMS ARE SPIKED DIRECTLY ON THE FOAM COLUMN. THE RECOVERY FROM DISTILLED WATER IS THE SAME AS THE DIRECTLY SPIKED COLUMN, WHILE THE AMOUNT RECOVERED FROM THE LAKE WATER IS ONLY ONE-HALF AS MUCH. DATA ARE ALSO GIVEN FOR THE EXTRACTION EFFICIENCY OF POLYURETHANE FOAM FOR AROCLOR 1254 IN MIXTURES OF LAKEWATER AND DISTILLED WATER. THE STUDY INDICATES THAT POLYURETHANE FOAM CANNOT BE USED RELIABLY TO EXTRACT POLYCHLORORIPHENYLS FROM NATURAL WATERS UNLESS SPIKED SAMPLES ARE RUN FROM EACH BODY OF WATER TO BE TESTED.

43730 A3
CONTROL: NIOSH-00005290
ACCESS:
SOURCE:
AUTHOR: [redacted]
TITLE: TOXICITY OF CHLORINATED BIPHENYLS
REFER1: [redacted]
REFER2:
PUBDATE: 74/00/00

THE CHLORINATED BIPHENYLS (POLYCHLORINATED BIPHENYLS; PCB'S) ARE REVIEWED WITH RESPECT TO THE STATUS OF THE TOXICOLOGIC, CARCINOGENIC, TERATOGENIC, AND MUTAGENIC ASPECTS OF PCB'S THAT ARE OF GREATEST HUMAN RELEVANCE. ACUTE AND SUBACUTE TOXICITY STUDIES ON PCB'S HAVE SHOWN THE GUINEA PIG TO BE THE MOST SENSITIVE ANIMAL SPECIES, FOLLOWED BY THE RABBIT AND THE RAT, RESPECTIVELY. PATHOLOGIC CHANGES INDUCED IN ANIMALS BY PCB'S ARE DESCRIBED. CHRONIC TOXICITY STUDIES ARE ALSO DESCRIBED WITH REGARD TO MORPHOLOGY, AND REPRODUCTIVE, CARCINOGENIC, TERATOGENIC, MUTAGENIC, IMMUNOSUPPRESSIVE, TOXICOLOGICAL, BIOLOGICAL, AND HUMAN EFFECTS. DESPITE INCREASING NUMBERS OF MAMMALIAN TOXICOLOGICAL INVESTIGATIONS ON PCB'S, ASPECTS OF DEFINITIVE ACUTE, SUBACUTE, AND CHRONIC TOXICITY OF PCB'S STILL REMAIN POORLY KNOWN AS REGARDS MAN. BOTH CHEMICAL AND PHYSICAL PROPERTIES OF PCB'S CONSPIRE IN MAKING THE EVALUATION OF TOXICITY AND BIOLOGICAL DATA DIFFICULT. TWO ACTIONS OF PCB'S HAVE

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CONSIDERED IN EVALUATING THE EFFECTS OF THESE SUBSTANCES; DDE AND PCB'S MAY HAVE GREATER ENVIRONMENTAL IMPACT TOGETHER THAN WOULD BE EXPECTED FROM SEPARATE TOXICITY TESTS. THESE INTERACTIONS COULD NOT HAVE BEEN PREDICTED FROM KNOWLEDGE OF THEIR ISOLATED BEHAVIOR, CHEMICAL STRUCTURES OR PROPERTIES.

41807 A3
CONTROL: NIOSH-00044095
ACCESS:
SOURCE:
AUTHOR: TURNER, J. C., AND R. S. GREEN
TITLE: THE EFFECT OF A POLYCHLORINATED BIPHENYL (AROCLOR 1254) ON LIVER MICROSOMAL ENZYMES IN THE MALE RAT
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 6, PAGES 669-671, 8 REFERENCES
REFER2:
PUBDATE: 74/00/00

EXPERIMENTAL STUDIES WERE DONE ON RATS TO INVESTIGATE THE EFFECT OF A POLYCHLORINATED BIPHENYL (AROCLOR 1243) (PCB) ON LIVER MICROSOMAL ENZYMES IN THE MALE RAT. PRESENT RESULTS INDICATE THAT CONCENTRATIONS OF PCB IN THE DIET AS LOW AS 10 PPM ARE SUFFICIENT TO PRODUCE MEASURABLE CHANGES IN THE MICROSOMAL ENZYME SYSTEM IF THE ANIMAL IS EXPOSED FOR A LONG ENOUGH PERIOD. THE DATA ALSO SUGGEST THAT CHRONIC EXPOSURE TO LOW LEVELS OF PCB MIGHT HAVE AN EFFECT IN OTHER SPECIES SINCE, GENERALLY SPEAKING, INDUCING AGENTS, PARTICULARLY OF THE ORGANOCHLORINE TYPE, ARE NOT CONSIDERED TO BE SPECIES-SPECIFIC IN THEIR ACTION.

41012 A3
CONTROL: NIOSH-00044100
ACCESS:
SOURCE:
AUTHOR: UCHIYAMA, M., T. CHIBA, AND K. NODA
TITLE: CO-CARCINOGENIC EFFECT OF DDT AND PCB FEEDINGS ON METHYLCHOLANTHRENE-INDUCED CHEMICAL CARCINOGENESIS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 6, PAGES 687-693, 7 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE COCARCINOGENIC EFFECT OF DDT AND KC-400 FEEDINGS ON METHYLCHOLANTHRENE-INDUCED CHEMICAL CARCINOGENESIS IN MICE WAS PRESENTED. EXPERIMENTAL CERVICAL EPITHELIUM CHANGES TOWARDS CANCER WERE PRODUCED BY MEANS OF 20-METHYLCHOLANTHRENE-IMPREGNATED THREAD INSERTED INTO THE UTERUS OF FEMALE MICE WHICH WERE FED WITH THE DIET CONTAINING VARIOUS LEVELS OF CONTAMINANTS. THE MAGNITUDE OF THE PROGRESS OF EPITHELIUM CHANGES WAS COMPARED WITH ANIMALS FED CONTROL DIET. UTILIZING THIS PROCEDURE IT WAS MADE OBVIOUS THAT FEEDING OF 100 PPM OF DDT FOR 8 WEEKS PRODUCED A REMARKABLE TENDENCY TOWARDS THE INDUCTION OF CARCINOMA, WHILE 10 PPM OF DDT AND 10 AND 100 PPM OF PCB

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PROTEINS, LIVER DELTA-AMINOLEVULINIC ACID-SYNTHETASE AND HEMATOLOGIC VALUES WERE SIMILAR IN ALL GROUPS. THE LIVERS IN THE 1254- AND 1242-TREATED RABBITS WERE SIGNIFICANTLY ENLARGED COMPARED TO THE 1221-TREATED AND CONTROL ANIMALS. THE EARLIEST CHANGE WAS MEGALOHEPATOCYTOSIS WHICH WAS FOLLOWED BY SUBCAPSULAR MIDZONAL NECROSIS. IN THE 1254-TREATED RABBITS, THE MIDZONAL NECROSIS WAS DIFFUSE AND FREQUENTLY INCLUDED MOST OF THE CENTRAL PART OF THE LOBULE. FIBROUS CONNECTIVE TISSUE REPLACED THE NECROTIC PART OF THE LOBULES IN THE MORE SEVERELY AFFECTED LIVERS. THE ROUGH ENDOPLASMIC RETICULUM IN THE LIVERS OF THE 1254-TREATED RABBITS APPEARED TO HAVE BEEN DESTROYED. THERE WAS ALSO ATROPHY OF THE UTERI IN THE 1254-TREATED RABBITS.

41805 A3
CONTROL: NIOSH-00044093
ACCESS:
SOURCE:
AUTHOR: MOSSER, J. L., T.-C. TENG, W. G. WALTHER, AND C. F. WURSTER
TITLE: INTERACTIONS OF PCBS, DDT AND DDE IN A MARINE DIATOM
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 6, PAGES 665-668, 20 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE INTERACTIONS OF POLYCHLORINATED BIPHENYLS (PCB'S), DDT, AND DDE IN A MARINE DIATOM KNOWN FROM PREVIOUS STUDIES TO BE SENSITIVE TO DDT AND PCB'S ARE STUDIED EXPERIMENTALLY IN A LABORATORY MEDIUM. DDE AND DDT INTERACTED QUITE DIFFERENTLY WITH PCB'S. DDE WAS SYNERGISTIC WITH PCB'S; GROWTH INHIBITION BY 10 PARTS PER BILLION (PPB) PCB'S OR 100 PPB DDE WAS MINOR, WHEREAS THESE SUBSTANCES TOGETHER AT THESE CONCENTRATIONS INHIBITED GROWTH SUBSTANTIALLY. HIGHER CONCENTRATIONS OF EITHER SUBSTANCE CAUSED A STILL GREATER GROWTH INHIBITION. BY CONTRAST, DDT COUNTERACTED THE TOXICITY OF PCB'S. TREATMENT WITH 50 PPB PCB'S ALONE ALMOST STOPPED GROWTH, BUT SIMULTANEOUS TREATMENT WITH 50 PPB PCB'S AND 500 PPB DDT RESTORED THE GROWTH RATE TO ABOUT TWO-THIRDS THAT IN CONTROL CULTURES. LOWER CONCENTRATIONS OF DDT COUNTERACTED PCB TOXICITY TO A LESSER EXTENT. DDT ADDED 12 OR 24 HOURS AFTER PCB TREATMENT ALSO REVERSED INHIBITION BY PCB'S. SINCE REVERSAL OCCURRED EVEN AFTER INHIBITION BY PCB'S HAD BEEN FULLY MANIFESTED, THE COUNTERACTION OF PCB TOXICITY BY DDT EVIDENTLY INVOLVED AN INTRACELLULAR INTERACTION, RATHER THAN PHYSICAL PROTECTION FROM PCB'S SUCH AS BY COPRECIPITATION OF THESE WATER-INSOLUBLE SUBSTANCES FROM THE GROWTH MEDIUM. COUNTERACTION COULD RESULT FROM DDT-INDUCED ELIMINATION OF PCB'S, ANALOGOUS TO DDT-INDUCED DIELDRIN ELIMINATION IN THE RAT, OR BY DISPLACEMENT OF THE PCB'S FROM A SENSITIVE CELLULAR SITE. INTERACTION BETWEEN DDT AND DDE WAS ONLY SLIGHT. GROWTH INHIBITION CAUSED BY TREATMENT WITH 500 PPB EACH OF DDT AND DDE WAS INTERMEDIATE BETWEEN THAT CAUSED BY TREATMENT WITH 500 PPB EACH OF DDT AND DDE WAS INTERMEDIATE BETWEEN THAT CAUSED BY 500 PPB OF EITHER OF THESE SUBSTANCES ALONE. THIS STUDY INDICATES THAT INTERACTION AMONG ORGANOCHLORINES MUST ALSO BE

SEARCH FOR P FOLEY ON PCBS:

41642 A3
CONTROL: NIOSH-00045079
ACCESS:
SOURCE:
AUTHOR: AHNOFF, M., AND B. JOSEFSSON
TITLE: SIMPLE APPARATUS FOR ON-SITE CONTINUOUS LIQUID-LIQUID EXTRACTION OF ORGANIC COMPOUNDS FROM NATURAL WATERS
REFER1: ANALYTICAL CHEMISTRY, VOL. 46, NO. 6, PAGES 658-663, 26 REFERENCES
REFER2:
PUBDATE: 74/05/00

AN APPARATUS FOR CONTINUOUS LIQUID-LIQUID EXTRACTION OF ORGANIC COMPOUNDS FROM NATURAL WATERS IS DESCRIBED. THE APPARATUS IS BASED ON MIXED SETTLING OF THE WATERS, ACCOMPANIED BY CYCLOHEXANE EXTRACTION OF THE ORGANIC COMPOUNDS. THE EXTRACTS ARE THEN SEPARATED INTO INDIVIDUAL COMPOUNDS BY GAS CHROMATOGRAPHY. THE THEORY FOR EXTRACTING CHLORINATED PESTICIDES CONTINUOUSLY FROM WATER WITH A STATIONARY IMMISCIBLE SOLVENT IS DISCUSSED. IN LABORATORY TESTS, THE RECOVERY OF SUCH ADDED PESTICIDES AS LINDANE, ALDRIN, DDE, DIELDRIN, DDD, AND DDT WAS 83-96% FOR DIFFERENT PESTICIDES AND DIFFERENT PUMP RATES. POLYCHLORINATED BIPHENYLS (PCB) WERE EXTRACTED IN A FIELD TRIAL FROM SOME HUNDRED LITERS OF WATER FROM THE GOETA RIVER (SWEDEN) WITH DIFFERENT MULTICHAMBER ARRANGEMENTS. CLOPHEN A-60 (BAYER), A MIXTURE OF PCB'S WAS USED AS THE STANDARD. IN ADDITION, THE CONTENT OF PCB WAS DETERMINED WITH ECD GAS CHROMATOGRAPHY IN THE RANGE OF 0.1-1.0 NG/LITER OF WATER.

41715 A3
CONTROL: NIOSH-00045381
ACCESS:
SOURCE:
AUTHOR: KOLLER, L. D., AND J. G. ZINKL
TITLE: PATHOLOGY OF POLYCHLORINATED BIPHENYLS IN RABBITS
REFER1: AMERICAN JOURNAL OF PATHOLOGY, VOL. 70, NO. 3, PAGES 363-378, 15 REFERENCES
REFER2:
PUBDATE: 73/03/00

AN EXPERIMENTAL STUDY WAS DEVISED TO COMPARE THE CLINICAL AND ANATOMICAL PATHOLOGIC EFFECTS PRODUCED BY ADMINISTERING 300 MG OF POLYCHLORINATED BIPHENYLS (PCB) AROCLOR 1221, AROCLOR 1242, AND AROCLOR 1254 TO RABBITS FOR 14 WEEKS. THESE FORMULATIONS ARE 21%, 42%, AND 54% CHLORINATED BIPHENYLS. ELEVATED (SERUM GLUTAMIC-PYRUVIC TRANSAMINASE) AND SGOT (SERUM GLUTAMIC-OXALOACETIC TRANSAMINASE) LEVELS OCCURRED IN THE MALE AND FEMALE 1254- AND MALE 1242-TREATED RABBITS AS EARLY AS 2 WEEKS. THE FEMALE 1242-TREATED RABBITS HAD INCREASED SGPT AND SGOT ACTIVITIES AT 4 AND 8 WEEKS, RESPECTIVELY. THESE SERUM ENZYME ACTIVITIES IN THE 1221-TREATED RABBITS WERE SIMILAR TO THE CONTROLS DURING THE 14-WEEK PERIOD. SERUM CHOLESTEROL CONCENTRATIONS WERE MODERATELY ELEVATED IN THE 1254-TREATED MALES THROUGHOUT THE EXPERIMENT. THE BUN (BLOOD UREA NITROGEN), SERUM

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BUT WHICH ELIMINATES THE NEED FOR ELABORATE SEPARATIONS, AND DOES NOT SACRIFICE TOO MUCH OF THE QUALITATIVE INFORMATION CONTENT INHERENT IN A COMPLETE MASS SPECTRUM. SEVERAL SETS OF CANDIDATE MASSES WERE EVALUATED USING PCB'S MIXED WITH CERTAIN PESTICIDES WHICH ARE LIKELY TO BE IN A SOLVENT EXTRACT OF AN ENVIRONMENTAL SAMPLE. THE METHOD WAS ALSO TESTED WITH A CONTAMINATED SEDIMENT SAMPLE FROM AN OHIO LAKE AND APPEARS USEFUL FOR BOTH QUALITATIVE AND QUANTITATIVE ANALYSES. THE TECHNIQUE IS CLEARLY ADAPTABLE TO OTHER ENVIRONMENTAL POLLUTANTS.

40913 A3
CONTROL: NIOSH-00036520
ACCESS:
SOURCE:
AUTHOR: OFFNER, H., C. KONAT, AND J. CLAUSEN
TITLE: THE EFFECT OF DDT, LINDANE AND AROCLOR 1254 ON BRAIN CELL CULTURE
REFER1: ENVIRONMENTAL PHYSIOLOGY & BIOCHEMISTRY, VOL. 3, NO. 4, PAGES 204-211, 29 REFERENCES
REFER2:
PUBDATE: 73/00/00

THE EFFECT OF DDT, LINDANE AND A MIXTURE OF POLYCHLORINATED BIPHENYLS AROCLOR 1254, ON BRAIN CELL CULTURE WAS INVESTIGATED. AMONG THE THREE POLYCHLORINATED HYDROCARBONS THE MOST TOXIC WAS FOUND TO BE DDT AND THE LEAST TOXIC AROCLOR 1254. GENERALLY, ADMINISTRATION OF THESE COMPOUNDS CAUSED DESTRUCTION OF THE CELL PROCESSES WITH VACUOLIZATION AND SWELLING OF THE CELL BODY.

00946 A3
CONTROL: NIOSH-00045964
ACCESS:
SOURCE:
AUTHOR: LEAVITT, R. A., G. C. C. SU, AND M. J. ZABIK
TITLE: PHOTOCHEMICALLY ASSISTED ANALYSIS OF CHLORINATED HYDROCARBON PESTICIDES IN THE PRESENCE OF POLYCHLORINATED BIPHENYLS
REFER1: ANALYTICAL CHEMISTRY, VOL. 45, NO. 12, PAGES 2130-2131, 12 REFERENCES
REFER2:
PUBDATE: 73/10/00

A GAS-LIQUID CHROMATOGRAPHIC METHOD IS PRESENTED FOR THE ANALYSIS OF CHLORINATED PESTICIDES IN THE PRESENCE OF POLYCHLORINATED BIPHENYLS (PCB'S). PCB'S ARE REMOVED BY PHOTOCHEMICAL DEGRADATION. THE METHOD WAS TESTED ON DIELDRIN, DDT, AND DDE; RESULTS ARE GIVEN. TOTAL ANALYSIS TIME FOR THIS METHOD IS LESS THAN 1 HOUR PER SAMPLE WITH PHOTOLYSIS CARRIED OUT OVER NIGHT. LOWER LIMITS OF PRACTICAL QUANTITATION ARE 0.5 PPM FOR POLYCHLORINATED BIPHENYLS AND 0.05 PPM FOR THE INDIVIDUAL CHLORINATED PESTICIDES.

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INDUSTRIES. AFTER REGULATIONS FORBIDDING THE USE OF MERCURY ARE ISSUED. SIMILAR DECREASES IN DIELDRIN CONCENTRATIONS IN FISH WERE OBSERVED AFTER DIELDRIN WAS BANNED FROM USE IN CERTAIN TEXTILE INDUSTRIES. A TOTAL BAN ON THE USE OF DDT IN SWEDEN (EXCEPT FOR VERY LIMITED CIRCUMSTANCES) HAS RESULTED IN A DECREASE IN DDT RESIDUES IN VEGETABLE FOODS AND HUMAN MILK. THE PCB LEVELS IN HUMAN MILK, THE MAIN SOURCE OF WHICH IS BALTIC FISH, HAS INCREASED.

38318 A3
CONTROL: NIOSH-00029095
ACCESS:
SOURCE:
AUTHOR: OSWALD, E. O., L. LEVY, B. J. COPPETT, AND M. P. WALKER
TITLE: DIFFERENTIATION AND CHARACTERIZATION OF ISOMERIC POLYCHLORINATED BIPHENYLS BY GAS-LIQUID CHROMATOGRAPHY COUPLED WITH ELECTRON IMPACT AND CHEMICAL IONIZATION MASS SPECTROMETRY
REFER1: JOURNAL OF CHROMATOGRAPHY, VOL. 93, NO. 1, PAGES 63-90, 31 REFERENCES
REFER2:
PUBDATE: 74/06/12

REPORT DESCRIBING THE UTILIZATION OF GAS-LIQUID CHROMATOGRAPHY COUPLED WITH CHEMICAL IONIZATION AND ELECTRON IMPACT MASS SPECTROMETRY FOR THE CHARACTERIZATION AND ISOMERIC DIFFERENTIATION OF POLYCHLORINATED BIPHENYLS (PCB'S) FROM NUMEROUS SOURCES. THE METHOD EMPLOYED IS FOUND TO BE A POWERFUL ANALYTICAL TOOL IN THE CLARIFICATION OF THE STRUCTURE OF NUMEROUS ISOMERIC CONTAMINANTS OF ORGANIC REACTIONS AND IN UNDERSTANDING THE POSSIBLE REACTION MECHANISMS OF SYNTHESES USED FOR THE PREPARATION OF PCB'S.

39198 A3
CONTROL: NIOSH-00045117
ACCESS:
SOURCE:
AUTHOR: EICHELBERGER, J. W., L. E. HARRIS, AND W. L. BUDDE
TITLE: ANALYSIS OF THE POLYCHLORINATED BIPHENYL PROBLEM
REFER1: ANALYTICAL CHEMISTRY, VOL. 46, NO. 2, PAGES 227-232, 10 REFERENCES
REFER2:
PUBDATE: 74/02/00

THE PROBLEM OF THE ANALYSIS OF THE POLYCHLORINATED BIPHENYLS, SPECIFICALLY THE APPLICATION OF GAS CHROMATOGRAPHY-MASS SPECTROMETRY WITH COMPUTER CONTROLLED REPETITIVE DATA ACQUISITION FROM SELECTED SPECIFIC IONS IS DISCUSSED. THE POLYCHLORINATED BIPHENYLS ARE A DIFFICULT-TO-ANALYZE CLASS OF ENVIRONMENTAL CONTAMINANTS BECAUSE OF THE LARGE NUMBER OF POSSIBLE INDIVIDUAL ISOMERS AND THEIR PHYSICAL AND CHEMICAL SIMILARITY TO THE CHLORINATED HYDROCARBON PESTICIDES. INDIVIDUAL MASS MONITORING TECHNIQUES WERE EXAMINED IN SEARCH OF A PROCEDURE WHICH IS SUFFICIENTLY SENSITIVE,

SEARCH FOR P FOLEY ON PCBS:

35597 A3
CONTROL: NIOSH-00041217
ACCESS:
SOURCE:
AUTHOR: FRIES, G. F., G. S. MARROW, JR., AND C. H. GORDON
TITLE: LONG-TERM STUDIES OF RESIDUE RETENTION AND EXCRETION BY COWS FED A POLYCHLORINATED BIPHENYL (AROCLOR 1254)
REFER1: JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, VOL. 21, NO. 1, PAGES 117-121, 17 REFERENCES
REFER2:
PUBDATE: 73/02/00

LONG-TERM EXPERIMENTAL STUDIES OF RESIDUE RETENTION AND EXCRETION BY COWS FED A POLYCHLORINATED BIPHENYL (AROCLOR 1254) WERE REPORTED. NINE COWS WERE FED 200 MG/DAY OF AROCLOR 1254 (PCB) FOR 60 DAYS. MILK AND BODY-FAT SAMPLES WERE OBTAINED DURING AND FOR 60 DAYS FOLLOWING FEEDING. CONCENTRATIONS OF PCB IN MILK FAT APPROACHED EQUILIBRIUM AFTER 40 DAYS. THE AVERAGE CONCENTRATION IN MILK FROM 40 TO 60 DAYS WAS 60.9 PLUS OR MINUS 8.5 MICROGRAMS/G FAT. CONCENTRATION IN BODY FAT WAS 41.7 PLUS OR MINUS 11.5 MICROGRAMS/G AT 60 DAYS. WHEN FEEDING STOPPED, CONCENTRATION IN MILK FAT DECLINED 50 PERCENT WITHIN 15 DAYS. AFTER 15 DAYS THE RATE OF THE FIRST-ORDER DECLINE IN CONCENTRATION WAS MUCH LESS. THE AVERAGE RATE CONSTANT WAS 0.010 DAY TO THE MINUS FIRST POWER AND VARIED AMONG COWS FROM 0.005 TO 0.016 DAY TO THE MINUS FIRST POWER. THE VARIATION COULD NOT BE RELATED TO SUCH PARAMETERS AS MILK-FAT PRODUCTION OR BODY-WEIGHT CHANGE. DECLINE IN CONCENTRATION OF PCB IN BODY FAT PARALLELED DECLINE IN CONCENTRATION OF PCB IN MILK FAT.

37501 A3
CONTROL: NIOSH-00040906
ACCESS:
SOURCE:
AUTHOR: WESTOEDE, G.
TITLE: CHANGES IN THE LEVELS OF ENVIRONMENTAL POLLUTANTS (HG, DDT, DIELDRIN, PCB) IN SOME SWEDISH FOODS
REFER1: AMBIO, VOL. 3, NO. 2, PAGES 79-83, 17 REFERENCES
REFER2:
PUBDATE: 74/00/00

DISCUSSED ARE CHANGES IN THE LEVELS OF CERTAIN ENVIRONMENTAL POLLUTANTS IN SOME SWEDISH FOODS AS THE RESULT OF THE ISSUING OF REGULATIONS DURING THE PAST TEN YEARS BY THE SWEDISH AUTHORITIES TO DIMINISH THE USE OF CERTAIN PERSISTENT PESTICIDES AND OTHER TOXIC COMPOUNDS, INCLUDING METHYLMERCURY COMPOUNDS, DDT, ALDRIN, AND DIELDRIN. REGULATIONS FORBIDDING THE USE OF METHYLMERCURY COMPOUNDS AS SEED DISINFECTANTS HAVE RESULTED IN A DECREASE IN THE MERCURY LEVELS IN FOODS OF ANIMAL ORIGIN (MEAT, EGGS) TO ROUGHLY 1/3-1/6 OF EARLIER LEVELS. MERCURY LEVELS IN FISH ALSO DECREASED IN WATER AREAS DOWNSTREAM FROM SEVERAL WOOD AND PAPER PULP

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VEHICLE OF ADMINISTRATION DID MAKE A DIFFERENCE IN LD50 VALUES, PROBABLY REFLECTING DIFFERING RATES OF ABSORPTION.

34497 A3
CONTROL: NIOSH-00024100
ACCESS:
SOURCE:
AUTHOR: HESSELBERG, R. J., AND D. D. SCHERP
TITLE: PCB'S AND P,P'-DDE IN THE BLOOD OF CACHECTIC PATIENTS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 3, PAGES 202-205, 12 REFERENCES
REFER2:
PUBDATE: 74/00/00

THE EFFECT OF SEVERE STRESS ON LEVELS OF LIPID-SOLUBLE ORGANO-CHLORINE COMPOUNDS IN THE VENOUS BLOOD IS STUDIED BY THE ANALYSIS OF SAMPLES FROM NINE PATIENTS HOSPITALIZED WITH SEVERE WASTING DISEASE. DATA ARE GIVEN FOR CONCENTRATIONS OF POLYCHLOROBIPHENYLS (PCB'S) AND P,P'-DDE IN VENOUS BLOOD OF BOTH GROUPS. DIAGNOSIS INDICATES METASTATIC CARCINOMA, MYELOFIBROSIS AND PNEUMONIA IN THE PATIENTS. NO PCB'S ARE DETECTED IN NONPATIENTS. CONCENTRATIONS OF DDE RESIDUES IN THE BLOOD ARE FOUND TO BE MUCH HIGHER IN PATIENTS THAN IN NONPATIENTS AND PCB CONCENTRATIONS HIGH ENOUGH TO BE HARMFUL. THE RESIDUES IN THE BLOOD ARE CONSIDERED TO BE THE RESULT OF CONTAMINATION IN FOOD PRIOR TO HOSPITALIZATION.

34626 A3
CONTROL: NIOSH-00024163
ACCESS:
SOURCE:
AUTHOR: MASUDA, Y. M., R. KAGAWA, AND M. KURATSUNE
TITLE: COMPARISON OF POLYCHLORINATED BIPHENYLS IN YUSHO PATIENTS AND ORDINARY PERSONS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 13, NO. 3, PAGES 213-216, 11 REFERENCES
REFER2:
PUBDATE: 74/03/00

POLYCHLORINATED BIPHENYL CONCENTRATIONS ARE DETERMINED IN THE ADIPOSE TISSUE AND MILK OF THE WESTERN JAPANESE AND IN PATIENTS AFFECTED BY YUSHO (A CONDITION DUE TO CHRONIC INGESTION OF RICE OIL CONTAMINATED WITH POLYCHLORINATED BIPHENYLS). GAS CHROMATOGRAPHY REVEALS THAT THE CONCENTRATION OF POLYCHLORINATED BIPHENYLS IN ADIPOSE TISSUE OF YUSHO PATIENTS IS SLIGHTLY HIGHER THAN IN ORDINARY INDIVIDUALS. THE FACT THAT EARLY PEAKS CORRESPONDING TO TETRACHLOROBIPHENYLS ARE VERY LOW AS COMPARED TO THE LATER PEAKS SUGGESTS THAT THE AMOUNTS OF POLYCHLORINATED BIPHENYLS IN THE BODY OF YUSHO PATIENTS ARE VERY MUCH DECREASED ONE YEAR AFTER THE ACCIDENT. THE SAME PEAK, PROBABLY DUE TO HEXACHLOROBIPHENYL OR HEPTACHLOROBIPHENYL, IS NOTED IN THE RICE OIL CONTAMINATED WITH KANECHLOR-400 AND INGESTED BY THE YUSHO PATIENTS.

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REFER2:
PUBDATE: 71/00/00

EFFECTS OF PCB (POLYCHLORINATED BIPHENYL) ADMINISTRATION ON MICROSOMAL ENZYME ACTIVITY IN PREGNANT RABBITS HAVE BEEN EXPERIMENTALLY DETERMINED AND REPORTED. BOTH BIOCHEMICAL AND PHYSIOLOGICAL EFFECTS ON RABBITS AND FETUSES WERE DETERMINED. PCB'S USED IN THE TESTS WERE AROCLOR 1221 AND AROCLOR 1254. THERE WAS NO SIGNIFICANT DIFFERENCE BETWEEN CONTROLS AND TREATED GROUPS IN BODY WEIGHT GAIN OR NUMBER OF FETUSES PER LITTER, NOR WAS THERE ANY NOTICEABLE EFFECT ON FETAL LIVER OR PLACENTAL WET WEIGHTS. THE ONLY SIGNIFICANT CHANGES NOTED WERE INCREASED DAM LIVER WEIGHTS FROM AROCLOR 1254 TREATMENT. THE CONCENTRATION OF LIVER VITAMIN A WAS LOWER IN ANIMALS RECEIVING AROCLOR 1254, BUT NO SIGNIFICANT DIFFERENCES WERE OBSERVED IN THE TOTAL AMOUNT OF VITAMIN A STORED PER LIVER. CERTAIN LEVELS OF AROCLOR 1221 INCREASED VITAMIN A STORAGE. THERE WAS NO EFFECT OF PCB ADMINISTRATION ON PROTEIN LEVELS IN MATERNAL AND FETAL LIVER HOMOGENATES. CARBOXYESTERASE ACTIVITY WAS SIGNIFICANTLY INCREASED BY AROCLOR 1254 IN MATERNAL LIVER HOMOGENATES ONLY. PARATHION DEGRADATION ABILITY WAS SIGNIFICANT IN ANIMALS TREATED WITH AROCLOR 1254 AT THE HIGHER DOSE (10 MG/KG BODY WEIGHT). LIVER ANILINE HYDROXYLASE AND AMINOPYRINE N-DEMETHYLASE ENZYME ACTIVITIES WERE INCREASED ONLY IN ANIMALS TREATED WITH AROCLOR 1254 AT THE HIGHER DOSE. RESULTS CONTRIBUTE TO KNOWLEDGE OF PESTICIDE INTOXICATION AS AFFECTING REPRODUCTIVE PROCESSES.

34100 A3
CONTROL: NIOSH-00066026
ACCESS:
SOURCE:
AUTHOR: LEVIN, V., W. A. MCCLAIN, AND F. H. WOLFE
TITLE: ACUTE INTRAPERITONEAL TOXICITY OF DDT AND PCB'S IN MICE USING TWO SOLVENTS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 8, PAGES 245-250, 29 REFERENCES
REFER2:
PUBDATE: 72/00/00

ACUTE INTRAPERITONEAL TOXICITY OF DDT AND POLYCHLORINATED BIPHENYL COMPOUNDS (PCB'S) IN MICE USING TWO SOLVENTS (DIMETHYL SULFOXIDE (DMSO) AND CORN OIL) WAS EXPERIMENTALLY DETERMINED. THE COMPOUNDS TESTED WERE SPECIFICALLY P,P'-DDT AND AROCLOR 1254, THE LATTER CHOSEN AS A REPRESENTATIVE MIXTURE OF PCB ISOMERS. ACUTE INTRAPERITONEAL 5 DAY LD50 VALUES FOR ADMINISTRATION OF P,P'-DDT AND AROCLOR 1254 IN CORN OIL WERE 200 MG/KG AND 2,840 MG/KG WITH DOSING AT 100 MG/ML AND 250 MG/ML, RESPECTIVELY, USING ONLY THE ALAS MOUSE STRAIN. ACUTE INTRAPERITONEAL 5 DAY LD50 VALUES IN MG/KG FOR ADMINISTRATION OF THE COMPOUNDS IN DMSO WERE 960 (ALAS), 800 (BALB), 730 (CBA), 980 (C57), 850 (WILD MUS), AND 1,200 (PEROMYSCUS) (P,P'-DDT AT 250 MG/ML SOLUTION CONCENTRATION); AND 1,200 (ALAS), 1,000 (BALB), 850 (CBA), 1,000 (C57), AND 970 (PEROMYSCUS) (AROCLOR 1254 AT 250 MG/ML SOLUTION CONCENTRATION). RESULTS INDICATE THAT THE

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AND B. FRAGILIS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 3, PAGES 296-300, 20 REFERENCES
REFER2:
PUBDATE: 74/00/00

BACTERIOLOGICAL STUDY OF THE EFFECTS OF .01 AND .1 PPM DDT AND PCB ON LIPID METABOLISM OF ESCHERICHIA COLI AND BACTEROIDES FRAGILIS, PRINCIPAL HUMAN ENTERIC AEROBIC AND ANAEROBIC BACTERIA, REVEALS NO SIGNIFICANT ALTERATION IN TOTAL LIPID LEVELS, ALTHOUGH PCB SIGNIFICANTLY DEPRESSES LIPID SYNTHESIS IN B. FRAGILIS. THESE FINDINGS SUGGEST THAT THE CARDIOVASCULAR DISEASE FACTOR ASSOCIATED WITH PCB AND DDT IS NOT DUE TO INCREASED LIPID ANABOLISM BY ENTERIC BACTERIA. DDT IS FOUND TO BE CONVERTED PRIMARILY TO DDD, A METABOLITE EASILY HYDROXYLATED AND EXCRETED IN URINE, DEMONSTRATING THAT E. COLI AND B. FRAGILIS ARE CAPABLE OF PARTICIPATING IN THE DEGRADATION OF DDT.

33080 A3
CONTROL: NIOSH-00031331
ACCESS:
SOURCE:
AUTHOR: PARDINI, R. S.
TITLE: POLYCHLORINATED BIPHENYLS (PCB): EFFECT ON MITOCHONDRIAL ENZYME SYSTEMS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 6, PAGES 539-545, 18 REFERENCES
REFER2:
PUBDATE: 71/00/00

THE EFFECT OF POLYCHLORINATED BIPHENYLS (PCB'S) ON MITOCHONDRIAL ENZYME SYSTEMS HAS BEEN EXPERIMENTALLY INVESTIGATED, WITH SPECIFIC ATTENTION TO NADH-OXIDASE AND SUCCINOXIDASE SYSTEMS IN HEAVY BEEF HEART MITOCHONDRIA (HBHM). ALL THE PCB'S TESTED PROVED TO BE INHIBITORY TO THE NADH(REDUCED NICOTINAMIDE-ADENINE DINUCLEOTIDE)-OXIDASE SYSTEM AND TO THE SUCCINOXIDASE SYSTEM. PCB'S TESTED INCLUDED AROCHLOR 1221, AROCHLOR 1232, AROCHLOR 1242, AROCHLOR 1248, AROCHLOR 1254, AROCHLOR 1260, AROCHLOR 1262, AND AROCHLOR 5442. DATA SERVE TO DEMONSTRATE THE TOXIC NATURE OF THE PCB INSECTICIDES IN VITRO, ALTHOUGH IN VIVO STUDIES HAVE NOT BEEN CARRIED OUT.

33089 A3
CONTROL: NIOSH-00031342
ACCESS:
SOURCE:
AUTHOR: VILLENEUVE, D. C., D. L. GRANT, W. E. J. PHILLIPS, M. L. CLARK, AND D. J. CLEGG
TITLE: EFFECTS OF PCB ADMINISTRATION ON MICROSOMAL ENZYME ACTIVITY IN PREGNANT RABBITS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 2, PAGES 120-126, 22 REFERENCES

SEARCH FOR P FOLEY ON PCBS;

32617 A3
CONTROL: NIOSH-00026715
ACCESS:
SOURCE:
AUTHOR: HARVEY, G. R., AND W. G. STEINHAUER
TITLE: ATMOSPHERIC TRANSPORT OF POLYCHLOROBIPHENYLS TO THE NORTH ATLANTIC
REFER1: ATMOSPHERIC ENVIRONMENT, VOL. 8, PAGES 777-782, 13 REFERENCES
REFER2:
PUBDATE: 74/00/00

CONCENTRATIONS OF POLYCHLORODIPHENYLS ARE MEASURED CHROMATOGRAPHICALLY IN THE ATMOSPHERE OVER THE WESTERN NORTH ATLANTIC, BY EXTRACTING BOTH THE PARTICULATE AND VAPOR PHASES. THE CONCENTRATION OF POLYCHLOROBIPHENYLS IN THE AIR IS FOUND TO DECREASE EXPONENTIALLY WITH DISTANCE FROM LAND. THE RESULTS SUGGEST THAT WIND TRANSPORT IS THE MAJOR SOURCE OF CHLORINATED HYDROCARBONS IN THE OCEANS.

32629 A3
CONTROL: NIOSH-00026962
ACCESS:
SOURCE:
AUTHOR: HIRWE, S. N., R. E. BORCHARD, L. G. HANSEN, AND R. L. METCALF
TITLE: GAS-LIQUID CHROMATOGRAPHY - MASS SPECTROMETRIC CHARACTERIZATION OF AROCLOR 1242 AND 1254 COMPONENTS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 2, PAGES 138-144, 10 REFERENCES
REFER2:
PUBDATE: 74/00/00

A GAS CHROMATOGRAPHY AND MASS SPECTROSCOPY METHOD IS DEVELOPED FOR STUDY OF THE TOXICITY OF POLYCHLOROBIPHENYL OR PCB INVOLVING DETERMINATION OF THE CHLORINE CONTENT. THE METHOD IS APPLIED TO AROCLOR 1242 AND AROCLOR 1254, WITH CONFIRMATION BY THERMAL CONDUCTIVITY AND MASS SPECTROSCOPY TRACINGS, TO DETERMINE THE POLYCHLORODIPHENYL CONTENT OF EACH AROCLOR. THE METHOD IS CITED AS ADEQUATE FOR ESTABLISHING THE TOXIC HAZARDS OF LOW LEVEL PCB INTAKE, THE RATES OF ACCUMULATION AND DEPLETION OF RESIDUES, AND THE MOST OFFENSIVE AND PERSISTENT COMPONENTS OF THE COMPLEX PCB MIXTURES INTRODUCED INTO THE ENVIRONMENT.

32672 A3
CONTROL: NIOSH-00026940
ACCESS:
SOURCE:
AUTHOR: GREER, D. E., J. L. KEIL, L. W. STILLWAY, AND S. H. SANDIFER
TITLE: THE EFFECT OF DDT AND PCB ON LIPID METABOLISM IN E. COLI

SEARCH FOR P FOLEY ON PCBS)

THE DIRECT FLUORESCENT ANTIBODY TECHNIQUE. BOTH THESE TECHNIQUES SEEMED TO BE SENSITIVE PARAMETERS FOR THE IMMUNOSUPPRESSIVE ACTION OF PCB IN THE TETANUS TOXOID-STIMULATED ANIMALS. IN THE UNSTIMULATED GUINEA PIGS NO SUPPRESSIVE ACTIVITY COULD BE FOUND. OTHER PARAMETERS, SUCH AS LEUKOCYTE COUNTS, WEIGHTS OF THYMUS, SPLEEN AND LYMPH NODES AND NUMBER OF FOLLICLES AND PYRONINOPHILIC CELLS, WERE IN GENERAL NOT SENSITIVE ENOUGH TO DETECT AN EFFECT OF PCB FEEDING. ABSENCE OF EFFECTS ON WEIGHT AND HISTOMORPHOLOGY OF THYMUS AND ADRENAL GLAND INDICATED THAT NOT STRESS BUT PCB ITSELF WAS RESPONSIBLE FOR THE IMMUNOSUPPRESSIVE ACTIVITY.

28150 A3
CONTROL: NIOSH-00031732
ACCESS:
SOURCE:
AUTHOR: CURLEY, A., V. W. BURSE, V. E. GRIM, R. W. JENNINGS, AND R. E. LINDER
TITLE: POLYCHLORINATED BIPHENYLS: DISTRIBUTION AND STORAGE IN BODY FLUIDS AND TISSUES OF SHERMAN RATS
REFER1: ENVIRONMENTAL RESEARCH, VOL. 4, PAGES 481-495, 39 REFERENCES
REFER2:
PUBDATE: 71/00/00

AN ANALYTICAL METHOD FOR DETERMINATION OF A POLYCHLORINATED BIPHENYL (PCB), AROCLOR 1254, IN BLOOD URINE, FECES, AND TISSUES OF EXPERIMENTAL SHERMAN STRAIN RATS AFTER PROLONGED DIETARY INTAKE (100, 500, AND 1000 PPM) IS PRESENTED. THE METHOD INVOLVES HOMOGENIZATION AND EXTRACTION WITH HEXANE, CLEANUP ON A SILICA GEL MICROCOLUMN AND ANALYSIS BY ELECTRON-CAPTURE GAS-LIQUID CHROMATOGRAPHY. RECOVERY DATA ARE SHOWN AT 0.1, 5, 10, AND 100 PPM. MASS SPECTROSCOPIC CHARACTERISTICS OF PCB IN TISSUES ARE GIVEN. DISTRIBUTION, STORAGE, AND EXCRETION RATES DURING FEEDING AND AFTER DISCONTINUANCE OF PCB IN THE DIET ARE PRESENTED. THE FOLLOWING GENERALIZATIONS CAN BE DRAWN FROM THE DATA PRESENTED: 1. FOLLOWING DOSAGE WITH AROCLOR 1254 OR 1260, WHETHER ACUTE OR CHRONIC, RESIDUE AMOUNTS CAN BE DETECTED IN ALL BODY TISSUES, FLUIDS, AND EXCREMENT; 2. AT THE SAME DOSAGE LEVELS RATS STORE MORE PCB'S THAN DDT; 3. NO SIGNIFICANT DIFFERENCE IS APPARENT IN THE STORAGE OF PBC'S BY MALE OR FEMALE RATS WHEN FED THE SAME DIETARY LEVELS; 4. PCB'S ARE STORED PRIMARILY IN ADIPOSE TISSUE; AND 5. SINCE THERE WAS NO RECURRENCE OF THE GENERAL AROCLOR PATTERN IN THE GAS CHROMATOGRAMS OR TOTAL ION CURRENT TRACES OF THE MASS SPECTROMETER BETWEEN THE AROCLOR STANDARDS AND COMPONENTS OBSERVED IN THE FAT OF URINE, POSSIBLE METABOLISM OR DIFFERENTIAL ABSORPTION IS SUGGESTED.

28412 A3
CONTROL: NIOSH-00030012
ACCESS: NONS 207430
SOURCE:
AUTHOR: ABRAHAMSON, L. J., AND J. R. ALLEN

RCH FOR P FOLEY ON PCBS;

IN ORDER TO DETERMINE THE EFFECT OF POLYCHLORINATED PHENYLS (PCB'S) ON THE EGGSHELLS OF RING DOVES, ONE GROUP OF RING ES (STREPTOPELIA RISORIA) WAS FED A DIET CONTAINING 10 PPM DCHLOR 1254 FOR SIX MONTHS AND THE ASHED EGGSHELL WEIGHTS COMPARED THOSE FROM A GROUP OF CONTROL BIRDS. NO CONSISTENT CHANGES IN GSHELL WEIGHTS WERE NOTED OVER THIS PERIOD, NOT DID THE FIRST AND OND EGG OF THE CLUTCH DIFFER SIGNIFICANTLY. IN ORDER TO OVERCOME E EFFECT OF INDIVIDUAL VARIATION, A SECOND EXPERIMENT WAS PERFORMED WHICH EGGS WERE COLLECTED FROM THE INDIVIDUAL BIRDS UNDER STUDY TH BEFORE AND AFTER BEING PUT ON A DIET CONTAINING 10 PPM PCB'S. THE THIRD EXPERIMENT, 25 MG PCB'S (EQUIVALENT TO 160 MG/KG) WERE JECTED INTRAPERITONEALLY ONE TO FOUR DAYS BEFORE EGG-LAYING AND HED EGGSHELL WEIGHTS COMPARED TO THOSE OF EGGS LAID BY THE SAME DIVIDUAL BEFORE INJECTION. PREVIOUS EXPERIMENTS HAD SHOWN THAT JECTION OF THE CARRIER ALONE WAS WITHOUT EFFECT. THE RESULTS ARE MMARIZED) IT IS CLEAR NO EFFECT WAS OBSERVED. IT IS CONCLUDED THAT CB'S DO NOT PLAY A SIGNIFICANT ROLE IN THE PHENOMENA OF EGGSHELL HINNING.

0217 A3
ONTROL: NIOSH-00027814
CCESS:
OURCE:
UTHOR: SUNDSTROM, G.
ITLE: POLYCHLORINATED BIPHENYLS II. SYNTHESIS OF SOME TETRA- AND PENTACHLOROBIPHENYLS
EFER1: ACTA CHEMICA SCANDINAVICA, VOL. 27, NO. 2, PAGES 600-604, 19 REFERENCES
EFER2:
UBDATE: 73/00/00

A METHOD IS DESCRIBED FOR THE SYNTHESIS OF 3 SYMMETRICALLY ND 15 UNSYMMETRICALLY SUBSTITUTED TETRACHLOROBIPHENYLS AND PENTACHLOROBIPHENYLS, OF INTEREST AS REFERENCE COMPOUNDS IN ANALYTICAL WORK ON ENVIRONMENTAL POLLUTANTS. PHYSICAL CHARACTERISTICS ARE GIVEN FOR THE COMPOUNDS, INCLUDING RELATIVE RETENTION TIMES IN GAS-LIQUID CHROMATOGRAPHY AND OCCURRENCE IN COMMERCIAL POLYCHLORINATED BIPHENYL MIXTURES.

30830 A3
CONTROL: NIOSH-00027307
ACCESS:
SOURCE:
AUTHOR: STAIFF, D. C., G. E. QUINBY, D. L. SPENCER, AND H. G. STARR, JR.
TITLE: POLYCHLORINATED BIPHENYL EMISSIONS FROM FLUORESCENT LAMP BALLASTS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION & TOXICOLOGY, VOL. 12, NO. 4, PAGES 455-461, 9 REFERENCES
REFER2:
PUBDATE: 74/00/00

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TESTS ARE CARRIED OUT UNDER SEVERAL EXPERIMENTAL CONDITIONS TO DETERMINE IF POLYCHLORINATED BIPHENYLS ARE EMITTED IN THE AIR WHEN FLUORESCENT LIGHT BALLASTS BURN OUT, TO DETERMINE WHICH COMPOUNDS ARE INVOLVED, TO EXPLORE THE ANALYTICAL PROBLEMS ENCOUNTERED IN ANALYSES, AND TO QUANTITATE EMISSIONS AT DIFFERENT DISTANCES FROM THE BALLASTS. RESULTS SHOW THAT POLYCHLORINATED BIPHENYLS ARE EMITTED DURING BURNOUT OF CERTAIN TYPES OF BALLASTS CONTAINED IN FLUORESCENT LIGHT UNITS. ALTHOUGH THE LEVELS DETECTED IN THE AIR ARE NOT HAZARDOUS TO PERSONS WORKING IN A CONTAMINATED AREA, THE POLYCHLORINATED BIPHENYLS MAY BE UNDESIRABLE CONTAMINANTS IN CERTAIN LABORATORIES.

31046 A3
CONTROL: NIOSH-000027L6
ACCESS:
SOURCE:
AUTHOR: LIEB, A. J., AND D. D. BILLS
TITLE: INFLUENCE OF STORAGE TEMPERATURE OF FLORISIL ON ANALYSIS OF POLYCHLORINATED BIPHENYLS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 3, 2 REFERENCES
REFER2:
PUBDATE: 74/09/00

THE GAS CHROMATOGRAPHIC PEAKS FOR POLYCHLORINATED BIPHENYLS (PCB) ARE FOUND TO DISAPPEAR OR TO BE REDUCED IN SIZE AFTER EXTRACTION FROM LIPIDS. THE PHENOMENON, PREVIOUSLY ATTRIBUTED TO METABOLISM OF PCB COMPONENTS, IS RELATED IN TESTS ON AROCLOR 1254 TO ABSORPTION BY FLORISIL IN THE COLUMN WHICH HAD BEEN STORED AT 130 DEGREES CENTIGRADE RATHER THAN AT ROOM TEMPERATURE.

31057 A3
CONTROL: NIOSH-00027L72
ACCESS:
SOURCE:
AUTHOR: MUSIAL, C. J., D. HUTZINGER, V. ZITKO, AND J. CROCKER
TITLE: PRESENCE OF PCB, DDE AND DDT IN HUMAN MILK IN THE PROVINCES OF NEWBRUNSWICK AND NOVA SCOTIA, CANADA
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 12, NO. 3, PAGES 258-267, 20 REFERENCES
REFER2:
PUBDATE: 74/00/00

GAS CHROMATOGRAPHY ANALYSIS OF LEVELS OF P,P-DDE, P,P'-DDT, AND PCB AS AROCHLOR 1254 IN HUMAN MILK IN NEW BRUNSWICK AND NOVA SCOTIA INDICATES THAT DDT AND DDE LEVELS ARE HIGHER IN NEW BRUNSWICK BECAUSE OF THE WIDER USE OF INSECTICIDE SPRAYS IN THE PAST. PCB LEVELS ARE SIMILAR IN BOTH PROVINCES. THE STUDY INVOLVED ONLY 15 SAMPLES, INDICATING THE NEED FOR MORE DATA BEFORE SIGNIFICANT DIFFERENCES ARE ESTABLISHED.

NONS 207432

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TITLE: THE BIOLOGICAL RESPONSE OF INFANT NONHUMAN PRIMATES TO A POLYCHLORINATED BIPHENYL
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, PAGES 81-85, 13 REFERENCES
REFER2:
PUBDATE: 73/06/00

THE BIOLOGICAL RESPONSE OF INFANT NONHUMAN PRIMATES TO A POLYCHLORINATED BIPHENYL (AROCLOR 1248) IS DISCUSSED. THE DATA PRESENTED INDICATE THAT THE INFANT MONKEY IS ABLE TO TOLERATE DOSES OF THE PCBS THAT PRODUCE EXTREME MORBIDITY IN ADULT MONKEYS. THE PRECISE REASON FOR THIS VARIATION IN RESPONSE IS UNCLEAR. THERE HAVE BEEN A NUMBER OF POSSIBILITIES PROPOSED, SUCH AS VARIATION IN ABSORPTION, METABOLISM, STORAGE, OR EXCRETION OF THE PCBS BY ADULT AND INFANT MONKEYS.

28979 A3
CONTROL: NIOSH-00032143
ACCESS:
SOURCE:
AUTHOR: ASAI, R. I., F. A. GUNTHER, W. E. WESTLAKE, AND Y. IWATA
TITLE: DIFFERENTIATION OF POLYCHLORINATED BIPHENYLS FROM DDT BY CARBON-SKELETON CHROMATOGRAPHY
REFER1: JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, VOL. 19, PAGES 396-398, 6 REFERENCES
REFER2:
PUBDATE: 71/00/00

APPLICATION OF CARBON-SKELETON CHROMATOGRAPHY TO THE QUALITATIVE DIFFERENTIATION BETWEEN POLYCHLORINATED BIPHENYLS (PCBS) AND DDT IS DEMONSTRATED. PCBS AND BIPHENYL YIELD IDENTICAL CARBON-SKELETON CHROMATOGRAMS THAT ARE STRIKINGLY DIFFERENT FROM THAT OF DDT. COMPARISONS OF THE RELATIVE RETENTION TIMES OF PRODUCTS YIELDED BY THE PCBS WITH KNOWN COMPOUNDS, PLUS PARTIAL IDENTIFICATION BY THEIR ULTRAVIOLET SPECTRA, SUGGESTED THAT THE PRODUCTS FORMED AT 300 DEGREES CENTIGRADE CATALYST TEMPERATURE WERE CYCLOHEXYLBENZENE AND BIPHENYL, AND AT 260 DEGREES CENTIGRADE WERE CYCLOHEXYLBENZENE AND A SMALL AMOUNT OF BICYCLOHEXYL.

29016 A3
CONTROL: NIOSH-00031384
ACCESS:
SOURCE:
AUTHOR: PEAKALL, D. B.
TITLE: EFFECT OF POLYCHLORINATED BIPHENYLS (PCB'S) ON THE EGGSHELLS OF RING DOVES
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 2, PAGES 100-101, 7 REFERENCES
REFER2:
PUBDATE: 71/00/00

REFER1: TOXICOLOGY AND APPLIED PHARMACOLOGY, VOL. 23, NO. 1, PAGES 112-122, 23 REFERENCES
REFER2:
PUBDATE: 72/00/00

AN EXPERIMENTAL EVALUATION OF THE EFFECT OF POLYCHLORINATED BIPHENYL (PCB) MIXTURES ON HEPATIC MICROSOMAL ENZYMES IN THE RAT. RATS WERE FED DIETS CONTAINING 4 DIFFERENT AROCLORS (AROCLOR 1242, AROCLOR 1245, AROCLOR 1254, AROCLOR 1260) VARYING IN CHLORINE CONTENT FROM 42 TO 60% FOR 4 WEEKS AT LEVELS OF 0.5, 5, 50, AND 500 PPM. THE INFLUENCE OF PCB WAS STUDIED BY DETERMINING LIVER WEIGHTS, HEPATIC TRIGLYCERIDE CONCENTRATION AND GLUCOSE-6-PHOSPHATASE ACTIVITY, MICROSOMAL ENZYME ACTIVITIES (NITROREDUCTION, DEMETHYLATION AND HYDROXYLATION) AND MICROSOMAL CYTOCHROME P-450 CONTENT. LIVER-TO-BODY WEIGHT RATIOS AND CYTOCHROME P-450 CONTENT WERE SIGNIFICANTLY INCREASED AT 50 AND 500 PPM FOR ALL PCB MIXTURES; THE INCREASE IN CYTOCHROME P-450 WAS SOMEWHAT GREATER, WITH INCREASING CHLORINE CONTENT. SIGNIFICANT INCREASES IN LIVER TRIGLYCERIDES WERE SEEN AT 500 PPM, WITH A MAXIMUM EFFECT OCCURRING AT APPROXIMATELY 50% CHLORINE CONTENT. A DOSE-RELATED INCREASE IN DEMETHYLASE ACTIVITY WAS OBSERVED, WITH A 2.5- TO 3-FOLD INCREASE OVER CONTROL VALUES AT 500 PPM FOR ALL MIXTURES. EFFECTS WERE MAXIMUM AT APPROXIMATELY 50% CHLORINE CONTENT. A DOSE-RELATED INCREASE IN PENTOBARBITAL HYDROXYLATION WAS SEEN, AND THE INDUCTION OF HYDROXYLATION INCREASED WITH INCREASING CHLORINE CONTENT. NITROREDUCTASE ACTIVITY WAS MARKEDLY STIMULATED WITH INCREASING DOSES OF PCB, AND INDUCTION WAS SEEN AT LEVELS AS LOW AS 0.5 PPM FOR ALL MIXTURES. THE MAXIMAL EFFECT APPEARS TO BE AT LEVELS HIGHER THAN 500 PPM. THE HIGHEST LEVELS OF ACTIVITY WERE SEEN WITH 60% CHLORINATION.

26189 A3
CONTROL: NIOSH-00031731
ACCESS:
SOURCE:
AUTHOR: VOS, J. G., AND T. DE ROIJ
TITLE: IMMUNOSUPPRESSIVE ACTIVITY OF A POLYCHLORINATED BIPHENYL PREPARATION ON THE HUMORAL IMMUNE RESPONSE IN GUINEA PIGS
REFER1: TOXICOLOGY AND APPLIED PHARMACOLOGY, VOL. 21, NO. 4, PAGES 549-555, 21 REFERENCES
REFER2:
PUBDATE: 72/00/00

AN EXPERIMENTAL INVESTIGATION OF THE IMMUNOSUPPRESSIVE ACTIVITY OF A POLYCHLORINATED BIPHENYL (PCB) PREPARATION ON THE HUMORAL IMMUNE RESPONSE IN GUINEA PIGS. THREE GROUPS OF 12 FEMALE ALBINO GUINEA PIGS WERE FED 0, 10, AND 50 PPM AROCLOR 1260 (PCB) FOR 8 WEEKS. IN HALF OF THE ANIMALS A FUNCTION TEST OF THE IMMUNOLOGICAL SYSTEM WAS CARRIED OUT: TETANUS TOXOID INJECTION WAS USED TO STUDY THE HUMORAL RESPONSE. AT THE END OF THE EXPERIMENT CELLULOSE ACETATE ELECTROPHORESIS WAS USED TO DETERMINE THE SERUM PROTEINS, INCLUDING THE GAMMA GLOBULIN LEVEL. THE NUMBER OF GAMMA GLOBULIN-CONTAINING CELLS IN POPLITEAL LYMPH NODES WAS DETERMINED SEMIQUANTITATIVELY WITH

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ORGANOPHOSPHORUS INSECTICIDES AFTER SIMULTANEOUS EXPERIMENTAL TOPICAL APPLICATIONS TO HOUSEFLIES. BOTH P,P'-DDT AND P,P'-DDE, APPLIED AT SUBLETHAL DOSES, ALSO INCREASED THE TOXICITY OF PARAOXON. THE PCB APPLIED SIMULTANEOUSLY WITH PARATHION DECREASED THE TOXICITY OF PARATHION TO HOUSE FLIES BUT INCREASED MORTALITIES WHEN APPLIED TO FLIES 0.5 HOUR AFTER APPLICATION OF THE INSECTICIDE. AROCLOR 1248 APPARENTLY INHIBITED THE CONVERSION OF PARATHION TO ITS TOXIC ACTIVATION PRODUCT, PARAOXON, AND THE BREAKDOWN OF PARAOXON INTO NONTOXIC COMPOUNDS. THIS WAS ALSO INDICATED BY RECOVERY OF LARGER AMOUNTS OF 14C-PARAOXON AND SMALLER AMOUNTS OF WATER SOLUBLE 14C-PRODUCTS FROM FLIES TREATED SIMULTANEOUSLY WITH AROCLOR 1248 PLUS PARAOXON IN COMPARISON TO THOSE TREATED WITH 14C-PARAOXON ONLY. IT IS RECOMMENDED THAT SINCE PCBS ARE IN THE ENVIRONMENT, THEIR POTENTIAL EFFECTS ON BIOLOGICAL SYSTEMS, ESPECIALLY IN COMBINATION WITH OTHER SYNTHETIC CHEMICALS, SHOULD NOT BE DISREGARDED. OTHER INSECTICIDES UTILIZED IN THE STUDY WERE AZINPHOSMETHYL, DIAZINON, DYFONATE, AND MALATHION IN THEIR OXYGEN ANALOGS.

27499 A3
CONTROL: NIOSH-00031353
ACCESS:
SOURCE:
AUTHOR: VOS, R. H. DE, AND C. W. PEET
TITLE: THIN-LAYER CHROMATOGRAPHY OF POLYCHLORINATED BIPHENYLS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 2, PAGES 160-170, 6 REFERENCES
REFER2:
PUBDATE: 71/00/00

THIN-LAYER CHROMATOGRAPHY OF POLYCHLORINATED BIPHENYLS (PCB'S) USING REVERSED PHASE PARTITION PROCEDURES HAS BEEN DESCRIBED AS A SATISFACTORY METHOD FOR THE SEPARATION OF THE COMPONENTS OF A PCB MIXTURE, AND CAN BE USED IN COMBINATION WITH GAS CHROMATOGRAPHY FOR THE STUDY OF THE COMPOSITION OF PCB RESIDUES. SUCH AN ASSAY TECHNIQUE IS PARTICULARLY USEFUL IN DETERMINING PCBS IN FATTY ANIMAL TISSUES, SUCH AS IN THE MEASUREMENT OF RESIDUE ACCUMULATION IN WILDLIFE SAMPLES. ONLY THE FUNGICIDE HEXACHLOROBENZENE SERIOUSLY INTERFERES WITH THIS METHOD OF DETERMINATION. THE METHOD WAS TESTED IN DETERMINATIONS OF PHENOCHLOR DP6, AROCLOR 1260, AND CLOPHEN A 60, AS WELL AS TECHNICAL MIXTURES OF BIPHENYLS SUCH AS PENTACHLOROBIPHENYLS, HEXACHLOROBIPHENYLS, HEPTACHLOROBIPHENYLS, AND OCTACHLOROBIPHENYLS.

28147 A3
CONTROL: NIOSH-00031729
ACCESS:
SOURCE:
AUTHOR: LITTERST, C. L., T. M. FARBER, A. M. BAKER, AND E. J. VAN LOON
TITLE: EFFECT OF POLYCHLORINATED BIPHENYLS ON HEPATIC MICROSOMAL ENZYMES IN THE RAT

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27260 A3
CONTROL: NIOSH-00030806
ACCESS:
SOURCE:
AUTHOR: PEAKALL, D. B.
TITLE: POLYCHLORINATED BIPHENYLS: OCCURRENCE AND BIOLOGICAL EFFECTS
REFER1: RESIDUE REVIEWS: RESIDUES OF PESTICIDES AND OTHER FOREIGN CHEMICALS IN FOODS AND FEEDS, VOL. 44, PAGES 1-22, 75 REFERENCES
REFER2:
PUBDATE: 72/00/00

THE OCCURRENCE AND BIOLOGICAL EFFECTS OF POLYCHLORINATED BIPHENYLS (PCB'S) ARE REVIEWED. SECTIONS INCLUDED DISCUSS ENVIRONMENTAL LEVELS OF PCB'S IN NORTH AMERICA AND EUROPE, THEIR INPUT AND TRANSPORT IN THE ENVIRONMENT, THEIR METABOLISM, THEIR TOXICITY (ACUTE TOXICITY, FEEDING EXPERIMENTS, TISSUE LEVELS, PATHOLOGICAL AND PHYSIOLOGICAL EFFECTS, REPRODUCTIVE EFFECTS), AND THEIR RELATIONSHIP TO HUMAN HEALTH. PCB'S HAVE BEEN SHOWN TO BE WIDESPREAD IN THE ENVIRONMENT. THE LEVELS FOUND TEND TO PARALLEL TOTAL DDT IN CONCENTRATION AND PCB'S ARE FREQUENTLY THE DOMINANT ORGANOCHLORINE COMPOUNDS KNOWN TO BE PRESENT. SINCE PCB'S ARE HIGHLY STABLE, THEY CAN BE EXPECTED TO PERSIST IN THE ENVIRONMENT FOR MANY YEARS. THE ACTION OF THE MONSANTO COMPANY IN PROMPTLY RESTRICTING THE USE OF THESE MATERIALS TO CLOSED CIRCUITS SHOULD GREATLY REDUCE THE INPUT OF PCB'S INTO THE ENVIRONMENT IN NORTH AMERICA. IT IS HOPED THAT COMPANIES OUTSIDE THE UNITED STATES WILL FOLLOW SUIT. THE ACUTE TOXICITY OF PCB'S IS LOW ALTHOUGH IMPURITIES SUCH AS THE CHLORINATED DIBENZOFURANS ARE HIGHLY TOXIC. PRELIMINARY EXPERIMENTAL RESULTS SUGGEST THAT PCB'S ARE EMBRYOTOXIC IN THE 10 PPM RANGE IN THE DIET. WHILE DEFINITE WORK ON MAMMALS REMAINS TO BE CARRIED OUT, THE INDICATIONS ARE THAT THE DECISION TO LIMIT ENVIRONMENTAL INPUT IS A WISE ONE.

27390 A3
CONTROL: NIOSH-00030827
ACCESS:
SOURCE:
AUTHOR: FUHRMANN, T. W., AND E. P. LICHTENSTEIN
TITLE: INCREASE IN THE TOXICITY OF ORGANOPHOSPHORUS INSECTICIDES TO HOUSE FLIES DUE TO POLYCHLORINATED BIPHENYL COMPOUNDS
REFER1: TOXICOLOGY AND APPLIED PHARMACOLOGY (PAPER PRESENTED AT THE NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES MEETING ON POLYCHLORINATED BIPHENYLS, DECEMBER 20-21, 1971), VOL. 22, PAGES 628-640, 18 REFERENCES
REFER2:
PUBDATE: 72/00/00

THE POLYCHLORINATED BIPHENYL (PCB) AROCLOR 1268, ALTHOUGH NONTOXIC BY ITSELF TO HOUSE FLIES AT DOSES OF 10 MICROGRAMS/FLY, SIGNIFICANTLY INCREASED THE TOXICITY OF THE OXYGEN ANALOGS OF 5

ARCH FOR P FOLEY ON PCBS;

E REPORTED.

598 A3
NTROL: NIOSH-00025103
CESS:
URCE:
THOR: IWATA, Y., F. A. GUNTHER, AND W. E. WESTLAKE
TLE: UPTAKE OF A PCB (AROCLOR 1254) FROM SOIL BY CARROTS UNDER FIELD CONDITIONS
FER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 6, PAGES 523-528, 15 REFERENCES
FER2:
BDATE: 7/7/00

BIOCHEMICAL STUDY OF THE EXTENT AND SELECTIVITY OF TRANSLOCATION OF POLYCHLORINATED BIPHENYLS (PCB'S) FROM SOIL INTO FOOD CROPS, PARTICULARLY CARROTS, KNOWN FOR THE QUALITY OF ABSORBING ORGANOCHLORINE PESTICIDE RESIDUES FROM SOIL. DATA ARE GIVEN FOR AROCLOR 1254 RESIDUES IN FIELD-TREATED SOIL USING EACH OF FIVE SELECTED GAS CHROMATOGRAPHIC PEAKS. RESULTS INDICATE THAT PCB'S ARE ABSORBED BY CARROTS AND THAT INCREASING TRANSLOCATION IS ASSOCIATED WITH DECREASING BIPHENYL CHLORINATION, SINCE 92% OF THE RESIDUE IS BOUND IN THE PEEL. VERY LITTLE TRANSLOCATION OCCURS IN THE PLANT [illegible].

6503 A3
ONTROL: NIOSH-00033175
CESS:
OURCE:
UTHOR: [illegible] AND W. E. GRIM
ITLE: POLYCHLORINATED BIPHENYLS: EVIDENCE OF TRANSPLACENTAL PASSAGE IN THE SHERMAN RAT
EFER1: FOOD AND COSMETIC TOXICOLOGY, VOL. 11, PAGES 471-476, 11 REFERENCES
EFER2:
PDATE: [illegible]

POLYCHLORINATED BIPHENYL (PCB), AROCLOR 1254, IS GIVEN ORALLY IN PEANUT OIL TO PREGNANT RATS ONCE DAILY FROM DAY 7 TO DAY 15 OF ORGANOGENESIS. DOSE LEVELS ARE 1.10, AND 50 MILLIGRAMS PER KILOGRAM PER DAY. NO STATISTICAL DIFFERENCE IS FOUND BETWEEN CONTROL AND DOSED GROUPS WITH RESPECT TO THE TOTAL WEIGHT OF LITTERS. RESIDUE LEVELS OF PCB-DERIVED MATERIAL ARE MEASURED IN THE FETUSES, IN THE MILK INGESTED BY SUCKLINGS AND IN TISSUES OF WEANLINGS BY ELECTRON-CAPTURE GAS-LIQUID CHROMATOGRAPHY. A SIGNIFICANT INCREASE IS FOUND IN THE RELATIVE LIVER WEIGHTS OF WEANLINGS FROM DOSED RATS COMPARED WITH CONTROL ANIMALS AND THE LIVERS OF MOST OF THE EXPOSED WEANLINGS CONTAIN ENLARGED HEPATOCYTES, ACCOMPANIED, IN SOME CASES, BY CYTOPLASMIC VACUOLIZATION AND BILE-DUCT PROLIFERATION, PARTICULARLY IN THE GROUP GIVEN THE HIGHER DOSAGE.

MONS 207437

SEARCH FOR P FOLEY ON PCBS:

FOR AROCLOR STANDARDS. RESULTS INDICATE THAT ALL MAJOR PCB'S OCCURRING IN CORMORANT CARCASS AND EGGS AND IN PELICAN FAT ALSO OCCUR IN AROCLOR 1254 AND/OR 1260. THE PATTERN OF PCB'S IN THE BIOLOGICAL SAMPLES IS NOT FOUND TO BE THE SAME AS THE PATTERNS IN AROCLORS AND FURTHER CHANGES IN PATTERN ARE SEEN WHEN COMPARING CORMORANT CARCASS AND EGGS.

21517 A3
CONTROL: NIOSH-00024343
ACCESS:
SOURCE:
AUTHOR: MACKAY, D., AND A. W. WOLKOFF
TITLE: RATE OF EVAPORATION OF LOW-SOLUBILITY CONTAMINANTS FROM WATER BODIES TO ATMOSPHERE
REFER1: ENVIRONMENTAL SCIENCE AND TECHNOLOGY, VOL. 7, NO. 7, PAGES 611-614, 17 REFERENCES
REFER2:
PUBDATE: 73/07/00

EQUATIONS ARE DERIVED TO PREDICT THE RATE OF EVAPORATION FROM AQUEOUS SOLUTIONS OF COMPOUNDS SUCH AS HYDROCARBONS AND CHLORINATED HYDROCARBONS WHICH ARE OF LOW SOLUBILITY. THE RATE OF EVAPORATION CAN BE HIGH EVEN FOR COMPOUNDS OF LOW VAPOR PRESSURE AND HALF LIVES IN SOLUTION CAN BE AS LOW AS MINUTES OR HOURS UNDER LABORATORY OR ENVIRONMENTAL CONDITIONS. TRANSFER OF CONTAMINANTS FROM THE WATER TO AIR ENVIRONMENTS ARE FOUND TO OCCUR FASTER THAN HAS BEEN GENERALLY APPRECIATED. THE EQUATIONS MAY BE APPLIED TO THE CALCULATION OF THE RATES OF EVAPORATION OF SUCH CONTAMINANTS AS AROCLOR, DDT, MERCURY COMPOUNDS, AROMATIC HYDROCARBONS, AND ALKANES.

22239 A3
CONTROL: NIOSH-00020669
ACCESS:
SOURCE:
AUTHOR: REYNOLDS, L. M.
TITLE: POLYCHLORODIPHENYLS (PCB'S) AND THEIR INTERFERENCE WITH PESTICIDE RESIDUE ANALYSIS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 4, NO. 3, PAGES 128-143, 11 REFERENCES
REFER2:
PUBDATE: 69/00/00

GAS LIQUID CHROMATOGRAPHIC METHOD FOR DETERMINATING THE INTERFERENCE OF POLYCHLORODIPHENYLS WITH PESTICIDE RESIDUE ANALYSIS AND COMPARISON OF THIS TECHNIQUE WITH THIN LAYER CHROMATOGRAPHY. IN SOME CASES, GAS LIQUID CHROMATOGRAPHY YIELDED A SINGLE PEAK INDICATING ONE PESTICIDE WHILE IN FACT THE SAMPLE WAS A MIXTURE CONSISTING OF THE PESTICIDE TOGETHER WITH SOME OTHER UNKNOWN TYPE OF POLYCHLORODIPHENYL HAVING THE SAME RETENTION TIME. THE SHORTCOMINGS OF THIN LAYER CHROMATOGRAPHY ARE ALSO INVESTIGATED. RESULTS OBTAINED WITH DDT, HEPTACHLOR, LINDANE, ALDRIN, DDE, AND POLYCHLORODIPHENYLS

ARCH FOR P FOLEY ON PCBS)

TREATMENT OF RATS WITH DIETARY DOSES OF POLYCHLORINATED PHENYL (AROCLOR 1254) OR PHENOBARBITAL SODIUM PRODUCES SIGNIFICANT VELS OF HEPATIC MICROSOMAL DRUG METABOLIZING ENZYME INDUCTION THIN 7 DAYS. WITH AROCLOR, BUT NOT PHENOBARBITAL, THE LEVEL OF DUCTION CONTINUES TO INCREASE. SINGLE ORAL DOSES OF AROCLOR AND ENOBARBITAL PRODUCE SIMILAR RESPONSES IN ENZYME ACTIVITY. SCONTINUATION OF TREATMENT RESULTS IN SLOW REDUCTION OF THE INDUCED ZYME ACTIVITY TO CONTROL VALUES AFTER 10 DAYS.

454 A3
NTROL: NIOSH-00024165
CESS:
URCE:
THOR: HOFSTADER, R. A., C. A. BACHE, AND D. J. LISK
TLE: INTERFERENCE IN THE ELECTRON-CAPTURE TECHNIQUE FOR DETERMINATION OF POLYCHLORINATED BIPHENYLS BY SULFUR-CONTAINING COMPOUNDS IN PETROLEUM PRODUCTS
FER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 2, PAGES 136-138, 3 REFERENCES
FER2:
DATE: 74/02/00

THE ELECTRON CAPTURE RESPONSE OF CONSTITUENTS IN 1365 C IL, A SOLVENT-REFINED PETROLEUM PRODUCT CLAIMED TO BE CONTAMINATED TH POLYCHLORINATED BIPHENYLS AND SUBJECTED TO GAS CHROMATOGRAPHY, PPEARS TO BE DUE AT LEAST IN PART TO THE PRESENCE OF RELATIVELY HIGH EVELS OF NATURAL SULFUR COMPOUNDS OF MODERATE ELECTRON AFFINITY. OMPARATIVE DATA ARE GIVEN FOR FLAME PHOTOMETRY, ELECTROLYTIC ONDUCTIVITY AND MICROCOULOMETRY.

1472 A3
ONTROL: NIOSH-00024147
CESS:
OURCE:
UTHOR: [redacted]
CELL
ITLE: ANALYSES OF POLYCHLORINATED BIPHENYLS IN BIRD TISSUES AND AROCLOR STANDARDS WITH GAS CHROMATOGRAPHY AND MASS SPECTROMETRY
FER1: [redacted] VOL. 11, NO. 2, PAGES 113-120, 7 REFERENCES
FER2:
DATE: [redacted]

ANALYSIS IS MADE OF POLYCHLORINATED BIPHENYLS (PCB) IN BIRD ISSUES AND AROCLOR STANDARDS TO RELATE THE PEAKS IDENTIFIED BY GAS IQUID CHROMATOGRAPHY TO THE PCB ISOMERS PRESENT IN EACH PEAK AS ETERMINED BY MASS SPECTROMETRY. DATA ARE GIVEN FOR THE RELATIVE ETENTION TIMES AND MASS SPECTRA FOR PCB RESIDUES IN CARCASSES, EGGS, ND FAT OF BIRDS, AND RELATIVE RETENTION TIMES AND MASS SPECTRA DATA

SEARCH FOR P FOLEY ON PCBS)

REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 4, PAGES 333-336, 12 REFERENCES
REFER2:
PUBDATE: 74/04/00

BRAIN TISSUE FROM JAPANESE QUAIL FED 1000 PPM OF THE POLYCHLORINATED BIPHENYL, AROCLOR, ARE SUBJECTED TO GAS CHROMATOGRAPHIC AND MASS SPECTROMETRIC ANALYSES TO COMPARE THE RESIDUE PATTERNS IN THE BRAINS OF BIRDS FED AROCLOR 1260 TO THE AROCLOR 1260 STANDARD CHROMATOGRAMS, TO IDENTIFY THE RESIDUE COMPONENTS BY MASS SPECTROMETRY, AND TO DETERMINE THE SPECIFIC CHANGES IN THE BIOLOGICAL SAMPLES. THE RESULTS INDICATE THAT QUALITATIVE AND QUANTITATIVE CHANGES IN THE AROCLOR 1260 STANDARD OCCUR WITHIN THE BODIES OF THE QUAIL AND THAT LESS CHLORINATED COMPOUNDS AS OPPOSED TO MORE HIGHLY CHLORINATED COMPOUNDS ARE STORED IN RELATIVELY SMALLER QUANTITIES IN THE BRAIN AND/OR ARE MORE READILY METABOLIZED.

21263 A3
CONTROL: NIOSH-00024194
ACCESS:
SOURCE:
AUTHOR: SUNDSTROM, G.
TITLE: POLYCHLORINATED BIPHENYLS V. +SYNTHESIS OF C-14-LABELLED 2,2',4,4',5,5'-HEXACHLOROBIPHENYL, A MAJOR COMPONENT IN PCB-MIXTURES
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 1, PAGES 39-44, 16 REFERENCES
REFER2:
PUBDATE: 74/01/00

GAS CHROMATOGRAPHIC AND THIN LAYER CHROMATOGRAPHIC STUDY OF THE STRUCTURE OF POLYCHLORINATED BIPHENYL (PCB) MIXTURES TO DETERMINE THE TURNOVER OF 2,2',4,4',5,5'-HEXACHLOROBIPHENYL (I), SYNTHESIZING THE RADIOCARBON-LABELLED COMPOUND. IN EXTRACTS OF THE FATTY TISSUES FROM HIGHER ANIMALS, INCLUDING MAN, 2,2',4,4',5,5'-HEXACHLOROBIPHENYL AMONG SOME OTHER POLYCHLORINATED BIPHENYLS IS FOUND IN HIGH CONCENTRATIONS, WHICH INDICATES A VERY SLOW METABOLISM OR EXCRETION OF THE COMPOUND.

21453 A3
CONTROL: NIOSH-00024164
ACCESS:
SOURCE:
AUTHOR: LITTERST, C. L., AND E. J. VAN LOON
TITLE: TIME-COURSE OF INDUCTION OF MICROSOMAL ENZYMES FOLLOWING TREATMENT WITH POLYCHLORINATED BIPHENYL
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 3, PAGES 206-212, 5 REFERENCES
REFER2:
PUBDATE: 74/03/00

SEARCH FOR D FOLEY ON PCBS)

CONTROL: NIOSH-00024150
ACCESS:
SOURCE:
AUTHOR: KAISER, M. K., D. E., AND P. T. S. WONG
TITLE: BACTERIAL DEGRADATION OF POLYCHLORINATED BIPHENYLS. I. IDENTIFICATION OF SOME METABOLIC PRODUCTS FROM AROCLOR 1242
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 3, PAGES 291-296, 11 REFERENCES
REFER2:
PUBDATE: 74/03/00

A BACTERIAL CULTURE ISOLATED FROM LAKE WATER IS SHOWN TO DEGRADE POLYCHLORINATED BIPHENYLS AT A RELATIVE HIGH CONCENTRATION OF A COMMERCIAL MIXTURE (AROCLOR 1242). SEVERAL METABOLITES OF AROCLOR 1242 IDENTIFIED BY MASS SPECTRAL AND GAS CHROMATOGRAPHIC DATA ARE ALKYL SUBSTITUTED AROMATIC HYDROCARBONS AND PURELY ALIPHATIC HYDROCARBONS. NONE OF THE METABOLITES SEEM TO CONTAIN CHLORINE.

21116 A3
CONTROL: NIOSH-00024476
ACCESS:
SOURCE:
AUTHOR: BRAESTRUP, F., J. CLAUSEN, AND O. BERG
TITLE: DDE, PCB AND ALDRIN LEVELS IN ARCTIC BIRDS OF GREENLAND
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 11, NO. 4, PAGES 326-332, 21 REFERENCES
REFER2:
PUBDATE: 74/04/00

THE POLYCHLORINATED HYDROCARBONS DDE, POLYCHLORINATED BIPHENYLS, ALDRIN, AND LINDANE ARE SEPARATED FROM ADIPOSE TISSUE OF BIRDS ON THE WEST COAST OF GREENLAND AND ANALYZED CHROMATOGRAPHICALLY TO STUDY THE ACCUMULATION OF THE COMPOUNDS IN THE ARCTIC ECOSYSTEMS OF GREENLAND. DATA ON THE CONTENT OF THE CHLORINATED ORGANIC COMPONENTS IN THE BIRD ADIPOSE TISSUE ARE GIVEN FOR NINE SPECIES OF BIRDS, WHILE DIETARY AND MIGRATORY HABITS ARE TABULATED FOR EIGHT OF THE NINE SPECIES. A CORRELATION FOUND BETWEEN THE CONTENT OF POLYCHLORINATED BIPHENYLS AND DDE IN THE FAT TISSUE MAY BE EXPLAINED BY THE HIGH ECOLOGICAL LEVEL OF THE BIRDS AND THE LIPID SOLUBILITIES OF THE GLOBALLY DISTRIBUTED POLYCHLORINATED HYDROCARBONS UNDER STUDY AS WELL AS THEIR METABOLIC INERTNESS.

21117 A3
CONTROL: NIOSH-00024477
ACCESS:
SOURCE:
AUTHOR: CALL, D. J., Y. A. GRLICHUS, AND J. J. NORMAN
TITLE: A GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC COMPARISON OF POLYCHLORINATED BIPHENYL RESIDUES IN THE JAPANESE QUAIL BRAIN TO AN AROCLOR STANDARD.

SEARCH FOR P FOLEY ON PCBS)

STUDY OF THE PROBLEMS ENCOUNTERED WHEN THE CHROMATOGRAM OF A SAMPLE BEING ANALYZED FOR POLYCHLORINATED BIPHENYLS (PCB'S) VIA GAS LIQUID CHROMATOGRAPHY CANNOT READILY BE COMPARED TO A PARTICULAR AROCLOR STANDARD. DETAILS ARE GIVEN OF EXTRACTION AND CLEANUP, PCB SEPARATION, CHROMATOGRAPHY CONDITIONS, QUANTITATION, AND STANDARDS. DATA PRESENTED INCLUDE VARIATION IN TOTAL PCB RESIDUES (AROCLOR 1254 AND AROCLOR 1260) AS THE COMPOSITION OF THE QUANTITATING STANDARD CHANGES. RESULTS INDICATE THAT THE CHOICE OF A STANDARD CAN ALTER THE VALUES BY MORE THAN A FACTOR OF 2 AND THAT THE PARTICULAR MIXTURE USED AS A STANDARD SHOULD BE REPORTED ALONG WITH RESULTING VALUES.

18765 A3
CONTROL: NIOSH-00023308
ACCESS:
SOURCE:
AUTHOR: THOMAS, G. H., AND L. M. REYNOLDS
TITLE: POLYCHLORINATED TERPHENYLS IN PAPERBOARD SAMPLES
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 10, NO. 1, PAGES 37-41, 10 REFERENCES
REFER2:
PUBDATE: 73/07/00

A GAS CHROMATOGRAPHIC PROCEDURE IS DESCRIBED FOR THE DETECTION, ESTIMATION AND CONFIRMATION OF IDENTITY OF AROCLOR POLYCHLOROTERPHENYLS (PCT'S) AND POLYCHLOROBIPHENYLS (PCB'S) IN PAPERBOARD AND FOOD PACKAGING MATERIAL. CHROMATOGRAMS ARE GIVEN FOR AROCLOR 5460 AND CLEANED UP EXTRACT OF PAPERBOARD SAMPLES.

18838 A3
CONTROL: NIOSH-00023517
ACCESS:
SOURCE:
AUTHOR: CROSBY, D. G., AND K. W. MOILANEN
TITLE: PHOTODECOMPOSITION OF CHLORINATED BIPHENYLS AND DIBENZOFURANS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 10, NO. 6, PAGES 372-377, 33 REFERENCES
REFER2:
PUBDATE: 73/12/00

BIOCHEMICAL STUDY OF THE POSSIBLE DEGRADATIVE EFFECTS OF THE ULTRAVIOLET (UV) COMPONENT OF SUNLIGHT ON THE LOW-MOLECULAR WEIGHT POLYCHLORINATED BIPHENYL (PCB) ISOMERS, USING IRRADIATION AND CHROMATOGRAPHY. DATA ARE GIVEN FOR THE PHOTOLYSIS OF CHLOROBIPHENYLS IN WATER. THE PHOTODECOMPOSITION OF THE LOWER CHLORINATED PCB ISOMERS IN POLAR AND NONPOLAR SOLVENTS REVEALS THE OPERATION OF ENVIRONMENTAL MECHANISMS WHICH COULD EFFECTIVELY DEGRADE THE WIDESPREAD CONTAMINANTS.

20937 A3

'SEARCH FOR P POLCY ON PCBS;

CONTROL: NIOSH-00023233
ACCESS:
SOURCE:
AUTHOR: OGATA, J. N., AND A. BEVENUE
TITLE: CHLORINATED PESTICIDE RESIDUES IN HONEY
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 9, NO. 3, PAGES 143-147, 5 REFERENCES
REFER2:
PUBDATE: 73/03/00

SAMPLES OF COMMERCIALLY AVAILABLE HONEY ARE ANALYZED BY GAS CHROMATOGRAPHY FOR PESTICIDE RESIDUES TO DETERMINE WHETHER PRODUCTS WHERE NO PESTICIDES OR FERTILIZERS ARE USED ARE FREE OF RESIDUES TO COMPARE RESIDUE CONTENTS OF 'ORGANIC', 'NATURAL', OR 'PURE', LABELED PRODUCTS; AND TO DETERMINE THE PRESENCE OF POLYCHLOROBIPHENYL PRODUCTS WHICH MAY HAVE DERIVED FROM PLASTIC FOUNDATIONS OF BEEHIVES OR PLASTIC CONTAINERS. OF 21 SAMPLES, 19 SAMPLES CONTAIN CHLORINATED PESTICIDE RESIDUES IN THE LOW PARTS PER BILLION RANGE, INCLUDING LINDANE, HEPTACHLOR, ALDRIN, DDE, DDD, DDT, DIELDRIN, HEPTACHLOR EPOXIDE, AND AROCLOR 1254.

18560 A3
CONTROL: NIOSH-00023238
ACCESS:
SOURCE:
AUTHOR: CECIL, H. G., S. J. HARRIS, J. BITMAN, AND G. F. FRIES
TITLE: POLYCHLORINATED BIPHENYL-INDUCED DECREASE IN LIVER VITAMIN A IN JAPANESE QUAILS AND RATS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 9, NO. 3, PAGES 179-185, 22 REFERENCES
REFER2:
PUBDATE: 73/03/00

AROCLOR 1242 (PCB) OR DDT ARE FOUND TO INCREASE LIVER WEIGHT AND LIPIDS, AND TO DECREASE LIVER VITAMIN A OF MALE AND FEMALE RATS AND MALE BIRDS. FEMALE BIRDS, WHEN EGG LAYING, DO NOT SHOW CONSISTENT CHANGES, WHICH IS RELATED TO MOBILIZATION OF LIPID AND VITAMIN A FOR EGG YOLK.

18761 A3
CONTROL: NIOSH-00023304
ACCESS:
SOURCE:
AUTHOR: BEEZHOLD, F. L., AND V. F. STOUT
TITLE: THE USE AND EFFECT OF MIXED STANDARDS ON THE QUANTITATION OF POLYCHLORINATED BIPHENYLS
REFER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 10, NO. 1, PAGES 10-15, 12 REFERENCES
REFER2:
PUBDATE: 73/07/00

SEARCH FOR P FOLEY ON PCBS?

14948 A3
CONTROL: NIOSH-00003408
ACCESS:
SOURCE:
AUTHOR: ZITKO, V.
TITLE: PROBLEMS IN THE DETERMINATION OF POLYCHLORINATED BIPHENYLS
REFER1: INTERNATIONAL JOURNAL OF ANALYTICAL CHEMISTRY, VOL. 1, PAGES 221-231, 24 REFERENCES
REFER2:
PUBDATE: 72/00/00

THE DETERMINATION OF POLYCHLORINATED BIPHENYLS (PCB) IS ANALYZED. PCB USED IN INDUSTRY HAVE BEEN FOUND AS RESIDUE IN WOLDLIFE AND PCB WERE FOUND READILY ACCUMULATED BY LIVING ORGANISMS SIMILAR TO CHLORINATED HYDROCARBON PESTICIDES. PCB ARE TOXIC AND THEIR LEVELS IN THE ENVIRONMENT NEED TO BE CONTROLLED. THE PRESENCE OF AROMATIC HYDROCARBONS IN PESTICIDE-GRADE HEXANES AFFECTS THE ELUTION PATTERNS OF PCB AND CHLORINATED HYDROCARBON PESTICIDES FROM SILICIC ACID COLUMNS. SEVERAL BATCHES OF SILICIC ACID WERE CONTAMINATED WITH PCB EXPRESSED AS AROCLOR 1254. CHLORINATED NAPHTHALENES ACCOMPANY PCB ON SILICIC ACID CHROMATOGRAPHY AND THEIR PRESENCE CAN BE DETECTED FROM AN ABSORPTION MAXIMUM AT 306 NANOMETERS, ANGSTROM ONE PERCENT PER 1 CENTIMETER EQUALS 329. PCB OF THE AROCLOR 1254 TYPE WERE DETECTED IN AMERICAN EEL, HERRING, AND ATLANTIC SALMON IN CONCENTRATIONS OF 0.32 TO 0.75 MICROGRAM PER GRAM WET WEIGHT. COMMERCIAL FISH OIL CONTAINED 3.5 MICROGRAMS PER GRAM OF PCB.

16995 A3
CONTROL: NIOSH-00020622
ACCESS:
SOURCE:
AUTHOR: REINKE, J., J. F. UTHE, AND M. D'ARRODOVICH
TITLE: DETERMINATION OF POLYCHLORINATED BIPHENYLS IN THE PRESENCE OF ORGANOCHLORINE PESTICIDES BY THIN-LAYER CHROMATOGRAPHY
REFER1: ENVIRONMENTAL LETTERS, VOL. 4, NO. 3, PAGES 201-210, 10 REFERENCES
REFER2:
PUBDATE: 73/00/00

A SIMPLE, QUICK, INEXPENSIVE AND EASILY REPRODUCED THIN-LAYER CHROMATOGRAPHIC METHOD FOR THE SEPARATION AND QUANTITATION OF ORGANOCHLORINE PESTICIDES AND POLYCHLORINATED BIPHENYLS (PCB'S) WAS DEVELOPED USING AN ALUMINUM OXIDE PLATE, WHICH WAS DEVELOPED IN A TRIETHYLAMINE:HEXANE SOLVENT, WITH STEAM AND ULTRAVIOLET TREATMENT FOR VISUALIZATION. THE RECOVERIES REPORTED ARE MOSTLY IN THE RANGE OF 90% TO 100%.

18555 A3

ARCH FOR P FOLEY ON PCBS)

OLOGICAL ASPECTS OF POLYCHLORINATED BIPHENYLS (PCB'S) WITH PRIMARY
CUS ON THEIR UTILITY, ECOLOGICAL DISTRIBUTION AND TOXICITY.
RULATION IS GIVEN FOR SOME USES OF AND PATHOLOGICAL CHANGES INDUCED
PCB'S. DIFFERENT TECHNIQUES USED FOR THE SEPARATION OF PCB'S FROM
LORINATED PESTICIDES AND THEIR SUBSEQUENT ANALYSIS ARE
VESTIGATED.

62 A3
NTROL: NIOSH-00018401
CESS:
URCE:
THOR: ROTE, J. W., AND P. G. MURPHY
TLE: A METHOD FOR THE QUANTITATION OF POLYCHLORINATED BIPHENYL (PCB) ISOMERS
FER1: BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, VOL. 6, NO. 4, PUBLISHED BY SPRINGER-VERLAG NEW YORK INC., PAGES 377-384, 19 REFERENCES
FER2:
BDATE: 71/00/00

RESULTS SHOW THAT DETECTOR RESPONSE USING ELECTRON-CAPTURE
S CHROMATOGRAPHY IS NOT THE SAME FOR ALL ISOMERS OF AROCLOR,
NSANTO'S PCB, BUT IS DEPENDENT ON THE DEGREE OF CHLORINATION.
ANTITATION OF INDIVIDUAL PCB ISOMERS BASED UPON THE ELECTRON
FINITIES OF COMPOUNDS SHOWS THAT POLYCHLORINATED COMPOUNDS CAN HAVE
00,000 TIMES THE RELATIVE ELECTRON ABSORPTION COEFFICIENT AS A
NOCHLORO COMPOUND AND 10,000,000 TIMES THAT OF AN UNCHLORINATED
MPOUND. IT IS FELT THAT THIS METHOD SHOULD BE USED IN REPORTING
B LEVELS FOUND IN FIELD SAMPLES.

265 A3
NTROL: NIOSH-00018405
CESS:
URCE:
THOR: KEIL, J. E., S. H. SANDIFER, C. D. GRABER, AND L. E. PRIESTER
TLE: DDT AND POLYCHLORINATED BIPHENYL (AROCLOR 1242-(R))
FER1: WATER RESEARCH, PERGAMON PRESS, OXFORD, VOL. 6, PAGES 837-841, 12 REFERENCES
FER2:
BDATE: 72/00/00

EFFECTS OF UPTAKE ON E. COLI GROWTH. DDT AT 0.01 AND
OLYCHLORINATED BIPHENYL (PCB) AT 0.01 AND 0.1 PPM CONSISTENTLY
MULATED E. COLI GROWTH IN VITRO. DIFFERENCES BETWEEN TREATMENTS
D CONTROLS WERE STATISTICALLY SIGNIFICANT AT THE 95 PER CENT
NFIDENCE LEVEL. E. COLI UNIFORMLY CONVERTED DDT TO DDD (75 PER
NT) AND DDE (25 PER CENT). THERE WAS NO DIFFERENCE IN NUCLEIC
IDS CONTENT BETWEEN TREATMENTS AND CONTROLS AT THE CONCLUSION OF 24
URS INCUBATION ALTHOUGH INCREASED UNTOTAL UPTAKE WAS NOTED IN ALL
ST AND PCB CULTURES AFTER 5 H INCUBATION.

MONS 207445

SEARCH FOR P FOLEY ON PCBS;

TITLE: POLYCHLORINATED BIPHENYLS AND THE ENVIRONMENT
REFER1: INTERDEPARTMENTAL TASK FORCE ON PCBS, WASHINGTON, D.C., REPORT NO. ITF-PCB-72-1, 181 PAGES
REFER2:
PUBDATE: 72/05/00

A REVIEW OF THE CHEMICALS KNOWN AS PCBS (POLYCHLORINATED BIPHENYLS) MADE BY FIVE FEDERAL AGENCIES, WITH PARTICIPATION BY OTHER AGENCIES. THE TASK FORCE MAKES NINE FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS, PRIMARILY POINTING OUT THAT PCBS SHOULD BE RESTRICTED TO ESSENTIAL OR NONREPLACEABLE USES WHICH WOULD MINIMIZE THE LIKELIHOOD OF HUMAN EXPOSURE OR LEAKAGE TO THE ENVIRONMENT. SUPPLEMENTING THE REPORT ARE EIGHT APPENDICES DETAILING THE CURRENT KNOWLEDGE ABOUT VARIOUS ASPECTS OF PCBS, INCLUDING THEIR USE AND REPLACEABILITY; OCCURRENCE, TRANSFER, AND CYCLING IN THE ENVIRONMENT; OCCURRENCE AND SOURCES IN FOOD; AND PCB EFFECTS ON MAN AND ANIMALS.

4575 A3
CONTROL: NIOSH-00018188
ACCESS:
SOURCE:
AUTHOR: BROADHURST, M. G.
TITLE: USE AND REPLACEABILITY OF POLYCHLORINATED BIPHENYLS
REFER1: ENVIRONMENTAL HEALTH PERSPECTIVES, NO. 2, PAGES 81-102, 129 REFERENCES
REFER2:
PUBDATE: 72/10/00

REVIEW OF USES AND PHYSICAL PROPERTIES REQUIRED FOR APPLICATION, ADVANTAGES AND DISADVANTAGES OF POLYCHLORINATED BIPHENYLS (PCB'S), AND THE POSSIBILITY OF REPLACING PCB'S WITH OTHER MATERIALS. AREAS OF INTEREST INCLUDE DIELECTRIC STUDIES FOR CAPACITORS AND TRANSFORMERS, INDUSTRIAL FLUIDS FOR HYDRAULIC, GAS TURBINE AND VACUUM PUMP USES. HEAT TRANSFER FLUIDS, AND PLASTICIZERS, FIRE RETARDANTS AND FLAME-PROOFING COMPOSITIONS, TEXTILE AND SURFACE COATINGS.

5437 A3
CONTROL: NIOSH-00017396
ACCESS:
SOURCE:
AUTHOR: FISHBEIN, L.
TITLE: CHROMATOGRAPHIC AND BIOLGICAL ASPECTS OF POLYCHLORINATED BIPHENYLS
REFER1: JOURNAL OF CHROMATOGRAPHY, VOL. 68, NO. 2, PAGES 345-426, 113 REFERENCES
REFER2:
PUBDATE: 72/00/00

REVIEW OF CHROMATOGRAPHIC (COLUMN, THIN-LAYER AND GAS LIQUID, AND COMBINED GAS-LIQUID), MASS SPECTROSCOPY FEATURES AND

SEARCH FOR P FOLEY ON PCBS)

724 A3
CONTROL: NIOSH-00000060
ACCESS: NTIS PB 206 534
SOURCE:
AUTHOR:
TITLE: PCB IN WATER-A BIBLIOGRAPHY
REFER1: WATER RESOURCES SCIENTIFIC INFORMATION CENTER, OFFICE OF WATER RESOURCES RESEARCH, U.S. DEPARTMENT OF THE INTERIOR, WASHINGTON, D.C., REPORT NO. WRSIC 72-201, 40 PAGES, 25 REFERENCES
REFER2:
PUBDATE: 72/01/00

COLLECTION OF ABSTRACTS OF TWENTY-FIVE REPORTS AND JOURNAL ARTICLES. TOPICS INCLUDE THE EFFECTS OF POLYCHLORINATED BIPHENYLS (PCB) AND ORGANOCHLORINE PESTICIDES ON FISH, WILDLIFE AND WATER SYSTEMS, INTERACTION BETWEEN PLASTICIZERS AND INSECTICIDES, EXTRACT ANALYSIS OF DIELDRIN AND DDT, CONTROLLED SELF-DESTRUCTION OF PESTICIDES, AND AIR TRANSPORT OF ORGANIC CONTAMINANTS TO THE MARINE ENVIRONMENT. APPENDED ARE A SIGNIFICANT DESCRIPTOR INDEX, AND A COMPREHENSIVE DESCRIPTOR INDEX.

3936 A3
CONTROL: NIOSH-00017031
ACCESS: NTIS ORNL-EIS-72-20
SOURCE:
AUTHOR: QUINBY, G. E.
TITLE: POLYCHLOROBIPHENYLS (PCBS) AND RELATED CHLOROPHENYLS: EFFECTS ON HEALTH AND ENVIRONMENT, I. BIBLIOGRAPHY: 1881-1971
REFER1: OAK RIDGE NATIONAL LABORATORY, U.S. ATOMIC ENERGY COMMISSION, OAK RIDGE, TENNESSEE, 100 PAGES
REFER2:
PUBDATE: 72/04/00

BIBLIOGRAPHY ON THE TOXICOLOGY OF POLYCHLOROBIPHENYLS (PCBS) INCLUDING A TOTAL OF 870 REFERENCES, INCLUDING AN AUTHOR INDEX AND A PERMUTED TITLE INDEX. ALTHOUGH THE FIRST SERIOUS FOOD POISONING EPISODE ATTRIBUTED TO PCBS OCCURRED IN JAPAN IN 1968, IT WAS NOT REPORTED IN THE JAPANESE LITERATURE UNTIL JULY 1969 AND REMAINED GENERALLY UNKNOWN IN THE UNITED STATES UNTIL 1971. THE CONCERN OVER PCBS IS HEIGHTENED BY THE RECOGNITION OF GROSS CONTAMINATION OF CERTAIN ANIMAL FEEDS AND OF TRACE CONTAMINATION OF SOME HUMAN FOODS.

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