

9. REFERENCES

Aage HK, Korsbech U, Bargholz K, et al. 1999. A new technique for processing airborne gamma ray spectrometry data for mapping low level contaminations. *Appl Radiat Isot* 51:651-662.

*Abbasi SA, Nipanay PC, Soni R. 1989. Environmental status of cobalt and its micro determination with 7-nitroso-8-hydroxyquinoline-5-sulfonic acid in waters, aquatic weeds and animal tissues. *Anal Lett* 22(1):225-235.

Abraham JL. 1990. The spectrum of pulmonary pathologic reaction and lung dust burden in 30 cases of cobalt pneumonitis (hard metal disease; giant cell interstitial pneumonia). *Am Rev Respir Dis* 141:A248.

*Abraham JL, Hunt A. 1995. Environmental contamination by cobalt in the vicinity of a cemented tungsten carbide tool grinding plant. *Environ Res* 69:67-74.

Abramson DH, Ellsworth RM, Kitchin FD. 1980. Osteogenic sarcoma of the humerus after cobalt plaque treatment for retinoblastoma. *Am J Ophthalmol* 90:374-376.

Abulfaraj WH, Mamoon AM. 2001. A case of increase in ^{222}Rn concentration in effluent from reservoir fed by well water. *Health Phys* 81(1):3-7.

ACGIH. 1999. 1999 TLVs and BEIs: Threshold limit values for chemical substances and physical agents biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

*ACGIH. 2000. Cobalt: 2000 TLVs and BEIs: Threshold limit values for chemical substances and physical agents biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

Adachi S, Takemoto K, Ohshima S, et al. 1991. Metal concentration in lung tissue of subjects suffering from lung cancer. *Int Arch Occup Environ Health* 63:193-197.

*Adam C, Baudin JP, Garnier-Laplace J. 2001. Kinetics of $^{110\text{m}}\text{Ag}$, ^{60}Co , ^{137}Cs and ^{54}Mn bioaccumulation from water and depuration by the crustacean *Daphnia magna*. *Water Air Soil Pollut* 125:171-188.

Adamis Z, Tatrai E, Honma K, et al. 1997. A study on lung toxicity of respirable hard metal dusts in rats. *Ann Occup Hyg* 41(5):515-526.

*Adelolu SB, Bond AM, Briggs MH. 1985. Multi element determination in biological materials by differential pulse voltammetry. *Anal Chem* 57:1386-1390.

*Adinolfi M. 1985. The development of the human blood-CSF-brain barrier. *Dev Med Child Neurol* 27:532-537.

* Cited in text

9. REFERENCES

*Adlercreutz H. 1995. Phytoestrogens: Epidemiology and a possible role in cancer protection. *Environ Health Perspect Suppl* 103(7):103-112.

Adriano DC, Delaney M, Paine D. 1977. Availability of cobalt-60 to corn and bean seedlings as influenced by soil types, lime, and DTPA. *Commun Soil Sci Plant Anal* 8(8):615-628.

*Agency for Toxic Substances and Disease Registry. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles; Notice. Agency for Toxic Substances and Disease Registry. *Federal Register* 54(174):37618-37634.

*Agency for Toxic Substances and Disease Registry. 1990. Biomarkers of organ damage or dysfunction for the renal, hepatobiliary, and immune systems. Subcommittee on Biomarkers of Organ Damage and Dysfunction, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

*Agency for Toxic Substances and Disease Registry. 1995. Public Health Assessment, Blackbird Mine, Cobalt, Lemhi County, Idaho CERCLIS No. IDD980725832 January 12, 1995. http://www.atsdr.cdc.gov/HAC/PHA/blackbird/bla_toc.html.

*Agency for Toxic Substances and Disease Registry. 1999. Toxicological profile for ionizing radiation. Agency for Toxic Substances and Disease Registry, Atlanta, GA.

Ahmad S, Waheed S, Mannan A, et al. 1994. Evaluation of trace elements in wheat and wheat by-products. *J AOAC Int* 77(1):11-18.

Aiken G, Cotsaris E. 1995. Soil and hydrology: their effect on NOM. *J Am Water Works Assoc* January:36-45.

*Alaux-Negrel G, Beaucaire C, Michard G, et al. 1993. Trace-metal behavior in natural granitic waters. *J Contam Hydrol* 13:309-325.

*Albrecht A. 2003. Validating riverine transport and speciation models using nuclear reactor-derived radiocobalt. *J Environ Radioactivity* 66:295-307.

Alessio L, Dell'Orto A. 1988. Biological monitoring of cobalt. In: *Biological monitoring of toxic metals*. New York, NY: Plenum Press, 407-417.

*Alexander CS. 1969. Cobalt and the heart. *Ann Intern Med* 70:411-413.

*Alexander CS. 1972. Cobalt-beer cardiomyopathy: A clinical and pathological study of twenty-eight cases. *Am J Med* 53:395-417.

*Alexandersson R. 1988. Blood and urinary concentrations as estimators of cobalt exposure. *Arch Env Health* 43(4):299-303.

Alexeeva-Popova NV, Igoshina TI, Drosdova IV. 1995. Metal distribution in the Arctic ecosystems of the Chukotka Peninsula, Russia. *Sci Total Environ* 160/161:643-652.

9. REFERENCES

- Alexiou D, Grimanis AP, Grimani M, et al. 1977. Trace elements (zinc, cobalt, selenium, rubidium, bromine, gold) in human placenta and newborn liver at birth. *Pediatr Res* 11:646-648.
- Alfy SE, Abdel-Rassoul AA. 1993. Trace metal pollutants in El Manzala Lakes by inductively coupled plasma spectroscopy. *Water Res* 27(7):1253-1256.
- Al-Jaloud AA, Hussain G, Al-Saati AJ, et al. 1995. Effect of wastewater irrigation on mineral composition of corn and sorghum plants in a pot experiment. *J Plant Nutr* 18(8):1677-1692.
- Allen MJ, Myer BJ, Millett PJ, et al. 1997. The effects of particulate cobalt, chromium and cobalt-chromium alloy on human osteoblast-like cells *in vitro*. *J Bone Jt Surg Am* 79-B:475-482.
- *Alomar A, Conde-Salazar L, Romaguera C. 1985. Occupational dermatosis from cutting oils. *Contact Dermatitis* 12:129-138.
- Alonso MT, Sanchez A, Garcia-Sancho J. 1990. Arachidonic acid-induced calcium influx in human platelets: Comparison with the effect of thrombin. *Biochem J* 272:435-443.
- Al-Saleh IA. 1996. Trace elements in drinking water coolers collected from primary schools, Riyadh, Saudi Arabia. *Sci Total Environ* 181:215-221.
- Al-Tawil NG, Marcusson JA, Moller E. 1985. HLA-class II restriction of the proliferative T lymphocyte responses to nickel, cobalt and chromium compounds. *Tissue Antigens* 25:163-172.
- *Altman PL, Dittmer DS. 1974. In: *Biological handbooks: Biology data book*. Vol. III. 2nd ed. Bethesda, MD: Federation of American Societies for Experimental Biology, 1987-2008, 2041.
- Ambrosini MV, Principato GB, Giovannini E, et al. 1979. Acid-base balance changes and erythropoietin production in the early stages of hypoxia or after CoCl₂ treatment in the rabbit. *Acta Hematol* 62:32-40.
- *Amiard JC, Amiard-Triquet C. 1979. Distribution of cobalt 60 in a mollusc, a crustacean and a freshwater teleost: Variations as a function of the source of pollution and during elimination. *Environ Pollut* 20(3):199-213.
- *Amundsen CE, Hanssen JE, Semb A, et al. 1992. Long-range atmospheric transport of trace elements to Southern Norway. *Atmos Environ* 26A(7):1309-1324.
- *Anard D, Kirsch-Volders M, Elhajouji A, et al. 1997. *In vitro* genotoxic effects of hard metal particles assessed by alkaline single cell gel and elution assays. *Carcinogenesis* 18(1):177-184.
- *Andersen O. 1983. Effects of coal combustion products and metal compounds on sister chromatid exchange (SCE) in a macrophage like cell line. *Environ Health Perspect* 47:239-253.
- *Andersen ME, Krishnan K. 1994. Relating *in vitro* to *in vivo* exposures with physiologically based tissue dosimetry and tissue response models. In: Salem H, ed. *Animal test alternatives: Refinement, reduction, replacement*. New York: Marcel Dekker, Inc., 9-25.
- *Andersen ME, Clewell HJ III, Gargas ML, et al. 1987. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. *Toxicol Appl Pharmacol* 87:185-205.

9. REFERENCES

- *Anderson MB, Lepak K, Farinas V, et al. 1993. Protective action of zinc against cobalt-induced testicular damage in the mouse. *Reprod Toxicol* 7:49-54.
- Anderson MB, Pedigo N, George WJ. 1986. Reproductive effects of chronic oral administration of cobaltous chloride in male mice. *Biol Reprod* 34:186.
- *Anderson MB, Pedigo NG, Katz RP, et al. 1992. Histopathology of testes from mice chronically treated with cobalt. *Reprod Toxicol* 6:41-50.
- Anderson PR, Christensen TH. 1988. Distribution coefficients of Cd, Co, Ni and Zn in soils. *J Soil Sci* 39:15-22.
- *Andre S, Metivier H, Masse R. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part III: Lung clearance of inhaled cobalt oxide particles in baboons. *J Aerosol Sci* 20(2):205-217.
- Andreev G, Simenov V. 1990. Distribution and correlation of elements in waters, suspensions, sediments and marine organisms from the Black Sea. *Toxicol Environ Chem* 28:1-9.
- Andreu V, Gimeno-Garcia E. 1996. Total content and extractable fraction of cadmium, cobalt, copper, nickel, lead, and zinc in calcareous orchard soils. *Commun Soil Sci Plant Anal* 27:2633-2648.
- *Andrzejewski SW, Zawisza B, Wybrzak-Wrobel T. 1980. Dose-related ^{60}Co γ -ray-induced oxygen uptake and citrulline production in liver mitochondria of whole-body irradiated rats. *Biochem Med* 23:282-292.
- Angelidis M, Grimanis AP. 1989. Geochemical partitioning of Co, Cr, Fe, Sc and Zn in polluted and non-polluted marine sediments. *Environ Pollut* 62:31-46.
- Angerer J, Heinrich-Ramm R, Lehnert G. 1989. Occupational exposure to cobalt and nickel: Biological monitoring. *Int J Environ Anal Chem* 35:81-88.
- Anissian L, Stark A, Dahlstrand H, et al. 2002. Cobalt ions influence proliferation and function of human osteoblast-like cells. *Acta Paediatr Scand* 73(3):369-374.
- ANL. 2000. Environmental monitoring at Argonne National Laboratory. Argonne, IL: Argonne National Laboratory. <http://ww.anl.gov/OPA/env/EMfacts.html>. May 15, 2000.
- *Antilla S, Sutitnen S, Paananen M, et al. 1986. Hard metal lung disease: A clinical, histological, ultra structural and x-ray micro analytical study. *Eur J Respir Dis* 69:83-94.
- Antonini JM, Starks K, Roberts JR, et al. 2000. Changes in F-Actin organization induced by hard metal particle exposure in rat pulmonary epithelial cells using laser scanning confocal microscopy. *In Vitro Mol Toxicol* 13(1):5-16.
- *APHA. 1998. Standard methods for the examination of water and wastewater, 20th edition. Washington, DC: American Public Health Association.

9. REFERENCES

- Apostoaiei AI, Nair SK, Thomas BA, et al. 2000. External exposure to radionuclides accumulated in shoreline sediments with an application to the lower Clinch River. *Health Phys* 78(6):700-710.
- Apostoli P, Giusti S, Bartoli D, et al. 1998. Multiple exposure to arsenic, antimony, and other elements in art glass manufacturing. *Am J Ind Med* 34:65-72.
- *Apostoli P, Porru S, Alessio L. 1994. Urinary cobalt excretion in short time occupational exposure to cobalt powders. *Sci Total Environ* 150:129-132.
- Arai F, Yamamura Y, Yoshida M, et al. 1994. Blood and urinary levels of metals (Pb, Cr, Mn, Sb, Co and Cu) in cloisonne workers. *Ind Health* 32:67-78.
- Archer RD. 1979. Coordination compounds. In: Kirk RE, Othmer DF, Grayson M, et al., eds. *Kirk-Othmer encyclopedia of chemical technology*. New York, NY: John Wiley and Sons, 793-797.
- *Arimoto R, Duce RA, Ray BJ, et al. 1985. Atmospheric trace elements at Enewetak Atoll: 2. Transport to the ocean by wet and dry deposition. *J Geophys Res* 90(D1):2391-2408.
- Arizono K, Okanari E, Ueno K, et al. 1991. Heme oxygenase activity and cytochrome P-450 content associated with induced metallothionein in the liver of rats treated with various metals. *J Environ Sci Health Part A* 26(6):941-951.
- Arkhipova OG, Golubovich EY, Spiridonova VI. 1965. Effect of chelating agents on cobalt elimination and glycylglycine dipeptidase activity. *Fed Proc* 25(1):T93-T94.
- *Arlauskas A, Baker RSU, Bonin AM, et al. 1985. Mutagenicity of metal ions in bacteria. *Environ Res* 36:379-388.
- Ashraf W, Jaffar M, Mohammad D. 1994. Trace metal contamination study on scalp hair of occupationally exposed workers. *Bull Environ Contam Toxicol* 53:516-523.
- *Ashraf W, Jaffar M, Mohammad D. 1995. Levels of selected trace metals in hair of urban and rural adult male population of Pakistan. *Bull Environ Contam Toxicol* 54:207-213.
- *Asmuß M, Mullenders LH, Hartwig A. 2000. Interference by toxic metal compounds with isolated zinc finger DNA repair proteins. *Toxicol Lett* 112-113:227-231.
- *ASTM. 1999. *Annual Book of ASTM Standards*, vol. 11.02. American Society for Testing of Materials. Philadelphia, PA: ASTM, 290-300.
- Astrup A, Tuchsén F. 1990. Cobalt exposure and cancer risk. *Crit Rev Toxicol* 20(6):427-437.
- Auchincloss JH, Abraham JL, Gilbert R, et al. 1992. Health hazard of poorly regulated exposure during manufacture of cemented tungsten carbides and cobalt. *Br J Ind Med* 49:832-836.
- *Augsburger JJ, Shields JA. 1985. Cataract surgery following cobalt-60 plaque radiotherapy for posterior uveal malignant melanoma. *Ophthalmology* 92:815-822.

9. REFERENCES

- Avery EL, Dunstan RH, Nell JA. 1996. The detection of pollutant impact in marine environments: Condition index, oxidative DNA damage, and their associations with metal bioaccumulation in the Sydney rock oyster *Saccostrea commercialis*. *Arch Environ Contam Toxicol* 31:192-198.
- *Ayala-Fierro F, Firriolo JM, Carter DE. 1999. Disposition, toxicity, and intestinal absorption of cobaltous chloride in male Fischer 344 rats. *J Toxicol Environ Health, Part A* 56:571-591.
- *Badsha KS, Goldspink CR. 1988. Heavy metal levels in three species of fish in Tjeukemeer, a Dutch polder lake. *Chemosphere* 17(2):459-463.
- *Baes CF, Sharp RD. 1983. A proposal for estimation of soil leaching and leaching constants for use in assessment models. *J Environ Qual* 12(1):17-28.
- *Bailey MR, Kreyling WG, Andre S, et al. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- Part 1: Objectives and summary of results. *J Aerosol Sci* 20(2):169-188.
- *Baker DH, Czarnecki-Maulden GL. 1987. Pharmacologic role of cysteine in ameliorating or exacerbating mineral toxicities. *J Nutr* 117:1003-1010.
- Balakrishnan S, Rao SB. 1999. Cytogenetic analysis of peripheral blood lymphocytes of occupational workers exposed to low levels of ionizing radiation. *Mutat Res* 442:37-42.
- Baldetorp L. 1977. Effect of 50 kV roentgen rays and cobalt-60 gamma rays in the activity of ciliated cells. *Acta Radiologica Therapy Physics Biology* 16:406-416.
- Balogh I, Rozsalyi K, Kovach A, et al. 1987. Endothelial cell injuries on the isolated rat heart after perfusion with trace elements. *J Mol Cell Cardiol* 19(III):S4.
- Banchereau J, Dubos M, Agneray J, et al. 1982. A direct evidence for the early membrane desialylation in cobalt-irradiated mouse lymphocytes. *Biochem Biophys Res Commun* 104(2):512-516.
- Banerjee RK, Datta AG. 1971. Effect of cobalt and vitamin B₁₂ on the peroxidase and iodinating activity of mouse thyroid and submaxillary gland: In vitro stimulation of vitamin B₁₂ coenzyme on the iodination of tyrosine. *Endocrinology* 88:1456-1464.
- *Baratta EJ, Apidianakis JC, Ferri ES. 1969. Cesium-137, lead-210 and polonium-210 concentrations in selected human tissues in the United States. *Am Ind Hyg Assoc J* 30:443-448.
- Barbera R, Farre R. 1988. Determination of cobalt in foods by flame and electro thermal atomization-atomic absorption spectrometry. A comparative study. *Atom Spectrosc* 9(1):6-8.
- *Barborik M, Dusek J. 1972. Cardiomyopathy accompanying industrial cobalt exposure. *Br Heart J* 34:113-116.
- *Barceloux DG. 1999. Cobalt. *Clin Toxicol* 37(2):201-216.
- *Bargagli R. 2000. Trace metals in Antarctica related to climate changes and increasing human impact. *Rev Environ Contam Toxicol* 166:129-173.

9. REFERENCES

- *Bargagli R, Barghigiani C, Siegel BZ, et al. 1991. Trace metal anomalies in surface soils and vegetation on two active island volcanos: Stromboli and Vulcano (Italy). *Sci Total Environ* 102:209-222.
- Barlas N. 1999. A pilot study of heavy metal concentration in various environments and fishes in the upper Sakarya river basin, Turkey. *Environ Toxicol* 14(3):367-373.
- Barman SC, Bhargave SK. 1997. Accumulation of heavy metals in soil and plants in industrially polluted field. In: Cheremisinoff PN, ed. *Ecological issues and environmental impact assessment*. Houston, TX: Gulf Publishing Company, 289-314.
- *Barnaby CF, Smith T. 1971. Calibration of a whole-body counter suitable for use in routine clinical investigations. *Phys Med Biol* 16:97-104.
- *Barnaby CF, Smith T, Thompson BD. 1968. Dosimetry of the radioisotopes of cobalt. *Phys Med Biol* 13(3):421-433.
- *Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. *Regul Toxicol Pharmacol* 8:471-486.
- *Barnes JE, Kanapilly GM, Newton GJ. 1976. Cobalt-60 oxide aerosols: Methods of production and short-term retention and distribution kinetics in the beagle dog. *Health Phys* 30:391-398.
- Barnhart S, Daniell W, Stebbins A, et al. 1991. Occurrence of hard metal pneumoconiosis at exposure levels below the permissible exposure limit. *Am Rev Respir Dis* 143:A263.
- Bar-Or D, Lau E, Winkler JV. 2000. A novel assay for cobalt-albumin binding and its potential as a marker for myocardial ischemia- a preliminary report. *J Emerg Med* 19(4):311-315.
- Barton JC, Conrad ME, Holland R. 1981. Iron, lead, and cobalt absorption: Similarities and dissimilarities. *Proc Soc Exp Biol Med* 166:64-69.
- Basaham AS, Al-Lihaibi SS. 1993. Trace elements in sediments of the western gulf. *Mar Pollut Bull* 27:103-107.
- Basketter DA, Briatico-Vangosa G, Kaestner W, et al. 1993. Nickel, cobalt and chromium in consumer products: A role in allergic contact dermatitis? *Contact Dermatitis* 28:15-25.
- *Bassant MH, Court L. 1978. Effects of whole-body irradiation on the activity of rabbit hippocampal neurons. *Radiat Res* 75:593-606.
- *Baudin JP, Fritsch AF. 1987. Retention of ingested ⁶⁰Co by a freshwater fish. *Water Air Soil Pollut* 36:207-217.
- *Baudin JP, Fritsch AF. 1989. Relative contributions of food and water in the accumulation of ⁶⁰Co by a freshwater fish. *Water Res* 23(7):817-823.

9. REFERENCES

- Baudin JP, Nucho R. 1992. ^{60}Co accumulation for sediment and planktonic algae by midge larvae (*chironomus luridus*). *Environ Pollut* 76:133-140.
- *Baudin JP, Adam C, Garnier-Laplace J. 2000. Dietary uptake, retention and tissue distribution of ^{54}Mn , ^{60}Co , and ^{137}Cs in the rainbow trout (*Oncorhynchus mikiss walbaum*). *Water Res* 34(11):2869-2878.
- *Baudin JP, Fritsch AF, Georges J. 1990. Influence of labeled food type on the accumulation and retention of ^{60}Co by a freshwater fish, *Cyprinus carpio* L. *Water Air Soil Pollut* 51:261-270.
- *Baumgardt B, Jackwerth E, Otto H, et al. 1986. Trace analysis to determine heavy metal load in lung tissue: A contribution to substantiation of occupational hazards. *Int Arch Occup Environ Health* 58:27-34.
- Bearden LJ. 1976. The toxicity of two prosthetic metals (cobalt and nickel) to cultured fibroblasts. *Diss Abstr Int B* 37(4):1785.
- *Beaugelin-Seiller K, Baudin JP, Brottet D. 1994. Use of aquatic mosses for monitoring artificial radionuclides downstream of the nuclear power plant of Bugey (River Rhone, France). *J Environ Radioact* 24:217-233.
- *Becker DE, Smith SE. 1951. The level of cobalt tolerance in yearling sheep. *J Anim Sci* 10:266-271.
- Becker G, Osterloh K, Schafer S, et al. 1981. Influence of fucoidan on the intestinal absorption of iron, cobalt, manganese and zinc in rats. *Digestion* 21:6-12.
- Beckett WS, Figueroa S, Gerstenhaber B, et al. 1992. Pulmonary fibrosis associated with occupational exposure to hard metal at a metal-coating plant - Connecticut, 1989. *MMWR Morb Mortal Wkly Rep* 41(4):65-67.
- *Bedello PG, Goitre M, Alovise V, et al. 1984. Contact dermatitis caused by cobalt naphthenate. *Contact Dermatitis* 11:247-264.
- *Behrooz A, Ismail-Beigi F. 1997. Dual control of glut1 glucose transporter gene expression by hypoxia and by inhibition of oxidative phosphorylation. *J Biol Chem* 272(9):5555-5562.
- *Beijer K, Jernelov A. 1986. Sources, transport and transformation of metals in the environment. In: *Handbook on the toxicology of metals: Volume I: General aspects*. New York, NY: Elsevier Science Publishing Co., Inc., 68-84.
- *BEIR V. 1990. Health effects of exposure to low levels of ionizing radiation. *Biological Effects of Ionizing Radiations*. Washington, DC: National Academy Press.
- Beitler JJ, McCormick B, Ellsworth RM, et al. 1990. Ocular melanoma: Total dose and dose rate effect with Co-60 plaque therapy. *Radiology* 176:275-278.
- *Beleznay E, Osvay M. 1994. Long-term clearance of accidentally inhaled ^{60}Co aerosols in humans. *Health Phys* 66:392-399.

9. REFERENCES

- *Bellet-Barthas M, Barthelemy L, Bellet M. 1980. Effects of ^{60}Co radiation on the rabbit lung surfactant system. *Int J Radiat Oncol Biol Phys* 6:1169-1177.
- *Bencko V, Wagner V, Wagnerova M, et al. 1983. Immuno-biochemical findings in groups of individuals occupationally and non-occupationally exposed to emissions containing nickel and cobalt. *J Hyg Epidemiol Microbiol Immunol* 27(4):387-394.
- *Bencko V, Wagner V, Wagnerova M, et al. 1986. Human exposure to nickel and cobalt: Biological monitoring and immunobiochemical response. *Environ Res* 40:399-410.
- Benes P, Cernik M. 1992. Kinetics of radionuclide interaction with suspended solids in modeling the migration of radionuclides in rivers: II. Effect of concentration of the solids and temperature. *J Radioanal Nucl Chem* 159(2):187-200.
- *Benes P, Jurak M, Crenik M. 1989a. Factors affecting interaction of radiocobalt with river sediments: II. Composition and concentration of sediment temperature. *J Radioanal Nucl Chem* 132(2):225-239.
- *Benes P, Jurak M, Kunkova M. 1989b. Factors affecting interaction of radiocobalt with river sediments: I. pH and composition of water and contact time. *J Radioanal Nucl Chem* 132(2):209-223.
- Benes P, Kuncova M, Slovak J, et al. 1988. Analysis of the interaction of radionuclides with solid phase in surface waters using laboratory model experiments: Methodical problems. *J Radioanal Nucl Chem* 125(2):295-315.
- *Benjamin SA, Lee AC, Angleton GM, et al. 1998a. Mortality in beagles irradiated during prenatal and postnatal development. I. Contribution of non-neoplastic diseases. *Radiat Res* 150:316-329.
- *Benjamin SA, Lee AC, Angleton GM, et al. 1998b. Mortality in beagles irradiated during prenatal and postnatal development. II. Contribution of benign and malignant neoplasia. *Radiat Res* 150:330-348.
- *Benjamin SA, Saunders WJ, Angleton GM, et al. 1991. Radiation carcinogenesis in dogs irradiated during prenatal postnatal development. *J Radiat Res* 2(Suppl.):86-103.
- *Benjamin SA, Saunders WJ, Lee AC, et al. 1997. Non-neoplastic and neoplastic thyroid disease in beagles irradiated during prenatal and postnatal development. *Radiat Res* 147:422-430.
- Bennett JE. 1968. Treatment of carcinoma of the prostate. *Radiology* 90:532-535.
- *Berg JW, Burbank F. 1972. Correlations between carcinogenic trace metals in water supplies and cancer mortality. *Ann NY Acad Sci* 199:249-264.
- *Berger GS. 1994. Epidemiology of endometriosis. In: Berger GS, ed. *Endometriosis: Advanced management and surgical techniques*. New York, NY: Springer-Verlag.
- *Berger ME, Hurtado R, Dunlap J, et al. 1997. Accidental radiation injury to the hand: anatomical and physiological considerations. *Health Physics* 72(3):343-348.
- Berkenstock OL. 1992. Issues concerning possible cobalt-chromium carcinogenicity: A literature review and discussion. *Contemporary Orthopaedics* 24(3):265-278.

9. REFERENCES

- *Bernstein H-G, Keilhoff G, Kirschke H, et al. 1986. Cathepsins B and D in rat brain glia during experimentally induced neuropathological defects. An immunocytochemical approach. *Biomed Biochem Acta* 45:1461-1464.
- Bertine KK, Goldberg ED. 1972. Trace elements in clams, mussels, and shrimp. *Limnol Oceanogr* 17(6):877-884.
- *Beskid M. 1963. The effect of administration of cobalt chloride on the pancreas in the guinea-pig. *Folia Histochem Cytochem* 1(1):95-102.
- Betti M, Giannarelli S, Hiernaut T, et al. 1996. Detection of trace radioisotopes in soil, sediment and vegetation by glow discharge mass spectrometry. *Fresenius J Anal Chem* 355:642-646.
- Beyersmann D. 1994. Interactions in metal carcinogenicity. *Toxicol Lett* 72:333-338.
- Beyersmann D, Hartwig A. 1992. The genetic toxicology of cobalt. *Toxicol Appl Pharmacol* 115:137-145.
- *Bezek S, Trnovec T, Scasnar V, et al. 1990. Irradiation of the head by ^{60}Co opens the blood-brain barrier for drugs in rats. *Experientia* 46:1017-1020.
- *Bhat IS, Hedge AG, Chandramouli S, et al. 1973. Evaluation of internal exposure to radionuclides of I, Cs, and Co, during maintenance operations on primary steam leak in a nuclear power station. *Health Phys* 25:135-139.
- *Bibak A, Behrens A, Sturup S, et al. 1998a. Concentration of 55 major trace elements in Danish agricultural crops measured by inductively coupled plasma mass spectrometry. 2. Pea (*pisum sativum* ping pong). *J Agric Food Chem* 46:3146-3149.
- *Bibak A, Behrens A, Sturup S, et al. 1998b. Concentrations of 63 major and trace elements in Danish agricultural crops measured by inductively coupled plasma mass spectrometry. 1. Onion (*Allium cepa* Hysam). *J Agric Food Chem* 46:3139-3145.
- Bieger W, Seybold J, Kern HF. 1975. Studies on intracellular transport of secretory proteins in the rat exocrine pancreas: III. Effect of cobalt, lanthanum, and antimycin A. *Virchows Arch A Pathol Anat Histol* 368:329-345.
- *Biego GH, Joyeux M, Hartemann P, et al. 1998. Daily intake of essential minerals and metallic micropollutants from foods in France. *Sci Total Environ* 217:27-36.
- Bingham D, Harrison JD, Phipps AW. 1997. Biokinetics and dosimetry of chromium, cobalt, hydrogen, iron and zinc radionuclides in male reproductive tissues of the rat. *Int J Radiat Biol* 72(2):235-248.
- *Bird GA, Hesslein RH, Mills KH, et al. 1998a. Bioaccumulation of radionuclides in fertilized Canadian Shield Lake basins. *Sci Total Environ* 218:67-83.
- Bird GA, Mills KH, Schwartz WJ. 1999. Accumulation of ^{60}Co and ^{134}Cs in lake whitefish in a Canadian shield lake. *Water Air Soil Pollut* 114:303-322.

9. REFERENCES

- *Bird GA, Schwartz WJ, Motycka M, et al. 1998b. Behavior of ^{60}Co and ^{134}Cs in a Canadian shield lake over 5 years. *Sci Total Environ* 212:115-135.
- Blalock TL, Hill CH. 1986. Mechanism of alleviation of Zn, Cd, V, Ni and Co toxicities by dietary iron. *Fed Proc* 45:369.
- Blume HP, Brummer G. 1991. Prediction of heavy metal behavior in soil by means of simple field tests. *Ecotoxicol Environ Saf* 22:164-174.
- *BNA. 2001. Environment and Safety Library on the Web States and Territories. Washington, DC: Bureau of National Affairs, Inc. <http://www.esweb.bna.com/>. June 06, 2001.
- *Boccolini A, De Franceschi L, Gentili A, et al. 1976. ^{60}Co in air. *Health Phys* 31:175-176.
- Bode P, De Bruin M, Aalbers TG, et al. 1990. Plastics from household waste as a source of heavy metal pollution. *Biol Trace Elem Res* 27:377-384.
- *Boikat U, Fink A, Bleck-Neuhaus J. 1985. Cesium and cobalt transfer from soil to vegetation on permanent pastures. *Radiation and Environmental Biophysics* 24:287-301.
- *Bond AM, Wallace GG. 1984. Liquid chromatography with electrochemical and/or spectrophotometric detection for automated determination of lead, cadmium, mercury, cobalt, nickel, and copper. *Anal Chem* 56:2085-2090.
- *Bonenfant JL, Auger C, Miller G, et al. 1969. Quebec beer-drinkers' myocardosis: pathological aspects. *Ann N Y Acad Sci* 156(1):577-582.
- Borg H, Johansson K. 1989. Metal fluxes to Swedish forest lakes. *Water Air Soil Pollut* 47:427-440.
- *Bouman AA, Platenkamp AJ, Posma FD. 1986. Determination of cobalt in urine by flameless atomic absorption spectrometry. Comparison of direct analysis using Zeeman background correction and indirect analysis using extraction in organic solution. *Ann Clin Biochem* 23:346-350.
- *Bourg WJ, Nation JR, Clark DE. 1985. The effects of chronic cobalt exposure on passive-avoidance performance in the adult rat. *Bulletin of the Psychonomic Society* 23(6):527-530.
- *Brady ME, Hayton WL. 1977a. GI drug absorption in rats exposed to cobalt-60 γ -radiation I: Extent of absorption. *J Pharm Sci* 66(3):361-365.
- *Brady ME, Hayton WL. 1977b. GI drug absorption in rats exposed to cobalt-60 γ -radiation II: In vivo rate of absorption. *J Pharm Sci* 66(3):366-370.
- Braham HW, Sacher GA. 1978. Metabolic and thermoregulatory effects of acute ^{60}Co radiation in myomorph rodents. *Radiat Res* 75:108-120.
- Braham JL. 1987. Lung pathology in 22 cases of giant cell interstitial pneumonia (GIP) suggests GIP as pathognomic of cobalt (hard metal) disease. *Chest* 91(2):312.

9. REFERENCES

- Brasch J, Geier J. 1997. Patch test results in schoolchildren: Results from the information network of departments of dermatology (IVDK) and the German Contact Dermatitis Research Group (DKG). *Contact Dermatitis* 37:286-293.
- Braselmann H, Schmid E, Bauchinger M. 1994. Chromosome aberrations in nuclear power plant workers: the influence of dose accumulation and lymphocyte life-time. *Mutat Res* 306:197-202.
- Breccia A, Balducci R, Stagni G. 1982. Electrochemical studies on nitroimidazole sensitizers: Interaction with Co(II), Zn(II), and Fe(III) in biological media. *Int J Radiat Oncol Biol Phys* 8:423-426.
- *Bregman B, Le Saux F, Trottier S, et al. 1985. Chronic cobalt-induced epilepsy: Noradrenaline ionophoresis and adrenoceptor binding studies in the rat cerebral cortex. *J Neural Transm* 63:109-118.
- *Brewer G. 1940. A statistical study of cobalt polycythemia in the dog. *Am J Physiol* 128:345-348.
- *Brizzee KR, Ordy JM, Kaak B, et al. 1978. Prenatal cobalt-60 irradiation effects on early postnatal development of the squirrel monkey offspring. *DOE Symp Ser* 47:204-227.
- *Bronstein AC, Currance PL. 1988. Emergency care for hazardous materials exposure. St. Louis, MO: CV Mosby Company.
- *Brooks AL, Carsten AL, Mead DK, et al. 1974. Effect of ^{60}Co exposure or continuous intake of tritiated water on the liver chromosomes of hale-stoner brookhaven mice. In: *Inhalation Toxicology Research Institute Annual Report 1973-1974*. Albuquerque, New Mexico: Lovelace Foundation for Medical Educational Research, 182-185.
- *Brooks AL, Mead DK, Peters RF. 1971a. Effect of chronic exposure to ^{60}Co on the frequency of metaphase chromosome aberrations in the liver cells of the Chinese hamster (in vivo). *Int J Radiat Biol* 20:(6)599-604.
- *Brooks AL, Peters RF, Rollag MD. 1971b. Metaphase chromosome aberrations in Chinese hamster liver cells in vivo after single acute ^{60}Co exposure. *Radiat Res* 45:191-201.
- *Brooks SC, Herman JS, Hornberger GM, et al. 1998. Biodegradation of cobalt-citrate complexes: Implications for cobalt mobility in groundwater. *J Contam Hydrol* 32:99-115.
- *Bruce BW, McMahon PB. 1996. Shallow ground-water quality beneath a major urban center: Denver, Colorado, USA. *J Hydrol* 186:129-151.
- Bruckner-Tuderman L, Konig A, Schnyder UW. 1992. Patch test results of the dermatology clinic Zurich in 1989: Personal computer-aided statistical evaluation. *Dermatology* 184:29-33.
- *Brugman L. 1988. Some peculiarities of the trace-metal distribution in Baltic waters and sediments. *Mar Chem* 23:425-440.
- *Brune D, Kjaerheim A, Paulsen G, et al. 1980. Pulmonary deposition following inhalation of chromium-cobalt grinding dust in rats and distribution in other tissues. *Scand J Dent Res* 88:543-551.

9. REFERENCES

- *Bruner A. 1977. Immediate changes in estimated cardiac output and vascular resistance after ^{60}Co exposure in monkeys: Implications for performance decrement. *Radiat Res* 70:391-405.
- *Bruni JE, Persaud TVN, Froese G, et al. 1994. Effect of *in utero* exposure to low dose ionizing on development in the rat. *Histol Histopathol* 9:27-33.
- *Brusseau ML, Zachara JM. 1993. Transport of Co^{2+} in a physically and chemically heterogeneous porous medium. *Environ Sci Technol* 27:1937-1939.
- *Bryan SE, Bright JE. 1973. Serum protein responses elicited by iron, cobalt and mercury. *Toxicol Appl Pharmacol* 26:109-117.
- *Bucher JR, Elwell MR, Thomson MB, et al. 1990. Inhalation toxicity studies of cobalt sulfate in F344/N rats and B6C3F1 mice. *Fundam Appl Toxicol* 15:357-372.
- *Bucher JR, Hailey JR, Roycroft JR, et al. 1999. Inhalation toxicity and carcinogenicity studies of cobalt sulfate. *Toxicol Sci* 49:56-67.
- *Buchholz BA, Landsberger S. 1995. Leaching dynamics studies of municipal solid waste incinerator ash. *J Air Waste Manage Assoc* 45:579-590.
- *Buchter B, Davidoff B, Amacher MC, et al. 1989. Correlation of freundlich K_d and n retention parameters with soils and elements. *Soil Sci* 148(5):370-379.
- *Budavari S. 1996. The Merck index. 12th edition. Merck and Co., Inc., 412-414.
- *Bulinski R, Kot A, Bloniarz J, et al. 1986. [Study on some trace elements in homemade food stuffs: Part VII. Lead, cadmium, zinc, copper, vanadium, and cobalt content in vegetables and fruits]. *Bromatol Chem Toksykol* 19:21-26. (Polish).
- *Bunn HF, Gu J, Huang LE, et al. 1998. Erythropoietin: A model system for studying oxygen-dependent gene regulation. *J Exp Biol* 201:1197-1201.
- Bunzl K, Schimmack W. 1989. Associations between the fluctuations of the distribution coefficients of Cs, Zn, Sr, Co, Cd, Ce, Ru, Tc and I in the upper two horizons of a podzol forest soil. *Chemosphere* 18:2109-2120.
- *Burba P, Rocha J, Klockow D. 1994. Labile complexes of trace metals in aquatic humic substances: Investigations by means of an ion exchange-based flow procedure. *Fresenius J Anal Chem* 349:800-807.
- *Burger J, Gochfeld M. 1988. Metals in tern eggs in a New Jersey estuary: A decade of change. *Environ Monit Assess* 11:127-135.
- Burke DH, Brooks JC, Ryan RP, et al. 1979. p-Chloroamphetamine antagonism of cobaltous chloride-induced hypothermia in mice. *Eur J Pharmacol* 60:241-243.
- Burke DH, Brooks JC, Trembl SB. 1983. Cobaltous chloride-induced hypothermia in mice III: Effect of pretreatment with 5-hydroxytryptaminergic agents. *J Pharm Sci* 72(7):824-826.

9. REFERENCES

- *Burr G, Sinks TH. 1989. Health hazard evaluation--report no. HETA 85-295-1907. General Electric Carboly Systems, Detroit, Michigan. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. NTIS PB89-121008.
- Burrows BA, Chalmers TC. 1990. Cesium-137/potassium-40 ratios in firewood ashes as a reflection of worldwide radioactive contamination of the environment. *Ann NY Acad Sci* 609:334-339.
- *Burt C. 1966. The Genetic determination of differences in intelligence: A study of monozygotic twins reared together and apart.
- *Byczkowski JZ, Gearhart JM, Fisher JW. 1994. "Occupational" exposure of infants to toxic chemicals via breast milk. *Nutrition* 10(1):43-48.
- Byrd JT, Lee KW, Lee DS, et al. 1990. The behavior of trace metals in the Geum Estuary, Korea. *Estuaries* 13(1):8-13.
- *CA Air Resources Board. 2000. California Air Toxics Program. Toxic air contaminant identification program. <http://www.arb.ca.gov/toxics/toxics.htm>. March 16, 2000.
- *CA EPA. 2000. State of California Environmental Protection Agency. Chemicals known to cause cancer. http://www.oehha.ca.gov/prop65/prop65_list/newlist.html. January 8, 2000.
- *Cahill DF, Harvey HD, McCurry DC, et al. 1972. Radiological surveys of Pearl Harbor, Hawaii, and environs. *Radiation Data and Reports* 13:323-334.
- Caicedo A, Kungel M, Pujol R, et al. 1998. Glutamate-induced Co^{2+} uptake in rat auditory brainstem neurons reveals developmental changes in Ca^{2+} permeability of glutamate receptors. *Eur J Neurosci* 10:941-954.
- *Camean A, Lopez-Artiguez M, Roca I, et al. 1998. Determination of cobalt, manganese, and alcohol content in beers. *J Food Prot* 61(1):129-131.
- Camner P, Johansson A. 1992. Reaction of alveolar macrophages to inhaled metal aerosols. *Environ Health Perspect* 97:185-188.
- *Camner P, Boman A, Johansson A, et al. 1993. Inhalation of cobalt by sensitized guinea pigs: Effects on the lungs. *Br J Ind Med* 50:753-757.
- Capar SG, Cunningham WC. 2000. Element and radionuclide concentrations in food: FDA total diet study 1991-1996. *J AOAC Int* 83(1):157-177.
- *Capomazza C, Botta A. 1991. Cobalt chloride induces micronuclei in human lymphocytes. *Med Sci Res* 19:219-220.
- Cardarelli J, Elliott L, Hornung R, et al. 1997. Proposed model for estimating dose to inhabitants of ^{60}Co contaminated buildings. *Health Phys* 72(3):351-360.

9. REFERENCES

Carnes BA, Olshansky SJ, Grahn D. 1998. An interspecies prediction of the risk of radiation-induced mortality. *Radiat Res* 149:487-492.

*Carvajal NJ, Zienius RH. 1986. Gas chromatographic analysis of trace metals isolated from aqueous solutions as diethyldithiocarbamates. *J Chromatogr* 355:107-116.

*Carvalho FP. 1987. Comparative uptake from sea water and tissue distribution of ^{60}Co in marine mollusks. *Health Phys* 53(1):73-81.

*Casarett LJ and Doull J. 1986. *Toxicology: The basic science of poisons*. 3rd ed. New York, NY: Macmillan Publishing Company, 56-57.

*Cassidy RM, Elchuk S, McHugh JO. 1982. Determination of metals in groundwaters by trace enrichment and liquid chromatography. *Anal Chem* 54:727-731.

Castiglioni G, Carosso A, Manzoni S, et al. 1992. Results of routine patch testing of 834 patients in Turin. *Contact Dermatitis* 27:182-185.

Cavelier C, Fousereau J, Gille P, et al. 1989. Allergy to nickel or cobalt: tolerance to nickel and cobalt samples in man and in the guinea pig allergic or sensitized to these metals. *Contact Dermatitis* 21:72-78.

*CDC. 2001. National report on human exposure to environmental chemicals, national health and nutrition examination survey, 1999. NCEH Pub. No. 01-0164, March 2001. Centers for Disease Control and Prevention, National Center for Environmental Health.

*CDC 2003. Second national report on human exposure to environmental chemicals. January 2003. Department of Health and Human Services. Centers for Disease Control and Prevention. Available at <http://www.cdc.gov/exposurereport/pdf/seconder.pdf> as of February 5, 2004.

CEA. 1985. Behavior of cesium 137, chromium 51, cobalt 60, manganese 54, sodium 22 and zinc 65 in simulated estuarine environments. Effects of suspended mineral particles and dissolved organic matters. Saint Paul Les Durance, France: Commissariat A L'Energie Atomique, Centre D'Etudes Nucleaires De Cadarache. CEA-R-5319.

Centeno JA, Pestaner JP, Mullick FG, et al. 1996. An analytical comparison of cobalt cardiomyopathy and idiopathic dilated cardiomyopathy. *Biol Trace Elem Res* 55:21-30.

Cereda C, Redaelli ML, Canesi M, et al. 1994. Widia tool grinding: The importance of primary prevention measures in reducing occupational exposure to cobalt. *Sci Total Environ* 150:249-251.

Chadwick JK, Wilson HK, White MA. 1997. An investigation of occupational metal exposure in thermal spraying processes. *Sci Total Environ* 199:115-124.

*Chamberlain JL. 1961. Thyroid enlargement probably induced by cobalt. A report of 3 cases. *J Pediatr* 59(1):81-86.

Chang MC, Hunt DM. 1960. Effects of in vitro radiocobalt irradiation of rabbit ova on subsequent development in vivo with special reference to the irradiation of maternal organism. *Anat Rec* 137:511-519.

9. REFERENCES

- *Chang MC, Hunt DM, Harvey EB. 1963. Effects of radiocobalt irradiation of pregnant rabbits on the development of fetuses. *Anat Rec* 145:455-466.
- Chang MC, Hunt DM, Romanoff EB. 1957. Effects of radiocobalt irradiation of rabbit spermatozoa in vitro on fertilization and early development. *Anat Rec* 129:211-229.
- Chang MG, Hunt DM, Romanoff EB. 1958. Effects of radiocobalt irradiation of unfertilized or fertilized rabbit ova in vitro on subsequent fertilization and development in vivo. *Anat Rec* 132:161-179.
- *Chang TC, Chen WL, Chang WP, et al. 2001. Effect of prolonged radiation exposure on the thyroid gland of residents living in ⁶⁰Co-contaminated rebar buildings. *Int J Radiat Biol* 77(11):1117-1122.
- *Chang WP, Chan CC, Wang JD. 1997. ⁶⁰CO contamination in recycled steel resulting in elevated civilian radiation doses: Causes and challenges. *Health Phys* 73:(3)465-472.
- *Chang WP, Hwang JS, Hung MC, et al. 1999a. Chronic low-dose γ -radiation exposure and the alteration of the distribution of lymphocyte subpopulations in residents of radioactive buildings. *Int J Radiat Biol* 75(10):1231-1239.
- *Chang WP, Lin YP, Hwang PT, et al. 1999b. Persistent leukocyte abnormalities in children years after previous long-term low-dose radiation exposure. *Br J Haematol* 106:954-959.
- *Chang WP, Tsai M-S, Hwang J-S, et al. 1999c. Follow-up in the micronucleus frequencies and its subsets in human population with chronic low-dose γ -irradiation exposure. *Mutat Res* 428:99-105.
- Chauncey DM, Hagan PL, Halpern SE, et al. 1978a. Distribution of ¹³⁷Cs, ²⁰¹Tl, ²⁰³Hg, ²⁰³Pb and ⁵⁷Co in a rat hematoma model. Comparison with ⁶⁷Ga. *Invest Radiol* 13(1):40-45.
- Chauncey DM, Hagan PL, Halpern SE, et al. 1978b. The distribution of cadmium-115m chloride, cobalt-57 bleomycin, iodine-125 human serum albumin, selenium-75 selenite and selenomethionine-75 in a rat hepatoma model. *Eur J Nucl Med* 3:243-248.
- Chave TA, Warin AP. 1999. Allergic contact dermatitis from cobalt in a beauty product. *Contact Dermatitis* 41:236.
- *Cheam V, Li EX. 1988. Ion chromatographic determination of low level cadmium(II), cobalt(II) and manganese(II) in water. *J Chromatogr* 450:361-371.
- *Chen WL, Hwang JS, Hu TH, et al. 2001. Lenticular opacities in populations exposed to chronic low-dose-rate gamma radiation from radiocontaminated buildings in Taiwan. *Radiat Res* 156:71-77.
- Chesnokov AV, Fedin VI, Govorun AP, et al. 1997. Collimated detector technique for measuring a ¹³⁷Cs deposit in soil under a clean protected layer. *Appl Radiat Isot* 48(9):1265-1272.
- *Chester R, Berry AS, Murphy KJT. 1991. The distributions of particulate atmospheric trace metals and mineral aerosols over the Indian Ocean. *Mar Chem* 34:261-290.

9. REFERENCES

- *Chetty KN, Rao DSVS, Drummond L, et al. 1979. Cobalt induced changes in immune response and adenosine triphosphatase activities in rats. *J Environ Sci Health B* 14(5):525-544.
- Chiappino G. 1994. Hard metal disease: clinical aspects. *Sci Total Environ* 150:65-68.
- Chiavarini S, Galletti M, Michetti I, et al. 1994. Environmental monitoring at Terra Nova Bay Station from 1989-1991. *Int J Environ Anal Chem* 55:331-340.
- Chillrud SN, Bopp RF, Simpson HJ, et al. 1999. Twentieth century atmospheric metal fluxes into Central Park Lake, New York City. *Environ Sci Technol* 33(5):657-662.
- Chin JH, Delorenzo RJ. 1985. Cobalt ion enhancement of 2-chloro[³H]adenosine binding to a novel class of adenosine receptors in brain: antagonism by calcium. *Brain Res* 348:381-386.
- Chocholova L. 1976. Effect of diazepam on the electroencephalographic pattern and vigilance of unanaesthetized and curarized rats with a chronic cobalt-gelatin focus. *Physiol Bohemoslov* 25(2):129-137.
- Christensen JM, Poulsen OM. 1994. A 1982-1992 surveillance program on Danish pottery painters. Biological levels and health effects following exposure to soluble or insoluble cobalt compounds in cobalt blue dyes. *Sci Total Environ* 150:95-104.
- *Christensen JM, Poulsen OM, Thomsen M. 1993. A short-term cross-over study in oral administration of soluble and insoluble cobalt compounds: Sex differences in biological levels. *Int Arch Occup Environ Health* 65:233-240.
- Christensen TH, Kjeldsen P, Albrechtsen HJ, et al. 1994. Attenuation of landfill leachate pollutants in aquifers. *Crit Rev Environ Sci* 24:119-202.
- *Christova T, Duridanova D, Braykova A, et al. 2001. Heme oxygenase is the main protective enzyme in rat liver upon 6-day administration of cobalt chloride. *Arch Toxicol* 75(8):445-451
- *Christova TY, Duridanova DB, Setchenska MS. 2002. Enhanced heme oxygenase activity increases the antioxidant defense capacity of guinea pig liver upon acute cobalt chloride loading: comparison with rat liver. *Comp Biochem Physiol C* 131(2):177-184.
- *Cikrt M, Tich M. 1981. Biliary excretion of cobalt in rats. *J Hyg Epidemiol Microbiol Immunol* 25(4):364-368.
- *Cirla AM. 1994. Cobalt-related asthma: Clinical and immunological aspects. *Sci Total Environ* 150:85-94.
- *Clewel HJ III, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- *Clifford D, Subramonian S, Sorg TJ. 1986. Removing dissolved inorganic contaminants from water. *Environ Sci Technol* 20(11):1072-1080.

9. REFERENCES

- *Clyne N, Hofman-Bang C, Haga Y, et al. 2001. Chronic cobalt exposure affects antioxidants and ATP production in rat myocardium. *Scand J Clin Lab Invest* 61(8):609-614.
- *Clyne N, Lins L-E, Pehrsson SK, et al. 1988. Distribution of cobalt in myocardium, skeletal muscle and serum in exposed and unexposed rats. *Trace Elem Med* 5(2):52-54.
- Clyne N, Persson B, Havu N, et al. 1990a. The intracellular distribution of cobalt in exposed and unexposed rat myocardium. *Scand J Clin Lab Invest* 50:605-609.
- Clyne N, Wibom R, Havu N, et al. 1990b. The effect of cobalt on mitochondrial ATP-production in the rat myocardium and skeletal muscle. *Scand J Clin Lab Invest* 50:153-159.
- *Coakley JP, Nagy E, Serodes JB. 1993. Spatial and vertical trends in sediment-phase contaminants in the upper estuary of the St. Lawrence River. *Estuaries* 16(3B):653-669.
- *Cobalt Development Institute. 2004. <http://www.thecdi.com/index2.html>. March 18, 2004.
- Cockerham LG, Prell GD. 1989. Prenatal radiation risk to the brain. *Neurotoxicology* 10:467-474.
- *Cockerham LG, Cerveny TJ, Hampton JD. 1986. Postradiation regional cerebral blood flow in primates. *Aviat Space Environ Med* June:578-582.
- *CO Dept Public Health and Environment. 2000. Air quality. Colorado Department of Public Health and Environment. <http://www.cdphe.state.co.us/cdphereg.asp>. April 4, 2000.
- Colasanti BK, Craig CR. 1992. Reduction of seizure frequency by clonazepam during cobalt experimental epilepsy. *Brain Res Bull* 28(2):329-331.
- *Colborn T, Clement C, eds. 1992. Chemically-induced alterations in sexual and functional development: The wildlife-human connection. In: *Advances in modern environmental toxicology*, Vol. XX1. Princeton, NJ: Princeton Scientific Publishing.
- *Coleman ME, Elder RS, Basu P. 1992. Trace metals in edible tissues of livestock and poultry. *J AOAC Int* 75(4):615-625.
- *Collecchi P, Esposito M, Brera S, et al. 1986. The distribution of arsenic and cobalt in patients with laryngeal carcinoma. *J Appl Toxicol* 6(4):287-289.
- *Collier CG, Bailey MR, Hodgson A. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part V: Lung clearance of inhaled cobalt oxide particles in hamsters, rats and guinea-pigs. *J Aerosol Sci* 20(2):233-247.
- *Collier CG, Hodgson A, Gray SA, et al. 1991. The lung clearance kinetics of $^{57}\text{Co}_3\text{O}_4$. *J Aerosol Sci* 22(4):537-549.
- *Collins JF, Johanson WG, McCullough B, et al. 1978. Effects of compensatory lung growth in irradiation-induced regional pulmonary fibrosis in the baboon. *Am Rev Respir Dis* 117:1079-1089.

9. REFERENCES

- *Comar CL and Davis GK. 1947. Cobalt metabolism studies III. Excretion and tissue distribution of radioactive cobalt administered to cattle. *Archives of Biochem* 12:257-266.
- Conde-Salazar L, Guimaraens D, Villegas C, et al. 1995. Occupational allergic contact dermatitis in construction workers. *Contact Dermatitis* 33:226-230.
- Conrad CH, Brooks WW, Ingwall JS, et al. 1984. Inhibition of hypoxic myocardial contracture by cobalt in the rat. *J Mol Cell Cardiol* 16:345-354.
- Coombs M. 1996. Biological monitoring of cobalt oxide workers. *Int Arch Occup Environ Health* 68:511-512.
- *Coquerelle TM, Weibezahn KF, Lucke-Huhle C. 1987. Rejoining of double strand breaks in normal human and ataxia-telangiectasia fibroblasts after exposure to ⁶⁰Co γ-rays, ²⁴¹Am α-particles or bleomycin. *Int J Radiat Biol* 51(2):209-218.
- *Corisco JAG, Carreiro MCV. 1999. Co-60 transfer from water to the freshwater planktonic algae *Selenastrum capricornutum* Prinz. In: Anagnostoopoulos P, Brebbia CA, eds. *Water pollution V: modeling, measuring, and prediction. Progress in water resources 1.* Boston: WIT Press, 427-436.
- *Corrier DE, Mollenhauer HH, Clark DE, et al. 1985. Testicular degeneration and necrosis induced by dietary cobalt. *Vet Pathol* 22:610-616.
- *Costa M, Heck JD, Robison S. 1982. Selective phagocytosis of crystalline metal sulfide particles and DNA strand breaks as a mechanism for the induction of cellular transformation. *Cancer Res* 42:2757-2763.
- *Cotton FA, Wilkinson G. 1980. *Advanced inorganic chemistry.* 4th ed. New York: John Wiley & Sons.
- Courtois A. 1972. Motor phenomenology of cobalt experimental epileptic focus in the motor cortex of the cat during various stages of vigilance. *Electroencephalogr Clin Neurophysiol* 32:259-267.
- *Cox AB, Keng PC, Glass NL, et al. 1981. Effects of heavy ions on rabbit tissues: alopecia. *Int J Radiat Biol* 40(6):645-657.
- Craig CR, Colasanti BK. 1992. Reduction of frequency of seizures by carbamazepine during cobalt experimental epilepsy in the rat. *Pharmacol Biochem Behav* 41:813-816.
- Craig CR, Chiu P, Colasanti K. 1976. Effects of diphenylhydantoin and trimethadione on seizure activity during cobalt experimental epilepsy in the rat. *Neuropharmacology* 15:485-489.
- *Cross DP, Ramachandran G, Wattenberg EV. 2001. Mixtures of nickel and cobalt chlorides induce synergistic cytotoxic effects: implications for inhalation exposure modeling. *Ann Occup Hyg* 45(5):409-418.
- *Croudace IW, Cundy AB. 1995. Heavy metal and hydrocarbon pollution in recent sediments from Southampton water, Southern England: A geochemical and isotopic study. *Environ Sci Technol* 29:1288-1296.

9. REFERENCES

- Cugell DW. 1992. The hard metal diseases. *Clinical Chest Medicine* 13(2):269-279.
- Cugell DW, Morgan WKC, Perkins DG, et al. 1990. The respiratory effects of cobalt. *Arch Intern Med* 150:177-183.
- Cui J-Q, Xu G-L. 1989. Protection of experimental cobalt cardiomyopathy in the rat by selenium pretreatment. In: Wendel A, ed. *Selenium in biology and medicine*. Berlin: Springer-Verlag, 194-198.
- Cummings KB, Taylor WJ, Correa RJ, et al. 1976. Observations on definitive cobalt 60 radiation for cure in bladder carcinoma: 15-year followup. *J Urol* 115:152-154.
- *Cunningham GR, Huckins C. 1978. Serum FSH, LH, and testosterone in ^{60}Co γ -irradiated male rats. *Radiat Res* 76:331-338.
- *Cushing CE, Watson DG, Scott AJ, et al. 1981. Decrease of radionuclides in Columbia River biota following closure of hanford reactors. *Health Phys* 41:59-67.
- *Cyr F, Mehra MC, Mallet VN. 1987. Leaching of chemical contaminants from a municipal landfill site. *Bull Environ Contam Toxicol* 38:775-782.
- Czeizel AE, Hegedus S, Timar L. 1999. Congenital abnormalities and indicators of germinal mutations in the vicinity of an acrylonitrile producing factory. *Mutat Res* 427:105-123.
- *Czyscinski KS, Pietrzak RF, Weiss AJ. 1982. Evaluation of isotope migration-land burial: Water chemistry at commercially operated low-level radioactive waste disposal sites. Nuclear Regulatory Commission, Office of Nuclear Regulatory Research, Washington, DC. NTIS/NUREG/CR-2124.
- *Dabeka RW. 1989. Survey of lead, cadmium, cobalt and nickel in infant formulas and evaporated milks and estimation of dietary intakes of the elements by infants 1-12 months old. *Sci Total Environ* 89:279-289.
- *Dabeka RW, McKenzie AD. 1995. Survey of lead, cadmium, fluoride, nickel, and cobalt in food composites and estimation of dietary intakes of these elements by Canadians in 1986-1988. *J AOAC Int* 78(4):897-909.
- D'Adda F, Borleri D, Migliori M, et al. 1994. Cardiac function study in hard metal workers. *Sci Total Environ* 150:179-186.
- *Daghman NA, Elder GE, Savage GA, et al. 1999. Erythropoietin production: evidence for multiple oxygen sensing pathways. *Ann Hematol* 78:275-278.
- *Dalvi RR, Robbins TJ. 1978. Comparative studies on the effect of cadmium, cobalt, lead, and selenium on hepatic microsomal monooxygenase enzymes and glutathione levels in mice. *J Environ Pathol Toxicol* 1:601-607.
- Dameron GW, Beck ML, Maurer JK, et al. 1997. Early clinical chemistry changes associated with short-term exposure to cobalt in rats. *Clin Chem* 43:6.

9. REFERENCES

- *Darwezah N, Maruyama Y, Feola JM, et al. 1988. Six- and thirty-day LD50 data for acute Co-60, Cs-137, and Cf-252 in total body-irradiated BALB/C mice. *Int J Radiat Oncol Biol Phys* 15(Suppl. 1):252.
- *Dasch JM, Wolff GT. 1989. Trace inorganic species in precipitation and their potential use in source apportionment studies. *Water Air Soil Pollut* 43:401-412.
- Dauvalter V. 1994. Heavy metals in lake sediments of the Kola Peninsula, Russia. *Sci Total Environ* 158:51-61.
- Davidson JS, Franco SE, Millar RP. 1993. Stimulation by Mn^{2+} and inhibition by Cd^{2+} , Zn^{2+} , Ni^{2+} , and Co^{2+} ions of lutenizing hormone exocytosis at an intracellular site. *Endocrinology* 132(6):2654-2658.
- *Davis JE. 1937. Cobalt polycythemia in the dog. *Proc Soc Exp Biol Med* 37:96-99.
- *Davis JE, Fields JP. 1958. Experimental production of polycythemia in humans by administration of cobalt chloride. *Proc Soc Exp Biol Med* 99:493-495.
- Davis ME. 1982. Cobaltous chloride effects on hexachlorobutadiene (HCBd) nephrotoxicity. *Fed Proc* 41(4):1053.
- *Davis SD, Yankelevitz DF, Henschke CI. 1992. Radiation effects on the lung: Clinical features, pathology, and imaging findings. *AJR Am J Roentgenol* 159:1157-1164.
- *Davison AG, Haslam PL, Corrin B, et al. 1983. Interstitial lung disease and asthma in hard-metal workers: bronchoalveolar lavage, ultrastructural, and analytical findings and results of bronchial provocation tests. *Thorax* 38:119-128.
- Dawson A. 2000. Mechanisms of endocrine disruption with particular reference to occurrence in avian wildlife: A review. *Ecotoxicology* 9:59-69.
- *Dawson EB, Evans DR, Harris WA, et al. 2000. Seminal plasma trace metal levels in industrial workers. *Biol Trace Elem Res* 74(2):97-105.
- *DE Air Quality Management. 2000. Chemicals and reportable quantities in pounds by CAS number. <http://www.dnrex.state.de.us/air/aqmpage/regs.htm>. April 10, 2000.
- *De Boeck M, Lardao S, Buchet J, et al. 2000. Absence of significant genotoxicity in lymphocytes and urine from workers exposed to moderate levels of cobalt-containing dust: a cross-sectional study. *Environ Mol Mutagen* 36(2):151-60.
- *De Boeck M, Lison D, Kirsh Volders M. 1998. Evaluation of the in vitro direct and indirect genotoxic effects of cobalt compounds using the alkaline comet assay. Influence of interdonor and interexperimental variability. *Carcinogenesis* 19:2021-2129.
- De Boeck M, Saaristo M, Van Goethem F, et al. 1997. Mutagenic and antimutagenic effects of cobalt compounds measured by the comet assay. *Mutat Res* 379:S129.
- Decaestecker AM, Marez T, Jdani J, et al. 1990. Hypersensitivity to dichromate among asymptomatic workers in a chromate pigment factory. *Contact Dermatitis* 23:52-53.

9. REFERENCES

- *De Franceschi L, Gentilis A, Guidi P, et al. 1976. ^{60}Co in the marine mollusc, *Pinna nobilis*. *Health Phys* 31:376-377.
- *Deka NC, Sehgal AK, Chhuttani PN. 1981. Absorption and transport of radioactive ^{57}Co cobalt vitamin B_{12} in experimental giardiasis in rats. *Indian J Med Res* 74:675-679.
- De La Cuadra J, Grau-Massanes M. 1991. Occupational contact dermatitis from rhodium and cobalt. *Contact Dermatitis* 25:182-184.
- De Matteis F, Gibbs AH. 1976. The effect of cobaltous on liver haem metabolism in the rat: Evidence for inhibition of haem synthesis and for increased haem degradation. *Ann Clin Res* 8(Suppl. 17):13-197.
- *De Matteis F, Gibbs AH. 1977. Inhibition of haem synthesis caused by cobalt in rat liver. *Biochem J* 162:213-216.
- *Demedts M, Gheysens B, Lauweryns J, et al. 1984a. "Hard-metal" lung disease due to cobalt in diamond polishers. *Am Rev Respir Dis* 129:A155.
- *Demedts M, Gheysens B, Nagels J, et al. 1984b. Cobalt lung in diamond polishers. *Am Rev Respir Dis* 130:130-135.
- *Deng JF, Sinks T, Elliott L, et al. 1991. Characterization of respiratory health and exposures are a sintered permanent magnet manufacturer. *Br J Ind Med* 48:609-615.
- Desrosiers MF. 1991. In vivo assessment of radiation exposure. *Health Phys* 61(6):859-861.
- Deur CJ, Stone MJ, Frenkel EP. 1981. Trace metals in hematopoiesis. *Am J Hematol* 11:309-331.
- *Devi UP, Baskar R, Hande MP. 1994. Effect of exposure to low-dose gamma radiation during the late organogenesis in the mouse fetus. *Radiat Res* 138:133-138.
- *Devi UP, Hossain M, Bisht KS. 1998. Effect of gamma radiation on the foetal haemopoietic system in the mouse. *Int J Radiat Biol* 74(5):639-646.
- *Devi U, Saini MR, Saharan BR, et al. 1979. Radioprotective effect of 2-mercaptopyrionylglycine on the intestinal crypt of Swiss albino mice after cobalt-60 irradiation. *Radiat Res* 80:214-220.
- Dewar AJ, Dow RC, McQueen JK. 1972. RNA and protein metabolism in cobalt-induced epileptogenic lesions in rat brain. *Epilepsia* 13:552-560.
- *Dick HLH, Saylor CB, Reeves MM, et al. 1979. Chronic cardiac arrhythmias produced by focused cobalt-60 gamma irradiation of the canine atria. *Radiat Res* 78:390-403.
- Diediker LP. 1999. Waste management and chemical inventories. Hartford site environmental report for calendar year 1998. PNNL-12088. <http://www.hanford.gov/docs/annualrp98/index.htm>. June 8, 1999.
- *Di Giulio C, Data PG, Lahiri S. 1991. Chronic cobalt causes hypertrophy of glomus cells in the rat carotid body. *Am J Physiol* 261:C102-C105.

9. REFERENCES

- *Di Giulio C, Huang WX, Lahiri S, et al. 1990. Cobalt stimulates carotid body chemoreceptors. *J Appl Physiol* 68(5):1844-1849.
- *Dinehart SM, Anthony JL, Pollack SV. 1991. Basal cell carcinoma in young patients after irradiation for childhood malignancy. *Med Pediatr Oncol* 19:508-510.
- *Djingova R, Kuleff I. 2002. Concentration of cesium-137, cobalt-60 and potassium-40 in some wild and edible plants around the nuclear power plant in Bulgaria. *J Environ Radioact* 59(1):61-73.
- DOE. 1978. Prenatal cobalt-60 irradiation effects on early postnatal development of the squirrel monkey offspring. In: *Developmental toxicology of energy-related pollutants; proceedings of the seventeenth annual Hanford Biology Symposium at Richland, Washington, October 17-19, 1977*. U.S. Department of Energy. DOE symposium series 47.
- DOE. 1983. Long term lung retention after inhalation of cobalt-oxide and cobalt-nitrate aerosols. In: *Current concepts in lung dosimetry: Proceedings of a special workshop*. U.S. Department of Energy. PNL-SA 11049.
- DOE. 1988. Investigation of leaching of radionuclides and hazardous materials from low-level wastes at Oak Ridge National Laboratory. Washington, DC: U.S. Department of Energy. NTIS/DE87013363.
- *DOE. 1991. Radioactive releases at the Savannah River site, 1954-1989. An environmental protection department summary. Washington, DC: U.S. Department of Energy. NTIS/DE92009983.
- *DOE. 1995. National low-level waste management program radionuclide report series. Volume 12: Cobalt-60. U.S. Department of Energy. DOE/LLW-128.
- *DOE. 1996. Evaluation of cobalt mobility in soils from the Nevada test site. Reno, NV: U.S. Department of Energy. DOE/NV/10845-58.
- *DOE. 1998. Assessment of radionuclides in the Savannah River Site. Environmental summary. Oak Ridge TN: U.S. Department of Energy. Office of Scientific and Technical Information. DE-AC09-96SR18500.
- *DOE. 1999a. Inventory and characteristics of spent nuclear fuel high level radioactive waste and other materials. U.S. Department of Energy. http://www.ymp.gov/deisdoc/Volume%2011/Appendix_A.pdf. January 18, 1999.
- *DOE. 1999b. In: Arnett MW, Mamatey AR, eds. Savannah River site environmental data for 1999. Oak Ridge TN: U.S. Department of Energy. Office of Scientific and Technical Information. DE-AC09-96SR18500.
- *DOE. 2000. Derived air concentrations (DAC), radiation standards inhalation. U.S. Department of Energy. Code of Federal Regulations. 10 CFR 835 Appendix A, C, E.
- *DOE. 2002a. Appendix A inventory and characteristics of spent nuclear fuel, high level radioactive waste, and other materials. http://www.ymp.gov:80/documents/feis_a/web_pdf/vol_2/eis_a_bm.pdf.

9. REFERENCES

- *DOE. 2002b. Statement by the Press Secretary. U.S. Department of Energy. <http://www.whitehouse.gov/news/releases/2002/07/20020723-2.html>. February 11,2003.
- *Dolling JA, Boreham DR, Brown DL, et al. 1998. Modulation of radiation-induced strand break repair by cesplatin in mammalian cells. *Int J Radiat Biol* 74(1):61-69.
- *Domingo JL. 1989. Cobalt in the environment and its toxicological implications. *Rev Environ Contam Toxicol* 108:105-132.
- Domingo JL. 1994. Metal-induced development toxicity in mammals: A review. *J Toxicol Environ Health* 42:123-141.
- *Domingo JL, Llobet JM. 1984. Treatment of acute cobalt intoxication in rats with L-methionine. *Rev Esp Fisiol* 40:443-448.
- *Domingo JL, Llobet JM, Bernat R. 1984. A study of the effects of cobalt administered orally to rats. *Arch Farmacol Toxicol* 10:13-20.
- *Domingo JL, Llobet JM, Corbela J. 1983. The effects of EDTA in acute cobalt intoxication in rats. *Toxicol Eur Res* 5(6):251-255.
- *Domingo JL, Llobet JM, Corbella J. 1985a. The effect of L-histadine on acute cobalt intoxication in rats. *Food Chem Toxicol* 23:130-131.
- *Domingo JL, Paternain JL, Llobet JM, et al. 1985b. Effects of cobalt on postnatal development and late gestation in rats upon oral administration. *Rev Esp Fisiol* 41:293-298.
- Dominiczak A, Clyde E, Bohr D. 1991. Cobalt contraction of vascular smooth muscle. *FASEB J* 5:A384.
- *Donaldson JD. 1986. Cobalt and cobalt compounds. In: Gerhartz W, Yamamoto YS, Campbell FT, et al., eds. *Ullman's Encyclopedia of industrial chemistry*. New York, NY: VCH, 281-313.
- Donat JR, Bruland KW. 1988. Direct determination of dissolved cobalt and nickel in seawater by differential pulse cathodic stripping voltammetry preceded by adsorptive collection of cyclohexane-1,2-dione dioxime complexes. *Anal Chem* 60:240-244.
- Dong ZZ, Chen P, Li X-Q. 1996. Neurobehavioral study of prenatal exposure to hyperthermia combined with irradiation in mice. *Neurotoxicol Teratol* 18(6):703-709.
- Doody MM, Mandel JS, Boice JD. 1995. Employment practices and breast cancer among radiologic technologists. *J Occup Environ Med* 37(3):321-327.
- *Dooms-Goossens A, Ceuterick A, Vanmalaele N, et al. 1980. Follow-up study of patients with contact dermatitis caused by chromates, nickel, and cobalt. *Dermatologica* 160:249-260.
- *DOT. 2001a. U.S. Department of Transportation. 40CFR173.435. Activity values for radionuclides. <http://www.dot.gov>. June 18, 2001.

9. REFERENCES

- *DOT. 2001b. U.S. Department of Transportation. 40CFR172.101. Superfund reportable quantity. <http://www.dot.gov>. June 18, 2001.
- *Down JD, Easton DF, Steel GG. 1986. Repair in the mouse lung during low dose-rate irradiation. *Radiother Oncol* 6:29-42.
- Dreizen S, Levy BM, Niedermeier W, et al. 1970. Comparative concentrations of selected trace metals in human and marmoset saliva. *Arch Oral Biol* 15:179-188.
- Dressler RL, Storm GL, Tzilkowski WM, et al. 1986. Heavy metals in cottontail rabbits on mined lands treated with sewage sludge. *J Environ Qual* 15(3):278-281.
- Drosselmeyer E, Muller HL, Pickering S. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles - part VII: Lung clearance of inhaled cobalt oxide particles in Sprague-Dawley rats. *J Aerosol Sci* 20(2):257-260.
- *Duby P. 1995. Metallurgy (Extractive). In: Kroschwitz JI, Howe-Grant M, eds. *Kirk-Othmer Encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 16:320-353.
- *Duckham JM, Lee HA. 1976a. Cobalt cardiomyopathy. *Lancet* 1:1350.
- *Duckham JM, Lee HA. 1976b. The treatment of refractory anaemia of chronic renal failure with cobalt chloride. *Q J Med* 178:277-294.
- Dufresne A, Loosereewanich P, Armstrong B, et al. 1996. Inorganic particles in the lungs of five a luminum smelter workers with pleuro-pulmonary cancer. *Am Ind Hyg Assoc J* 57:370-375.
- *Duncan RE, Bennett DW, Evans AT, et al. 1977. Radiation-induced bladder tumors. *J Urol* 118:43-45.
- Duncan WRH, Morrison ER, Garton GA. 1981. Effects of cobalt deficiency in pregnant and post-parturient ewes and their lambs. *Br Med J* 46:337-344.
- *Dzubay TG, Morosoff N, Whitaker GL, et al. 1988. Polymer film standards for x-ray fluorescence spectrometers. *Journal of Trace and Microprobe Techniques* 5(4):327-341.
- Eaton RP. 1972. Cobalt chloride-induced hyperlipemia in the rat: Effects on intermediary metabolism. *Am J Physiol* 222(6):1550-1557.
- *Eaton RP, Pommer I. 1973. Glucagon secretion and activity in the cobalt chloride-treated rat. *Am J Physiol* 225:67-72.
- *Eckel WP, Jacob TA. 1988. Ambient levels of 24 dissolved metals in U.S. surface and ground waters. In: *Proceedings of the 196th meeting of the American Chemical Society, Division of Environmental Chemistry*. New York, NY: American Chemical Society, 317-372.
- Edel J, Pozzi G, Sabbioni E, et al. 1994. Metabolic and toxicological studies on cobalt. *Sci Total Environ* 150:233-244.

9. REFERENCES

Edmondson PW, Batchelor AL. 1971. Acute lethal responses of goats and sheep to bilateral or unilateral whole-body irradiation by gamma-rays and fission neutrons. *Int J Radiat Biol* 20(3):269-290.

*Ehrlich A, Kucenic M, Belsito DV. 2001. Role of body piercing in the induction of metal allergies. *Am J Contact Dermatitis* 12(3):151-155.

*Eisenbud M. 1987. *Environmental Radioactivity*. 3rd ed. New York: Academic Press, Inc.

Elinder CG. 1984. Health hazards from exposure to cobalt, with special reference to carcinogenic, mutagenic and teratogenic effects. *Toxicol Environ Chem* 7:251-256.

*Ellenhorn MJ, Schonwald S, Ordog G, et al., eds. 1997. *Medical toxicology: Diagnosis and treatment of human poisoning*. 2nd edition. Baltimore, MD: Williams & Wilkins. 1682-1723.

Elliott JE, Scheuhammer AM. 1997. Heavy metal and metallothionein concentrations in seabirds from the pacific coast of Canada. *Mar Pollut Bull* 34(10):794-801.

Elliott WC, Koski J, Houghton DC, et al. 1982. Bis(2,3-dibromopropyl) phosphate nephrotoxicity: Effect of sex and CoCl₂ pretreatment. *Life Sci* 32:1107-1117.

El-Sewedy SM, Abdel-Tawab GA, El-Zoghby SM, et al. 1974. Studies with tryptophan metabolites in vitro. Effect of zinc, manganese, copper and cobalt ions on kynurenine hydrolase and kynurenine aminotransferase in normal mouse liver. *Biochem Pharmacol* 23:2557-2565.

Emtestam L, Zetterquist H, Olerup O. 1993. HLA-DR, -DQ and -DP alleles in nickel, chromium, and/or cobalt-sensitive individuals: Genomic analysis based on restriction fragment length polymorphisms. *J Invest Dermatol* 100:271-274.

*Endo A, Kano Y, Mihara K, et al. 1993. Alteration in the retinoblastoma gene associated with immortalization of human fibroblasts treated with ⁶⁰Co gamma rays. *J Cancer Res Clin Oncol* 119:522-526.

EPA. 1980. Prescribed procedures for measurement of radioactivity in drinking water. Cincinnati, OH: U.S. Environmental Protection Agency. EPA-600/4-80-032.

EPA. 1986. Broad scan analysis of the FY82 national human adipose tissue survey specimens volume I-executive summary: Final report. Washington, DC: U.S. Environmental Protection Agency. EPA-560/5-86-035.

EPA. 1987. Reference dose (RfD): Description and use in health risk assessments. Volume I, Appendix A: Integrated risk information system supportive documentation. Washington, DC: U.S. Environmental Protection Agency. EPA/600/8-86/032a.

EPA. 1988. Analysis of clean water act effluent guidelines: Pollutants. Summary of the chemicals regulated by industrial point source category. Environmental Protection Agency. Federal Register. 40 CFR Parts 400-475.

EPA. 1989a. Reportable quantity adjustments: Delisting of ammonium thiosulfate. Final rules. U.S. Environmental Protection Agency. Federal Register 54:33417. 40 CFR parts 116, 117 and 302.

9. REFERENCES

EPA. 1989b. Reportable quantity adjustments: radionuclides. Final rules. U.S. Environmental Protection Agency. Federal Register 54:22524-22543. 40 CFR parts 202 and 355.

*EPA. 1990. Interim methods for development of inhalation reference concentrations. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development, Environmental Criteria and Assessment Office. EPA 600/8-90/066A.

EPA. 1994. State tribal and site identification center, NPL site narrative at listing. <http://www.epa.gov/superfund/sites/npl/nar1369.htm> May 29, 1994.

*EPA. 1997a. Special report on environmental endocrine disruption: An effects assessment and analysis. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA/630/R-96/012.

*EPA 1998 Radioactive waste disposal: An Environmental perspective. Low-level radioactive waste . U.S. Environmental Protection Agency, available at <http://www.epa.gov/radiation/docs/radwaste/llw.htm>.

*EPA. 1997b. Health effects assessment summary tables, FY 1997 update. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA/540/R/97/036.

EPA. 1999a. Designation of hazardous substances. Code of Federal Regulations. 40 CFR 302.4.

EPA. 1999b. Table 6 - VHAP or potential concern. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 63 Subpart JJ.

EPA. 1999c. NPDES permit application testing requirements for organic toxic pollutants by industrial category for existing dischargers. U.S. Environmental Protection Agency. Code of Federal Regulations 40 CFR 122, Appendix D.

EPA. 1999d. Designation of hazardous substances. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 116.4.

EPA. 1999e. Toxic chemical release reporting; Community right-to-know. Sub-part D – Specific toxic chemical listings. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 372.65.

EPA. 1999f. Health and safety data reporting: Scope and compliance. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 716.1.

EPA. 1999g. Designation of hazardous substances and reportable quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.4, 40 CFR 302.5.

EPA. 1999h. Compliance procedures methods for determining compliance with subpart I. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 61, Appendix E.

*EPA. 2000. Drinking water standards and health advisories. U.S. Environmental Protection Agency. EPA 822-B-00-001.

9. REFERENCES

- *EPA. 2001a. Annual possession quantities. U.S. Environmental Protection Agency. 40CFR61. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 13, 2001.
- *EPA. 2001b. BPT effluent limitations. U.S. Environmental Protection Agency. 40CFR415.652. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 13, 2001.
- *EPA. 2001c. Community right-to-know, release reporting. U.S. Environmental Protection Agency. 40CFR372.65. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. February 22, 2001.
- *EPA. 2001d. Groundwater monitoring. U.S. Environmental Protection Agency. 40CFR264. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 13, 2001.
- *EPA. 2001e. Hazardous waste identification and listing. U.S. Environmental Protection Agency. 40CFR261.38. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. February 22, 2001.
- *EPA. 2001f. Municipal solid waste landfills. U.S. Environmental Protection Agency. 40CFR258. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. February 22, 2001.
- *EPA. 2001g. NPEDS permit application testing requirements. U.S. Environmental Protection Agency. 40CFR122. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 23, 2001.
- *EPA. 2001h. Reported quantity, cobalt compounds. U.S. Environmental Protection Agency. 40CFR302.4. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 23, 2001.
- *EPA. 2001i. Superfund reportable quantities. U.S. Environmental Protection Agency. 40CFR302.4. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. March 13, 2001.
- *EPA. 2001j. Test methods. U.S. Environmental Protection Agency. 40CFR61. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. February 22, 2001.
- *EPA. 2001k. TSCA health and safety data reporting. U.S. Environmental Protection Agency. 40CFR716.120. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. February 22, 2001.
- *EPA. 2002. Radionuclide carcinogenicity slope factors. Environmental Protection Agency. <http://www.epa.gov/radiation/heast/index.html>.
- *EPA. 2004. Radioactive Waste Disposal: An Environmental Perspective. Low Level Radioactive Wastes. <http://www.epa.gov/radiation/docs/radwaste/llw.html>.
- *Erlandsson B, Ingemansson T, Mattsson S. 1983. Comparative studies of radionuclides from global fallout and local sources in ground level air and sewage sludge. *Water Air Soil Pollut* 20:331-346.
- *Esclapez M, Trottier S. 1989. Changes in GABA-immunoreactive cell density during motor focal epilepsy induced by cobalt in the rat. *Exp Brain Res* 76:369-385.
- *Evans GJ, Jervis RE. 1987. Hair as a bio-indicator: Limitations and complications in the interpretation of results. *J Radioanal Nucl Chem* 110(2):613-625.

9. REFERENCES

- *Evans GJ, Tan PV. 1998. The fate elements in residential composters. *Arch Environ Contam Toxicol* 34:323-329.
- *Evans RD, Andrews D, Cornett RJ. 1988. Chemical fractionation and bioavailability of cobalt-60 to benthic deposit-feeders. *Can J Fish Aquat Sci* 45:228-236.
- *Eyrolle F, Charmasson S. 2001. Distribution of organic carbon, selected stable elements and artificial radionuclides among dissolved, colloidal and particulate phases in the Rhone River (France) : preliminary results. *J Environ Radioact* 55(2):145-155
- Facchini A, Maraldi NM, Bartoli S, et al. 1976. Changes in membrane receptors of B and T human lymphocytes exposed to ^{60}Co gamma rays. *Radiat Res* 68:339-348.
- Fan Z, Hiraoka M. 1989. Depression of delayed outward K^+ current by Co^{2+} in guinea pig ventricular myocytes. *J Mol Cell Cardiol* 21(Suppl. II):S55.
- Farah SB. 1983. The in vivo effect of cobalt chloride on chromosomes. *Rev Bras Genet* 6(3):433-442.
- Farquhar SJ. 1997. Self dosing with cobalt or selenium by farmers. *N Z Med J* 110:237.
- Fatemi SH, Antosh M, Cullan GM, et al. 1985. Late ultrastructural effects of heavy ions and gamma irradiation in the gastrointestinal tract of the mouse. *Virchows Arch B* 48:325-340.
- Fawade MM, Pawar SS. 1983. Effect of NiCl_2 , CoCl_2 & cycloheximide on microsomal drug metabolism & ALA-synthesis during thiodemeton toxicity. *Indian J Exp Biol* 21:343-346.
- *FDA. 1999. Ionizing radiation in animal feed and pet food. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 579.40.
- *FDA. 2000a. Drug products withdrawn or removed from the market for reasons of safety or effectiveness. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 216.24.
- *FDA. 2000b. Certain drugs accorded new drug status through rulemaking procedures. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 310.502.
- *FDA. 2000c. Sources of radiation used for inspection of food, for inspection of packaged food, and for controlling food processing. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 179.21.
- *FDA. 2000d. Requirements regarding certain radioactive drugs. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 310.503.
- *FDA. 2000e. OTC warning label. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 369.20. <http://www.access.gpo.gov>. March 13, 2001.
- *FDA. 2000f. Substances recognized as safe. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 582.20. <http://www.access.gpo.gov>. March 13, 2001.

9. REFERENCES

- *FDA. 2000g. Prohibited use in human food. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 189.120. <http://www.access.gpo.gov>. March 13, 2001.
- *FDRL. 1984a. Acute oral LD₅₀ study of cobalt sulphate lot no. S88336/A in Sprague-Dawley rats. FDRL study no. 8005D. Food and Drug Research Laboratories, Inc., Waverly, NY. April 11, 1984.
- *FDRL. 1984b. Study of cobalt (II) carbonate tech gr. CoCo₃, lot #030383 in Sprague-Dawley rats. Food and Drug Research Laboratories, Inc., Waverly, NY. April 12, 1984.
- *FDRL. 1984c. Acute oral toxicity study of cobalt oxide tricobalt tetraoxide in Sprague-Dawley rats. Food and Drug Research Laboratories, Inc., Waverly, NY. April 5, 1984.
- *FDRL. 1984d. Acute oral LD₅₀ study of cobalt-325 MESH t3N in Sprague-Dawley rats. FDRL study no. 8005B. Food and Drug Research Laboratories, Inc., Waverly, NY. April 11, 1984.
- *FEDRIP. 2004. Federal Research In Progress Database. National Technical Information Service, Springfield, VA..
- *Feinendegen LE, Henneberg P, Tislgar-Lentulis G. 1977. DNA strand breakage and repair in human kidney cells after exposure to incorporated iodine-125 and cobalt-60 γ -rays. *Curr Top Radiat Res Q* 12:436-452.
- Fenech M, Morley AA. 1989. Kinetochore detection in micronuclei: An alternative method for measuring chromosome loss. *Mutagenesis* 4(2):98-104.
- *Feng MR, Rossi DT, Strenkoski C, et al. 1998. Disposition kinetics of cobalt mesoporphyrin in mouse, rat, monkey and dog. *Xenobiotica* 28(4):413-426.
- Feola J, Maruyama Y, Magura C, et al. 1986. Response of lymphoid organs to low dose rate Cf-252, Cs-137 and acute Co-60. *Nucl Sci Appl* 2:787-796.
- *Ferdenzi P, Giaroli C, Mori P, et al. 1994. Cobalt powder sintering industry (stone cutting diamond wheels): A study of environmental-biological monitoring, workplace improvement and health surveillance. *Sci Total Environ* 150:245-248.
- *Fergusson JE, Ryan DE. 1984. The elemental composition of street dust from large and small urban areas related to city type, source and particle size. *Sci Total Environ* 34:101-116.
- Fernandez MA, Martinez L, Segarra M, et al. 1992. Behavior of heavy metals in the combustion gases of urban waste incinerators. *Environ Sci Technol* 26(5):1040-1047.
- Fernandez-Turiel JL, Lopez-Soler A, Liorens JF, et al. 1995. Environmental monitoring using surface water, river sediments, and vegetation: A case study in the Famatina Range, La Rioja, NW Argentina. *Environ Int* 21(6):807-820.
- *Ferrans VJ, Hibbs RG, Weilbaecher DG. 1964. Alcoholic cardiomyopathy: a histochemical and electron microscopic study. *Am J Cardiol* 13:106-107.

9. REFERENCES

- Ferri F, Candela S, Bedogni L, et al. 1994. Exposure to cobalt in the welding process with stellite. *Sci Total Environ* 150:145-147.
- Feuer G, Roomi MW, Stuhne-Sekalec L, et al. 1985. Association between progesterone binding and cytochrome P-450 content of hepatic microsomes in the rat treated with cobalt-haem. *Xenobiotica* 15(5):407-412.
- Fiedler H, Hoffman HD. 1970. [The action of nickel(II)-L-glutamate and of different cobalt complexes on the behavior of several lipid components in rabbits]. *Acta Biol Med Ger* 25:389-398.
- *Figueroa S, Gerstenhaber B, Welch L, et al. 1992. Hard metal interstitial pulmonary disease associated with a form of welding in a metals parts coating plant. *Am J Ind Med* 21:363-373.
- *Finney BP, Huh C-A. 1989. History of metal pollution in the southern California bight: An update. *Environ Sci Technol* 23:294-303.
- *Firriolo JM, Ayala-Fierro F, Snipes IG, et al. 1999. Absorption and disposition of cobalt naphthenate in rats after a single oral dose. *J Toxicol Environ Health, Part A* 58:383-395.
- *Fischer T, Rystedt I. 1983. Cobalt allergy in hard metal workers. *Contact Dermatitis* 9:115-121.
- Fisher DR, Dunavant BG. 1978. Internal decontamination of radiocobalt. *Health Phys* 35(2):279-285.
- Fisher GE, MacPherson A. 1991. Effect of cobalt deficiency in the pregnant ewe on reproductive performance and lamb viability. *Res Vet Sci* 50:319-327.
- *Fisher NS, Fowler SW, Boisson F, et al. 1999. Radionuclide bioconcentration factors and sediment partition coefficients in arctic seas subject to contamination from dumped nuclear wastes. *Environ Sci Technol* 33(12):1979-1982.
- *Fisher NS, Teyssie JL, Fowler SW, et al. 1996. Accumulation and retention of metals in mussels from food and water: A comparison under field and laboratory conditions. *Environ Sci Technol* 30:3232-3242.
- Fishman MJ, Perryman GR, Schroder LJ, et al. 1986. Determination of trace metals in low ionic strength waters using Zeeman and Deuterium background correction for graphite furnace absorption spectrometry. *J Assoc Off Anal Chem* 69(4):704-708.
- *Fishman ML, Bean SC, Cogan DG. 1976. Optic atrophy following prophylactic chemotherapy and cranial radiation for acute lymphocytic leukemia. *Am J Ophthalmol* 82(4):571-576.
- *Flaten TP. 1991. A nation-wide survey of the chemical composition of drinking water in Norway. *Sci Total Environ* 102:35-73.
- Fleet JC, Golemboski KA, Dietert RR, et al. 1990. Induction of hepatic metallothionein by intraperitoneal metal injection: an associated inflammatory response. *Am J Physiol* 258:G926-G933.
- Flegal ARE, Smith GJ, Gill GA, et al. 1991. Dissolved trace element cycles in the San Francisco Bay estuary. *Mar Chem* 36:329-363.

9. REFERENCES

- *Fomon SJ. 1966. Body composition of the infant: Part I: The male "reference infant". In: Falkner F, ed. Human development. Philadelphia, PA: WB Saunders, 239-246.
- *Fomon SJ, Haschke F, Ziegler EE, et al. 1982. Body composition of reference children from birth to age 10 years. *Am J Clin Nutr* 35:1169-1175.
- *Forbes RM, Cooper AR, Mitchell HH. 1954. On the occurrence of beryllium, boron, cobalt, and mercury in human tissues. *J Biol Chem* 209:857-865.
- Fordham PJ, Gramshaw JW, Crews HM, et al. 1995. Element residues in food contact plastics and their migration into food stimulants, measured by inductively-coupled plasma-mass spectrometry. *Food Addit Contam* 12(5):651-669.
- Forni A. 1994. Bronchoalveolar lavage in the diagnosis of hard metal disease. *Sci Total Environ* 150:69-76.
- Fortoul TI, Osorio LS, Tovar AT, et al. 1996. Metals in lung tissue from autopsy cases in Mexico City residents: Comparison of cases from the 1950s and the 1980s. *Environ Health Perspect* 104(6):630-632.
- *Foster PP, Pearman I, Ramsden D. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part II: Lung clearance of inhaled cobalt oxide in man. *J Aerosol Sci* 20(2):189-204.
- Fowler SW. 1986. Trace metal monitoring of pelagic organisms from the open Mediterranean Sea. *Environ Monit Assess* 7:59-78.
- Franchi A, Prens EP, Ferrara GB, et al. 1996. Allergy to cobalt is associated with the activation of cobalt-specific HLA-DR-restricted CD4+ T-cells. *Euro Respir J* 9(Suppl. 23):895.
- Franchini I, Bocchi MC, Giaroli C, et al. 1994. Does occupational cobalt exposure determine early renal changes? *Sci Total Environ* 150:149-152.
- Francis AJ, Dodge CJ. 1988. Anaerobic microbial dissolution of transition and heavy metal oxides. *Appl Environ Microbiol* 54(4):1009-1014.
- Francis AJ, Dodge CJ. 1990. Anaerobic microbial remobilization of toxic metals coprecipitated with iron oxide. *Environ Sci Technol* 24:373-378.
- *Francis CW, Davis EC, Goyert JC. 1985. Plant uptake of trace elements from coal gasification ashes. *J Environ Qual* 14(4):561-569.
- Frank R, Stonefield KI, Luyken H, et al. 1986. Survey of elemental contents in two organs of slaughtered bovine, porcine and avian specimens, Ontario, Canada 1980-83. *Environ Monit Assess* 6:259-265.
- *Freitas ACS, Guimaraes JRD, Gouvea VA, et al. 1988. Laboratory experiments on ⁶⁰Co bioaccumulation by tropical seaweeds. In: Seeliger U, de Lacerda LD, Patchineelam SR, eds. *Metals in coastal environments of Latin America*. Berlin, Germany: Springer-Verlag, 147-154.

9. REFERENCES

- Frias-Espericueta MG, Osuna-Lopez JI, Sandoval-Salazar G, et al. 1999. Distribution of trace metals in different tissues in the rock oyster *crassostrea iridescens*: Seasonal variation. *Bull Environ Contam Toxicol* 63:73-79.
- Fried W, Kilbridge T. 1969. Effect of testosterone and of cobalt on erythroprotein production by anephric rats. *J Lab Clin Med* 74(4):623-629.
- *Friedman HA, Kelmers AD. 1988. Investigation of leaching of radionuclides and hazardous materials from low-level wastes at Oak Ridge National Laboratory. Department of Energy, Washington, DC. NTIS/DE87013363.
- *FSTRAC. 1995. Summary of state and federal drinking water standards and guidelines 1993-1995. Federal-State Toxicology and Risk Analysis Committee. U.S. Environmental Protection Agency.
- *FSTRAC. 1999. Summary of state and federal drinking water standards and guidelines 1998-1999. Federal-State Toxicology and Risk Analysis Committee. U.S. Environmental Protection Agency.
- Fuge R, Laidlaw IMS, Perkins WT, et al. 1991. The influence of acidic mine and spoil drainage on water quality in the mid-Whales area. *Environ Geochem Health* 13(2):70-75.
- *Fukunaga M, Kurachi Y, Mizuguchi Y. 1982. Action of some metal ions on yeast chromosomes. *Chem Pharm Bull* 30(8):3017-3019.
- Fuller CC, Harvey JW. 2000. Reactive uptake of trace metals in the hyporheic zone of a mining-contaminated stream, Pinal Creek, Arizona. *Environ Sci Technol* 34:1150-1155.
- Furuno K, Suetsugu T, Sugihara N. 1996. Effects of metal ions on lipid peroxidation in cultured rat hepatocytes loaded with α -linolenic acid. *J Toxicol Environ Health* 48:121-129.
- Gagnon WF, Horton JL. 1979. Physical factors affecting absorbed dose to the skin from cobalt-60 gamma rays and 25-MV x rays. *Med Physics* 6(4):285-290.
- Gallagher MJ, Alade PI, Dominiczak AF, et al. 1994. Cobalt contraction of vascular smooth muscle is calcium dependent. *J Cardiovasc Pharmacol* 24:293-297.
- *Gallorini M, Edel J, Pietra R, et al. 1994. Cobalt speciation in urine of hard metal workers. A study carried out by nuclear and radioanalytical techniques. *Sci Total Environ* 150:153-160.
- *Garcia-Silva J, Velasco-Benito JA, Pena-Penabad C, et al. 1996. Basal cell carcinoma in a girl after cobalt irradiation to the cranium for acute lymphoblastic leukemia: Case report and literature review. *Pediatric Dermatology* 13(1):54-57.
- *Garg AN, Weginwar RG, Chutke NL. 1993. Radiochemical neutron activation analysis of Fe, Co, Zn, Sb, and Se in biomedical and environmental samples. *Sci Total Environ* 139/140:421-430.
- Garnham GW, Codd GA, Gadd GM. 1993. Uptake of cobalt and cesium by microalgal-and cyanobacterial-clay mixtures. *Microb Ecol* 25:71-82.

9. REFERENCES

- *Gautier MA. 1983. Manual of analytical methods for radiobioassay, DOE report no. LA-9763-M (National Technical Information Services, Springfield, Virginia).
- Gawkrodger DJ, Lewis FM. 1993. Isolated cobalt sensitivity in an etcher. *Contact Dermatitis* 28:46.
- Genicot J-L. 1997. Room-temperature semiconductor detectors for in vivo monitoring of internal contamination. *Environ Health Perspect Suppl* 105(6):1423-1426.
- *Gennart J, Lauwerys R. 1990. Ventilatory function of workers exposed to cobalt and diamond containing dust. *Int Arch Occup Environ Health* 62:333-336.
- *Gennart JP, Baleux C, Verellen-Dumoulin C, et al. 1993. Increased sister chromatid exchanges and tumor markers in workers exposed to elemental chromium-, cobalt- and nickel-containing dusts. *Mutat Res* 299:55-61.
- Gerhardsson L, Nordberg GF. 1993. Lung cancer in smelter workers - interactions of metals as indicated by tissue levels. *Scand J Work Environ Health* 19(Suppl. 1):90-94.
- *Gerhardsson L, Brune D, Nordberg GF, et al. 1988. Multielemental assay of tissues of deceased smelter workers and controls. *Sci Total Environ* 74:97-110.
- *Gerhardsson L, Wester PO, Nordberg GF, et al. 1984. Chromium, cobalt and lanthanum in lung, liver and kidney tissue from deceased workers. *Sci Total Environ* 37:233-246.
- *Gerritse RG, Vriesema R, Dalenberg JW, et al. 1982. Effect of sewage sludge on trace element mobility in soils. *J Environ Qual* 11(3):359-364.
- Geuniche A, Viac J, Lizard G, et al. 1994. Effect of various metals on intercellular adhesion molecule-1 expression and tumor necrosis factor alpha production by normal human keratinocytes. *Arch Dermatol Res* 286:466-470.
- *Gheysens B, Auwerx J, Van den Eeckhout A, et al. 1985. Cobalt-induced bronchial asthma in diamond polishers. *Chest* 88:740-744.
- *Gibbs RJ. 1994. Metals in the sediments along the Hudson River Estuary. *Environ Int* 20(4):507-516.
- *Gilman JPW. 1962. Metal carcinogenesis: II. A study on the carcinogenic activity of cobalt, copper, iron, and nickel compounds. *Cancer Res* 22:158-162.
- *Gilman JPW, Ruckerbauer GM. 1962. Metal carcinogenesis: I. Observations on the carcinogenicity of a refinery dust, cobalt oxide, and colloidal thorium dioxide. *Cancer Res* 22:152-157.
- *Gilot-Delhalle J, Moutschen J, Garsou J. 1988. Induction of translocations in mouse spermatogonia after fractionated exposure to ⁶⁰Co γ-rays. *Mutat Res* 207:29-31.
- Giulio CD, Data PG, Lahiri S. 1991. Chronic cobalt causes hypertrophy of glomulus cells in the rat carotid body. *Am J Physiol* 261:C102-C105.

9. REFERENCES

- Giusti L, Yang Y-L, Hewitt CN, et al. 1993. The solubility and partitioning of atmospherically derived trace metals in artificial and natural waters: A review. *Atmos Environ* 27A(10):1567-1578.
- *Giwercman A, Carlsen E, Keiding N, et al. 1993. Evidence for increasing incidence of abnormalities of the human testis: A review. *Environ Health Perspect Suppl* 101(2):65-71.
- Glasgow GP, Corrigan KW. 1995. Installation of ^{60}Co 100 cm source-to-axis distance teletherapy units in vaults designed for 80-cm units. *Health Phys* 68(3):411-415.
- *Glooschenko WA, Capocianco J, Coburn J, et al. 1981. Geochemical distribution of trace metals and organochlorine contaminants of a Lake Ontario shoreline marsh. *Water Air Soil Pollut* 15:197-213.
- Godleski JJ, Kreyling WG. 1990. Localization of cobalt in the matrix of airway cartilage. *Am Rev Respir Dis* 141:A525.
- Goebeler M, Meinardus-Hager G, Roth J, et al. 1993. Nickel chloride and cobalt chloride, two common contact sensitizers, directly induce expression of intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), and endothelial leukocyte adhesion molecule (ELAM-1) by endothelial cells. *J Invest Dermatol* 100:759-765.
- Goebeler M, Roth J, Brocker E-B, et al. 1995. Activation of nuclear factor-kB and gene expression in human endothelial cells by the common haptens nickel and cobalt. *J Immunol* 155:2459-2467.
- *Goh CL, Gan SL, Ngui SJ. 1986. Occupational dermatitis in a prefabrication construction factory. *Contact Dermatitis* 15:235-240.
- *Goldberg MA, Schneider TJ. 1994. Similarities between the oxygen-sensing mechanisms regulating the expression of vascular endothelial growth factor and erythropoietin. *J Biol Chem* 269(6):4355-4359.
- *Goldberg MA, Dunning SP, Bunn HF. 1988. Regulation of the erythropoietin gene: Evidence that the oxygen sensor is a heme protein. *Science* 242:1412-1415.
- *Goldfrank, LR, Flomenbaum, NE, Lewin, NA, et al. eds. 1998. *Toxicological emergencies*. 6th edition. Connecticut: Appleton & Lange, 481t, 489, 490t, 1338-1339.
- *Goldfrank LR, Flomenbaum NE, Weisman RS, et al. 1990. Cobalt. In: Goldfrank LR, Flomenbaum NE, Weisman RS, et al., eds. *Goldfrank's toxicologic emergencies*. Norwalk, Connecticut: Appleton and Lange, 654-655.
- *Goldner MG, Volk BW, Lazarus SS. 1952. The effect of cobaltous chloride on the blood sugar and alpha cells in the pancreatic islets of the rabbit. *Metabolism* 1:544-548.
- *Golomb D, Ryan D, Eby N, et al. 1997. Atmospheric deposition of toxics onto Massachusetts Bay--I. Metals. *Atmos Environ* 31(9):1349-1359.
- Gomaa MA, Aziz A, El-Assaly FM, et al. 1983. Biologically and physically recorded doses after an accidental exposure to ^{60}Co - γ rays. *Health Phys* 44:409-411.

9. REFERENCES

- *Gomez-de-Segura I, Grande AG, De Miguel E. 1998. Antiemetic effects of lerisetron in radiation-induced emesis in the dog. *Acta Oncol* 37:759-763.
- Gonsior SJ, Sorci JJ, Zoellner MJ, et al. 1997. The effects of EDTA on metal solubilization in river sediment/water systems. *J Environ Qual* 26:957-966.
- *Goodwin DA, Meares CF. 1976. Radiolabeled antitumor agents. *Seminars in Nuclear Medicine* 6(4):389-396.
- *Goossens A, Bedert R, Zimerson E. 2001. Allergic contact dermatitis caused by nickel and cobalt in green plastic shoes. *Contact Dermatitis* 45(3):172.
- Gopfert T, Eckardt K-U, Gess B, et al. 1995. Cobalt exerts opposite effects on erythropoietin gene expression in rat hepatocytes in vivo and in vitro. *Am J Physiol* 269:R995-R1001.
- *Grahn D, Carnes BA, Farrington BH. 1988. Genetic injury in hybrid male mice exposed to low doses of ^{60}Co γ -rays or fission neutrons. *Mutat Res* 162:81-89.
- *Grahn D, Lee CH, Farrington BF. 1983. Interpretation of cytogenetic damage induced in the germ line of male mice exposed for over 1 year to ^{239}Pu alpha particles, fission neutrons, or ^{60}Co gamma rays. *Radiat Res* 95:566-583.
- Grant FW. 1976. Chromogenic response of aqueous cobalt thiocyanate to lipophilic drugs. *J Chromatogr* 116:230-234.
- *Greathouse DG, Craun GF. 1978. Cardiovascular disease study - occurrence of inorganics in household tap water and relationships to cardiovascular mortality rates. In: *Proceedings of the 12th annual conference on trace substances on environmental health*. Columbia, MO: University of Missouri, 31-39.
- *Greenberg DM, Copp DH, Cuthbertson EM. 1943. Studies in mineral metabolism with the aid of artificial radioactive isotopes: VII. The distribution and excretion, particularly by way of the bile, of iron, cobalt, and manganese. *J Biol Chem* 147:749-756.
- *Gregus Z, Klaassen CD. 1986. Disposition of metals in rats: A comparative study of fecal, urinary, and biliary excretion and tissue distribution of eighteen metals. *Toxicol Appl Pharmacol* 85:24-38.
- *Greig RA, Jones J. 1976. Nondestructive neutron activation analysis of marine organisms collected from ocean dump sites of the middle eastern United States. *Arch Environ Contam Toxicol* 4(4):420-434.
- Greig RA, Sennfelder G. 1985. Metals and PCB concentrations in mussels from Long Island Sound. *Bull Environ Contam Toxicol* 35:331-334.
- *Grice HC, Goodman T, Munro IC, et al. 1969. Myocardial toxicity of cobalt in the rat. *Ann Acad Sci NY* 156:189-194.
- Griffin MO, Levere RD, Abraham NC. 1991. Differential effect of DMSO and cobalt chloride on gene expression during erythropoiesis. *Exp Hematol* 19:486.

9. REFERENCES

- *Gross RT, Kriss JP, Spaet TH. 1955. The hematopoietic and goitrogenic effects of cobaltous chloride in patients with sickle cell anemia. *Pediatrics* 15:284-290.
- Grundy SM. 1994. Influence of stearic acid on cholesterol metabolism relative to other long-chain fatty acids 1-3. *Am J Clin Nutr* :986S-990S.
- *Guieu C, Martin JM, Thomas AJ, et al. 1991. Atmospheric versus river inputs of metals to the Gulf of Lions. Total concentrations, partitioning and fluxes. *Mar Pollut Bull* 22(4):176-183.
- *Gumgum B, Unlu E, Tez Z, et al. 1994. Heavy metal pollution in water, sediment and fish from the Tigris River in Turkey. *Chemosphere* 29(1):111-116.
- *Gutenmann WH, Rutzke M, Kuntz HT, et al. 1994. Elements and polychlorinated biphenyls in sewage sludge of large cities in the United States. *Chemosphere* 28(4):725-728.
- Guzelian PS, Bissell DM. 1976. Effect of cobalt on synthesis of heme and cytochrome P-450 in the liver. *J Biol Chem* 251(14):4421-4427.
- *Guzelian PS, Henry CJ, Olin SS, eds. 1992. Similarities and differences between children and adults: Implications for risk assessment. Washington, DC: International Life Sciences Institute Press.
- *Haddad E, Winchester JF. 1990. Clinical management of poisoning and drug overdose, 2nd ed. Philadelphia, PA: W.B. Saunders Co., 1030.
- *Haddad E, Zikovsky L. 1985. Determination of Al, As, Cr, Cs, Fe, Mn, Sb, Sc, W and Zn in the workroom air by instrumental neutron activation analysis. *J Radioanal Nucl Chem* 93(6):371-378.
- *Haga Y, Clyne N, Hatori N, et al. 1996. Impaired myocardial function following chronic cobalt exposure in an isolated rat heart model. *Trace Elem Electrolytes* 13(2):69-74.
- *Hakanson R, Lundquist I, Sundler F. 1974. Elevated levels of insulin-like activity and 5-hydroxytryptamine in guinea pig pancreas following CoCl_2 treatment. *Endocrinology* 94:318-324.
- *Hamilton BF, Benjamin SA, Angleton GM, et al. 1989. The effect of perinatal ^{60}Co γ radiation on brain weight in beagles. *Radiat Res* 119:366-379.
- *Hamilton EI. 1994. The geobiochemistry of cobalt. *Sci Total Environ* 150:7-39.
- *Hamilton-Koch W, Snyder RD, Lavelle JM. 1986. Metal-induced DNA damage and repair in human diploid fibroblasts and Chinese hamster ovary cells. *Chem Biol Interact* 59:17-28.
- *Hanford. 1999. Hanford site environmental report for calendar year 1998. Sec 2.5. Waste Management. PNNL-12088, Richland, WA: Pacific Northwest National Laboratory. <http://www.hanford.gov/docs/annualrp98/sec2.5>. February 16, 1999.
- *Hanks GE, Ainsworth EJ, Leong GF, et al. 1966. Injury accumulation and recovery in sheep exposed to protracted cobalt-60 gamma radiation. *Radiat Res* 29:211-221.

9. REFERENCES

- *Hanna RGM. 1992. The level of heavy metals in the Red Sea after 50 years. *Sci Total Environ* 125:417-448.
- *Hansen HS, Rygard J, Engelholm SA. 1976. Clinical use of combined bleomycin and radiation therapy for head and neck tumors and testicular cancers. *Bull Cancer* 63(3):371-378.
- Hanson WF, Grant W. 1974. Dose to the skin from cobalt-60 tangential chest wall therapy. *Phys Med Biol* 19(2):260-261.
- *Hansson H-C, Ekholm A-KP, Ross HB. 1988. Rainwater analysis: A comparison between proton-induced x-ray emission and graphite furnace atomic absorption spectroscopy. *Environ Sci Technol* 22:527-531.
- *Harding HE. 1950. Notes on the toxicology of cobalt metal. *Brit J Ind Med* 7:76-78.
- Haritonidis S, Malea P. 1995. Seasonal and local variation of Cr, Ni and Co concentrations in *Ulva rigida* C. Agardh and *Enteromorpha linza* (Linnaeus) from Theremaikos Gulf, Greece. *Environ Pollut* 89(3):317-327.
- Harmuth-Hoene AE, Schelenz R. 1980. Effect of dietary fiber on mineral absorption in growing rats. *J Nutr* 110:1774-1784.
- *Harp MJ, Scoular FI. 1952. Cobalt metabolism of young college women on self-selected diets. *J Nutr* 47:67-72.
- Harrison RM, Jones M. 1995. The chemical composition of airborne particles in the UK atmosphere. *Sci Total Environ* 168:195-214.
- Harrow JAC. 1976. Subcellular basis of the cardiotoxic effects of cobalt, nickel and manganese. *Diss Abstr Int B* 37(11):5541-5542.
- *Hartman ER, Colasanti BK, Craig CR. 1974. Epileptogenic properties of cobalt and related metals applied directly to cerebral cortex of rat. *Epilepsia* 15:121-129.
- *Hartung M, Schaller K-H, Brand E. 1982. On the question of the pathogenetic importance of cobalt for hard metal fibrosis of the lung. *Int Arch Occup Environ Health* 50:53-57.
- Hartwig A. 1998. Carcinogenicity of metal compounds: Possible role of DNA repair inhibition. *Toxicol Lett* 102-103:235-239.
- Hartwig A, Kasten U, Boakye-Dankwa K, et al. 1990. Uptake and genotoxicity of micromolar concentrations of cobalt chloride in mammalian cells. *Toxicol Environ Chem* 28:205-215.
- Hartwig A, Schlepegrell R, Dally H, et al. 1996. Interaction of carcinogenic metal compounds with deoxyribonucleic acid repair processes. *Ann Clin Lab Sci* 26(1):31-38.
- *Hartwig A, Snyder RD, Schlepegrell R, et al. 1991. Modulation by Co(II) of UV-induced DNA repair, mutagenesis and sister-chromatid exchanges in mammalian cells. *Mutat Res* 248:177-185.

9. REFERENCES

- *Harvey EB, Chang MC. 1962. Effects of radiocobalt irradiation of pregnant hamsters on the development of embryos. *J Cell Comp Physiol* 59:293-305.
- *Hasanen E, Lipponen M, Minkkinen P, et al. 1990. Element concentrations of aerosol samples from the Baltic Sea area. *Chemosphere* 21(3):339-347.
- *Hashimoto M, Mitsuyasu Y. 1967. Subacute and chronic histological changes in the irradiated bone marrow. *Acta Pathol Jpn* 17(3):328-329.
- Hatori N, Pehrsson SK, Clyne N, et al. 1993. Acute exposure and oxygen radical scavengers in the rat myocardium. *Biochem Biophys Acta* 1181:257-260.
- Hatta T, Ishimoto F, Shinohara H, et al. 1990. Interference of MNNG and cobalt in teratogenicity. *Teratology* 42:46A.
- Hattori Y, Moriwaki A, Hayashi Y, et al. 1985. Regional difference in depolarization-elicited accumulation of cyclic amp in cobalt-induced epileptic cortex of the rat. *Acta Med Okayama* 39(6):489-492.
- Hattori Y, Moriwaka A, Hayashi Y, et al. 1992. Increased responses to adenosine and 2-chloroadenosine of cyclic AMP-generating systems in the primary cortical region of cobalt-induced epilepsy in the rat. *Jpn J Physiol* 42:151-157.
- *Hattori Y, Moriwaki A, Hayashi Y, et al. 1993. Involvement of adenosine-sensitive cyclic AMP-generating systems in cobalt-induced epileptic activity in the rat. *J Neurochem* 61:2169-2174.
- Haux F, Lasfargues G, Lauwerys R, et al. 1995. Lung toxicity of hard metal particles and production of interleukin-1, tumor necrosis factor- α , fibronectin, and cystatin-c by lung phagocytes. *Toxicol Appl Pharmacol* 132:53-62.
- Hayward DG, Petreas MX, Winkler JJ, et al. 1996. Investigation of a wood treatment facility: Impact on an aquatic ecosystem in the San Joaquin River, Stockton, California. *Arch Environ Contam Toxicol* 30:30-39.
- *HazDat. 2004. Agency for Toxic Substances and Disease Registry (Agency for Toxic Substances and Disease Registry), Atlanta, GA.
- *Heath JC. 1956. The production of malignant tumors by cobalt in the rat. *Br J Cancer* 10:668-673.
- *Heath JC. 1960. The histogenesis of malignant tumors induced by cobalt in the rat. *Br J Cancer* 15:478-482.
- *Heath JC, Daniel MR. 1962. The production of malignant tumors by cobalt in the rat: Intrathoracic tumors. *Br J Cancer* 1:473-478.
- *Heath JC, Webb M, Caffrey M. 1969. The interaction of carcinogenic metals with tissues and body fluids. Cobalt and horse serum. *Br J Cancer* 23:153-166.

9. REFERENCES

- *Heaton RW, Rahn KA, Lowenthal DH. 1990. Determination of trace elements, including regional tracers, in Rhode Island precipitation. *Atmos Environ* 24A(1):147-153.
- Heinrich R, Angerer J. 1984. Determination of cobalt in biological materials by voltammetry and electrothermal atomic absorption spectrometry. *Int J Environ Anal Chem* 16:305-314.
- *Hellou J, Fancey LL, Payne JF. 1992a. Concentrations of twenty-four elements in bluefin tuna, *Thunnus thynnus* from the northwest Atlantic. *Chemosphere* 24(2):211-218.
- Hellou J, Warren WG, Payne JF, et al. 1992b. Heavy metals and other elements in three tissues of cod, *Gadus morhua* from the Northwest Atlantic. *Mar Pollut Bull* 24(9):452-458.
- *Helmers E, Schrems O. 1995. Wet deposition of metals to the tropical north and the south Atlantic ocean. *Atmos Environ* 29(18):2475-2484.
- *Henquin J-C, Lambert AE. 1975. Cobalt inhibition of insulin secretion and calcium uptake by isolated rat islets. *Am J Physiol* 228(6):1669-1677.
- *Henquin J-C, Schmeer W, Meissner HP. 1983. Forskolin, an activator of adenylate cyclase, increase Ca^{2+} -dependent electrical activity induced by glucose in mouse pancreatic B cells. *Endocrinology* 112(6):2218-2220.
- Henrichs K, Newhaus R, Roth W. 1997. The monitoring of potential incorporations of occupationally exposed workers in Germany: II. Monitoring intakes of employees servicing nuclear power plants. *Kerntechnik* 62(1):51-52.
- *Henshaw JM, Heithmar EM, Hinnert TA. 1989. Inductively coupled plasma mass spectrometric determination of trace elements in surface waters subject to acidic deposition. *Anal Chem* 61:335-342.
- Herndon BL, Jacob RA, McCann J. 1979. Physiological effects. In: Smith IC, Carson BL, eds. *Trace elements in the environment*. Ann Arbor, MI: Ann Arbor Science Publishers, 925-1075.
- *Hewitt PJ. 1988. Accumulation of metals in the tissues of occupationally exposed workers. *Environ Geochem Health* 10(3-4):113-116.
- Hicks M, Wharton G, Murphy WR, et al. 1997. Assessing the sequence specificity in the binding of CO(III) to DNA via a thermodynamic approach. *Biopolymers* 42:549-559.
- HI Dept of Health. 2000. Environmental health: Clean air rules. Air pollution controls. Hawaii Department of Health. <http://www.hawaii.gov/doh/rules/emd/carule.htm>. June 18, 2000.
- Hildebrand HF, Veron C, Martin P. 1989. Nickel, chromium, cobalt dental alloys and allergic reactions: an overview. *Biomaterials* 10:545-548.
- Hilgertova J, Ostra A, Sonka J. 1975. Formiminoglutamate excretion in rats exposed to x-rays and ^{60}Co gamma radiation. *J Nucl Biol Med* 19(1):1-4.
- *Hillerdal G, Hartung M. 1983. Short communication on cobalt in tissues from hard metal workers. *Int Arch Occup Environ Health* 53:89-90.

9. REFERENCES

- *Hiraide M, Sakurai K, Mizuike A. 1984. Radiochemical separation of cobalt-60 in seawater using continuous-flow coprecipitation-flotation. *Anal Chem* 56:2851-2853.
- *Hirobe T. 1994. Effects of γ -irradiation on the yield of mid-ventral white spots in mice in different genetic backgrounds and at different times during development. *Mutat Res* 322:213-220.
- *Hirobe T, Zhou X. 1990. Effects of γ -irradiation on the differentiation of mouse melanocytes in the hair follicles. *Mutat Res* 234:91-96.
- Hirose K. 1990. Chemical speciation of trace metals in seawater: Implication of particulate trace metals. *Mar Chem* 28:267-274.
- *Ho VT, Bunn HF. 1996. Effects of Transition Metals on the Expression of the Erythropoietin Gene: Further Evidence That the Oxygen Sensor Is a Heme Protein *Biochem Biophys Res Commun*. 223:175-180.
- Hobel M, Maroske D, Wegener K, et al. 1972. Über die toxische Wirkung von CoCl_2 , $\text{Co}[\text{Co-EDTA}]$ oder $\text{Na}_2[\text{Co-EDTA}]$ enthaltender Aerosole auf die Ratte und die Verteilung von $[\text{Co-EDTA}]^{--}$ in Organen des Meerschweinchens. *Arch Int Pharmacodyn* 198:213-222.
- *Hocherman S, Reichenthal E. 1983. Induction of semichronic epileptic foci using cobalt oxide. *Surg Neurol* 20:417-421.
- *Hodge FG. 1993. Cobalt and cobalt alloys. In: Kroschwitz JI, Howe-Grant M, eds. *Kirk-Othmer Encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 760-777.
- *Hoel DG, Davis DL, Miller AB, et al. 1992. Trends in cancer mortality in 15 industrialized countries, 1969-1986. *J Natl Cancer Inst* 84(5):313-320.
- *Hoet PMH, Roesems G, Demedts MG, et al. 2002. Activation of the hexose monophosphate shunt in rat type II pneumocytes as an early marker of oxidative stress caused by cobalt particles. *Arch Toxicol* 76(1):1-7.
- Hoffman P, Dedik AN, Deutsch F, et al. 1997. Solubility of single chemical compounds from an atmospheric aerosol in pure water. *Atmos Environ* 31(17):2777-2785.
- *Holcombe LJ, Eynon BP, Switzer P. 1985. Variability of elemental concentrations in power plant ash. *Environ Sci Technol* 19:615-620.
- *Hollins JG, McCullough RS. 1971. Radiation dosimetry of internal contamination by inorganic compounds of cobalt: An analysis of cobalt metabolism in rats. *Health Phys* 21:233-246.
- *Holly RG. 1956. Studies on iron and cobalt metabolism. *J Clin Endocrinol* 16:831-833.
- *Holly RG. 1955. Studies on iron and cobalt metabolism. *JAMA* 158:1349-1352.
- Honda K, Nasu T, Tatsukawa R. 1984. Metal distribution in the earthworm, *Pheretima hilgendorfi*, and their variations with growth. *Arch Environ Contam Toxicol* 13:427-432.

9. REFERENCES

- Horn EM, Dilloin GH, Fan Y-P, et al. 1999. Developmental aspects and mechanisms of rat caudal hypothalamic neuronal responses to hypoxia. *Journal of Neurophysiology* 81:1949-1959.
- *Horowitz SF, Fischbein A, Matza D, et al. 1988. Evaluation of right and left ventricle function in hard metal workers. *Brit J Ind Med* 45:742-746.
- Horvath Z, Laszitty A, Varga I. 1992. The role of spectrochemical analysis in the determination of the composition of atmospheric precipitation and aerosol samples in remote environments. *Microchem J* 46:130-135.
- *Horwitz C, Van Der Linden SE. 1974. Cadmium and cobalt in tea and coffee and their relationship to cardiovascular disease. *S Afr Med J* 48:230-233.
- *Houk AEH, Thomas AW, Sherman HC. 1946. Some interrelationships of dietary iron, copper and cobalt in metabolism. *J Nutr* 31:609-620.
- *House RA, Sax SE, Rumack ER, et al. 1992. Medical management of three workers following a radiation exposure incident. *Am J Ind Med* 22:249-257.
- Howie DW, Rogers SD, McGee MA, et al. 1996. Biological effects of cobalt chrome in cell and animal models. *Clin Orthop Relat Res* 329S:S217-S232.
- *HSDB. 1989. Hazardous Substance Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *HSDB. 2001. Hazardous Substance Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda MD.
- *HSDB. 2004. Hazardous Substance Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda MD.
- HSE. 1996. Cobalt and cobalt compounds in air. Methods for the determination of hazardous substances 30/2. Sudbury, UK: Health and Safety Executives.
- Huang C-Y, Lee J-D, Tseng C-L, et al. 1994. A rapid method for the determination of ¹³⁷Cs in environmental water samples. *Anal Chim Acta* 294:221-226.
- Huck DW. 1976. The study of cobalt toxicity in pigs and rats. *Diss Abstr Int B* 37(1):159.
- Huy ND, Morin PJ, Mohiuddin SM, et al. 1973. Acute effects of cobalt on cardiac metabolism and mechanical performance. *Can J Physiol Pharmacol* 51(1):46-51.
- *IAEA. 1962. Whole-body counting, International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/47.
- *IAEA. 1970. Directory of whole-body radioactivity monitors, International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/213.

9. REFERENCES

- *IAEA. 1972. Assessment of radioactive contamination in man, International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/290.
- *IAEA. 1976. Diagnosis and treatment of incorporated radionuclides, International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/411.
- *IAEA. 1985. Assessment of radioactive contamination in man 1984, International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/674.
- IAEA. 1988. The radiological accident in Goiania. International Atomic Energy Agency. Vienna: IAEA Publication No. STI/PUB/815.
- *IARC. 1991. IARC monographs on the evaluation of carcinogenic risks to humans. Vol. 52: Chlorinated drinking-water; chlorination by-products; some other halogenated compounds; cobalt and cobalt compounds. World Health Organization, Lyon, France.
- *IARC. 2000. Cobalt. International Agency for Research on Cancer. <http://193.51.164.11/htdocs/Directory/index.html>. February 17, 2000.
- *IARC. 2001a. Carcinogenicity classification - Group 2B, cobalt and cobalt compounds. International Agency for Research on Cancer. <http://www.iarc.fr/pageroot/top1.html>. June 7, 2001.
- *IARC. 2001b. Some internally deposited radionuclides. International Agency for Research on Cancer. <http://193.51.164.11/htdocs/Monographs/Vol78/Vol78-radionuclides.html>. June 7, 2001.
- *Ichikawa Y, Kusaka Y, Goto S. 1985. Biological monitoring of cobalt concentrations in blood and urine. *Int Arch Occup Environ Health* 55:269-276.
- Ichikawa Y, Kusaka Y, Ogawa Y, et al. 1988. Changes of blood and urinary levels of cobalt during single exposure to cobalt. *Jpn J Ind Health* 30(3):208-209.
- *ICRP. 1979. Limits for intakes of radionuclides by workers. International Commission of Radiological Protection. ICRP Publication 30. New York: Pergamon Press.
- *ICRP. 1983. Radionuclide transformations: Energy and intensity of emissions. The International Commission on Radiological Protection. ICRP publication 30. New York, NY: Pergamon Press, 54-66.
- *ICRP. 1991. 1990 Recommendations of the International Commission on Radiological Protection. International Commission on Radiological Protection.
- *ICRP. 1993. Age-dependent doses to members of the public from intake of radionuclides: Part 2 ingestion dose coefficients. The International Commission on Radiological Protection. ICRP publication 67. New York, NY: Pergamon Press.
- *ICRP. 1994. Age-dependent doses to members of the public from intake of radionuclides: Part 2, ingestion dose coefficients. The International Commission on Radiological Protection. ICRP publication 67. New York, NY: Pergamon Press.

9. REFERENCES

- *ICRP. 1995. Age-dependent doses to members of the public from intake of radionuclides: Part 4 ingestion dose coefficients. The International Commission on Radiological Protection. ICRP publication 71. New York, NY: Pergamon Press.
- *ID Dept of Environmental Quality 2000. Air pollution control. Idaho Department of Environmental Quality. <http://www2.state.id.us/adm/adminrules/rules/IDAPA58/58INDEX.htm>. March 13, 2000.
- Igarashi J, Hayashi N, Kikuchi G. 1978. Effects of administration of cobalt chloride and cobalt proporphyrin on σ -aminolevulinate synthesis in rat liver. *J Biochem* 84:997-1000.
- *Ikarashi Y, Ohno K, Tsuchiya T, et al. 1992a. Differences of draining lymph node cell proliferation among mice, rats and guinea pigs following exposure to metal allergens. *Toxicology* 76:283-292.
- *Ikarashi Y, Tsuchiya T, Nakamura A. 1992b. Detection of contact sensitivity of metal salts using the murine local lymph node assay. *Toxicol Lett* 62:53-61.
- *IL EPA. 2000a. Toxic air contaminants. Illinois Pollution Control Board. Illinois Environmental Protection Agency. <http://www.ipcb.state.il.us/title35/35conten.html>. June 12, 2000.
- *IL EPA. 2000b. Ground water quality. Illinois Pollution Control Board. Illinois Environmental Protection Agency. <http://www.ipcb.state.il.us/title35/35conten.html>. June 12, 2000.
- *IL EPA. 2000c. Radiation hazards. Illinois Pollution Control Board. Illinois Environmental Protection Agency. <http://www.ipcb.state.il.us/title35/35conten.html>. June 12, 2000.
- *Imbrogno P, Alborghetti F. 1994. Evaluation and comparison of the levels of occupational exposure to cobalt during dry and/or wet hard metal sharpening. environmental and biological monitoring. *Sci Total Environ* 150:259-262.
- *Inaba J, Suzuki-Yasumoto M. 1979. A kinetic study of radionuclide absorption through damaged and undamaged skin of the guinea pig. *Health Phys* 37(4):592-595.
- *Inaba J, Nishimura Y, Ichikawa R. 1980. Comparative metabolism of ^{54}Mn , ^{59}Fe , ^{60}Co and ^{65}Zn incorporated into *Chlorella* and in inorganic form in rats. *Health Phys* 39:611-617.
- *Inano H, Ishii-Ohba H, Suzuki K, et al. 1990. Reasons for reduced activities of 17α -hydroxysteroid oxidase and C_{17} - C_{20} lyase in spite of increased contents of cytochrome P-450 in mature rat testis fatally irradiated with ^{60}Co . *J Steroid Biochem* 35(6):711-714.
- *Inano H, Suzuki K, Ishii-Ohba H, et al. 1989. Steroid hormone production on testis, ovary, and adrenal gland of immature rats irradiated *in utero* with ^{60}Co . *Radiat Res* 117:293-303.
- *INEL. 2000. Isotope report. National Low-Level Waste Management Program, Idaho National Environmental Laboratory. Manifest Information Management System (MIMS). <http://mims.inel.gov>. June 12, 2000.
- *Inoue T, Ohta Y, Sadaie Y, et al. 1981. Effect of cobaltous chloride on spontaneous mutation induction in a *Bacillus subtilis* mutator strain. *Mutat Res* 91:41-45.

9. REFERENCES

- *Institute of Medicine. 2000. Dietary reference intakes for thiamine, riboflavin, niacin, vitamin B₆, folate, vitamin B₁₂, pantothenic acid, biotin and choline. Washington DC: National Academy Press, 306-356. <http://www.nap.edu/books/0309065542/html/index.html>. June 25, 2000.
- *Invancsits S, Diem E, Pilger A, et al. 2002. Induction of 8-hydroxy-2'-deoxyguanosine by cobalt (II) and hydrogen peroxide in vitro. *J Toxicol Environ Health A* 65:665-676.
- *IRIS. 2000. Cobalt. Integrated Risk Information System. <http://www.epa.gov/iris/subst/index.htm>. April 6, 2000.
- *IRIS. 2001. Cobalt. Integrated Risk Information System. U.S. Environmental Protection Agency. <http://www.epa.gov/iris/subst/index.htm>. April 3, 2001.
- Isaacs RD, Wattie WJ, Wells AU, et al. 1987. Massive haemoptysis as a late consequence of pulmonary irradiation. *Thorax* 42:77-78.
- *Ishihara N, Koizumi M, Yoshida A. 1987. Metal concentrations in human pancreatic juice. *Arch Env Health* 42(6):356-360.
- Isom GE, Way JL. 1974. Alteration of in vivo glucose metabolism by cobaltous chloride. *Toxicol Appl Pharmacol* 27:131-139.
- *Iyengar GV. 1982. Elemental composition of human and animal milk. A review. A report prepared under the auspices of the IAEA in collaboration with the WHO. September 1982. NTIS # DE83703562.
- *Jackman AP, Kennedy VC, Bhatia N. 2001. Interparticle migration of metal cations in stream sediments as a factor in toxics transport. *J Hazardous Materials* B82:27-41.
- *Jacobziner H, Raybin HW. 1961. Poison control... accidental cobalt poisoning. *Arch Pediatr* 78:200-205.
- Jagadeesan V, Sivaramakrishnan VM. 1969. Fate of cobalt-60 1-nitroso 2-naphthol chelate in albino rats after intravenous administration. *Indian J Exp Biol* 7:217-220.
- *Jansen HML, Knollema S, van der Duin LV, et al. 1996. Pharmacokinetics and dosimetry of cobalt-55 and cobalt-57. *J Nucl Med* 37(12):2082-2086.
- *Jarvis JQ, Hammond E, Meier R, et al. 1992. Cobalt cardiomyopathy: A report of two cases from mineral assay laboratories and a review of the literature. *J Occup Med* 34(6):620-626.
- *Jenkins DW. 1980. Biological monitoring of toxic trace metals: Volume 1. Biological monitoring and surveillance. NTIS PB81-103475.
- Jensen AA, Tuchsén F. 1990. Cobalt exposure and cancer risk. *Crit Rev Toxicol* 20:427-437.
- Jimenez JS, Benitez MJ, Lechuga CG, et al. 1995. Casein kinase 2 inactivation by Mn²⁺, Mn²⁺ and Co²⁺ ions. *Mol Cell Biochem* 152:1-6.

9. REFERENCES

- Johansen OJ, Carlson DA. 1976. Characterization of sanitary landfill leachates. *Water Res* 10:1129-1134.
- *Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs cerebral cortex. *Brain Res* 190:3-16.
- *Johansson A, Curstedt T, Camner P. 1991. Lung lesions after combined inhalation of cobalt and nickel. *Environ Res* 54:24-38.
- *Johansson A, Curstedt T, Rasool O, et al. 1992. Rabbit lung after combined exposure to soluble cobalt and trivalent chromium. *Environ Res* 58:80-96.
- *Johansson A, Curstedt T, Robertson B, et al. 1984. Lung morphology and phospholipids after experimental inhalation of soluble cadmium, copper, and cobalt. *Environ Res* 34:295-309.
- *Johansson A, Robertson B, Camner P. 1987. Nodular accumulation of type II cells and inflammatory lesions caused by inhalation of low cobalt concentrations. *Environ Res* 43:227-243.
- *Johansson S, Svensson H, Denekamp J. 2000. Timescale of evolution of late radiation injury after postoperative radiotherapy of breast cancer patients. *Int J Radiat Oncol Biol Phys* 48(3):745-750.
- *Jones P, Williams T, Ebdon L. 1989. Determination of cobalt at picogram levels by high-performance liquid chromatography with chemiluminescence detection. *Anal Chim Acta* 217:157-163.
- Jones WA, Miller EV, Sullivan LD, et al. 1980. RE: Severe prostatic calcification after radiation therapy for cancer. *J Urol* 123:135-136.
- *Jordan C, Whitman RD, Harbut M, et al. 1990. Memory deficits in workers suffering from hard metal disease. *Toxicol Lett* 54:241-243.
- *Jorhem L, Sundstrom B. 1993. Levels of lead, cadmium, zinc, copper, nickel, chromium, manganese, and cobalt in foods on the Swedish market, 1983-1990. *J Food Comp Anal* 6:223-241.
- Joseph MH, Emson PC. 1976. Taurine and cobalt induced epilepsy in the rat: A biochemical and electrocorticographic study. *J Neurochem* 27:1495-1501.
- *Juraskova V, Drasil V. 1987. The level of chromosome aberrations and sister chromatid exchanges in continuously irradiated LS/BL lymphosarcoma cells. *Studia Biophys* 118:125-134.
- *Kada T, Shirasu Y, Ikekawa N, et al. 1986. Detection of natural bio-antimutagens and in vivo and in vitro analysis of their action. In: *Genetic toxicology of environmental chemicals, part A: Basic principles and mechanisms of action*: Alan Liss, Inc.
- *Kadiiska MB, Maples KR, Mason RP. 1989. A comparison of cobalt(II) and iron(II) hydroxyl and superoxide free radical formation. *Arch Biochem Biophys* 275(1):98-111.
- Kahkonen MA, Suominen KP, Manninen PKG, et al. 1998. 100 years of sediment accumulation history of organic halogens and heavy metals in recipient and nonrecipient lakes of pulping industry in Finland. *Environ Sci Technol* 32(12):1741-1746.

9. REFERENCES

- *Kakinuma J, Orii H. 1982. DNA interaction with ^{57}Co -bleomycin. *Nucl Med* 21:232-235.
- Kamendulis LM, Jiang J, Xu Y, et al. 1999. Induction of oxidative stress and oxidative damage in rat glial cells by acrylonitrile. *Carcinogenesis* 20(8):1555-1560.
- Kamiya K, Inoh A, Fujii Y, et al. 1985. High mammary carcinogenicity of neutron irradiation in rats and its promotion by prolactin. *Jpn J Cancer Res* 76:449-456.
- *Kanematsu N, Hara M, Kada T. 1980. Rec assay and mutagenicity studies on metal compounds. *Mutat Res* 77:109-116.
- *Kanerva L, Estlander T, Jolanki R. 1988. Occupational skin disease in Finland. *Int Arch Occup Environ Health* 60:89-94.
- *Kanerva L, Estlander T, Jolanki R. 1998. Bank clerk's occupational allergic nickel and cobalt contact dermatitis from coins. *Contact Dermatitis* 38:217-218.
- *Kapstad B. 1978. Treatment of squamous cell carcinomas of the head and neck region with cobalt and bleomycin. *Int J Radiat Oncol Biol Phys* 4:91-94.
- *Kapstad B. 1979. Cobalt and bleomycin against carcinomas of head and neck: A controlled clinical study. *Acta Otolaryngol Suppl (Stockh)* 360:171-173.
- Karube Y, Iwamoto K, Miura J, et al. 1989. Radioactive metal complexes with affinity for tumors. II. Biodistribution of radioactivity in cellular and subcellular fractions of tumor tissues. *Chem Pharm Bull* 37(7):1874-1876.
- *Kasprzak KS, Zastawny TH, North SL, et al. 1994. Oxidative DNA base damage in renal, hepatic, and pulmonary chromatin of rats after intraperitoneal injection of cobalt(II) acetate. *Chem Res Toxicol* 7:329-335.
- Kasten U, Hartwig A, Beyersmann D. 1992. Mechanisms of cobalt(II) uptake into V79 Chinese hamster cells. *Arch Toxicol* 66:592-597.
- *Kasten U, Mullenders LH, Hartwig A. 1997. Cobalt(II) inhibits the incision and the polymerization step of nucleotide excision repair in human fibroblasts. *Mutat Res* 383:81-90.
- *Katsarou A, Baxevanis C, Armenaka M, et al. 1997. Study of persistence and loss of patch test reactions to dichromate and cobalt. *Contact Dermatitis* 36:87-90.
- Katsuoka Y, Beckman B, George WJ, et al. 1983. Increased levels of erythropoietin in kidney extracts of rats treated with cobalt and hypoxia. *Am J Physiol* 244(13):F129-F133.
- Katz RP, George WJ, Anderson MB. 1988. Ultrastructural evaluation of the toxic effect of cobalt on the murine testis. *Anat Rec* 220(4):51A.
- *Kawakami Y, Koyama I. 1992. Changes in the strength of recurrent inhibition in cobalt-induced epilepsy. *Epilepsia* 33(3):428-434.

9. REFERENCES

- Kawakami Y, Ishikawa T, Koyama I. 1990. Seizure elicited by VPL stimulation in cobalt induced epilepsy model. *Jpn J Psychiatry Neurol* 44(2):422-423.
- *Kawanishi S, Inoue S, Yamamoto K. 1994. Active oxygen species in DNA damage induced by carcinogenic metal compounds. *Environ Health Perspect Suppl* 102(3):17-20.
- Kawanishi S, Yamamoto K, Inoue S. 1989. Site-specific DNA damage induced by sulfite in the presence of cobalt(II) ion. *Biochem Pharmacol* 38(20):3491-3496.
- Kazantzis G. 1981. Role of cobalt, iron, lead, manganese, mercury, platinum, selenium, and titanium in carcinogenesis. *Environ Health Perspect* 40:143-161.
- *Keener HA, Percival GP, Morrow KS, et al. 1949. Cobalt tolerance in young dairy cattle. *J Dairy Sci* 32:527-533.
- Kempron S, Sterritt RM, Lester JN. 1987. Heavy metal removal in primary sedimentation II. The influence of metal speciation and particle size. *Sci Total Environ* 63:247-258.
- Kempton S, Sterritt RM, Lester JN. 1987. Heavy metal removal in primary sedimentation I. The influence of metal solubility. *Sci Total Environ* 63:231-246.
- Kent B, Spycher N. 1994. Major chemical parameters in groundwater control. In: *Environmental science and pollution control. Groundwater contamination and control*. New York, NY: Dekker, M, 479-495.
- *Kent NL, McCance RA. 1941. The absorption and excretion of 'minor' elements by man. *Biochem J* 35:877-883.
- *Kerfoot EJ. 1975. Semi-chronic inhalation study on cobalt. *Diss Abstr Int B* 35:6054-6055.
- *Kesteloot H, Roelandt J, Willems J, et al. 1968. An enquiry into the role of cobalt in the heart disease of chronic beer drinkers. *Circulation* 37:854-864.
- *Keys HM, Reed W. 1980. Severe prostatic calcification after radiation therapy for cancer. *J Urol* 123:(1)135-1366.
- *Kharab P, Singh I. 1985. Genotoxic effects of potassium dichromate, sodium arsenite, cobalt chloride and lead nitrate in diploid yeast. *Mutat Res* 155:117-120.
- Kiec-Swierczynska M. 1990a. Allergy to chromate, cobalt and nickel in Lodz 1977-1988. *Contact Dermatitis* 22:229-231.
- Kiec-Swierczynska M. 1990b. Occupational dermatoses and allergy to metals in Polish construction workers manufacturing prefabricated building units. *Contact Dermatitis* 23:27-32.
- *Kiec-Swierczynska M, Krecisz B. 2000. Occupational skin diseases among the nurses in the region of Lodz. *Int J Occup Med Environ Health* 13(3):179-184.

9. REFERENCES

- *Kiec-Swierczynska M, Krecisz B. 2002. Allergic contact dermatitis in dentists and dental nurses. *Exog Dermatol* 1(1):27-31.
- Kilinc K, Rouhani R. 1992. Cobaltous ion inhibition of lipid peroxidation in biological membranes. *Biochem Biophys Acta* 1125:189-195.
- *Killey RWD, McHugh JO, Champ DR, et al. 1984. Subsurface cobalt-60 migration from a low-level waste disposal site. *Environ Sci Technol* 18:148-157.
- *Kim EY, Goto R, Tanabe S, et al. 1998a. Distribution of 14 elements in tissues and organs of oceanic seabirds. *Arch Environ Contam Toxicol* 35:638-645.
- Kim SH, Chung CY, Son CH. 1998b. Cell death by apoptosis in the neonatal mouse cerebellum following gamma-irradiation. *Anticancer Res* 18:1629-1632.
- Kimberly MM, Bailey GG, Paschal DC. 1987. Determination of urinary cobalt using matrix modification and graphite furnace atomic absorption spectrometry with Zeeman-effect background correction. *Analyst* 112:287-290.
- *Kincaid JF, Strong JS, Sunderman FW. 1954. Toxicity studies of cobalt carbonyls. *Arch Ind Hyg Occup Med* 10:210-212.
- *King GL. 1988a. Characterization of radiation-induced emesis in the ferret. *Radiat Res* 114:599-612.
- *King JN, Fritz JS. 1987. Determination of cobalt, copper, mercury, and nickel as bis(2-hydroxyethyl)dithiocarbamate by high-performance liquid chromatography. *Anal Chem* 59:703-708.
- *King LD. 1988b. Retention of metals by several soils of the southeastern United States. *J Environ Qual* 17(2):239-246.
- *Kinoshita K, Fujita T. 1972. Metabolism of ⁵⁷Co-methylcobalamin in rat and guinea pig. *Chem Pharm Bull* 20(12):2561-2569.
- *Kirchgessner M, Reuber S, Kreuzer M. 1994. Endogenous excretion and true absorption of cobalt as affected by the oral supply of cobalt. *Biol Trace Elem Res* 41:175-189.
- Kitahara J, Yamanaka K, Kato K, et al. 1996. Mutagenicity of cobalt and reactive oxygen producers. *Mutat Res* 370:133-140.
- *Kitamori T, Suzuki K, Sawada T, et al. 1986. Determination of sub-part-per-trillion amounts of cobalt by extraction and photoacoustic spectroscopy. *Anal Chem* 58:2275-2278.
- Klaassen CD, Amdur MO, Doull J. 1986. Casarett and Doull's toxicology: The basic science of poisons. 3rd ed. New York, NY: Macmillon Publishing Company.
- Klavins M, Rodinov V, Vereskuns G. 1998. Metals and organochlorine compounds in fish from Latvian lakes. *Bull Environ Contam Toxicol* 60:538-545.

9. REFERENCES

- *Klener V, Tuscany R, Velupkova J, et al. 1986. Long-term follow-up after accidental γ irradiation from a ^{60}Co source. *Health Phys* 51(5):601-607.
- *Kloke A, Sauerbeck DR, Vetter H. 1984. The contamination of plants and soils with heavy metals and the transport of metals in terrestrial food chains. In: Nriagu JO, ed. *Changing metal cycles and human health*. Berlin Heidelberg: Springer-Verlag, 113-141.
- *Knauer GA, Martin JH, Gordon RM. 1982. Cobalt in north-east Pacific waters. *Nature* 297:49-51.
- Knulst J, Sodergren A. 1994. Occurrence and toxicity of persistent pollutants in surface microlayers near an incinerator plant. *Chemosphere* 29(6):1339-1347.
- *Knutson AB, Klerks PL, Levinton JS. 1987. The fate of metal contaminated sediments in Foundry Cove, New York. *Environ Pollut* 45:291-304.
- Kobayashi M, Shimizu S. 1999. Cobalt proteins. *Eur J Biochem* 261:1-9.
- Koethals E, Obersztyn A, Dominikowski M. 1967. Pathological changes in the teeth and tooth appendages of the rat in radiation sickness. *Pol Med J* 6(5):1198-1205.
- Kohlhardt M, Haap K. 1980. On the mechanism underlying the cobalt-induced inhibition of slow inward current in mammalian ventricular myocardium. *J Mol Cell Cardiol* 12:1075-1090.
- Kohlhardt M, Bauer B, Krause H, et al. 1973. Selective inhibition of the transmembrane Ca conductivity of mammalian myocardial fibres by Ni, Co and Mn ions. *Pflugers Arch* 338:115-123.
- *Kokelj F, Daris F, Lutmann A, et al. 1994. Nickel, chromate and cobalt in toilet soaps analyzed by inductively coupled plasma mass spectrometry. *Contact Dermatitis* 31:270.
- *Koksal G, Dalci DO, Pala FS. 1996. Micronuclei in human lymphocytes: The Co-60 gamma-ray dose-response. *Mutat Res* 359:151-157.
- *Koksal G, Pala FS, Dalci DO. 1995. In vitro dose-response curve for chromosome aberrations induced in human lymphocytes by ^{60}Co γ -radiation. *Mutat Res* 329:57-61.
- Komeda H, Kobayashi M, Shimizu S. 1997. A novel transporter involved in cobalt uptake. *Proc Natl Acad Sci U S A* 94:36-41.
- *Komori M, Nishio K, Kitada M, et al. 1990. Fetus-specific expression of a form of cytochrome P-450 in human livers. *Biochemistry* 29:4430-4433.
- *Koponen M, Gustafsson T, Kalliomaki P-L. 1982. Cobalt in hard metal manufacturing dusts. *Am Ind Hyg Assoc J* 43(9):645-651.
- Koyama I. 1992. A morphological study of the cortical pyramidal neuron in the cobalt-induced epileptogenic focus of the cat. *Jpn J Psychiatry Neurol* 46(2):351-352.

9. REFERENCES

- Koyama I, Ueda K, Sekino Y, et al. 1988. A morphological study comparing cortical neurons of focal epilepsy in humans with those of cobalt-induced focal epilepsy in cats. *Jpn J Psychiatry Neurol* 42(3):653-655.
- Kozubek S, Krasavin EA, Amirtayev KG, et al. 1989. The induction of revertants by heavy particles and y-rays in salmonella tester strains. *Mutat Res* 210:221-226.
- *Krasovskii GN, Fridlyand SA. 1971. Experimental data for the validation of the maximum permissible concentration of cobalt in water bodies. *Hyg Sanit* 26:277-279.
- *Kratchler M, Rossipal SLE, Irgolic KJ. 1998. Changes in the concentrations of trace elements in human milk during lactation. *J Trace Elements Med Biol* 12:159-176.
- Kreyling WG, Cox C, Ferron GA, et al. 1993. Lung cancer in Long-Evans rats after inhalation of porous, monodisperse cobalt oxide particles. *Exp Lung Res* 19:445-467.
- Kreyling W, Ferron GA, Haider B. 1980. Analysis of the long term lung retention of cobalt oxide nitrate aerosols in dogs. In: Hochrainer D, ed. *Aerosols in science, medicine and technology: Physical and chemical properties of aerosols*. Schmallenberg, Germany: Gesellschaft fur Aerosolforschung, 251-258.
- *Kreyling WG, Ferron GA, Haider B. 1984a. The dependency of the lung retention on cobalt aerosol parameters. *J Aerosol Sci* 15(3):229-232.
- *Kreyling WG, Ferron GA, Haider B. 1984b. Lung retention and clearance of cobalt oxide particles depending on their physicochemical parameters. *EUR* 9384:141-146.
- *Kreyling W, Ferron G, Haider B, et al. 1985. Total and regional lung retention of monodisperse cobalt compound aerosols after a single inhalation. *Z Erkr Atmungsorgane* 164:60-66.
- *Kreyling WG, Ferron GA, Haider B. 1986. Metabolic fate of inhaled Co aerosols in beagle dogs. *Health Phys* 51(6):773-795.
- *Kreyling WG, Ferron GA, Haider B. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part IV: Lung clearance of inhaled cobalt oxide particles in beagle dogs. *J Aerosol Sci* 20(2):219-232.
- *Kreyling WG, Godleski JJ, Kariya ST, et al. 1990. In vitro dissolution of uniform cobalt oxide particles by human and canine alveolar macrophages. *Am J Resp Cell Mol Biol* 2:413-422.
- *Krishnan K, Andersen ME. 1994. Physiologically based pharmacokinetic modeling in toxicology. In: Hayes AW, ed. *Principles and methods of toxicology*. 3rd ed. New York, NY: Raven Press, Ltd., 149-188.
- *Krishnan K, Andersen ME, Clewell HJ III, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, ed. *Toxicology of chemical mixtures: Case studies, mechanisms, and novel approaches*. San Diego, CA: Academic Press, 399-437.
- *Kriss JP, Carnes WH, Ross RT. 1955. Hypothyroidism and thyroid hypoplasia in patients treated with cobalt. *JAMA* 157(2):117-121.

9. REFERENCES

- KS Dept of Health and Environment. 2000. Ambient air quality standards and air pollution control. Rules and Regulations. <http://www.kdhe.state.ks.us/>. May 16, 2000.
- *Kumagai S, Kusaka Y, Goto S. 1996. Cobalt exposure level and variability in the hard metal industry of Japan. *Am Ind Hyg Assoc J* 67:365-369.
- Kumagai S, Kusaka Y, Goto S. 1997. Log-normality of distribution of occupational exposure concentrations to cobalt. *Ann Occup Hyg* 41(3):281-286.
- Kumar GP, Laloraya M, Laloraya MM. 1990. Powerful anti-sperm motility action of cobaltous ions and its recovery by a sulfhydryl compound. *Contraception* 41(6):633-639.
- Kureishy T, Gupta RS, Mesquita A, et al. 1993. Heavy metals in some parts of Antarctica and the southern Indian Ocean. *Mar Pollut Bull* 26(11):651-652.
- Kurishita A, Ihara T. 1990. Inhibitory effects of cobalt chloride and cinnamaldehyde on 5-azacytidine-induced digital malformations in rats. *Teratology* 41:161-166.
- *Kuroda Y, Inoue T. 1988. Antimutagenesis by factors affecting DNA repair in bacteria. *Mutat Res* 202:387-391.
- *Kusaka Y, Ichikawa Y, Shirakawa T, et al. 1986a. Effect of hard metal dust in ventilatory function. *Brit J Ind Med* 43:486-489.
- *Kusaka Y, Iki M, Kumagai S, et al. 1996a. Decreased ventilatory function in hard metal workers. *Occup Environ Med* 53:194-199.
- *Kusaka Y, Iki M, Kumagai S, et al. 1996b. Epidemiological study of hard metal asthma. *Occup Environ Med* 53:188-193.
- Kusaka Y, Kumagai S, Kyono H, et al. 1992. Determination of exposure to cobalt and nickel in the atmosphere in the hard metal industry. *Ann Occup Hyg* 36(5):497-507.
- *Kusaka Y, Yokoyama K, Sera Y, et al. 1986b. Respiratory diseases in hard metal workers: An occupational hygiene study in a factory. *Brit J Ind Med* 43:474-485.
- Kusama T, Itoh S, Yoshizawa Y. 1986. Absorption of radionuclides through wounded skin. *Health Phys* 51(1):138-141.
- *Kyono H, Kusaka Y, Homma K, et al. 1992. Reversible lung lesions in rats due to short-term exposure to ultrafine cobalt particles. *Ind Health* 30:103-118.
- *Lacy PE, Cardeza AF. 1958. Electron microscopy of guinea pig pancreas. *Diabetes* 7(5):368-374.
- *Lacy SA, Merritt K, Brown SA, et al. 1996. Distribution of nickel and cobalt following dermal and systematic administration with in vitro and in vivo studies. *J Biomed Mater Res* 32:279-283.

9. REFERENCES

- *Ladoux A, Frelin C. 1994. Cobalt stimulates the expression of vascular endothelial growth factor and mRNA in rat cardiac cells. *Biochem Biophys Res Commun* 204(2):794-798.
- *Lafuma C, Wegrowski J, Labat-Robert J, et al. 1987. Parallel increase of plasma fibronectin and perchlorosoluble serum glycoproteins in radiation-induced lung damage. *Clin Physiol Biochem* 5:61-69.
- *Lafuma J, Chmelevsky D, Chameaud J, et al. 1989. Lung carcinomas in sprague-dawley rats after exposure to low doses of radon daughters, fission neutrons, or γ rays. *Radiat Res* 118:230-245.
- Lahaye D, Demedts M, Van Den Oever R, et al. 1984. Lung diseases among diamond polishers due to cobalt? *Lancet* :156-157.
- Laissue JA, Bally E, Joel DD, et al. 1983. Protection of mice from whole-body gamma radiation by deuteration of drinking water. *Radiat Res* 96:59-64.
- *Lammintausta K, Pitkanen O-P, Kalimo K, et al. 1985. Interrelationship of nickel and cobalt contact sensitization. *Contact Dermatitis* 13:148-152.
- *Lantzy RJ, Mackenzie FT. 1979. Atmospheric trace metals: Global cycles and assessment of man's impact. *Geochemica et Cosmochimica Acta* 43:511-525.
- *Laporte P, Viguiet-MARTINEZ M-C, Zongo D, et al. 1985. Changes in testicular fluid production and plasma hormones in the adult rat after testicular ^{60}Co irradiation. *Reprod Nutr Dev* 25(2):355-366.
- *Lasfargues G, Lardot C, Delos M, et al. 1995. The delayed lung responses to single and repeated intratracheal administration of pure cobalt and hard metal powder in the rat. *Environ Res* 69:108-121.
- Lasfargues G, Lison D, Maldague P, et al. 1992. Comparative study of the acute lung toxicity of pure cobalt powder and cobalt-tungsten carbide mixture in rat. *Toxicol Appl Pharmacol* 112(1):41-50.
- *Lasfargues G, Wild P, Moulin JJ, et al. 1994. Lung cancer mortality in a French cohort of hard-metal workers. *Am J Ind Med* 26:585-595.
- Lauwerys R, Lison D. 1994. Health risks associated with cobalt exposure - an overview. *Sci Total Environ* 150:1-6.
- *Lazarus SS, Goldner MG, Volk BW. 1953. Selective destruction of pancreatic alpha cells by cobaltous chloride in the dog. *Metabolism* 2:513-520.
- LBNL. 2000. The Isotopes Project, Ernest Orlando Lawrence Berkeley National Laboratory, <http://ie.lbl.gov/>. Collaborative Project with Lund Nuclear Data WWW Service, Lund University, Sweden, update 5/30/99, <http://nucleardata.nuclear.lu.se/nucleardata/>. June 21, 2001.
- Ledney GD, Exum ED, Jackson WE. 1985. Wound-induced alterations in survival of ^{60}Co irradiated mice: importance of wound timing. *Experientia* 41:614-616.
- *Lee AC, Angleton GM, Benjamin SA. 1989. Hypodontia in the beagle after perinatal whole-body ^{60}Co γ irradiation. *Radiat Res* 118:467-475.

9. REFERENCES

- *Lee C, Malpeli JG. 1986. Somata-selective lesions induced by cobaltous chloride: A parametric study. *Brain Res* 364:396-399.
- Lee JY, Watanabe H, Komatsu K, et al. 1997. Developmental anomalies and embryo lethality of ^{60}Co γ -ray irradiation on the embryonic development scid mice. *Teratology* 55(1):67-68.
- *Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics: Implications for practice. *Pediatr Clin North Am* 44(1):55-77.
- Leghissa P, Ferrari MT, Piazzola S, et al. 1994. Cobalt exposure evaluation in dental prostheses production. *Sci Total Environ* 150:253-257.
- *Legrum W, Stuehmeier G, Netter KJ. 1979. Cobalt as a modifier of microsomal monooxygenases in mice. *Toxicol Appl Pharmacol* 48:195-204.
- *Lehninger AL. 1982. *Principles of Biochemistry*. New York: Worth Publishers, Inc., 361-466.
- Leivouri M, Vallius H. 1998a. A case study of seasonal variation in the chemical composition of accumulating suspended sediments in the central Gulf of Finland. *Chemosphere* 36(3):503-521.
- Leivouri M, Vallius H. 1998b. A case study of seasonal variation in the chemical composition of accumulating suspended sediments in the Central Gulf of Finland. *Chemosphere* 36(10):2417-2435.
- Leonard A, Lauwerys R. 1990. Mutagenic, carcinogenicity and teratogenicity of cobalt metal and cobalt compounds. *Mutat Res* 239:17-27.
- *Leonard KS, McCubbin D, Harvey BR. 1993a. Chemical speciation and environmental behavior of ^{60}Co discharged from a nuclear establishment. *J Environ Radioact* 20:1-21.
- *Leonard KS, McCubbin D, Harvey BR. 1993b. A radiochemical procedure for the determination and speciation of radiocobalt in environmental waters. *Sci Total Environ* 130/131:237-251.
- *Lessard ET, Miltenberger RP, Cohn SH, et al. 1984. Protracted exposure to fallout: Rongelap and Utirik experience. *Health Phys* 46:511-527.
- Letourneau EG, Jack GC, McCullough RS, et al. 1972. The metabolism of cobalt by the normal human male: Whole body retention and radiation dosimetry. *Health Phys* 22:451-459.
- *Leung H-W. 1993. Physiologically-based pharmacokinetic modelling. In: Ballentine B, Marro T, Turner P, eds. *General and applied toxicology*. Vol. 1. New York, NY: Stockton Press, 153-164.
- Lewis CPL, Demedts M, Nemery B. 1990. Cobalt induces oxidative stress in pulmonary tissue. *Amer Rev Respir Dis* 141:A423.
- *Lewis CPL, Demedts M, Nemery B. 1991. Indices of oxidative stress in hamster lung following exposure to cobalt(II) ions: In vivo and in vitro studies. *Am J Resp Cell Mol Biol* 5:163-169.
- Lewis CPL, Demedts M, Nemery B. 1992a. The role of thiol oxidation in cobalt(II)-induced toxicity in hamster lung. *Biochem Pharmacol* 43(3):519-525.

9. REFERENCES

- Lewis M, Worobey J, Ramsay DS, et al. 1992b. Prenatal exposure to heavy metals: Effect on childhood cognitive skills and health status. *Pediatrics* 89(6):1010-1015.
- Li CS, Hsu LY, Chuang YYT. 1993. Elemental profiles of indoor and outdoor particulate matter less than 10 μ m (PM10) and 2.5 μ m (PM2.5) in Taipei. *Chemosphere* 27(11):2143-2154.
- *Libshitz HI. 1993. Radiation changes in the lung. *Semin Roentgenol* 28:303-320.
- *Licht A, Oliver M, Rachmilewitz EA. 1972. Optic atrophy following treatment with cobalt chloride in a patient with pancytopenia and hypercellular marrow. *Isr J Med Sci* 8:61-66.
- *Lichtenstein ME, Bartl F, Pierce RT. 1975. Control of cobalt exposures during wet process tungsten carbide grinding. *Am Ind Hyg Assoc J* 36:879-885.
- *Lide, DR, ed. 1994. Handbook of chemistry and physics. 75th edition. Boca Raton, FL: CRC Press, Inc., 4-3, 37-8.
- *Lide, DR, ed. 1998. Handbook of chemistry and physics. 79th edition. Boca Raton, FL: CRC Press, Inc., 4-38, 11-41, 143-4.
- Liden C, Wahlberg JE. 1994. Cross-reactivity to metal compounds studies in guinea pigs induced with chromate or cobalt. *Acta Derm Venereol (Stockh)* 74(5):341-343.
- Lin L, Villalon P, Martasek P, et al. 1990. Regulation of heme oxygenase gene expression by cobalt in rat liver and kidney. *Eur J Biochem* 192:577-582.
- *Lindahl-Kiessling K, Santesson B, Book JA. 1970. Chromosome and chromatid-type aberrations induced by cobalt 60 irradiation and tritiated uridine in human leukocyte cultures. *Chromosoma* 31:280-284.
- Linnainmaa M, Kiilunen M. 1997. Urinary cobalt as a measure of exposure in the wet sharpening of hard metal and stellite blades. *Int Arch Occup Environ Health* 69:193-200.
- *Linnainmaa M, Kangas J, Kalliokoski P. 1996. Exposure to airborne metals in the manufacture and maintenance of hard metal and stellite blades. *Am Ind Hyg Assoc J* 57:196-201.
- *Lisk DJ, Gutenmann WH, Rutzke M, et al. 1992. Survey of toxicants and nutrients in composted waste materials. *Arch Environ Contam Toxicol* 22:190-194.
- Lison D. 1996. Human toxicity of cobalt-containing dust and experimental studies on the mechanism of interstitial lung disease (hard metal disease). *Crit Rev Toxicol* 26(6):585-616.
- Lison D, Lauwerys R. 1990. In vitro cytotoxic effects of cobalt-containing dusts on mouse peritoneal and rat alveolar macrophages. *Environ Res* 52:187-198.
- Lison D, Lauwerys R. 1991. Biological responses of isolated macrophages to cobalt metal and tungsten carbide-cobalt powders. *Pharmacol Toxicol* 69:282-285.

9. REFERENCES

- Lison D, Lauwerys R. 1992. Study of the mechanism responsible for the elective toxicity of tungsten carbide-cobalt powder toward macrophages. *Toxicol Lett* 60:203-210.
- Lison D, Lauwerys R. 1993. Evaluation of the role of reactive oxygen species in the interactive toxicity of carbide-cobalt mixtures on macrophages in culture. *Arch Toxicol* 67:347-351.
- Lison D, Lauwerys R. 1994. Cobalt bioavailability from hard metal particles. *Arch Toxicol* 68:528-531.
- Lison D, Lauwerys R. 1995. The interaction of cobalt metal with different carbides and other mineral particles on mouse peritoneal macrophages. *Toxicol in Vitro* 9(3):341-347.
- *Lison D, Buchet JP, Swennen B, et al. 1994. Biological monitoring of workers exposed to cobalt metal, salt, oxides, and hard metal dust. *Occup Environ Med* 51:447-450.
- *Lison D, Carbonnelle P, Mollo L, et al. 1995. Physicochemical mechanism of the interaction between cobalt metal and carbide particles to generate toxic activated oxygen species. *Chem Res Toxicol* 8:600-606.
- *Lison D, Lauwerys R, Demedts M, et al. 1996. Experimental research into the pathogenesis of cobalt/hard metal lung disease. *European Respiratory Journal* 9:1024-1028.
- *Little JA, Sunico R. 1958. Cobalt-induced goiter with cardiomegaly and congestive failure. *J Pediatr* 52:284-288
- *Livingston, AL. 1978. Forage plant estrogens. *J Toxicol Environ Health* 4:301-324.
- *Llena JF, Cespedes G, Hirano A, et al. 1976. Vascular alterations in delayed radiation necrosis of the brain. *Arch Pathol Lab Med* 100:531-534.
- Llobet JM, Domingo JL, Corbella J. 1985. Comparison of antidotal efficacy of chelating agents upon acute toxicity of Co(II) in mice. *Res Commun Chem Pathol Pharmacol* 50(2):305-308.
- *Llobet JM, Domingo JL, Corbella J. 1988. Comparative effects of repeated parenteral administration of several chelators on the distribution and excretion of cobalt. *Res Commun Chem Pathol Pharmacol* 60(2):225-233.
- *Lloyd DR, Phillips DH, Carmichael PL. 1997. Generation of putative intrastrand cross-links and strand breaks in DNA by transition metal ion-mediated oxygen radical attack. *Chem Res Toxicol* 10:393-400.
- Lobel PB, Longrich HP, Jackson SE, et al. 1991. A major factor contributing to the high degree of unexplained variability of some elements concentrations in biological tissue: 27 elements in 5 organs of the mussel *Mytilus* as a model. *Arch Environ Contam Toxicol* 21:118-125.
- *Lofstrom A, Wigzell H. 1986. Antigen specific human T cell lines for cobalt chloride. *Acta Derm Venereol (Stockh)* 66:200-206.
- *Lohmann W, Denny WF, Perkins WH, et al. 1966. Influence of roentgen and ⁶⁰Co gamma rays on DNA synthesis in hamster organs. *Acta Radiologica Therapy Physics Biology* 4(1):3-6.

9. REFERENCES

- Lorusso GF, De Stasio G, Gilbert B, et al. 1998. High sensitivity quantitative analysis of cobalt uptake in rat cerebral granule cells with and without excitatory amino acids. *Neurosci Lett* 248:9-12.
- *Lucke-Huhle C, Pech M, Herrlich P. 1986. Selective gene amplification in mammalian cells after exposure to ^{60}Co γ rays, ^{241}Am χ particles, or uv light. *Radiat Res* 106:345-355.
- *Lucke-Huhle C, Pech M, Herrlich P. 1990. SV40 DNA amplification and reintegration in surviving hamster cells after ^{60}Co γ -irradiation. *Int J Radiat Biol* 58(4):577-588.
- Lugowski SJ, Smith DC, McHugh AD, et al. 1991. Release of metal ions from dental implant materials in vivo: Determination of Al, Co, Cr, Mo, Ni, V, and Ti in organ tissue. *J Biomed Mater Res* 25:1443-1458.
- Lundborg M, Falk R, Johansson A, et al. 1992. Phagolysosomal pH and dissolution of cobalt oxide particles by alveolar macrophages. *Environ Health Perspect* 97:153-157.
- Lundborg M, Johard U, Johansson A, et al. 1995. Phagolysosomal morphology and dissolution of cobalt oxide particles by human and rabbit alveolar macrophages. *Exp Lung Res* 21:51-66.
- *Lux D, Kammerer L, Ruhm W, et al. 1995. Cycling of Pu, Sr, Cs, and other long living radionuclides in forest ecosystems of the 30-km zone around Chernobyl. *Sci Total Environ* 173/174:375-384.
- Lymberis C, Makrigiorgos G, Sbonias E, et al. 1987. Radiocesium levels in human muscle samples in Greece one year after the Chernobyl accident. *Appl Radiat Isot* 39(2):175-176.
- Lytle TF, Lytle JS. 1990. Heavy metals in the eastern oyster, *Crassostrea virginica*, of the Mississippi Sound. *Bull Environ Contam Toxicol* 44:142-148.
- MacVicar BA. 1987. Morphological differentiation of cultured astrocytes is blocked by cadmium or cobalt. *Brain Res* 420:175-177.
- Madden JD, Grodner RM, Feagley SE, et al. 1991. Minerals and xenobiotic residues in the edible tissues of wild and pond-raised Louisiana crayfish. *J Food Saf* 12:1-15.
- Madruca MJ, Carreiro MCV. 1992. Experimental study of ^{60}Co behavior in Tejo River sediments. *Hydrobiologia* 235/236:661-668.
- *Maenhaut W, Zoller WH, Duce RA, et al. 1979. Concentration and size distribution of particulate trace elements in the south polar atmosphere. *J Geophys Res* 84(C5):2421-2431.
- Mahara Y, Kudo A. 1980. Mobility and retention of ^{60}Co in soils in coastal areas. In: *Radiation Protection: A systematic approach to safety*. New York, NY: Pergamon Press, 1111-1142.
- Mahara Y, Kudo A. 1981a. Fixation and mobilization of ^{60}Co on sediments in coastal environments. *Health Phys* 41(4):645-655.
- *Mahara Y, Kudo A. 1981b. Interaction and mobility of cobalt-60 between water and sediments in marine environments possible effects by acid rain. *Water Res* 15(4):413-419.

9. REFERENCES

- *Maier DM, Landauer MR. 1989. Effects of acute sublethal gamma radiation exposure on aggressive behavior in male mice: A dose-response study. *Aviation, Space, and Environmental Medicine*, 774-778.
- Maines MD, Kappas A. 1975. Study of the developmental pattern of heme catabolism in liver and the effects of cobalt on cytochrome P-450 and the rate of heme oxidation during the neonatal period. *J Exp Med* 141:1400-1410.
- Maines MD, Janousek V, Tomio JM, et al. 1976. Cobalt inhibition of synthesis and induction of δ -aminolevulinate synthase in liver. *Proc Natl Acad Sci U S A* 73(5):1499-1503.
- Malanin G, Kalimo K. 1992. Occupational contact dermatitis due to delayed allergy to pig epithelia. *Contact Dermatitis* 26:134-135.
- *Malinski T, Fish J, Matsusiewicz H. 1988. Determining ultratrace metal concentrations by inductively coupled plasma emission spectrometry. *Am Water Works Assoc* 80:81-85.
- Malzone WF, Wilder BJ, Mayersdorf A. 1972. A method of modifying the rapidity of cobalt-induced epileptogenesis in the cat. *Epilepsia* 13:643-648.
- Manciet JR, Barrade A, Janssen F, et al. 1995. Contact allergy with immediate and delayed photoaggravation to chromate and cobalt. *Contact Dermatitis* 33:282-284.
- Manninen H, Perkio A, Palonen J, et al. 1996. Trace metal emissions from co-combustion of refuse derived and packaging derived fuels in a circulating fluidized bed boiler. *Chemosphere* 32(12):2457-2469.
- *Mantoura RFC, Dickson A, Riley JP. 1978. The complexation of metals with humic materials in natural waters. *Estuarine Coastal Shelf Sci* 6:387-408.
- Mao Y, Liu KJ, Jiang JJ, et al. 1996. Generation of reactive oxygen species by Co(II) from H₂O₂ in the presence of chelators in relation to DNA damage and 2'-deoxuguanosine hydroxylation. *J Toxicol Environ Health* 47:61-75.
- *Marcussen PV. 1963. Cobalt dermatitis. Clinical picture. *Acta Derm Venereol (Stockh)* 43:231-234.
- Marks GS. 1994. Heme oxygenase: The physiological role of one of its metabolites, carbon monoxide and interactions with zinc protoporphyrin and other metalloporphyrins. *Cell Mol Biol* 40(7):863-870.
- Marmolejo-Rivas C, Paez-Osuna F. 1990. Trace metals in tropical coastal lagoon bivalves, *mytella strigata*. *Bull Environ Contam Toxicol* 45:545-551.
- Marsh GM, Gula MJ, Youk AO, et al. 1999. Mortality among chemical plant workers exposed to acrylonitrile and other substances. *Am J Ind Med* 36:423-436.
- Marston HR. 1970. The requirement of sheep for cobalt or for vitamin B₁₂. *Br Med J* 24:615-633.
- *Martin RG, Ruckdeschel JC, Chang P, et al. 1975. Radiation-related pericarditis. *Am J Cardiol* 35:216-220.

9. REFERENCES

- Maruta K, Osa T, Inoue H. 1989. Comparison of Mg, Mn, and Co ions affecting the β -adrenoceptor-mediated membrane response in the guinea-pig taenia caeci. *Jpn J Physiol* 39:659-671.
- Maruyama Y, Feola JM, Magura C, et al. 1985. Study of acute ^{60}Co , low dose rate CF-252 and CS-137 radiation on LSA ascites lymphoma in vivo. *Int J Radiat Oncol Biol Phys* 11:1991-1997.
- *Mascanzoni D. 1989. Long-term transfer from soil to plant of radioactive corrosion products. *Environ Pollut* 57:49-62.
- Massone L, Anonide A, Borghi S, et al. 1991. Positive patch test reactions to nickel, cobalt, and potassium dichromate in a series of 576 patients. *Cutis* 47:119-122.
- Mat I. 1994. Arsenic and trace metals in commercially important bivalves, *anadara granosa* and *paphia undulata*. *Bull Environ Contam Toxicol* 52:833-839.
- Matsubara S, Horiuchi J, Okuyama T, et al. 1985. Chromosome aberrations in the peripheral lymphocytes induced by brachytherapy and external cobalt teletherapy. *Int J Radiat Oncol Biol Phys* 11:1085-1094.
- *Mayr U, Butsch A, Schneider S. 1992. Validation of two in vitro test systems for estrogenic activities with zearalenone, phytoestrogens and cereal extracts. *Toxicology* 74:135-149.
- *Mayfield KP, Lai J, Porreca F. 1994. Selective upregulation of opioid delta receptors in NG 108-15 cells by treatment with cobalt: Possible hypoxic regulation. *Regul Peptides* 54(1):183-184.
- *Mazur L, Manowska J, Bobik R. 1991. Effects of ^{60}Co gamma-irradiation of mice on the temporal changes of acid phosphatase activity in spleen and liver. *Acta Physiologica Hungarica* 78:(2)135-141.
- *McBrien MP. 1973. Vitamin B₁₂ malabsorption after cobalt teletherapy for carcinoma of the bladder. *Br Med J* 1:648-650.
- *McCartney M, Kershaw PJ, Woodhead DS, et al. 1994. Artificial radionuclides in the surface sediments of the Irish Sea, 1968-1988. *Sci Total Environ* 141:103-138.
- *McLaren JW, Mykytiuk AP, Willie SN, et al. 1985. Determination of trace metals in seawater by inductively coupled plasma mass spectrometry with preconcentration on silica-immobilized 8-hydroxyquinoline. *Anal Chem* 57:2907-2911.
- McLaren P, Little DI. 1987. The effects of sediment transport on contaminant dispersal: An example from Milford Haven. *Mar Pollut Bull* 18(11):586-594.
- *McLaren RG, Lawson DM, Swift RS. 1986. Sorption and desorption of cobalt by soils and soil components. *J Soil Sci* 37:413-426.
- *McLean RI, Summers JK. 1990. Evaluation of transport and storage of ^{60}Co , ^{134}Cs , ^{137}Cs and ^{65}Zn by river sediments in the lower Susquehanna River. *Environ Poll* 63:137-153.

9. REFERENCES

- MDE. 1999. News release: MDE seeks court action against neutron products for decommissioning of its cobalt-60 production facility. Maryland Department of the Environment. <http://www.mde.state.md.us>. April 20, 2000.
- *MDS Nordion 2000. Cobalt 60 Sources. MDS Nordion, Toronto, Canada. <http://www.mds.nordion.com>. January 16, 2000.
- Meachim G, Pedley RB, Williams DF. 1982. A study of sarcogenicity associated with Co-Cr-Mo particles implanted in animal muscle. *J Biomed Mater Res* 16:407-416.
- *Meecham HM, Humphrey P. 1991. Industrial exposure to cobalt causing optic atrophy and nerve deafness: A case report. *J Neurol Neurosurg Psychiatry* 54(4):374-375.
- Meijer C, Bredberg M, Fischer T, et al. 1995. Ear piercing and nickel and cobalt sensitization, in 520 young Swedish men doing compulsory military service. *Contact Dermatitis* 32:147-149.
- *Mejstrik V, Svacha J. 1988. Concentrations of Co, Cd, Ni, and Zn in crop plants cultivated in the vicinity of coal-fired power plants. *Sci Total Environ* 72:57-67.
- *Mele PC, Franz CG, Harrison JR. 1988. Effects of sublethal doses of ionizing radiation on schedule-controlled performance in rats. *Pharmacol Biochem Behav* 30:1007-1014.
- Mendoza CA, Cortes G, Munoz D. 1996. Heavy metal pollution in soils and sediments of rural developing district 063, Mexico. *Environ Toxicol Water Qual* 11:327-333.
- Mentasti E, Abollino O, Aceto M, et al. 1998. Distribution of statistical correlations of major, minor and trace metals in lake environments of Antarctica. *Int J Environ Anal Chem* 71(3-4):245-255.
- Meplan C, Richard M-J, Hainaut P. 2000. Metalloregulation of the tumor suppressor protein p53: zinc mediates the renaturation of p53 after exposure to metal chelators in vitro and in intact cells. *Oncogene* 19(46):5227-5236.
- *Meranger JC, Subramanian KS, Chalifoux C. 1981. Metals and other elements: Survey for cadmium, cobalt, chromium, copper, nickel, lead, zinc, calcium, and magnesium in Canadian drinking water supplies. *J Assoc Off Anal Chem* 64(1):44-53.
- *Merian E. 1985. Introduction on environmental chemistry and global cycles of chromium, nickel, cobalt, beryllium, arsenic, cadmium and selenium, and their derivatives. *Curr Top Environ Toxicol Chem* 8:3-32.
- *Mermut AR, Jain JC, Song L, et al. 1996. Trace element concentrations of selected soils and fertilizers in Saskatchewan, Canada. *J Environ Qual* 25:845-853.
- Merritt K, Crowe TD, Brown SA. 1989. Elimination of nickel, cobalt, and chromium following repeated injections of high dose metal salts. *J Biomed Mater Res* 23:845-862.
- Meyers-Schone L, Walton BT. 1994. Turtles as monitors of chemical contaminants in the environment. *Rev Environ Toxicol* 135:93-153.

9. REFERENCES

- Michetti G, Mosconi G, Zanelli R, et al. 1994. Bronchoalveolar lavage and its role in diagnosing cobalt lung disease. *Sci Total Environ* 150:173-178.
- Michiels JJ. 1997. Diagnostic criteria of the myeloproliferative disorders (MPD): essential thrombocythaemia, polycythaemia vera and chronic megakaryocytic granulocytic metaplasia. *51(2):57-64.*
- Migliori M, Mosconi G, Michetti G, et al. 1994. Hard metal disease: Eight workers with interstitial lung fibrosis due to cobalt exposure. *Sci Total Environ* 150:187-196.
- *Milford JB, Davidson CI. 1985. The size of particulate trace elements in the atmosphere - a review. *J Air Pollut Control Assoc* 35(12):1249-1260.
- Milkovic-Kraus S, Kubelka D, Vekic B. 1992. Biological monitoring of three ⁶⁰Co radiation incident victims. *Am J Ind Med* 22:243-247.
- Miller ME, Howard D, Stohman F, et al. 1974. Mechanism of erythropoietin production by cobaltous chloride. *Blood* 44(3):339-346.
- *Miller-Ihli NJ, Wolf WR. 1986. Characterization of a diet reference material for 17 elements. *Anal Chem* 58:3225-3231.
- *Miltenberger RP, Lessard ET, Greenhouse NA. 1981. ⁶⁰Co and ¹³⁷Cs long-term biological removal rate constants for the marshalllese population. *Health Phys* 40:615-623.
- *Minamoto K, Nagano M, Inaoka T, et al. 2002. Occupational dermatoses among fibreglass-reinforced plastics factory workers. *Contact Dermatitis* 46:339-347.
- Miyamoto T, Iwasaki K, Mihara Y, et al. 1997. Lymphocytoma cutis induced by cobalt. *Br J Dermatol* 137:467-484.
- *Mochizuki H, Kada T. 1982. Antimutagenic action of cobaltous chloride on trp-P-1-induced mutations in salmonella typhimurium TA98 and TA1538. *Mutat Res* 95:145-157.
- Mochizuki H, Kada T. 1984. Mechanisms of antimutagenicity of cobaltous chloride: Analysis of SOS reactions in Escherichia coli B/r. *Mutat Res* 130:371.
- *Moger WH. 1983. Effects of the calcium-channel blockers cobalt, verapamil, and D600 on leydig cell steroidogenesis. *Biol Reprod* 28:528-535.
- Mohapatra SP. 1988. Distribution of heavy metals in polluted creek sediment. *Environ Monit Assess* 10(2):157-163.
- *Mohiuddin SM, Taskar PK, Rheault M, et al. 1970. Experimental cobalt cardiomyopathy. *Am Heart J* 80(4):532-543.
- *Mollenhauer HH, Corrier DE, Clark DE, et al. 1985. Effects of dietary cobalt on testicular structure. *Virchows Arch B* 49:241-248.

9. REFERENCES

- Momeni MH, Worden L, Goldman M. 1974. Dosimetry and facilities of UCD outdoor-indoor ^{60}Co irradiator. *Health Phys* 26:469-472.
- Monnet-Tschudi F, Zurich MG, Honegger P. 1993. Evaluation of the toxicity of different metal compounds in the developing brain using aggregating cell cultures as a model. *Toxicol in Vitro* 7(4):335-339.
- Monsees TK, Winterstein U, Hayatpour J, et al. 1998. Effect of heavy metals on the secretory function of testicular cells in culture. *J Trace Microprobe Tech* 16(4):427-435.
- Montiel C, Artalejo AR, Sanchez-Garcia P, et al. 1993. Two components in the adrenal nicotinic secretory response revealed by cobalt ramps. *Eur J Pharmacol* 230:77-84.
- *Moorehouse CP, Halliwell B, Grootveld M, et al. 1985. Cobalt(II) ion as a promoter of hydroxyl radical and possible 'crypto-hydroxyl' radical formation under physiological conditions. Differential effects of hydroxyl radical scavengers. *Biochim Biophys Acta* 843:261-268.
- Moratal J, Castells J, Donaire A, et al. 1994. Interaction of cobalt ions with carboxypeptidase A. *J Inorg Biochem* 53:1-11.
- Morel FMM, Westall JC, O'Melia CR, et al. 1975. Fate of trace metals in Los Angeles County wastewater discharge. *Environ Sci Technol* 9(8):756-761.
- *Morelli L, Di Giulio C, Iezzi M, et al. 1994. Effect of acute and chronic cobalt administration on carotid body chemoreceptors responses. *Sci Total Environ* 150:215-216.
- *Morgan KZ. 1976. Releases of radioactive materials from reactors. In: *Nuclear Power Safety*. Pergamon Press, NY, 101-153.
- Morgan GW, Breit SN. 1995. Radiation and the lung: A reevaluation of the mechanisms mediating pulmonary injury. *Int J Radiat Oncol Biol Phys* 31(2):361-369.
- Morgan RM, Kundomal YR, Hupp EW. 1983. Serum lactate dehydrogenase (LDH) activity following exposures to cadmium and/or ^{60}Co gamma irradiation. *J Environ Sci Health Part A* 18(4):483-492.
- Morgan RM, Kundomal YR, Hupp EW. 1987. Serum alkaline phosphatase (SAP) activity following exposure to cadmium and/or ^{60}Co gamma irradiation. *J Environ Sci Health Part A* 22(4):337-342.
- *Morin Y, Daniel P. 1967. Quebec beer-drinkers' cardiomyopathy: etiological considerations. *Can Med Assoc J* 97:926-928.
- *Morin Y, Tetu A, Mercier G. 1971. Cobalt cardiomyopathy: Clinical Aspects. *Br Heart J* 33:175-178.
- Morita H, Noda K, Umeda M. 1985. Mutagenicities of nickel and cobalt compounds in a mammalian cell line. *Mutat Res* 147:265-266.
- Morita H, Umeda M, Ogawa HI. 1991. Mutagenicity of various chemicals including nickel and cobalt compounds in cultured mouse FM3A cells. *Mutat Res* 261:131-137.

9. REFERENCES

- Morita Y, Mizutani M. 1987. Inhibitory effect of cobaltous chloride on mutagenesis induced by N-methyl-N'-nitro-N-nitrosoguanidine (MNNG) in FM3A cells. *Mutat Res* 182:367-368.
- Morrall FR. 1979. Cobalt compounds. In: Kirk RE, Othmer DF, Grayson M, et al., eds. *Kirk-Othmer encyclopedia of chemical technology*. New York, NY: John Wiley and Sons, 495-510.
- Morrison RA, Zellmer DL, Dean RD. 1981. Low vs high dose-rate effects on the acute reaction of pig skin to cobalt-60 gamma rays. *Int J Radiat Oncol Biol Phys* 7:359-364.
- Morrison RJ, Gangaiya P, Naqasima MR, et al. 1997. Trace element studies in the Great Astrolabe Lagoon, Fiji, a pristine marine environment. *Mar Pollut Bull* 34(5):353-356.
- *Morselli PL, Franco-Morselli R, Bossi L. 1980. Clinical pharmacokinetics in newborns and infants: Age-related differences and therapeutic implications. *Clin Pharmacokin* 5:485-527.
- Morsy SM, El-Assaly FM. 1970. Body elimination rates of ^{134}Cs , ^{60}Co and ^{203}Hg . *Health Phys* 19:769-773.
- *Morvai V, Szakmary E, Tatrai E, et al. 1993. The effects of simultaneous alcohol and cobalt chloride administration on the cardiovascular system of rats. *Acta Physiol Hung* 81(3):253-261.
- *Mosconi G, Bacis M, Leghissa P, et al. 1994a. Occupational exposure to metallic cobalt in the province of Beragmo. Results of a 1991 survey. *Sci Total Environ* 150:121-128.
- *Mosconi G, Bacis M, Vitali MT, et al. 1994b. Cobalt excretion in urine: Results of a study on workers producing diamond grinding tools and on a control group. *Sci Total Environ* 150:133-139.
- Mosher BW, Winkler P, Jaffrezo JL. 1993. Seasonal aerosol chemistry at dye 3, Greenland. *Atmos Environ* 27A(17/18):2761-2772.
- Motelica-Heino M, Coustumer PL, Thomassin JH, et al. 1998. Macro and microchemistry of trace metals in vitrified domestic wastes by laser ablation ICP-MS and scanning electron microprobe X-ray energy dispersive spectroscopy. *Talanta* 46:407-422.
- Mothersill C, Seymour CB, Harney J, et al. 1994. High levels of stable p53 protein and the expression of c-myc in cultured human epithelial tissue after cobalt-60 irradiation. *Radiat Res* 137:317-322.
- *Moulin JJ, Clavel T, Roy D, et al. 2000. Risk of lung cancer in workers producing stainless steel and metallic alloys. *Int Arch Occup Environ Health* 73(3):171-180.
- *Moulin JJ, Wild P, Mur JM, et al. 1993. A mortality study of cobalt production workers: An extension of the follow-up. *Am J Ind Med* 23:281-288.
- *Moulin JJ, Wild P, Romazini S, et al. 1998. Lung cancer risk in hard-metal workers. *Am J Epidemiol* 148(3):241-248.
- *Mucklow ES, Griffin SJ, Delves HT, et al. 1990. Cobalt poisoning in a 6-year old. *The Lancet*. 335:981.

9. REFERENCES

- Mudroch A. 1985. Geochemistry of the Detroit River sediments. *Great Lakes Res Rev* 11(3):193-200.
- *Mulsow S, Coquery M, Dovlete C, et al. 1999. Radionuclide concentrations in underground waters of Mururoa and Fangataufa Atolls. *Sci Total Environ* 237/238:287-300.
- *Mumma RO, Raupach DC, Sahadewan K, et al. 1990. National survey of elements and radioactivity in municipal incinerator ashes. *Arch Environ Contam Toxicol* 19:399-404.
- Mumma RO, Raupach DC, Sahadewan K, et al. 1991. Variation in elemental composition of municipal refuse incinerator ashes with time of sampling. *Chemosphere* 23(3):391-395.
- *Mumma RO, Raupach DC, Waldman JP, et al. 1984. National survey of elements and other constituents in municipal sewage sludges. *Arch Environ Contam Toxicol* 13:75-83.
- Mundschenk VH. 1991. [On the behavior of the radioisotopes ^{58}Co and ^{60}Co from nuclear power plants in the case of the Rhine River]. *Z Wasser Abwasser Forsch* 24:268-284.
- *Munita CS, Mazzilli BP. 1986. Determination of trace elements in Brazilian cigarette tobacco by neutron activation analysis. *J Radioanal Nucl Chem* 108(4):217-227.
- *Mur JM, Moulin JJ, Charruyer-Seinerra MP, et al. 1987. A cohort mortality study among cobalt and sodium workers in an electrochemical plant. *Am J Ind Med* 11:75-81.
- *Muramatsu Y, Parr RM. 1988. Concentrations of some trace elements in hair, liver and kidney from autopsy subjects - relationship between hair and internal organs. *Sci Total Environ* 76:29-40.
- *Murdock HR. 1959. Studies on the pharmacology of cobalt chloride. *J Am Pharm Assoc Sci Ed* 48:140-142.
- *Murray RL. 1994. Understanding radioactive waste, 4th edition. Battelle Pacific Northwest Laboratories, Battelle Press.
- *Murthy GK, Rhea U, Peeler JT. 1971. Levels of antimony, cadmium, cobalt, manganese, and zinc in institutional total diets. *Environ Sci Technol* 5(5):436-442.
- *Mutafova-Yambolieva V, Staneva-Stoytcheva D, Lasova L, et al. 1994. Effects of cobalt or nickel on the sympathetically mediated contractile responses in rat-isolated vas deferens. *Pharmacology* 48:100-110.
- *Myskowski PL, and Safai B. 1981. Localized comedo formation after cobalt irradiation. *Int Society of Tropical Dermatology Inc*, 550-551.
- *Nackerdien Z, Kasprak KS, Rao G, et al. 1991. Nickle(II)-and cobalt(II)-dependent damage by hydrogen peroxide to the DNA bases in isolated human chromatin. *Cancer Res* 51:5837-5842.
- Nadeenko VG, Lenchenko VG, Saichenko SP, et al. 1980. [Embryotoxic action of cobalt in peroral body uptake]. *Gig Sanit* 2:6-8.

9. REFERENCES

- Nagao M, Sugaru E, Kambe T, et al. 1999. Unidirectional transport from apical to basolateral compartment of cobalt ion in polarized Madin-Darby canine kidney cells. *Biochem Biophys Res Commun* 257:289-294.
- *Nagaraj PR. 1995. Minerals Recovery and Processing. In: Kroschwitz JJ, Howe-Grant M, eds. *Kirk-Othmer encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 16:784-844.
- Nagy I, Woolf CJ, Dray A, et al. 1994. Cobalt accumulation in neurons expressing ionotropic excitatory amino acid receptors in young rat spinal cord: Morphology and distribution. *J Comp Neur* 344:321-335.
- *Naidu AS, Blanchard A, Kelley JJ, et al. 1997. Heavy metals in Chukchi Sea sediments as compared to selected circum-arctic shelves. *Mar Pollut Bull* 35:260-269.
- Najean Y, Rain J-D, Dresch C, et al. 1996. Risk of leukamia, carcinoma, and myelofibrosis in 32P- or chemotherapy-treated patients with polycythaemia vera: a prospective analysis of 682 cases. *Leuk Lymphoma* 22:111-119.
- Nakamura M, Yasukochi Y, Minakami S. 1975. Effect of cobalt on heme biosynthesis in rat liver and spleen. *J Biochem* 78:373-380.
- Nakashima S, Sturgeon RE, Willie SN, et al. 1988. Determination of trace metals in seawater by graphite furnace atomic absorption spectrometry with preconcentration on silica-immobilized 8-hydroxyquinoline in a flow-system. *Fresenius Z Anal Chem* 330:592-595.
- *Namba M, Nishitani K, Fukushima F, et al. 1981. Neoplastic transformation of human diploid fibroblasts reacted with chemical carcinogens and Co-60 γ -rays. *Gann Monogr Cancer Res* 27:221-230.
- *Namba M, Nishitani K, Fukushima F, et al. 1988. Multi-step neoplastic transformation of normal human fibroblasts by Co-60 gamma rays and Ha-ras oncogenes. *Mutat Res* 199:415-423.
- *Namba M, Nishitani K, Hyodoh F, et al. 1985. Neoplastic transformation of human diploid fibroblasts (KMST-6) by treatment with ^{60}Co gamma rays. *Indian J Cancer* 35:275-280.
- *NAS. 1977. Drinking water and health. National Academy of Sciences, Washington, DC, 209-211, 247.
- *NAS/NRC. 1989. Report of the oversight committee. In: *Biologic markers in reproductive toxicology*. Washington, DC: National Academy of Sciences, National Research Council, National Academy Press.
- Nasu T. 1992. Calcium antagonism by cobalt ions on contraction of guinea-pig taenia coli. *J Pharm Pharmacol* 44:879-884.
- *Nation JR, Bourgeois AE, Clark DE, et al. 1983. The effects of chronic cobalt exposure on behavior and metallothionein levels in the adult rat. *Neurobehav Toxicol Teratol* 5:9-15.
- Nayebzadeh A, Dufresne A, Harvie S, et al. 1999. Mineralogy of lung tissue in dental laboratory technician's pneumoconiosis. *Am Ind Hyg Assoc J* 60:349-353.

9. REFERENCES

- *Naylor GPL, Harrison JD. 1995. Gastrointestinal iron and cobalt absorption and iron status in young rats and guinea pigs. *Human Exp Toxicol* 14:949-954.
- *NCRP. 1987. Use of bioassay procedures for assessment of internal radionuclide deposition. National Council on Radiation Protection and Measurements. Bethesda, MD: NCRP; NCRP Report No. 87.
- *NCRP. 1993. Limitation of exposure to ionizing radiation. National Council on Radiation Protection.
- *NCRP. 1997. Deposition, retention and dosimetry of inhaled radioactive substances. National Council on Radiation Protection and Measurements. Bethesda, MD: NCRP; NCRP Report No. 125.
- Neal C, Smith CJ, Jeffery HA, et al. 1996. Trace element concentrations in the major rivers entering the Humber estuary, NE England. *J Hydrol* 182:37-64.
- Neal C, Smith CJ, Walls J, et al. 1990. Hydrogeochemical variations in Hafren Forest stream waters, Mid-Wales. *J Hydrol* 116:185-200.
- *Nielsen NH, Kristiansen J, Borg L, et al. 2000. Repeated exposures to cobalt or chromate on the hands of patients with hand eczema and contact allergy to that metal. *Contact Dermatitis* 43(4):212-215.
- Nellessen JE, Fletcher JS. 1993. Assessment of published literature on the uptake, accumulation, and translocation of heavy metals by vascular plants. *Chemosphere* 27(9):1669-1680.
- *Nemery B, Casier P, Roosels D, et al. 1992. Survey of cobalt exposure and respiratory health in diamond polishers. *Am Rev Respir Dis* 145:610-616.
- Nemery B, Lewis CPL, Demedts M. 1994. Cobalt and possible oxidant-mediated toxicity. *Sci Total Environ* 150:57-64.
- Nemery B, Nagels J, Verbeke E, et al. 1990. Rapidly fatal progression of cobalt lung in a diamond polisher. *Am Rev Respir Dis* 141(5):1373-1378.
- Nemery B, Roosels D, Lahaye D, et al. 1988. Cross-sectional survey of lung function and assessment of cobalt exposure in diamond polishers. *Am Rev Respir Dis* 137:96.
- *Nevissi AE. 1992. Measurement of actinides and long-lived radionuclides in large coral samples. *J Radioanalyt Nucl Chem* 156:243-251.
- *Newton D, Rundo J. 1971. The long term retention of inhaled cobalt-60. *Health Phys* 21:(3)377-384.
- Nies DH. 1992. Resistance to cadmium, cobalt, zinc, and nickel in microbes. *Plasmid* 27:17-28.
- *Nimmo M, Chester R. 1993. The chemical speciation of dissolved nickel and cobalt in Mediterranean rainwaters. *Sci Total Environ* 135:153-160.
- *Nimmo M, Fones GR. 1997. The potential pool of Co, Ni, Cu, Pb and Cd organic complexing ligands in coastal and urban rain waters. *Atmos Environ* 31(5):693-702.

9. REFERENCES

- NIOSH. 1973. Chronic animal inhalation toxicity to cobalt. Cincinnati, OH: National Institute for Occupational Safety and Health, Center for Disease Control. PB 232 247.
- NIOSH. 1989. Health hazard evaluation report no. HETA-85-295-1907. General Electric carbonyl systems, Detroit, Michigan. National Institute for Occupational Safety and Health, Department of Health and Human Services.
- NIOSH. 2000a. Cobalt. NIOSH pocket guide to chemical hazards. National Institute for Occupational Safety and Health. <http://www.cdc.gov>. March 13, 2000.
- NIOSH. 2000b. Radioactive cobalt. NIOSH pocket guide to chemical hazards. National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/homepage.html>. March 13, 2000.
- *NIOSH. 2001. REL (TWA), cobalt metal, dust, and fume. National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/srchpage.html>. February 23, 2001.
- Nishigaki I, Oku H, Noguchi M, et al. 1993. Prevention by ellagic acid of lipid peroxidation in placenta and fetus of rats irradiated with ^{60}Co . *J Clin Biochem Nutr* 15:135-141.
- *Nishimura Y, Inaba J, Ichikawa R. 1978. Fetal uptake of $^{60}\text{CoCl}_2$ and ^{57}Co -cyanocobalamin in different gestation stages of rats. *J Radiat Res* 19:236-245.
- *Nitschke KD, Kociba RJ, Keyes DG, et al. 1981. A thirteen week repeated inhalation study of ethylene dibromide in rats. *Fundam Appl Toxicol* 1:437-442.
- *Nitta Y, Kamiya K, Yokoro K. 1992. Carcinogenic effect of *in utero* ^{252}Cf and ^{60}Co irradiation in C57BL/6NXC3H/He F1 (B6C3F1) mice. *J Radiat Res* 33:319-333.
- *Nojiri Y, Kawai T, Otsuki A, et al. 1985. Simultaneous multielement determinations of trace metals in lake waters by ICP emission spectrometry with preconcentration and their background levels in Japan. *Water Res* 19(4):503-509.
- Nolte J. 1988. Pollution source analysis of river water and sewage sludge. *Environ Technol Lett* 9:857-868.
- Nordberg G. 1994. Assessment of risks in occupational cobalt exposures. *Sci Total Environ* 150:201-207.
- *Norris WP, Poole CM. 1969. The response of ANL beagles to protracted exposure to ^{60}Co gamma rays at 5 to 35 R/day. II. Estimation of the LD50 at 35 R/day. In: Biological and Medical Research Division Annual Report. Argonne National Laboratory, IL.
- *Nriagu JO. 1989. A global assessment of natural sources of atmospheric trace metals. *Nature* 338:47-49.
- Nriagu JO. 1992. Toxic metal pollution in Africa. *Sci Total Environ* 121:1-37.
- *Nriagu JO, Coker RD. 1980. Trace metals in humic and fulvic acids from Lake Ontario sediments. *Environ Sci Technol* 14:443-446.

9. REFERENCES

- *NTP. 1991. NTP report on the toxicity studies of cobalt sulfate heptahydrate in F344/N rats and B6C3F1 mice (inhalation studies). National Institutes of Health, National Toxicology Program. NIH Publication No. 91-3124.
- *NTP. 1998. NTP report on the toxicity studies of cobalt sulfate heptahydrate in F344/N rats and B6C3F1 mice (inhalation studies). National Institutes of Health, National Toxicology Program. NIH Publication No. 471.
- Numazawa S, Oguro T, Yoshida T, et al. 1989. Synergistic induction of rat hepatic ornithine decarboxylase by multiple doses of cobalt chloride. *Chem Biol Interact* 72:257-267.
- *NYS Dept of Environmental Conservation. 2000. Memorandum: DAR-1 (air guide) AGC/SGC tables. Albany, NY: New York State Department of Environmental Conservation.
- Oanh NT, Bengtsson BE, Reutergardh L, et al. 1995. Levels of contaminants in effluent, sediment, and biota from Bai Bang, a bleached kraft pulp and paper mill in Vietnam. *Arch Environ Contam Toxicol* 29:506-516.
- O'Brien DJ, Kaneene JB, Poppenga RH. 1993. The use of mammals as sentinels for human exposure to toxic contaminants in the environment. *Environ Health Perspect* 99:351-368.
- *Ogawa HI, Liu S-Y, Sakata K, et al. 1988. Inverse correlation between combined mutagenicity in *Salmonella typhimurium* and strength of coordinate bond in mixtures of cobalt(II) chloride and 4-substituted pyridines. *Mutat Res* 204:117-121.
- Ogawa HI, Ohyama Y, Ohsumi Y, et al. 1999. Cobaltous chloride-induced mutagenesis in the supF tRNA gene of *Escherichia coli*. *Mutagenesis* 14(2):249-253.
- *Ogawa HI, Sakata K, Inouye T, et al. 1986. Combined mutagenicity of cobalt(II) salt and heteroaromatic compounds in *Salmonella typhimurium*. *Mutat Res* 172:97-104.
- Ogawa HI, Shibahara T, Iwata H, et al. 1994. Genotoxic activities in vivo of cobaltous chloride and other metal chlorides as assayed in the drosophila wing spot test. *Mutat Res* 320:133-140.
- O'Hara GP, Mann DE, Gautieri RF. 1971. Effect of cobalt chloride and sodium cobaltinitrite on the growth of established epithelial tumors induced by methylcholanthrene. *J Pharm Sci* 60(3):473-474.
- Ohba S, Hiramatsu M, Edamatsu R, et al. 1994. Metal ions affect neuronal membrane fluidity of rat cerebral cortex. *Neurochem Res* 19(3):237-247.
- *Ohio EPA. 2000. Toxic release inventory. Air pollution regulations. <http://www.epa.ohio.gov/dapc/regs/trirules.html>. February 22, 2000.
- Olivarius F, Menne T. 1992. Skin reactivity to metallic cobalt in patients with a positive patch test to cobalt chloride. *Contact Dermatitis* 27:241-243.
- *Olivero S, Villani P, Botta A. 1995. Genotoxic effects of cobalt chloride, sulfate and nitrate on cultured human lymphocytes. *Med Sci Res* 23:339-341.

9. REFERENCES

- Olmez I, Sheffield AE, Gordon GE, et al. 1988. Compositions of particles from selected sources in Philadelphia for receptor modeling applications. *J Air Pollut Control Assoc* 38(11):1392-1402.
- Olsavszky R, Rycroft RJG, White IR, et al. 1998. Contact sensitivity to chromate: comparison at a London contact dermatitis clinic over a 10-year period. *Contact Dermatitis* 38:329-331.
- *Ondov JM, Zoller WH, Gordon GE. 1982. Trace element emissions on aerosols from motor vehicles. *Environ Sci Technol* 16:318-328.
- Ondov JM, Choquette CE, Zoller WH, et al. 1989. Atmospheric behavior of trace elements on particles emitted from a coal-fired power plant. *Atmos Environ* 23(10):2193-2204.
- Ong A, Li WX, Ling CC. 1993. Low-dose-rate irradiation of rat embryo cells containing the Ha-ras oncogene. *Radiat Res* 134:251-255.
- *Onkelinx C. 1976. Compartment analysis of cobalt (II) metabolism in rats of various ages. *Toxicol Appl Pharmacol* 38(425-438):425-438.
- Onozuka M, Imai S. 1990. Induction of epileptic seizure activity by a specific protein from cobalt-induced epileptogenic cortex of rats. *Brain Res* 507:143-145.
- OSHA. 1993. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.
- OSHA. 1999a. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000.
- OSHA. 1999b. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000.
- OSHA. 1999c. Gases, vapors, fumes, dusts, and mists. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.55.
- *OSHA. 2001d. Construction industry, cobalt metal, dust, and fume. Occupational Safety and Health Administration. http://www.osha.gov/OshStd_data/1926_0055.html. June 7, 2001.
- *OSHA. 2001e. General industry, cobalt metal, dust, and fume. Occupational Safety and Health Administration. http://www.osha.gov/OshStd_data/1910_0000.html. June 7, 2001.
- *OSHA. 2001a. Ionizing radiation. Occupational Safety and Health Administration, U.S. Department of Labor. Code of Federal Regulations. 29 CFR 1910.1096. http://www.osha-slc.gov/OshStd_data/1910_1096.html. June 7, 2001.
- *OSHA. 2001b. Safety and health regulations for construction. Ionizing radiation. Occupational Safety and Health Administration, U.S. Department of Labor. Code of Federal Regulations. 29 CFR 1926.53. http://www.osha-slc.gov/OshStd_data/1926_0053.html. June 7, 2001.

9. REFERENCES

- *OSHA. 2001c. Shipyards, cobalt metal, dust, and fume. Occupational Safety and Health Administration. http://www.osha.gov/OshStd_data/1915_0000.html. June 7, 2001.
- *Ostapczuk P, Froning M, Stoeppler M, et al. 1985. Square wave voltammetry: A new approach for the sensitive determination of nickel and cobalt in human samples. In: Brown SS, Sunderman FW, eds. Progress in nickel toxicology: Proceedings of the 3rd international conference on nickel metabolism and toxicology held in Paris 4-7 September 1984. Palo Alto, CA: Blackwell Scientific Publications, 129-132.
- *Ostapczuk P, Valenta P, Rutzel H, et al. 1987. Application of differential pulse anodic stripping voltammetry to the determination of heavy metals in environmental samples. *Sci Total Environ* 60:1-16.
- Osuna Lopez JI, Zazueta-Padilla HM, Rodriguez-Higuera A, et al. 1990. Trace metal concentrations in mangrove oyster (*Crassostrea corteziensis*) from tropical lagoon environments, Mexico. *Mar Pollut Bull* 21(10):486-488.
- *Outridge PM, Noller BN. 1991. Accumulation of toxic trace elements by freshwater vascular plants. *Rev Environ Contam Toxicol* 121:1-63.
- *Owen GM, Brozek J. 1966. Influence of age, sex and nutrition on body composition during childhood and adolescence. In: Falkner F, ed. Human development. Philadelphia, PA: WB Saunders, 222-238.
- Owens PN, Walling DE, He Q. 1996. The behavior of bomb-derived caesium-137 fallout in catchment soils. *J Environ Radioact* 32(3):169-191.
- Paez-Osuna F, Marmolejo-Rivasa C. 1990a. Occurrence and seasonal variation of heavy metals in the oyster *Crassostrea iridescens*. *Bull Environ Contam Toxicol* 44:129-134.
- Paez-Osuna F, Marmolejo-Rivasa C. 1990b. Trace metals in tropical coastal lagoon bivalves *Crassostrea corteziensis*. *Bull Environ Contam Toxicol* 45:538-544.
- *Page NP, Ainsworth EJ, Leong GF. 1968. The relationship of exposure rate and exposure time to radiation injury in sheep. *Radiat Res* 33:94-106.
- *Painter RB, Howard R. 1982. The hela DNA-synthesis inhibition test as a rapid screen for mutagenic carcinogens. *Mutat Res* 92:427-437.
- Paksy K, Forgacs Z, Gati I. 1999. In vitro comparative effect of Cd²⁺, Ni²⁺, and Co²⁺ on mouse postblastocyst development. *Environmental Research (Section A)* 80:340-347.
- *Paley KR, Sobel ES, Yalow RS. 1958. Effect of oral and intravenous cobaltous chloride on thyroid function. *J Clin Endocrinol Metab* 18:850-859.
- *Palit S, Ghosh AK, Sharma A, et al. 1991a. Modification of the clastogenic effects of cobalt by calcium in bone marrow cells of mice in vivo. *Cytologia* 56:373-377.
- *Palit S, Sharma A, Talukder G. 1991b. Chromosomal aberrations induced by cobaltous chloride in mice in vivo. *Biol Trace Elem Res* 29:139-145.

9. REFERENCES

- *Palit S, Sharma A, Talukder G. 1991c. Cytotoxic effects of cobalt chloride on mouse bone marrow cells in vivo. *Cytobios* 65:85-89.
- *Palit S, Sharma A, Talukder G. 1991d. Protection by chlorophyllin against induction of chromosomal aberrations by cobalt in bone marrow cells of mice in vivo. *Fitoterapia* 62:(5)425-428.
- *Palko J, Yli-Halla M. 1988. Solubility of Co, Ni, and Mn in some extractants in a Finnish acid sulphate soil area. *Acta Agric Scand* 38:153-158.
- *Palmes ED, Nelson N, Laskin S, et al. 1959. Inhalation toxicity of cobalt hydrocarbonyl. *Am Ind Hyg Assoc J* 20:453-468.
- Palmiter RD. 1994. Regulation of metallothionein genes by heavy metals appears to be mediated by a zinc-sensitive inhibitor that interacts with a constitutively active transcription factor, MTF-1. *Proc Natl Acad Sci USA* 91:1219-1223.
- *Paternain JL, Domingo JL, Corbella J. 1988. Developmental toxicity of cobalt in the rat. *J Toxicol Environ Health* 24:193-200.
- Pathak SP, Kumar S, Ramteke PW, et al. 1992. Riverine pollution in some northern and northeastern states of India. *Environ Monit Assess* 22:227-236.
- *Patrick G, Batchelor AL, Stirling C. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part VI: Lung clearance of inhaled cobalt oxide particles in SPF Fischer rats. *J Aerosol Sci* 20(2):249-255.
- Patrick G, Stirling C, Kreyling WG, et al. 1994. Interspecies comparison of the clearance of ionic cobalt from the lungs. *Inhal Toxicol* 6:225-240.
- Payan H. 1971. Morphology of cobalt experimental epilepsy in rats. *Exp Mol Pathol* 15:312-319.
- *Payan HM, Conard JR. 1974. Cobalt-induced epilepsy in rats: A study in biochemical substances. *Arch Pathol* 97:170-172.
- Pearson TC. 2001. Evaluation of diagnostic criteria in polycythemia vera. *Semin Hematol* 38(1):21-4.
- Pearson TC, Messinez M. 1996. The diagnostic criteria of polycythaemia rubra vera. *Leuk Lymphoma* 22:87-93.
- Pearson TC, Messinezy M, Westwood N, et al. 2000. A polycythemia vera update: Diagnosis, Pathobiology, and Treatment. *Hematology (Am Soc Hematol Educ Program)*:51-68.
- Pedigo NG. 1994. Time course of cobalt toxicity in murine preimplantation embryos and dose responsive induction of metallothionein. *Biol Reprod* 50(Suppl. 1):89.
- *Pedigo NG, Vernon MW. 1993. Embryonic losses after 10-week administration of cobalt to male mice. *Reprod Toxicol* 7:111-116.

9. REFERENCES

- *Pedigo NG, George WJ, Anderson MB. 1988. Effects of acute and chronic exposure to cobalt in male reproduction in mice. *Reprod Toxicol* 2:45-53.
- Peet MJ, Gregersen H, McLennan H. 1986. 2-Amino-5-phosphonovalerate and Co^{2+} selectively block depolarization and burst firing of rat hippocampal CA1 pyramidal neurones by N-methyl-D-aspartate. *Neuroscience* 12(3):635-641.
- *Pehrsson SK, Hatori N, Clyne N, et al. 1991. The effect of chronic cobalt exposure on cardiac function in rats. *Trace Elem Med* 8(4):195-198.
- *Persson B, Carlenor E, Clyne N, et al. 1992. Binding of dietary cobalt to sarcoplasmic reticulum proteins. *Scand J Clin Lab Invest* 52:137-140.
- Peryakov EA, Berliner LJ. 1994. Co^{2+} binding to α -lactalbumin. *J Protein Chem* 13(3):277-281.
- Pery-Man N, Houeto P, Coirault C, et al. 1996. Hydroxocobalamin vs cobalt toxicity on rat cardiac and diaphragmatic muscles. *Intensive Care Med* 22:108-115.
- Pesch G, Reynolds B, Rogerson P. 1978. Trace metals in scallops from within and around two ocean disposal sites. *Mar Pollut Bull* 8(10):224-228.
- *Pettine M, Camusso M, Martinotti W, et al. 1994. Soluble and particulate metals in the Po River: factors affecting concentrations and partitioning. *Sci Total Environ* 145:243-265.
- *Philippe JV. 1975. Fertility and irradiation: A preconceptional investigation in teratology. *Am J Obstet Gynecol* 123(7):714-718.
- Pinkerton BW, Brown KW. 1985. Plant accumulation and soil sorption of cobalt from cobalt-amended soils. *Agron J* 77:634-638.
- Pisati G, Zedda S. 1994. Outcome of occupational asthma due to cobalt hypersensitivity. *Sci Total Environ* 150:167-171.
- *Pitkanen A, Saano V, Hyvonen K, et al. 1987. Decreased GABA, benzodiazepine, and picrotoxinin receptor binding in brains of rats after cobalt-induced epilepsy. *Epilepsia* 28:11-16.
- *Planinsek F, Newkirk JB. 1979. Cobalt and cobalt alloys. In: Kirk RE, Othmer DF, Grayson M, et al., eds. *Kirk-Othmer encyclopedia of chemical technology*. New York, NY: John Wiley and Sons, 481-494.
- PNL. 2000. Hanford site environmental report for calendar year 1994. Richland, WA: Pacific Northwest National Laboratory. <http://www.pnl.gov/env/toc.html>. March 17, 2000.
- *PNNL 1996. Hanford site environmental report for calendar year 1995. Richland, WA: Pacific Northwest National Laboratory. <http://www.hanford.gov/docs/annualrp/1995/index.htm>. February 12, 1996.
- Polyak K, Bodog I, Hlavay J. 1994. Determination of chemical species of selected trace elements in fly ash. *Talanta* 41(7):1151-1159.

9. REFERENCES

- Popov LN. 1977. An experimental study of the effects of low concentrations of metallic cobalt aerosols on the animal organism. *Gig Sanit* 4:97-98.
- *Potolicchio I, Festucci A, Hausler P, et al. 1999. HLA-DP molecules bind cobalt: a possible explanation for the genetic association with hard metal disease. *Eur J Immunol* 29:2140-2147.
- *Potolicchio I, Mosconi G, Forni A, et al. 1997. Susceptibility to hard metal lung disease is strongly associated with the presence of glutamate 69 in HLA-Dp β chain. *Eur J Immunol* 27:2741-2743.
- *Poulsen OM, Christensen JM, Sabbioni E, et al. 1994. Trace element reference values in tissues from inhabitants of the European community. V. Review of trace elements in blood, serum and urine and critical evaluation of reference values for the Danish Population. *Sci Total Environ* 141:197-215.
- Poulsen OM, Olsen E, Christensen JM, et al. 1995. Geltape method for measurement of work related surface contamination with cobalt containing dust: Correlation between surface contamination and airborne exposure. *Occup Environ Med* 52:827-833.
- *Prager D, Sembrot JT, Southard M. 1972. Cobalt-60 therapy of Hodgkin's disease and the subsequent development of hypothyroidism. *Cancer* 29(2):458-460.
- Prangere T, Bowden AD, Beauchat V, et al. 1997. A study of the behavior of cobalt chloride, during the labeling of leukocytes with $^{99}\text{Tc}^{\text{m}}$ - HMPAO stabilized in vitro by the addition of cobalt chloride solution. *Nucl Med Commun* 18:258-261.
- *Prescott E, Netterstrom B, Faber J, et al. 1992. Effect of occupational exposure to cobalt blue dyes on the thyroid volume and function of female plate painters. *Scand J Work Environ Health* 18:101-104.
- Probst T, Zeh P, Kim J-I. 1995. Multielement determinations in ground water ultrafiltrates using inductively coupled plasma mass spectrometry and monostandard neutron activation analysis. *Fresenius J Anal Chem* 351:745-751.
- Pruss RM, Akeson RL, Racke MM, et al. 1991. Agonist-activated cobalt uptake identifies divalent cation-permeable kainate receptors on neurons and glial cells. *Neuron* 7:509-518.
- *Pryce DW, King CM. 1990. Orofacial granulomatosis associated with delayed hypersensitivity to cobalt. *Clin Exp Dermatol* 15:384-386.
- Pyatt FB. 1999. Comparison of foliar and stem bioaccumulation of heavy metals by corsican pines in the Mount Olympus area of Cyprus. *Ecotoxicol Environ Saf* 42:57-61.
- Que Hee SS, Finelli VN, Fricke FL, et al. 1982. Metal content of stack emissions, coal and fly ash from some eastern and western power plants in the U.S.A. as obtained by ICP-AES. *Int J Environ Anal Chem* 13:1-18.
- *Rabin BM, Joseph JA, Erat S. 1998. Effects of exposure to different types of radiation on behaviors mediated by peripheral or central systems. *Adv Space Res* 22(2):217-225.

9. REFERENCES

- Rae T. 1978. The haemolytic action of particulate metals (Cd, Cr, Co, Fe, Mo, Ni, Ta, Ti, Zn, Co-Cr alloy). *J Pathol* 125:81-89.
- *Raffn E, Mikkelsen S, Altman DG, et al. 1988. Health effects due to occupational exposure to cobalt blue dye among plate painters in a porcelain factory in Denmark. *Scand J Work Environ Health* 14:378-384.
- *Raghavendran KV, Satbhai PD, Unnikrishnan K, et al. 1978. Long-term retention studies of ^{131}I , ^{137}Cs and ^{60}Co in Indian workers. *Health Phys* 34:185-188.
- Rainbow PS, White SL. 1990. Comparative accumulation of cobalt by three crustaceans: A decapod, an amphipod and barnacle. *Aquat Toxicol* 16:113-126.
- Rakusan K, Rajhathy J. 1974. Oxygen affinity of blood in rats during cobalt-induced erythrocytic polycythemia and after its correction. *Life Sci* 15(1):23-28.
- *Rapiejko A, Rosson R, Lahr J, et al. 2001. Radionuclides in Peconic River fish, mussels, and sediments. *Health Phys* 81(6):698-703.
- *Rastogi SK, Gupta BN, Husain T, et al. 1991. A cross-sectional study of pulmonary function among workers exposed to multimetals in the glass bangle industry. *Am J Ind Med* 20:391-399.
- Ratcliffe J, English JSC. 1997. Allergic contact dermatitis from cobalt in animal feed. *Contact Dermatitis* 39:201-202.
- *Rauscher AH, Bauchinger M. 1983. Chromosome aberrations induced in patients treated with chemotherapeutic drugs and irradiation for acute lymphatic leukemia. *Hum Genet* 64:73-79.
- *Raven KP, Loeppert RH. 1997. Trace element composition of fertilizers and soil amendments. *J Environ Qual* 26:551-557.
- Ravichandran M, Baskaran M, Santschi PH, et al. 1995. History of trace metal pollution in Sabine-Neches Estuary, Beaumont, Texas. *Environ Sci Technol* 29:1495-1503.
- Reagan EL. 1992a. Acute oral LD₅₀ study in rats with cobalt (II) carbonate hydrate. *J Am Coll Toxicol* 11(6):687.
- Reagan EL. 1992b. Acute oral LD₅₀ study in rats with cobalt powder. *J Am Coll Toxicol* 11(6):686.
- Reagan EL. 1992c. Acute oral LD₅₀ study in rats with cobalt sulfate. *J Am Coll Toxicol* 11(6):688.
- Reagan EL. 1992d. Acute oral toxicity study in rats with cobalt (II) sulfide. *J Am Coll Toxicol* 11(6):693.
- Reddy PRK, Reddy SJ. 1997. Elemental concentrations in medicinally important leafy materials. *Chemosphere* 34(9/10):2193-2212.
- *Reimann C, DeCaritat P, Halleraker JH, et al. 1997. Rainwater composition in eight arctic catchments in northern Europe (Finland, Norway and Russia). *Atmos Environ* 31(2):159-170.

9. REFERENCES

- Remez VP, Sapozhnikov YA. 1996. The rapid determination of caesium radionuclides in water systems using composite sorbents. *Appl Radiat Isot* 47:885-886.
- Remy Davee Guimarraes J. 1992. Bioaccumulation of ^{137}Cs and ^{60}Co by a tropical marine teleost *Epinephelus* sp. *Sci Total Environ* 120:205-212.
- *Rengasamy A, Kommineni C, Jones JA, et al. 1999. Effects of hard metal on nitric oxide pathways and airway reactivity to methacholine in rat lungs. *Toxicol Appl Pharmacol* 157:178-191.
- Repetto G, Sanz P, Repetto M. 1995. Effects of cobalt on mouse neuroblastoma cells cultured in vitro. *Toxicol in Vitro* 9(4):375-379.
- Ressetar HG, Overman DO. 1987. Neurotoxicity of cobaltous chloride during myelination in the golden hamster brain. *Anat Rec* 218(1):113A.
- *Reuber S, Krcuzer M, Kirchgessner M. 1994. Interactions of cobalt and iron in absorption and retention. *J Trace Elem Electrolytes Health Dis* 8:151-158.
- *Reuff J, Bras A, Cristovao L, et al. 1993. DNA strand breaks and chromosomal aberrations induced by H_2O_2 and ^{60}Co τ -radiation. *Mutat Res* 289:197-204.
- *Reyners H, De Reyners EG, Poortmans F, et al. 1992. Brain atrophy after foetal exposure to very low doses of ionizing radiation. *Int J Radiat Biol* 62:(5)619-626.
- *Rezvani M, Heryet JC, Hopewell JW. 1989. Effects of single doses of gamma-radiation on pig lung. *Radiother Oncol* 14:132-142.
- Rhoads K, Samders CL. 1985. Lung clearance, translocation, and acute toxicity of arsenic, beryllium, cadmium, cobalt, lead, selenium, vanadium and ytterbium oxides following deposition in rat lung. *Environ Res* 36:359-378.
- *Richardson HW. 1993. Cobalt compounds. In: Kroschwitz JI, Howe-Grant M, eds. *Kirk-Othmer Encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 778-793.
- Richter H, Lorenz W, Bahadir M. 1997. Examination of organic and inorganic xenobiotics in equipped printed circuits. *Chemosphere* 35(1):169-179.
- Ridout PS, Rainbow PS, Roe HSJ, et al. 1989. Concentrations of V, Cr, Mn, Fe, Ni, Co, Cu, Zn, As and Cd in mesopelagic crustaceans from the North East Atlantic Ocean. *Mar Biol* 100:465-471.
- Rizzato G, Fraioli P, Sabbioni E, et al. 1994. The differential diagnosis of hard metal lung disease. *Sci Total Environ* 150:77-83.
- *Robbins MEC, Bywaters T, Rezvani M, et al. 1991a. Residual radiation-induced damage to the kidney of the pig as assayed by retreatment. *Int J Radiat Biol* 60:(6)917-928.

9. REFERENCES

- *Robbins MEC, Campling D, Rezvani M, et al. 1989a. Nephropathy in the mature pig after the irradiation of a single kidney: A comparison with the mature pig. *Int J Radiat Oncol Biol Phys* 16:1519-1528.
- *Robbins MEC, Campling D, Rezvani M, et al. 1989b. Radiation nephropathy in mature pigs following the irradiation of both kidneys. *Int J Radiat Biol* 56:(1)83-98.
- *Robbins MEC, Campling D, Rezvani M, et al. 1989c. The effect of age and the proportion of renal tissue irradiated on the apparent radiosensitivity of the pig kidney. *Int J Radiat Biol* 6:(1)99-106.
- *Robbins MEC, Wooldridge MJA, Jaenke RS, et al. 1991b. A morphological study of radiation nephropathy in the pig. *Radiat Res* 126:317-327.
- *Roche M, Layrisse M. 1956. Effect of cobalt on the thyroïdal uptake of I131. *J Clin Endocrinol Metab* 16:831-833.
- Rodgers GM, George WJ, Fisher JW. 1972. Increased kidney cyclic AMP levels and erythropoietin production following cobalt administration. *Proc Soc Exp Biol Med* 140(3):977-981.
- Roesems G, Hoet PHM, Demedts M, et al. 1997. In vitro toxicity of cobalt and hard metal dust in rat and human type II pneumocytes. *Pharmacol Toxicol* 81:74-80.
- *Romaguera C, Vilaplana J. 1998. Contact dermatitis in children: 6 years experience (1992-1997). *Contact Dermatitis* 39:227-280.
- *Romaguera C, Lecha M, Grimalt F, et al. 1982. Photocontact dermatitis to cobalt salts. *Contact Dermatitis* 8:383-388.
- Ronde P, Nichols RA. 1996. Uptake of cadmium and cobalt in rat brain synaptosomes in the absence of depolarization. *J Neurochem* 66(Suppl. 1):S51.
- Rooney C, Beral V, Maconochie N, et al. 1993. Case-control study of prostatic cancer in employees of the United Kingdom Atomic Energy Authority. *Br Med J* 307(6916):1391-1397.
- *Roscher AA, Woodard JS. 1969. Fatal gastrointestinal complications following cobalt therapy for carcinoma of the uterine cervix. *Int Surg* 51(6):526-536.
- *Rosenberg DW. 1993. Pharmacokinetics of cobalt chloride and cobalt-protoporphyrin. *Drug Metab Dispos* 21(5):846-849.
- *Rossmann R, Barres J. 1988. Trace element concentrations in near-surface waters of the Great Lakes and methods of collection storage, and analysis. *J Great Lakes Res* 14(2):188-204.
- *Roswit B, White DC. 1977. Severe radiation injuries of the lung. *AJR Am J Roentgenol* 129:(1)127-136.
- Roto P. 1980. Asthma, symptoms of chronic bronchitis and ventilatory capacity among cobalt and zinc production workers. *Scand J Work Environ Health* 6(Suppl. 1):1-49.

9. REFERENCES

- *Roy PE, Bonenfant JT, Turcot L. 1968. Thyroid changes in cases of Quebec beer drinkers myocardosis. *Am J Clin Pathol* 50:234-239.
- Roy WR. 1994. Groundwater contamination from municipal landfills in the USA. In: Adriano DC, ed. *Contamination of groundwaters: Case studies*. Northwood, UK: Scientific Review, 411-446.
- *Rubin ES. 1999. Toxic releases from power plants. *Environ Sci Technol* 33:3062-3067.
- *Rueff J, Bras A, Cristovao L, et al. 1993. DNA strand breaks and chromosomal aberrations induced by H₂O₂ and ⁶⁰Co γ -radiation. *Mutation Research*. 289:197-204.
- *Ruokonen E-L, Linnainmaa M, Seuri M, et al. 1996. A fatal case of hard-metal disease. *Scand J Work Environ Health* 22:62-65.
- *Russell-Jones GJ, Alpers DH. 1999. Vitamin B12 transporters. In: Amidon GL, Sadee W, eds. *Pharmaceutical biotechnology*. New York, NY: Kluwer Academic/Plenum Publishers, 493-520.
- *Rystedt I, Fischer T. 1983. Relationship between nickel and cobalt sensitization in hard metal workers. *Contact Dermatitis* 9:195-200.
- Saad AY, Abdelazim AA, El-Khashab MM, et al. 1991. Effects of gamma radiation on incisor development of the prenatal albino mouse. *J Oral Pathol Med* 20:385-388.
- Sadiq M, Zaidi TH. 1994. Sediment composition and metal concentrations in mangrove leaves from the Saudi coast of the Arabian Gulf. *Sci Total Environ* 155:1-8.
- Sadiq M, Mian AA, Althagafi KM. 1992. Inter-city comparison of metals in scalp hair collected after the Gulf War 1991. *J Environ Sci Health Part A* 27(6):1415-1431.
- *Saker F, Ybarra J, Leahy P, et al. 1998. Glycemia-lowering effect of cobalt chloride in the diabetic rat: role of decreased gluconeogenesis. *Am J Physiol* 274:E984-E991.
- Sala C, Mosconi G, Bacis M, et al. 1994. Cobalt exposure in 'hard metal' and diamonds grinding tools manufacturing and in grinding processes. *Sci Total Environ* 150:111-116.
- Salmi HA, Lindgren I. 1969. Retention of cobalt in experimentally induced kidney disease. *Acta Radiologica Therapy Physics Biology* 8(3):208-214.
- *Saltzman BE, Keenan RG. 1957. Microdetermination of cobalt in biological materials. *Methods Biochem Anal* 5:181-223.
- Sanchez JH, Abernethy DJ, Boreiko CJ. 1987. Lack of di-(2-ethylhexyl) phthalate activity in the C3H/10T1/2 cell transformation system. *Toxicol in Vitro* 1(1):49-53.
- *Sanudo-Wilhelmy SA, Flegal AR. 1996. Trace metal concentrations in the surf zone and in coastal waters off Baja California, Mexico. *Environ Sci Technol* 30:1575-1580.
- *Sanyal B, Pant GC, Subrahmaniyam K, et al. 1979. Radiation myelopathy. *J Neurol Neurosurg Psychiatry* 42:413-418.

9. REFERENCES

- *Sarkar B. 1995. Metal replacement in DNA-binding zinc finger proteins and its relevance to mutagenicity and carcinogenicity through free radical generation. *Nutrition* 11(5):646-649.
- Sasame HA, Boyd MR, Mitchell JR, et al. 1977. Increased tissue levels of reduced glutathione produced by cobaltous chloride. *Fed Proc* 36:405.
- Satoh-Kamachi A, Munakata M, Kusaka Y, et al. 1998. A case of sarcoidosis that developed three years after the onset of hard metal asthma. *Am Ind Hyg Assoc J* 33:379-383.
- Scanes P. 1996. Oyster watch: Monitoring trace metal and organochlorine concentrations in Sydney's coastal waters. *Mar Pollut Bull* 33(7-12):226-238.
- *Scansetti G, Botta GC, Spinelli P, et al. 1994. Absorption and excretion of cobalt in the hard metal industry. *Sci Total Environ* 150:141-144.
- *Scansetti G, Lamon S, Talarico S, et al. 1985. Urinary cobalt as a measure of exposure in the hard metal industry. *Int Arch Occup Environ Health* 57:19-26.
- Scansetti G, Maina G, Botta GC, et al. 1998. Exposure to cobalt and nickel in the hard-metal production industry. *Int Arch Occup Environ Health* 71:60-63.
- *Schade SG, Felsher BF, Bernier GM, et al. 1970. Interrelationship of cobalt and iron absorption. *J Lab Clin Med* 75:435-441.
- Schaeffer J, El-Mahdi AM, Peebles WJ. 1977. Treatment of intraperitoneal implants in mice using ³²P or ⁶⁰Co. *Int J Nucl Med Biol* 4:77-79.
- Schaller H, Neeb R. 1987. Gas-chromatographic elemental analysis via di(trifluoroethyl)dithiocarbamate-chelates: X. Capillary gas chromatography at the pg-level - determination of Co and Cr[VI] besides Cr[III] in river water. *Fresenius Z Anal Chem* 327:170-174.
- *Schepers GWH. 1955a. The biological action of particulate cobalt metal. *AMA Arch Ind Health*:127-133.
- *Schepers GWH. 1955b. The biological action of particulate tungsten metal. *AMA Arch Ind Health* 12:134-136.
- *Schepers GWH. 1955c. Biological action of tungsten carbide and carbon. Experimental pulmonary histopathology. *AMA Arch Ind Health* 12:137-139.
- *Schepers GWH. 1955d. The biological action of tungsten carbide and cobalt. *AMA Arch Ind Health*:140-146.
- Schimmel RJ. 1978. Calcium antagonists and lipolysis in isolated rat epididymal adipocytes: Effects of tetracaine, manganese, cobaltous and lanthium ions and D600. *Horm Metab Res* 10:128-134.

9. REFERENCES

- *Schmid E, Regulla D, Guldbakke S, et al. 2002. Relative biological effectiveness of 144 keV neutrons in producing dicentric chromosomes in human lymphocytes compared with ^{60}Co gamma rays under head-to-head conditions. *Radiat Res* 157(4):453-460.
- *Schmidt SL, Lent R. 1987. Effects of prenatal irradiation on the development of cerebral cortex and corpus callosum of the mouse. *J Comp Neurol* 264:193-204.
- *Schnitzer M. 1969. Reactions between fulvic acid, a soil humic compound and inorganic soil constituents. *Soil Sci Soc Am Proc* 33:75-81.
- *Schramel P. 1989. Determination of some additional trace elements in certified standard reference materials (soils, sludges, sediment) by ICP-emission spectrometry. *Fresenius J Anal Chem* 333:203-210.
- *Schroeder WH, Dobson M, Kane DM, et al. 1987. Toxic trace elements associated with airborne particulate matter: A review. *J Air Pollut Control Assoc* 37(11):1267-1285.
- *Schull WJ, Otake M, Yoshimaru H. 1988. Effect on intelligence test score of prenatal exposure to ionizing radiation in Hiroshima and Nagasaki: A comparison of the T65DR and DS86 dosimetry systems. Radiation Effects Research Foundation (RERF) Technical Report No. 3-88. Hiroshima, Japan. NTIS Report Number: DE89-906462.
- Schulman HM, Ponka P. 1981. The stimulation of globin synthesis by cobalt in reticulocytes with inhibited heme synthesis. *Biochim Biophys Acta* 654:166-168.
- *Schultz PN, Warren G, Kosso C, et al. 1982. Mutagenicity of a series of hexacoordinate cobalt(III) compounds. *Mutat Res* 102:393-400.
- Schuster SJ, Badiavas EV, Costa-Giomi P, et al. 1989. Stimulation of erythropoietin during hypoxia and cobalt exposure. *Blood* 73(1):13-16.
- Schwartz JL, Giovanazzi SM, Karrison T, et al. 1988. 2-[(Aminopropyl)amino] ethanethiol-mediated reductions in ^{60}Co γ -ray and fission-spectrum neutron-induced chromosome damage in V79 cells. *Radiat Res* 113:145-154.
- Schwartzkroin PA, Shimada Y, Bromley B. 1977. Recordings from cortical epileptogenic foci induced by cobalt iontophoresis. *Exper Neurol* 55:353-367.
- *Schweitzer DJ, Benjamin SA, Lee AC. 1987. Retinal dysplasia and progressive atrophy in dogs irradiated during ocular development. *Radiat Res* 111:340-353
- *Searl AG, Beechey CV, Green D, et al. 1976. Cytogenetic effects of protracted exposures to alpha-particles from plutonium-239 and to gamma-rays from cobalt-60 compared in male mice. *Mutat Res* 41:297-310.
- *Searl AG, Beechey CV, Green D, et al. 1980. Comparative effects of protracted exposures to ^{60}Co γ -radiation and ^{239}Pu α -radiation on breeding performance in female mice. *Int J Radiat Biol* 37:(2)189-200.
- *Sederholm T, Kouvalainen K, Lamberg BA. 1968. Cobalt-induced hypothyroidism and polycythemia in lipoid nephrosis. *Acta Med Scand* 184(4):301-306.

9. REFERENCES

- *Sedlet J, Robinson J, Fairman W. 1958. A cobalt and a tritium incident at Argonne National Laboratory. In: Proceedings of the bio-assay and analytical chemistry annual meeting, 101-106.
- *Seed TM, Carnes BA, Tolle DV, et al. 1989. Blood responses under chronic low daily dose gamma irradiation: Differential preclinical responses of irradiated male dogs in progression to either aplastic anemia or myeloproliferative disease. *Leukemia Research* 13:(12)1069-1084.
- Seghizzi P, D'Adda F, Borleri D, et al. 1994. Cobalt myocardiopathy. A critical review of literature. *Sci Total Environ* 150:105-109.
- *Seidenberg JM, Anderson DG, Becker RA. 1986. Validation of an in vivo developmental toxicity screen in the mouse. *Teratogenesis Carcinog Mutagen* 6:361-374.
- *Semenza GL, Roth PH, Fang H-M, et al. 1994. Transcriptional regulation of genes encoding glycolytic enzymes by hypoxia-inducible factor 1. *J Biol Chem* 269(38):23757-23763.
- *Sesana G, Cortona G, Baj A, et al. 1994. Cobalt exposure in wet grinding of hard metal tools for wood manufacture. *Sci Total Environ* 150:117-119.
- *Setchell BP, Waites GMH. 1975. The blood-testis barrier. In: Creep RO, Astwood EB, Geiger SR, eds. *Handbook of physiology: Endocrinology V*. Washington, DC: American Physiological Society.
- *Shabaan AA, Marks V, Lancaster MC, et al. 1977. Fibrosarcomas induced by cobalt chloride (CoCl₂) in rats. *Lab Anim* 11:43-46.
- *Sheets RW. 1998. Release of heavy metals from European and Asian porcelain dinnerware. *Sci Total Environ* 212:107-113.
- *Sheline GE, Chaikoff IL, Montgomery ML. 1945. The elimination of administered cobalt in pancreatic juice and bile of the dog, as measured with its radioactive isotopes. *Am J Physiol* 145:285-290.
- Sheridan PJ, Zoller WH. 1989. Elemental composition of particulate material sampled from the Arctic haze aerosol. *J Atmos Chem* 9:363-381.
- Shibuya M, Fariello R, Farley IJ, et al. 1978. Cobalt injections into the substantia nigra of the rat: Effects on behavior and dopamine metabolism in the striatum. *Exper Neurol* 58:486-499.
- *Shine JP, Ika RV, Ford TE. 1995. Multivariate statistical examination of spatial and temporal patterns of heavy metal equipment in New Bedford Harbor marine sediments. *Environ Sci Technol* 29:1781-1788.
- Shirakawa T, Morimoto K. 1997. Interplay of cigarette smoking and occupational exposure on specific immunoglobulin E antibodies to cobalt. *Arch Env Health* 52(2):124-128.
- *Shirakawa T, Kusaka Y, Fujimura N, et al. 1988. The existence of specific antibodies to cobalt in hard metal asthma. *Clin Allergy* 18:451-460.

9. REFERENCES

- *Shirakawa T, Kusaka Y, Fujimura N, et al. 1989. Occupational asthma from cobalt sensitivity in workers exposed to hard metal dust. *Chest* 95(1):29-37.
- Shirakawa T, Kusaka Y, Fujimura N, et al. 1990. Hard metal asthma: Cross immunological and respiratory reactivity between cobalt and nickel? *Thorax* 45:267-271.
- Shirakawa T, Kusaka Y, Morimoto K. 1992a. Combined effect of smoking habits and occupational exposure to hard metal on total IgE antibodies. *Chest* 101(6):1569-1576.
- Shirakawa T, Kusaka Y, Morimoto K. 1992b. Specific IgE antibodies to nickel in workers with known reactivity to cobalt. *Clin Exp Allergy* 22:213-218.
- Shoji S, Watanabe H, Komatsu K. 1998. Teratogenic effects of ^{60}Co γ -rays irradiation on the embryonic development of the scid mice and CB-17 mice. *Teratology* 57:230.
- *Shrivastava VK, David CV, Khare N, et al. 1996. Cobalt chloride induced histopathological changes in thyroid gland of female mice, *Mus musculus* (P.). *Pollut Res* 15(3):307-309.
- *Simesen M. 1939. The fate of cobalt after oral administration of metallic cobalt and subcutaneous injection of carbonatotetraminecobalt chloride, with remarks on the quantitative estimation of cobalt in organic materials. *Arch Int Pharmacodyn* 62:347-356.
- Sinclair JF, Sinclair PR, Healey JF, et al. 1982. Decrease in hepatic cytochrome P-450 by cobalt. *Biochem J* 204:103-109.
- *Sinclair P, Gibbs AH, Sinclair JF, et al. 1979. Formation of cobalt protoporphyrin in the liver of rats. *Biochem J* 178:529-538.
- *Singh I. 1983. Induction of reverse mutation and mitotic gene conversion by some metal compounds in *Saccharomyces cerevisiae*. *Mutat Res* 117:149-152.
- *Singh PP, Junnarkar AY. 1991. Behavioral and toxic profile of some essential trace metal salts in mice and rats. *Indian J Pharmacol* 23:153-159.
- *Smith IC, Carson BL. 1979. Trace metals in the environment. Ann Arbor, MI: Ann Arbor Science Publishers.
- *Smith IC, Carson BL. 1981. Trace metals in the environment. Ann Arbor, MI: Ann Arbor Science Publishers.
- *Smith RJ. 1972. I. The effect of cobalt on hydrolase activity in kidney and plasma and its relationship to erythropoietin production. II. Structure activity relationships of several protein and polypeptide potentiators of bradykinin action on rat uterus. *Diss Abstr Int B* 32(10):6132.
- Smith RJ, Fisher JW. 1976. Neutral protease activity and erythropoietin production in the rat after cobalt administration. *J Pharmacol Exp Ther* 197(3):714-722.
- *Smith RJ, Fisher JW. 1973. Effects of cobalt on the renal erythropoietic factor kidney hydrolase activity in the rat. *Blood* 42(2):893-905.

9. REFERENCES

- Smith RP. 1969. Cobalt salts: Effects in cyanide and sulfide poisoning and on methemoglobinemia. *Toxicol Appl Pharmacol* 15:505-516.
- *Smith T, Edmonds CJ, Barnaby CF. 1972. Absorption and retention of cobalt in man by whole-body counting. *Health Phys* 22:359-367.
- Sonnhof U, Krupp J, Claus H. 1990. The cobalt-epilepsy, a phenomenon of a modified sodium channel. *Pflugers Arch* 415(Suppl. 1):R87.
- Soon YK, Bates TE. 1985. Molybdenum, cobalt and boron uptake from sewage-sludge-amended soils. *Can J Soil Sci* 65:507-517.
- Sora S, Carbone MLA, Pacciarini M, et al. 1986. Disomic and diploid meiotic products induced in *Saccharomyces cerevisiae* by the salts of 27 elements. *Mutagenesis* 1(1):21-28.
- *Sorbie J, Olatunbosun D, Corbett WEN, et al. 1971. Cobalt excretion test for the assessment of body iron stores. *Can Med Assoc J* 104(9):777-782.
- *Speijers GJA, Krajnc EI, Berkvens JM, et al. 1982. Acute oral toxicity of inorganic cobalt compounds in rats. *Food Chem Toxicol* 20:311-314.
- Spiegel SJ, Farmer JK, Garver SR. 1985. Heavy metal concentrations in municipal wastewater treatment plant sludge. *Bull Environ Contam Toxicol* 35:38-43.
- Sprince NL, Oliver LC, Chamberlin RI, et al. 1987. Exposure to cobalt and interstitial lung disease in tungsten carbide production workers. *Am Rev Respir Dis* 135:A20.
- *Sprince NL, Oliver LC, Eisen EA, et al. 1988. Cobalt exposure and lung disease in tungsten carbide production: A cross-sectional study of current workers. *Am Rev Respir Dis* 138:1220-1226.
- SRI. 1989. 1989 Directory of chemical producers: United States of America. Menlo Park, CA: Stanford Research Institute International, 535-537.
- *SRI. 1999. 1999 Directory of chemical producers: United States of America. Menlo Park, CA: Stanford Research Institute International, 529-531.
- *SRI. 2003. 2003. Directory of chemical producers: United States of America. Menlo Park, CA: Stanford Research Institute International, 518-520.
- Srivastava AK, Gupta BN, Mathur N, et al. 1991. An investigation of metal concentrations in blood of industrial workers. *Vet Hum Toxicol* 33(3):280-282.
- *Stanley AJ, Hopps HC, Shideler AM. 1947. Cobalt polycythemia. II. Relative effects of oral and subcutaneous administration of cobaltous chloride. *Proc Soc Exp Biol Med* 66:19-20.
- *Stavem P, Brogger A, Devik F, et al. 1985. Lethal acute gamma radiation accident at Kjeller, Norway. *Acta Radiologica Oncology* 24:61-80.

9. REFERENCES

- *Stebbins AI, Horstman SW, Daniell WE, et al. 1992. Cobalt exposure in a carbide tip grinding process. *Am Ind Hyg Assoc J* 53(3):186-192.
- Steel LK, Sweedler IK, Catravas GN. 1983. Effects of ^{60}Co radiation on synthesis of prostaglandins $\text{F}_2\alpha$, E, and thromboxane B2 in lung airways of guinea pigs. *Radiat Res* 94:156-165.
- Steinhoff D, Mohr U. 1991. On the question of a carcinogenic action of cobalt-containing compounds. *Exp Pathol* 41:169-174.
- Stephenson T, Lester JN. 1987a. Heavy metal behavior during the activated sludge process I. Extent of soluble and insoluble metal removal. *Sci Total Environ* 63:199-214.
- Stephenson T, Lester JN. 1987b. Heavy metal behavior during the activated sludge process II. Insoluble metal removal mechanisms. *Sci Total Environ* 63:215-230.
- *Stokinger HE. 1981. The metals. In: Clayton GD, Clayton FE, eds. *Patty's industrial hygiene and toxicology*. New York, NY: John Wiley and Sons, 1493-1619.
- *Stokinger HE, Wagner WD. 1958. Early metabolic changes following cobalt exposure. *Arch Ind Health* 17:273-279.
- *Stutz DR, Janusz SJ. 1988. *Hazardous materials injuries: A handbook for pre-hospital care*. 2nd ed. Beltsville, MD: Bradford Communications Corp.
- Suardi R, Belotti L, Ferrari MT, et al. 1994. Health survey of workers occupationally exposed to cobalt. *Sci Total Environ* 150:197-200.
- *Sugaya E, Ishige A, Sediguchi K, et al. 1988. Damage of hippocampal neurons caused by cobalt focus in the cerebral cortex of rats. *Brain Res* 459:196-199.
- Sugimoto T, Itoh K, Yasui Y, et al. 1985. Coexistence of neuropeptides in projection neurons of the thalamus in the cat. *Brain Res* 347:381-384.
- *Sullivan JF, Egan JD, George RP. 1969. A distinctive myocardial pathology occurring in Omaha, Nebraska: Clinical aspects. *Ann N Y Acad Sci* 156(1):526-543
- *Sun LC, Clinton JH, Kaplan E, et al. 1997. ^{137}Cs exposure in the Marshallese populations: An assessment based on whole-body counting measurements (1989-1994). *Health Phys* 73:86-99.
- *Sundaram P, Agrawal K, Mandke JV, et al. 2001. Giant cell pneumonitis induced by cobalt. *Indian J Chest Dis Allied Sci* 43 (1):47-49.
- *Sunderman WF. 1987. Metal induction of heme oxygenase. *Ann N Y Acad Sci* 514:65-80.
- *Sunderman FW, Zaharia O. 1988. Hepatic lipid peroxidation in CoCl_2 -treated rats, evidenced by elevated concentrations of thiobarbituric acid chromogens. *Res Commun Chem Pathol Pharmacol* 59(1):69-78.

9. REFERENCES

- Sunderman FW, Hopfer SM, Swift T, et al. 1989. Cobalt, chromium, and nickel concentrations in body fluids of patients with porous-coated knee or hip prostheses. *J Orthop Res* 7(3):307-315.
- *Suzuki K, Takahashi M, Ishii-Ohba H, et al. 1990. Steroidogenesis in the testes and the adrenals of adult male rats after γ -irradiation *in utero* at late pregnancy. *J Steroid Biochem* 35(2):301-305.
- *Suzuki Y, Shimizu H, Nagae Y, et al. 1993. Micronucleus test and erythropoiesis: Effect of cobalt on the induction of micronuclei by mutagens. *Environ Mol Mutagen* 22:101-106.
- *Swanson JL. 1984. Mobility of organic complexes of nickel and cobalt in soils. Department of Energy, Washington, DC. NTIS/DE830178997.
- *Sweeney WT, Elzay RP, Levitt SH. 1977. Histologic effect of fractionated doses of selectively applied ^{60}Co irradiation on the teeth of albino rats. *J Dent Res* 56(11):1403-1407.
- *Sweet CW, Vermette SJ, Landsberger S. 1993. Sources of toxic trace elements in urban air in Illinois. *Environ Sci Technol* 27:2502-2510.
- *Swennen B, Buchet J-P, Stanescu D, et al. 1993. Epidemiological survey of workers exposed to cobalt oxides, cobalt salts, and cobalt metal. *Br J Ind Med* 50:835-842.
- *Swiontkowski MF, Agel J, Schwappach J, et al. 2001. Cutaneous metal sensitivity in patients with orthopaedic injuries. *J Orthop Trauma* 15 (2):86-89.
- Sypert GW, Bidgood WD. 1977. Effect of intracellular cobalt ions in postsynaptic inhibition in cat spinal motoneurons. *Brain Res* 134:372-376.
- Szakmary E, Morvai V, Naray N, et al. 1992. The pre- and perinatal offspring damaging effect of cobalt. *Reprod Toxicol* 6:188-189.
- *Szakmary E, Ungvary G, Hudak A, et al. 2001. Effects of cobalt sulfate on prenatal development of mice, rats, and rabbits, and on early postnatal development of rats. *J Toxicol Environ Health A* 62:367-386.
- Szakmary E, Ungvary G, Naray M, et al. 1989. Harmful effects of heavy metals (chromium, nickel, cobalt) on offspring. *Teratology* 40(3):298-299.
- *Szebeni J, Garcia R, Eskelson CD, et al. 1989. The organ distribution of liposome-encapsulated and free cobalt in rats. Liposomes decrease the cardiac uptake of the metal. *Life Sci* 45:729-736.
- Szefer P, Ikuta K, Kushiyama S, et al. 1997. Distribution of trace metals in the Pacific oyster, *Crassostrea gigas*, and crabs from the East Coast of Kyushu Island, Japan. *Bull Environ Contam Toxicol* 58:108-114.
- *Szefer P, Penpkowiak J, Skwarzec B, et al. 1993. Concentration of selected metals in penguins and other representative fauna of the Antarctica. *Sci Total Environ* 138:281-288.
- *Szefer P, Szefer K, Glasby GP, et al. 1996. Heavy-metal pollution in surficial sediments from the southern Baltic Sea off Poland. *J Environ Sci Health Part A* 31(10):2723-2754.

9. REFERENCES

- Szefer P, Szefer K, Skwarzec B. 1990. Distribution of trace metals in some representative fauna of the Southern Baltic. *Mar Pollut Bull* 21(2):60-62.
- Szliska C, Raskoski J. 1990. Sensitization to nickel, cobalt and chromium in surgical patients. *Contact Dermatitis* 23:378-379.
- *Tabatowski K, Roggli VL, Fulkerson WJ, et al. 1988. Giant cell interstitial pneumonia in a hard-metal worker: Cytologic, histologic and analytical electron microscopic investigation. *Acta Cytol* 32(2):240-246.
- *Takagi Y, Matsuda S, Imai S, et al. 1986. Trace elements in human hair: An international comparison. *Bull Environ Contam Toxicol* 36:793-800.
- *Takagi Y, Matsuda S, Imai S, et al. 1988. Survey of trace elements in human nails: An international comparison. *Bull Environ Contam Toxicol* 41:690-695.
- *Talbot RJ, Morgan A. 1989. An interspecies comparison of the lung clearance of inhaled monodisperse cobalt oxide particles- part VIII: Lung clearance of inhaled cobalt oxide particles in mice. *J Aerosol Sci* 20(2):261-265.
- Talbot V. 1983. Lead and other trace metals in the sediments and selected biota of Princess Royal Harbour, Albany, Western Australia. *Environ Pollut Ser B* 5:35-49.
- Tandon L, Iyengar GV, Parr RM. 1998. A review of radiologically important trace elements in human bones. *Appl Radiat Isot* 8:903-910.
- Tanizaki Y, Shimokawa T, Yamazaki M. 1992. Physico-chemical speciation of trace elements in urban streams by size fractionation. *Water Res* 26(1):55-63.
- Taubman SB, Malnick JW. 1975. Inability of Ni⁺⁺ and Co⁺⁺ to release histamine from rat peritoneal mast cells. *Res Commun Chem Pathol Pharmacol* 10(2):383-386.
- Taylor A, Marks V. 1978. Cobalt: a review. *J Hum Nutr* 32:165-177.
- *Taylor A, Marks V, Shabaan AA, et al. 1977. Cobalt induced lipaemia and erthropoiesis. *Dev Toxicol Environ Sci* 1:105-108.
- *Taylor DM. 1962. The absorption of cobalt from the gastro-intestinal tract of the rat. *Phys Med Biol* 6:445-451.
- *Taylor JJ. 1996. Nuclear reactors. Safety in nuclear power facilities. In: Kroschwitz JJ, Howe-Grant M, eds. *Kirk-Othmer Encyclopedia of chemical technology*. Vol. 17. New York, NY: John Wiley & Sons, 473-507.
- Tephly TR, Hibbeln P. 1971. The effect of cobalt chloride administration on the synthesis of hepatic microsomal cytochrome P-450. *Biochem Biophys Res Commun* 42(4):589-595.

9. REFERENCES

- *Teraoka H. 1981. Distribution of 24 elements in the internal organs of normal males and the metallic workers in Japan. *Arch Env Health* 36(4):155-165.
- Thaw CN, Raaka EG, Gershengorn MC. 1984. Evidence that cobalt ion inhibition of prolactin secretion occurs at an intracellular locus. *Am J Physiol* 247(3):C150-C155.
- Theis TL, Young TC, Huang M, et al. 1994. Leachate characteristics and composition of cyanide-bearing wastes from manufactured gas plants. *Environ Sci Technol* 28:99-106.
- *Thibadoux GM, Pereira WV, Hodges JM, et al. 1980. Effects of cranial radiation on hearing in children with acute lymphocytic leukemia. *J Pediatr* 96(3):403-406.
- *Thiele J, Kvasnicka HM. 2001. Chronic myeloproliferative disorders. The new WHO classification. *22(6):429-443*.
- Thomas RAP, Lawlor K, Bailey M, et al. 1998. Biodegradation of metal-EDTA complexes by an enriched microbial population. *Appl Environ Microbiol* 64(4):1319-1322.
- *Thomas RG, Furchner JE, London JE, et al. 1976. Comparative metabolism of radionuclides in mammals-x. Retention of tracer-level cobalt in the mouse, rat, monkey, and dog. *Health Phys* 31:323-333.
- Thompson LJ, Ebel JG, Manzell KL, et al. 1995. Analytical survey of elements in veterinary college incinerator ashes. *Chemosphere* 30(4):807-811.
- Thomson ABR, Valberg LS, Sinclair DG. 1971. Competitive nature of the intestinal transport mechanism for cobalt and iron in the rat. *J Clin Invest* 50:2384-2394.
- Tian L, Lawrence DA. 1996. Metal-induced modulation of oxide production in vitro by murine macrophages: Lead, nickel, and cobalt utilize different mechanisms. *Toxicol Appl Pharmacol* 141:540-547.
- Tilsley DA, Rostein H. 1980. Sensitivity caused by internal exposure to nickel, chrome and cobalt. *Contact Dermatitis* 6:175-178.
- *Tinsley DA, Baron AR, Critchley R, et al. 1983. Extraction procedures for atomic absorption spectrometric analysis of toxic metals in urban dust. *Int J Environ Anal Chem* 14:285-298.
- *Tipping E, Lofts S, Lawlor AJ. 1998. Modelling the chemical speciation of trace metals in the surface waters of the Humber system. *Sci Total Environ* 210/211:63-77.
- *Tolle DA, Arthur MF, Van Voris P. 1983. Microcosm/field comparison of trace element uptake in crops grown in fly ash-amended soil. *Sci Total Environ* 31:243-261.
- Tolle DV, Fritz TE, Norris WP. 1977. Radiation-induced erythroleukemia in the beagle dog. *Am J Pathol* 87(3):499-510.
- Tom DJ, Rodgers PA, Shokoohi V, et al. 1996. Hepatic heme oxygenase is inducible in neonatal rats during the early postnatal period. *Pediatr Res* 40(2):288-293.

9. REFERENCES

- Tonna EA, Pavelec M. 1970. Changes in the proliferative activity of young and old mouse skeletal tissues following Co60 whole-body irradiation. *J Gerontol* 25(1):9-16.
- Toran L. 1994. Radionuclide contamination in groundwater: Is there a problem? In: Environmental science and pollution control. Groundwater contamination and control. New York, NY: Dekker, M, 437-455.
- Torre FD, Cassani M, Segale M, et al. 1990. Trace metal lung diseases: A new fatal case of hard metal pneumoconiosis. *Respiration* 57:248-253.
- Tossavainen A, Jaakkola J. 1994. Occupational exposure to chemical agents in Finland. *Appl Occup Environ Hyg* 9(1):28-31.
- *Toste AP, Kirby LJ, Pahl TR. 1984. Role of organics in the subsurface migration of radionuclides in groundwater. In: Barney GS, Navratil JD, Schulz WW, eds. *Geochemical behavior of disposed radioactive waste*. Washington, DC: American Chemical Society, 251-270.
- TRI98. 2000. National Library of Medicine, National Toxicology Information Program, Bethesda, MD. <http://www.epa.gov/triexplorer/chemical.htm>. June 12, 2000.
- TRI99. 2001. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Office of Information Analysis and Access, Offices of Environmental Information, U.S. Environmental Protection Agency. Toxic Release Inventory. <http://www.epa.gov/triexplorer/>. June 7, 2001.
- TRI00. 2002. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Office of Information Analysis and Access, Offices of Environmental Information, U.S. Environmental Protection Agency. Toxic Release Inventory. <http://www.epa.gov/triexplorer/>.
- *TRI01. 2004. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Office of Information Analysis and Access, Offices of Environmental Information, U.S. Environmental Protection Agency. Toxic Release Inventory. <http://www.epa.gov/triexplorer/>.
- *Trocine RP, Trefry JH. 1996. Metal concentrations in sediment, water and clams from the Indian River Lagoon, Florida. *Mar Pollut Bull* 32(10):754-759.
- *Tso W-W, Fung W-P. 1981. Mutagenicity of metallic cations. *Toxicol Lett* 8:195-200.
- *Tuchsen F, Jensen MV, Villadsen E, et al. 1996. Incidence of lung cancer among cobalt-exposed women. *Scand J Work Environ Health* 22:444-450.
- Uchiyama M, Shiraishi Y, Akiba S. 1980. Kinetics of inhaled ⁵⁴Mn and ⁶⁰Co after an accidental human exposure. *DOE Symp Ser* 53:162-176.
- Ueda T, Nakahara M, Nakamura R, et al. 1985. Accumulation of ⁶⁰Co by marine organisms under resuction of radioactivity in sea water. *Bull Jpn Soc Sci Fish* 51(11):1811-1816.
- *USAEC. 1973. Environmental levels of radioactivity Atomic Energy Commission installations. 1. National reactor testing stations, January-December 1970. *Radiation Data and Reports* 14:762-774.

9. REFERENCES

- *USAEC. 1974a. Environmental levels of radioactivity Atomic Energy Commission installations. 1. Argonne National Laboratory, January-December 1972. Radiation Data and Reports 15:518-537.
- *USAEC. 1974b. Environmental levels of radioactivity Atomic Energy Commission installations. 1. Hanford atomic products operations, January-December 1971. Radiation Data and Reports 15:356-373.
- *USC. 1999. Hazardous air pollutants. United States Code. 42 USC 7412.
- *USC. 2001a. Hazardous air pollutants, cobalt compounds. United States Code. 42USC7412. <http://www.4.law.cornell.edu>. June 18, 2001.
- *USC. 2001b. Exemption of tax imposed on recycled cobalt. United States Code. 26USC4662. <http://www.4.law.cornell.edu>. June 18, 2001.
- *USC. 2001c. Superfund, imposition of taxes. United States Code. 26USC4661. <http://www.4.law.cornell.edu>. June 18, 2001.
- *USGS. 1998. Cobalt. U.S. Geological Survey – Mineral Information – 1998 by Kim B. Shedd. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/210498.pdf>. March 7, 1998.
- *USGS. 1999. Cobalt. U.S. Geological Survey – Mineral Information – 1999 by Kim B. Shedd. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/210499.pdf>. April 13, 1999.
- *USGS. 2000. Mineral Commodity Summaries 1999. Cobalt. U.S. Geological Survey. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/210300.pdf>. February 3, 2000.
- *USGS. 2001. Mineral Commodity Summaries 2000. Cobalt. U.S. Geological Survey. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/210301.pdf>. June 7, 2001.
- *USGS. 2002. Mineral Yearbook 2002. U.S. Geological Survey. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/cobalmyb02.pdf>. March 16, 2003.
- *USGS. 2004. Mineral Commodity Summaries 2004. U.S. Geological Survey. <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/cobalmcs04>. March 16, 2004.
- USNRC. 1982. Evaluation of isotope migration-land burial: Water chemistry at commercially operated low-level radioactive waste disposal sites. Washington, DC: Nuclear Regulatory Commission, Office of Nuclear Regulation Research. NTIS/NUREG/CR-2124.
- *USNRC. 1984. Lower limit of detection: Definition and elaboration of a proposed position for radiological effluent and environmental measurements. Nuclear Regulatory Commission. Washington, DC: NRC; U.S. Report NUREG/CR-4604.
- *USNRC. 1991. Nuclear Regulatory Commission. Washington, DC.
- *USNRC. 1993. Pesticides in the diets of infants and children. National Research Council. Washington, DC: National Academy Press.

9. REFERENCES

- *USNRC. 1997. Minimum detectable concentrations with typical radiation survey instruments for various contaminants and field conditions. Nuclear Regulatory Commission. Rockville, MD: NRC; U.S. Report NUREG-1507.
- *USNRC. 1999. Annual limits on intake (ALIs) and derived air concentrations (DACs) of radionuclides for occupational exposure: Effluent concentration: Concentrations for release to sewerage. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 20 Sub O, Appendix B.
- *USNRC. 2000a. Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to release. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30.72 Schedule C.
- *USNRC. 2000b. Quantities of licensed material requiring labeling. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30, Appendix B.
- *USNRC. 2000c. Use of sources for brachytherapy. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 35.400.
- *USNRC. 2000d. NRC inspection manual, inspection procedure 79702, inspection control and monitoring of radiological source term, April 17, 2000. <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/>. March 16, 2004.
- *USNRC. 2001a. Activity values for radionuclides. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 71. <http://www.nrc.gov>. March 13, 2001.
- *USNRC. 2001b. Byproduct material listing. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30.71. <http://www.nrc.gov>. March 13, 2001.
- *USNRC. 2001c. Byproduct material listing. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 33.100. <http://www.nrc.gov>. March 23, 2001.
- *USNRC. 2001d. Byproduct material listing, electron tubes, spark gap irradiators. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30.15. <http://www.nrc.gov>. March 13, 2001.
- *USNRC. 2001e. Byproduct material listing, exempt concentrations. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30.70. <http://www.nrc.gov>. March 23, 2001.
- *USNRC. 2001f. Individual monitoring. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 20.2206. <http://www.nrc.gov>. April 6, 2001.
- *USNRC. 2001g. Labeling. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30. <http://www.nrc.gov>. April 6, 2001.
- *USNRC. 2001h. Medical use. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 35.400. <http://www.nrc.gov>. April 6, 2001.
- *USNRC. 2001i. Quantities of radioactive materials requiring labeling. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 20, Appendix C. <http://www.nrc.gov>. April 6, 2001.

9. REFERENCES

- *USNRC. 2001j. Quantities of radioactive materials requiring need for an emergency plan. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 30.72. <http://www.nrc.gov>. April 13, 2001.
- *USNRC. 2001k. Radiation standards. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 20. <http://www.nrc.gov>. April 13, 2001.
- *USNRC. 2001l. Radioactive waste classification. Nuclear Regulatory Commission. Code of Federal Regulations. 10 CFR 61.55. <http://www.nrc.gov>. June 7, 2001.
- *Valberg LS, Ludwig J, Olatunbosun D. 1969. Alteration in cobalt absorption in patients with disorders of iron metabolism. *Gastroenterology* 56(2):241-251.
- Valchev G, Tzvetkova A, Dimitrov L, et al. 1998. Assessment of ^{60}Co and ^{54}Mn intakes from whole-body measurements. *Radiat Prot Dosim* 78(2):151-155.
- *Valer M, Somogyi Z, Racz I. 1967. Studies concerning the sensitizing effect of cobalt. *Dermatologica* 134:36-50.
- Van Bastelaere PBM, Callens M, Vangrysterperre AE, et al. 1992. Binding characteristics of Mn^{2+} , Co^{2+} and Mg^{2+} ions with several D-xylose isomerases. *Biochem J* 286:729-735.
- *Van Bruwaene R, Gerber GB, Kirchmann R, et al. 1984. Metabolism of ^{51}Cr , ^{54}Mn , ^{59}Fe and ^{60}Co in lactating dairy cows. *Health Phys* 46(5):1069-1082.
- *Van Campenhout E. 1955. The cytotoxic effect of cobalt salts on the alpha cells of the Islands of Langerhans. *J Exp Zool* 124:535-559.
- *Van Cutsem EJ, Ceuppens JL, Lacquet LM, et al. 1987. Combined asthma and alveolitis induced by cobalt in a diamond polisher. *Eur J Respir Dis* 70:54-61.
- Van Den Broeke LT, Graslund A, Nilsson JLG, et al. 1998. Free radicals as potential mediators of metal-allergy: Ni^{2+} - and Co^{2+} -mediated free radical generation. *Egypt J Pharm Sci* 6:279-286.
- *Van Goethem F, Lison D, Kirsch-Volders M. 1997. Comparative evaluation of the in vitro micronucleus test and the alkaline single cell gel electrophoresis assay for the detection of DNA damaging agents: Genotoxic effects of cobalt powder, tungsten carbide and cobalt-tungsten carbide. *Mutat Res* 392:31-43.
- *Van Oort RP, Veremy J, Bosch JJT. 1984. Skin response to cobalt 60 irradiation and the consequences for matching the color of facial prostheses. *J Prosthet Dent* 52:704-710.
- Van Ostrand G, Cooper RM. 1994. [^{14}C]2-deoxyglucose autoradiographic technique provides a metabolic signature of cobalt-induced focal epileptogenesis. *Epilepsia* 35(5):939-949.
- *Vassilev PP, Venkova K, Pencheva N, et al. 1993. Changes in the contractile responses to carbachol and in the inhibitory effects of verapamil and nitrendipine on isolated smooth muscle preparations from rats subchronically exposed to Co^{2+} and Ni^{2+} . *Arch Toxicol* 67:330-337.

9. REFERENCES

- Vazquez FG, Aguilera LJ, Sharma VK. 1994. Metals in sediments of San Andres Lagoon, Tamaulipas, Mexico. *Bull Environ Contam Toxicol* 52:382-387.
- Veien NK, Svejgaard E. 1978. Lymphocyte transformation in patients with cobalt dermatitis. *Br J Dermatol* 99:191-196.
- *Veien NK, Hattel T, Justesen O, et al. 1987. Oral challenge with nickel and cobalt in patients with positive patch tests to nickel and/or cobalt. *Acta Derm Venereol (Stockh)* 67:321-325.
- Veien NK, Hattel T, Laurberg G. 1995. Placebo-controlled oral challenge with cobalt in patients with positive patch tests to cobalt. *Contact Dermatitis* 33:54-55.
- Venkataramani ES, Ahlert RC, Corbo P. 1984. Biological treatment of landfill leachates. *CRC Crit Rev Environ Control* 14(4):333-376.
- Verhamme EN. 1973. Contribution to the evaluation of the toxicity of cobalt. *Cobalt* 2:29-32.
- Verrengia Guerrero NR, Kesten EM. 1994. Levels of heavy metals in waters from the La Plata River, Argentina: An approach to assess bioavailability. *Bull Environ Contam Toxicol* 52:254-260.
- Vertacnik A, Prohic E, Juracic M, et al. 1997. Selected element concentrations in alluvial sediments under garbage disposal site (Zagreb, Croatia). *Water Res* 31(6):1421-1429.
- *Vieira I, Sonnier M, Cresteil T. 1996. Developmental expression of CYP2E1 in the human liver: Hypermethylation control of gene expression during the neonatal period. *Eur J Biochem* 238:476-483.
- *Vienna A, Capucci E, Wolfesperger M, et al. 1995. Heavy metal concentration in hair of students in Rome. *Anthropol Anz* 53(1):27-32.
- *Vilaplana J, Grimalt F, Romaguera C, et al. 1987. Cobalt content of household cleaning products. *Contact Dermatitis* 16:139-141.
- *Villanueva S, Botello AV. 1998. Metal pollution in coastal areas of Mexico. *Rev Environ Contam Toxicol* 157:53-94.
- Vitagliano S, Berrino L, Pizzirusso A, et al. 1994. Cobalt blocks L-Glutamate-induced apnea and arterial hypotension in the nucleus tractus solitarii of anaesthetized rats. *Neuropharmacology* 33(1):145-146.
- Volkert WA, Goeckeler WF, Ehrhardt GJ, et al. 1991. Therapeutic radionuclides: Production and decay property considerations. *J Nucl Med* 32(1):174-185.
- Von Gunten HR, Kull TP. 1986. Infiltration of inorganic compounds from the Glatt River, Switzerland, into a groundwater aquifer. *Water Air Soil Pollut* 29:333-346.
- Von Zallinger C, Tempel K. 1998. Transplacental transfer of radionuclides. A review. *Vet Med (Prague)* A45:581-590.

9. REFERENCES

- Vos CM, Westera G, Van der Jagt PJ, et al. 1979. The effect of dose loading and of double labeling with ^{57}Co and ^{125}I on the tissue distribution in animals. *Eur J Nucl Med* 4:393-396.
- *Vouk VB. 1986. General chemistry of metals. In: Friberg L, Nordberg GF, Vouk VB, eds. *Handbook on the toxicology of metals*. 2nd ed. New York, NY: Elsevier Science Publishers, 33-34.
- *Voutsinou-Taliadour F, Varnavas SP, Nakopoulou C, et al. 1997. Dissolved trace elements in South Aegean seawater. *Mar Pollut Bull* 34(10):840-843.
- WA Dept of Ecology. 2000. Controls for new sources of toxic air pollutants. Washington Department of Ecology. <http://www.wa.gov/ecology/leg/ecywac.html>. March 13, 2000.
- *Wahlberg JE, Lidén C. 2000. Cross-reactivity patterns of cobalt and nickel studied with repeated open applications (ROATs) to the skin of guinea pigs. *Am J Contact Dermatitis* 11(1):42-48.
- Walker PR, LeBlanc J, Sikorska M. 1989. Effects of aluminum and other cations on the structure of brain and liver chromatin. *Biochem* 28:3911-3915.
- Wallmann K. 1992. Solubility of cadmium and cobalt in a post-oxic sediment suspension. *Hydrobiologia* 235/236:611-622.
- *Walter JF. 1980. Cobalt radiation-induced comedones. *Arch Dermatol* 116:1073-1074.
- *Wang H, Chen D, Gao C, et al. 1993. Effects of low level prenatal ^{60}Co gamma-irradiation on postnatal growth and behavior in mice. *Teratology* 48:451-457.
- *Wang JC, Lin YP, Hwang JS, et al. 2001. Physical heights of children with prolonged low dose-rate - radiation exposure in radiocontaminated buildings. *Int J Radiat Biol* 77(1):117-125.
- *Wang JY, Tsukayama DT, Wicklund BH, et al. 1996. Inhibition of T and B cell proliferation by titanium, cobalt, and chromium: Role of IL-2 and IL-6. *J Biomed Mater Res* 32:655-661.
- *Wang X, Yokoi I, Liu J, et al. 1993. Cobalt(II) and nickel(II) ions as promoters of free radicals in vivo: Detected directly using electron spin resonance spectrometry in circulating blood in rats. *Arch Biochem Biophys* 306(2):402-406.
- *Washburn TC, Kaplan E. 1964. Cobalt therapy and goiter. *Clin Pediatr* 3(2):89-92.
- *Watabe T, Uchida S, Kamada H. 1984. Transfer of radionuclides through soil-plant pathway. *J Radiat Res* 25:274-282.
- Watkins S, BAron J, Tephly TR. 1980. Identification of cobalt protoporphyrin IX formation in vivo following cobalt administration to rats. *Biochem Pharmacol* 29:2319-2323.
- *Warnau M, Fowler SW, Teyssie J-L. 1999. Biokinetics of radiocobalt in the asteroid *Asterias rubens* (Echinodermata): Sea water and food exposures. *Mar Pollut Bull* 39(1-12):159-164.
- *Weakly JN. 1973. The action of cobalt ions on neuromuscular transmission in the frog. *J Physiol* 234:597-612.

9. REFERENCES

*Weast RC. 1985. CRC handbook of chemistry and physics. 66th ed. Boca Raton, Florida: CRC Press.

Webb M. 1962 The biological action of caoble and other metals. III. Chelation of cations by dihydrolipoic acid. *Biochim. Biophys. Acta* 65:47-65.

*WEB Research Co. 1999. Mössbauer gamma sources: New lower prices for AEA technology Co57 sources. http://www.webres.com/gamma_price.html_ April 4, 1999.

*Wehner AP, Craig DK. 1972. Toxicology of inhaled NiO and CoO in Syrian golden hamsters. *Am Ind Hyg Assoc J* 33:146-155.

*Wehner AP, Busch RH, Olson RJ, et al. 1977. Chronic inhalation of cobalt oxide and cigarette smoke by hamsters. *Am Ind Hyg Assoc J* 38:338-346.

Weinberg SR. 1983. Effects of prenatal irradiation on fetal, neonate, and young adult murine hemopoiesis. *Int J Radiat Oncol Biol Phys* 9:1825-1831.

*Wellman PJ, Watkins PA, Nation JR, et al. 1984. Conditioned taste aversion in the adult rat induced by dietary ingestion of cadmium or cobalt. *Neurotoxicology* 5(2):81-90.

*West JR, Smith HW, Chasis H. 1948. Glomerular filtration rate, effective renal blood flow, and maximal tubular excretory capacity in infancy. *J Pediatr* 32:10-18.

Whanger PD, Weswig PH, Schmitz JA, et al. 1976. Effects of selenium, cadmium, mercury, tellurium, arsenic, silver and cobalt on white muscle disease in lambs and effect of dietary forms of arsenic on its accumulation in tissues. *Nutr Rep Int* 14(1):63-72.

White MA, Dyne D. 1994. Biological monitoring of occupational cobalt exposure in the United Kingdom. *Sci Total Environ* 150:209-213.

WHO. 2000. Drinking water quality. World Health Organization. <http://www.who.int/>. June 5, 2000.

*Wöhrle S, Kriechbaumer N, Hemmer W, et al. 2001. A cream containing the chelator DTPA (diethylenetriaminepenta-acetic acid) can prevent contact allergic reactions to metals. *Contact Dermatitis* 44(4):224-228.

*Wiberg GS. 1968. The effect of cobalt ions on energy metabolism in the rat. *Can J Biochem* 46:549-554.

*Widdowson EM, Dickerson JWT. 1964. Chemical composition of the body. In: Comar CL, Bronner F, eds. *Mineral metabolism: An advanced treatise. Volume II: The elements Part A.* New York: Academic Press.

*WI Dept of Natural Resources. 2000. Air pollution control. Wisconsin Department of Natural Resources. <http://www.legis.state.wi.us/rsb/code/nr/nr400.html>. March 13, 2000.

Wiegand H, Uhlig S, Gotzsch U, et al. 1990. The action of cobalt, cadmium and thallium on presynaptic currents in mouse motor nerve endings. *Neurotoxicol Teratol* 12:313-318.

9. REFERENCES

- *Wiersema JM, Wright L, Rogers B, et al. 1984. Human exposure to potentially toxic elements through ambient air in Texas. In: Proceedings of the Air Pollution Control Association 77th Annual Meeting, Austin, TX.
- *Wild P, Perdrix A, Romazini S, et al. 2000. Lung cancer mortality in a site producing hard metals. *Occup Environ Med* 57:568-573.
- *Wilde M. 1984. Effect of short-term exposure to five industrial metals on the embryonic and fetal development of the mouse. *Environ Res* 33:47-53.
- *Williams DE, Vlamis J, Pukite AH, et al. 1985. Metal movement in sludge-treated soils after six years of sludge addition: 2. Nickel, cobalt, iron, manganese, chromium, and mercury. *Soil Sci* 140(2):120-125.
- Williams LR, Pregonzer JF, Oostveen JA. 1992. Induction of cobalt accumulation by excitatory amino acids within neurons of the hippocampal slice. *Brain Res* 581:181-189.
- Williams SJ, Sabransky M, Menzel DB. 1979. Pulmonary absorption of cobalt salts. *Fed Proc* 38:394.
- Windham ST, Phillips CR. 1973. Radiological survey of New London harbor, Thames River, Conn., and environs. *Radiation Data and Reports* 14:659-666.
- Windholz M. 1983. The Merck index. 10th ed. Rahway, NJ: Merck and Co.
- *Windom HL, Schropp SJ, Calder FD, et al. 1989. Natural trace metal concentrations in estuarine and coastal marine sediments of the southeastern United States. *Environ Sci Technol* 23(3):314-320.
- *Winger PV, Schultz DP, Johnson WW. 1990. Environmental contamination concentrations in biota from the lower Savannah River, Georgia and South Carolina. *Arch Environ Contam Toxicol* 19:101-117.
- *Wöhrl S, Kriechbaumer N, Hemmer W, et al. 2001. A cream containing the chelator DTPA (diethylenetriaminepenta-acetic acid) can prevent contact allergic reactions to metals. *Contact Dermatitis* 44 (4):224-228.
- Wojcicki J, Rozewicka L, Kadykow M. 1973. Experimental studies on cobalt cardiopathy. *Arch Immunol Ther Exp* 21:287-296.
- Wolf W. 1993. Radionuclides. In: Elvers B, Hawkins S, Russey W, et al., eds. *Ullman's encyclopedia of industrial chemistry*. New York, NY: VCH, Vol. A22, 500-543.
- *Wollenberg A, Peter RU, Przybilla B. 1995. Multiple superficial basal cell carcinoma (basalomatosis) following cobalt irradiation. *Br J Dermatol* 133:644-646.
- Wollheim CB, Janjic D. 1984. Cobalt inhibition of insulin release: Evidence for an action not related to Ca²⁺ uptake. *Am J Physiol* 246:C57-C62.
- Woltering DM, Larson RJ, Hopping WD, et al. 1987. The environmental fate and effects of detergents. *Tens Surfactants Deterg* 24(5):286-296.

9. REFERENCES

- Woods JS, Carver GT. 1977. Action of cobalt chloride on the biosynthesis, degradation, and utilization of heme in fetal rat liver. *Drug Metab Dispos* 5(5):487-492.
- Yalcintas MG, Jones TD, Meyer HR, et al. 1980. Estimation of dose due to accidental exposure to a ^{60}Co therapy source. *Health Phys* 38:187-191.
- Yamada H, Koizumi S. 1991. Metallothionein induction in human peripheral blood lymphocytes by heavy metals. *Chem Biol Interact* 78:347-354.
- *Yamagata N, Murata S, Torii T. 1962. The cobalt content of human body. *J Radiat Res* 5:4-8.
- *Yamatani K, Saito K, Ikezawa Y, et al. 1998. Relative contribution of Ca^{2+} -dependent mechanism in glucagon-induced glucose output from the liver. *Arch Biochem Biophys* 355(2):175-180.
- Yang EYT, Umezawa M, Nahrwold DL. 1991. A relationship between insulin and enterooxyntin. *Surg Forum* 42:177-179.
- *Yastrebov AP. 1966. Mechanism of cobalt action on erythropoiesis. *Fed Proc* 25:630-632.
- *Yasuda H, Uchida S, Muramatsu Y, et al. 1995. Sorption of manganese, cobalt, zinc, strontium, and cesium onto agricultural soils: Statistical analysis on effects of soil properties. *Water Air Soil Pollut* 83:85-96.
- *Yasukochi Y, Nakamura M, Minakami S. 1974. Effect of cobalt on the synthesis and degradation of hepatic catalase in vivo. *Biochem J* 144:455-464.
- *Ybarra J, Behrooz A, Gabriel A, et al. 1997. Glycemia-lowering effect of cobalt chloride in the diabetic rat: increased GLUT1 mRNA expression. *Mol Cell Endocrinol* 133:151-160.
- Yifen G, Lianping H, Dechang W. 1992. Effect of ^{60}Co γ -irradiation on the nonspecific cytotoxicity of alveolar macrophages in vitro. *Environ Health Perspect* 97:167-170.
- Yoshida T, Numazawa S, Kuroiwa Y. 1986. Induction of hepatic and renal ornithine decarboxylase by cobalt and other metal ions in rats. *Biochem J* 233:577-581.
- *Young RS. 1979. Cobalt in biology and biochemistry. London: Academic Press.
- *Yu KN, Mao SY. 1999. Assessment of radionuclide contents in food in Hong Kong. *Health Phys* 77(6):686-669.
- *Yukawa M, Suzuki-Yasumoto M, Amano K, et al. 1980. Distribution of trace elements in the human body determined by neutron activation analysis. *Arch Env Health* 35:36-44.
- *Zanelli R, Barbic F, Migliori M, et al. 1994. Uncommon evolution of fibrosing alveolitis in a hard metal grinder exposed to cobalt dusts. *Sci Total Environ* 150:225-229.
- *Zanetti G, Fubini B. 1997. Surface interaction between metallic cobalt and tungsten carbide particles as a primary cause of hard metal lung disease. *J Mater Chem* 7(8):1647-1654.

9. REFERENCES

- Zenorola P, Bisceglia M, Lomuto M. 1994. Ashy dermatosis associated with cobalt allergy. *Contact Dermatitis* 31:53-54.
- *Zhang C, Cai W, Li Y, et al. 1998a. Quantitative analysis of calcitonin gene-related peptide- and neuropeptide Y-immunoreactive nerve fibers in mesenteric blood vessels of rats irradiated with cobalt-60 gamma rays. *Radiat Res* 149:19-26.
- *Zhang H, Van Den Berg CMG, Wollast R. 1990. The determination of interactions of cobalt (II) with organic compounds in seawater using cathodic stripping voltammetry. *Mar Chem* 28:285-300.
- Zhang Q, Kusaka Y, Sato K, et al. 1998b. Differences in the extent of inflammation caused by intratracheal exposure to three ultrafine metals: Role of free radicals. *J Toxicol Environ Health, Part A* 53:423-438.
- Zhang Q, Kusaka Y, Sato K, et al. 1999. Tumor necrosis factor-alpha release from rat pulmonary leukocytes exposed to ultrafine cobalt: in vivo and in vitro studies. *Environ Health Prev Med* 4:87-91.
- *Zhao D, Feng G, Wu X, et al. 1985. Seizures induced by intraventricular microinjection of ionized cobalt in the rat - a new experimental model of epilepsy. *Brain Res* 342:323-329.
- *Zhong DZ, Pei C, Xiu-Qin L. 1996. Neurobehavioral study of prenatal exposure to hyperthermia combined with irradiation in mice. *Neurotoxicol Teratol* 18:(6)703-709.
- *Zhou X-Y, Dong J-C, Geng X-S, et al. 1986. Tritium beta-ray and ⁶⁰Co gamma-ray caused dominant lethal mutation in mice. *Chin Med J* 99(5):420-423.
- *Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12:29-34.
- *Zou W, Yan M, Xu W, et al. 2001. Cobalt chloride induces PC12 cells apoptosis through reactive oxygen species and accompanied by AP-1 activation. *J. Neurosci Res* 64 (6):646-53.
- *Zyball A. 1993. Radionuclides. In: Elvers B, Hawkins S, Russey W, et al., eds. *Ullman's encyclopedia of industrial chemistry*. New York, NY: VCH, Vol. A22, 553-560.
- *Zylicz E, Zablorna R, Geisler J, et al. 1975. Effects of DTPA on the deposition of ⁶⁵Zn, ⁶⁰Co and ¹⁴⁴Ce in pregnant rat and in fetoplacental unit. *Int J Radiat Biol* 28(2):125-136.
- *Zylicz E, Zablorna R, Szot Z. 1976. Placental transfer of ⁶⁰Co as a function of gestation age. *Nukleonika* 12:1204-1210.