

9. REFERENCES

ACGIH. 1988. Threshold limit values and biological exposure indices for 1988-1989. Cincinnati, OH. American Conference of Governmental Industrial Hygienists.

ACGIH. 1991. Ammonium chloride fume. Documentation of the threshold limit values: For chemical substances in the work environment. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

*ACGIH. 2001. Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

*Adamowicz RF. 1979. A model for the reversible washout of sulfur dioxide, ammonia and carbon dioxide from a polluted atmosphere and the production of sulfates in raindrops. *Atmos Environ* 13:105-121.

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

Aelion CM, Shaw JN, Wahl M. 1997. Impact of suburbanization on ground water quality and denitrification in coastal aquifer sediments. *J Exp Mar Biol Ecol* 213(1):31-51.

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

*Agency for Toxic Substances and Disease Registry. 1999. ATSDR National Exposure Registry (NER). <http://www.atsdr.cdc.gov/faq/faqner.html>. May 3, 2002.

Agte V, Chiplonkar S, Joshi N, et al. 1994. Apparent absorption of copper and zinc from composite vegetarian diets in young Indian men. *Ann Nutr Metab* 38(1):13-19.

Ahmad I, Ali S, Jan MR. 2000. Physico-chemical analysis of fertilizer industry effluent and its effects on crop plants. *Pak J Sci Ind Res* 43(2):83-89.

Albrecht J. 1998. Roles of neuroactive amino acids in ammonia neurotoxicity. *J Neurosci Res* 51(2):133-138.

Ali BA, Ahmed HO, Ballal SG, et al. 2001. Pulmonary function of workers exposed to ammonia: A study in the Eastern Province of Saudi Arabia. *Int J Occup Environ Health* 7(1):19-22.

Allen AG, Harrison RM, Erisman J-W. 1989. Field measurements of the dissociation of ammonium nitrate and ammonium chloride aerosols. *Atmos Environ* 23(7):1591-1599.

* Cited in text

9. REFERENCES

- Allen WM, Sansom BF, Trower CJ. 1993. Bovine deaths associated with ammoniated straw. *Vet Rec* 132(16):419.
- *Altman PL, Dittmer DS. 1974. *Biological handbooks: Biology data book*. Vol. III. 2nd ed. Bethesda, MD: Federation of American Societies for Experimental Biology, 1987-2008, 2041.
- Ambrose AM. 1943. Studies on the physiological effects of sulfamic acid and ammonium sulfamate. *J Ind Hyg Toxicol* 25(1):26-28.
- *Amoore JE, Hautala E. 1983. Odor as an aid to chemical safety: Odor thresholds compared with threshold limit values and volatilities for 214 industrial chemicals in air and water dilution. *J Appl Toxicol* 3(6):272-290.
- *Amshel CE, Fealk MH, Phillips BJ, et al. 2000. Anhydrous ammonia burns case report and review of the literature. *Burns* 26(5):493-497.
- *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.
- Andersson BO. 1991. Lithuanian ammonia accident, March 20th 1989. *Inst Chem Eng Symp Ser* 124:15-17.
- *Aneja VP, Murthy AB, Battye W, et al. 1998. Analysis of ammonia and aerosol concentrations and deposition near the free troposphere at Mt. Mitchell, NC, USA. *Atmos Environ* 32(3):353-358.
- Anghileri LJ. 1975. Tumor growth inhibition by ammonium chloride-induced acidosis. *Int J Clin Pharmacol* 12:320-326.
- *Ankley GT, Katko A, Arthur JW. 1990. Identification of ammonia as an important sediment-associated toxicant in the lower Fox River and Green Bay, Wisconsin. *Environ Toxicol Chem* 9:313-322.
- Anonymous. 2003. Final report on the safety assessment of ammonium, potassium, and sodium persulfate. *Int J Toxicol* 20(3):7-21.
- *Appelman LM, ten Berg WF, Reuzel PGJ. 1982. Acute inhalation toxicity of ammonia in rats with variable exposure periods. *Am Ind Hyg Assoc J* 43(9):662-665.
- *ApSimon HM, Kruse M, Bell JNB. 1987. Ammonia emissions and their role in acid deposition. *Atmos Environ* 21:1939-1946.
- *Arwood R, Hammond J, Ward GG. 1985. Ammonia inhalation. *J Trauma* 25 (5):444-447.
- *Asman WAH, Drukker B. 1988. Modelled historical concentrations and depositions of ammonia and ammonium in Europe. *Atmos Environ* 22:725-736.
- *Asman WAH, Janssen AJ. 1987. A long-range transport model for ammonia and ammonium for Europe. *Atmos Environ* 21:2099-2119.

9. REFERENCES

- *Asman WAH, Sutton MA, Schjorring JK. 1998. Ammonia: Emission, atmospheric transport and deposition. *New Phytol* 139(1):27-48.
- *Atlas RM, Bartha R. 1998. Biochemical cycling: nitrogen, sulfur, phosphorus, iron, and other elements. In: Fogel L, Wong G, eds. *Microbial ecology. Fundamentals and applications*. Menlo Park, CA: Benjamin/Cummings Science Publishing, 414-425.
- *Attwood P, Brouwer R, Ruigewaard P, et al. 1987. A study of the relationship between airborne contaminants and environmental factors in Dutch confinement buildings. *Am Ind Hyg Assoc J* 48(8):745-751.
- *Auerbach C, Robson JM. 1947. XXXIII-Test of chemical substances for mutagenic action. *Proc R Soc Edinb (Nat Environ)* 62:284-291.
- *Ayers GP, Gillett RW, Caeser ER. 1985. Solubility of ammonia in water in the presence of atmospheric CO₂. *Tellus* 37B:35-40.
- *Bachmann C. 2002. Mechanisms of hyperammonemia. *Clin Chem Lab Med* 40(7):653-662.
- Bai G, Rama Rao KV, Murthy ChRK, et al. 2001. Ammonia induces the mitochondrial permeability transition in primary cultures of rat astrocytes. *J Neurosci Res* 66(5):981-991.
- *Ballal SG, Ali BA, Albar AA, et al. 1998. Bronchial asthma in two chemical fertilizer producing factories in eastern Saudi Arabia. *Int J Tuberc Lung Dis* 2(4):330-335.
- Baraldi M, Pinelli G, Ricci P, et al. 1984. Toxins in hepatic encephalopathy: The role of synergistic effect of ammonia, mercaptans and short chain fatty acids. *Arch Toxicol Suppl* 7:103-105.
- Barbieri P, Adami G, Predonzani S, et al. 1999. Survey of environmental complex systems: pattern recognition of physicochemical data describing coastal water quality in the Gulf of Trieste. *J Environ Monit* 3(2):210-216.
- *Barica J. 1990. Ammonia and nitrite contamination of Hamilton Harbour, Lake Ontario. *Water Pollut Res J Can* 25(3):359-386.
- *Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. *Regul Toxicol Pharmacol* 8:471-486.
- *Barrow CS, Steinhagen WH. 1980. NH₃ concentrations in the expired air of the rat: Importance to inhalation toxicology. *Toxicol Appl Pharmacol* 53:116-121.
- Barrow CS, Alarie Y, Stock M. 1978. Sensory irritation and incapacitation evoked by thermal decomposition products of polymers and comparisons with known sensory irritants. *Arch Environ Health* 33(2):79-88.
- Barry DAJ, Goorahoo D, Goss MJ. 1993. Estimation of nitrate concentrations in groundwater using a whole farm nitrogen budget. *J Environ Qual* 22(4):767-775.
- Barshaw ML, Wachtel RC, Cohen L, et al. 1986. Neurological outcome in premature infants with transient asymptomatic hyperammonemia. *J Pediatr* 108(2):271-275.

9. REFERENCES

- *Barzel US. 1975. The effect of chronic ammonium chloride ingestion on parathyroid hormone function. *Nephron* 14:339-346.
- *Barzel US, Jowsey J. 1969. The effects of chronic acid and alkali administration on bone turnover in adult rat. *Clin Sci* 36:517-524.
- Basile AS. 2002. Direct and indirect enhancement of GABAergic neurotransmission by ammonia: implications for the pathogenesis of hyperammonemic syndromes. *Neurochem Int* 41:115-122.
- *Bauer CF, Andren AW. 1985. Emissions of vapor-phase fluorine and ammonia from the Columbia coal-fired power plant. *Environ Sci Technol* 19:1099-1103.
- Baum MM, Kiyomiya ES, Kumar S, et al. 2001. Multicomponent remote sensing of vehicle exhaust by dispersive absorption spectroscopy. 2. Direct on road ammonia measurements. *Environ Sci Technol* 35(18):3735-3741.
- *Beare JD, Wilson RS, Marsh RJ. 1988. Ammonia burns of the eye: Old weapon in new hands. *Br Med J* 296:590.
- *Beauchamp EG, Kidd GE, Thurtell G. 1978. Ammonia volatilization from sewage sludge applied in the field. *J Environ Qual* 7:141-146.
- *Beauchamp EG, Kidd GE, Thurtell G. 1982. Ammonia volatilization from liquid dairy cattle manure in the field. *Can J Soil Sci* 62:11-19.
- Benjamin AM, Okamoto K, Quastel JH. 1978. Effects of ammonium ions on spontaneous action potentials and on contents of sodium, potassium, ammonium and chloride ions in brain *in vitro*. *J Neurochem* 30:131-143.
- *Benyajati S, Goldstein L. 1975. Renal glutaminase adaptation and ammonia excretion in infant rats. *Am J Physiol* 228:693-698.
- Berenzen N, Schulz R, Liess M. 2001. Effects of chronic ammonium and nitrite contamination on the macroinvertebrate community in running water microcosms. *Water Res* 35(14):3478-3482.
- *Berger GS. 1994. Epidemiology of endometriosis. In: Berger GS, ed. *Endometriosis: Advanced management and surgical techniques*. New York, NY: Springer-Verlag.
- Berger S, Bermes EW, Blanke RV, et al. Ammonia. 1970. In: Tietz NW, ed. *Fundamentals of clinical chemistry*. Philadelphia, PA: W.B. Saunders Company, 665-731.
- *Betterton EA. 1992. Henry's law constants of soluble and moderately soluble organic gases: effects on aqueous phase chemistry. In: Nriagu JO, ed. *Gaseous pollutants: Characterization and cycling*. Tuscon, AZ: John Wiley & Sons, Inc., 1-50.
- *Beyrouthy CA, Sommers LE, Nelson DW. 1988. Ammonia volatilization from surface-applied urea as affected by several phosphoroamide compounds. *Soil Sci Soc Am J* 52:1173-1178.
- Bilski J, Jaworek J, Cieszkowski M, et al. 1996. Exocrine pancreatic response to ammonia *in vivo* and *in vitro*. *Digestion* 57(4):219.

9. REFERENCES

- *Bishop RW, Belkin F, Gaffney R. 1986. Evaluation of a new ammonia sampling and analytical procedure. *Am Ind Hyg Assoc J* 47:135-137.
- Blade MC, Arola L, Alemany M. 1988. Rapid detoxification of infused ammonium by the anesthetized rat. *Biochem Int* 16(5):859-867.
- *Blei AT, Olafsson S, Therrien G, et al. 1994. Ammonia-induced brain edema and intracranial hypertension in rats after portacaval anastomosis. *Hepatology* 19(6):1437-1444.
- Blowey R, Packington A. 1994. Polioencephalomalacia associated with ingestion of ammonium sulphate. *Vet Rec* 134(24):636.
- *Bodansky A, Jaffe HL, Chandler JP. 1932. Serum phosphatase changes in calcium deficiency and in ammonium chloride osteoporosis. *Proc Soc Exp Biol Med* 29:871-873.
- *Bodega G, Suárez I, Boyano MC, et al. 1993. High ammonia diet: Its effect on the glial fibrillary acidic protein (GFAP). *Neurochem Res* 18(9):971-975.
- *Bodega G, Suárez I, Rubio M, et al. 1991. Heterogeneous astroglial response in the rat spinal cord to long-term portacaval shunt. An immunohistochemical study. *Glia* 4:400-407.
- *Bouwman AF, Lee DS, Asman WAH, et al. 1997. A global high-resolution emission inventory for ammonia. *Global Biogeochem Cycles* 11(4):561-587.
- *Bouwmeester RJ, Vlek PLG. 1981. Rate control of ammonia volatilization from rice paddies. *Atmos Environ* 15:131-140.
- *Boyano-Adanez MC, Bodega G, Barrios V, et al. 1996. Response of rat cerebral somatostatinergic system to a high ammonia diet. *Neurochem Res* 29(5):469-476.
- *Boyd EM, Seymour KGW. 1946. Ethylenediamine dihydrochloride or chlor-ethamine. II. Untoward and toxic reactions. *Exp Med Surg* 223-227.
- *Boyd EM, MacLachlan ML, Perry WF. 1944. Experimental ammonia gas poisoning in rabbits and cats. *J Ind Hyg Toxicol* 26:29-34.
- Braissant O, Henry H, Villard A, et al. 2002. Ammonium-induced impairment of axonal growth is prevented through glial creatine. *J Neurosci* 22(22):9810-9820.
- *Bremner JM. 1965. Inorganic forms of nitrogen. In: Black CA, Evans DD, Ensminger LE, et al., eds. *Agronomy. Methods of soil analysis. Part 2. Chemical and microbiological properties*. Madison, WI: American Society of Agronomy, Inc., 1179-1237.
- *Brimblecombe P, Dawson GA. 1984. Wet removal of highly soluble gases. *J Atmos Chem* 2:95-107.
- *Brinson SEJR, Cabrera ML, Tyson SC. 1994. Ammonia volatilization from surface-applied, fresh and composted poultry litter. *Plant Soil* 167(2):213-218.
- *BLR. 2002. Book of chemical lists on CD-Rom. Old Saybrook, CT: Business & Legal Reports, Inc.

9. REFERENCES

- *Broderson JR, Lindsey JR, Crawford JE. 1976. The role of environmental ammonia in respiratory mycoplasmosis of rats. *Am J Pathol* 85:115-130.
- Brooks KJ, Kauppinen RA, Williams SR, et al. 1989. Ammonia causes a drop in intracellular pH in metabolizing cortical brain slices: A phosphorus-31 and proton NMR study. *Neuroscience* 33(1):185-192.
- *Brown RH, Duda GD, Korkes S, et al. 1957. A colorimetric micromethod for determination of ammonia; the ammonia content of rat tissues and human plasma. *Arch Biochem Biophys* 66:301-309.
- *Brunke R, Alvo P, Schuepp P, et al. 1988. Effect of meteorological parameters on ammonia loss from manure in the field. *J Environ Qual* 17:431-436.
- *Brunner H, Thaler H, eds. 1981. *Hepatology: A festschrift for Hans Popper*. New York, NY: Raven Press, 212.
- *Budavari S, O'Neil MJ, Smith A, et al., eds. 1996. *The Merck index*, 12th ed. Whitehouse Station, NJ: Merck & Co. Inc., 87.
- *Buff R, Koller EA. 1974. Studies underlying the reflex hyperpnoea induced by inhalation of chemical irritants. *Respir Physiol* 21:371-383.
- Bugge M, Bengtsson F, Nobin A, et al. 1988. Serotonin metabolism in the rat brain following ammonia administration. In: Soeters PB, Wilson JHP, Meijer AJ, et al., eds. *Advances in ammonia metabolism and hepatic encephalopathy*. New York, NY: Excerpta Medica.
- Bugge M, Bengtsson F, Nobin A, et al. 1989. The effect of ammonia infusion on brain monoamine metabolism in portacaval-shunted rats. *Res Exp Med* 189(2):101-111.
- *Buijsman E, Maas HFM, Asman WAH. 1987. Anthropogenic NH₃ emissions in Europe. *Atmos Environ* 21(5):1009-1022.
- Burkhard LP, Jenson JJ. 1993. Identification of ammonia, chlorine, and diazinon as toxicants in a municipal effluent. *Arch Environ Contam Toxicol* 25:506-515.
- Burkitt DP. 1978. Workshop V - fiber and cancer. Summary and recommendations. *Am J Clin Nutr* 31:S213-S215.
- *Burns TR, Greenberg SD, Mace ML, et al. 1985. Ultrastructure of acute ammonia toxicity in the human lung. *Am J Forensic Med Pathol* 6:204-210.
- *Butterworth RF. 2002. Pathophysiology of hepatic encephalopathy: A new look at ammonia. *Metab Brain Dis* 17(4):221-227.
- Bytnerowicz A, Fenn ME. 1996. Nitrogen deposition in California forests: A review. *Environ Pollut* 92(2):127-146.
- *C & E News. 1987. Ammonia. *Chem Eng News*. March 2, 1987.
- *Cadle SH. 1985. Seasonal variations in nitric acid, nitrate, strong aerosol acidity, and ammonia in an urban area. *Atmos Environ* 19(1):181-188.

9. REFERENCES

- Campbell CL, Dawes RK, Deolalkar S, et al. 1958. Effect of certain chemicals in water on the flavor of brewed coffee. *Food Res* 23:575-579.
- Campbell SC. 1988. Severe ventilatory depression reversed with aromatic ammonia inhalation. *N Engl J Med* 319(8):1550.
- *Caplin M. 1941. Ammonia-gas poisoning: Forty-seven cases in a London shelter. *Lancet* 241:95-96.
- *Capuco AV. 1977. Ammonia: A modulator of 3T3 cell growth. *Diss Abstr Int B* 38(9):4085.
- *Castell DO, Moore EW. 1971. Ammonia absorption from the human colon. *Gastroenterology* 60:33-42.
- Chan H, Pannunzio M, Hazell AS, et al. 2001. Exposure to ammonia results in decreased glutamate transporter activity in cultured cerebellar granule cells. *J Neurochem* 78(Suppl 1):40.
- Chapin RE, Gulati DK. 1997. Reproductive toxicology. Pesticed/fertilizer mix II (California). *Environ Health Perspect Suppl* 105(1):373-374.
- Chou SF, Jacobs LW, Penner D. 1978. Absence of plant uptake and translocation of polybrominated biphenyls (PBBs). *Environ Health Perspect* 23:9-12.
- *Choudat D, Goehen M, Korobaeff M, et al. 1994. Respiratory symptoms and bronchial reactivity among pig and dairy farmers. *Scand J Work Environ Health* 20(1):48-54.
- Chourasia HK. 2001. Efficacy of ammonia in detoxification of fumonisin contaminated corn. *Indian J Exp Biol* 39(5):493-495.
- *Christesen HB. 1995. Prediction of complications following caustic ingestion in adults. *Clin Otolaryngol* 20(3):272-278.
- *Clark EC, Nath KA, Hostetter MK, et al. 1990. Role of ammonia in tubulointerstitial injury. *Miner Electrolyte Metab* 16(5):315-321.
- *Clemmesen JO, Larsen FS, Kondrup J, et al. 1999. Cerebral herniation in patients with acute liver failure is correlated with arterial ammonia concentration. *Hepatology* 29(3):648-653.
- *Clewell HJ III, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- *Clinton SK, Bostwick DG, Olson LM, et al. 1988. Effects of ammonium acetate and sodium cholate on N-methyl-N'-nitro-N-nitrosoguanidine-induced colon carcinogenesis of rats. *Cancer Res* 48:3035-3039.
- *Close LG, Catlin FI, Cohn AM. 1980. Acute and chronic effects of ammonia burns of the respiratory tract. *Arch Otolaryngol* 106:151-158.
- CLPSD. 1987. Contract Laboratory Program (CLP) Statistical Database. Alexandria, VA: Viar and Company, Management Services Division, April 1987.
- CMR. 1988. Ammonia. *Chemical Market Reporter*. October 3, 1998. 51-52.

9. REFERENCES

- *CMR. 1999. Chemical profile ammonia. Chemical Market Reporter. November 29, 1999.
- *Colborn T, Clement C, eds. 1992. Chemically-induced alterations in sexual and functional development: The wildlife human connection. Princeton, NJ: Princeton Scientific Publishing.
- *Cole TJ, Cotes JE, Johnson GR, et al. 1977. Ventilation, cardiac frequency and pattern of breathing during exercise in men exposed to *o*-chlorobenzylidene malonitrile (CS) and ammonia gas in low concentrations. Q J Exp Physiol Cogn Med Sci. 63:341-351.
- *Conn HO. 1972. Studies of the source and significance of blood ammonia IV. Early ammonia peaks after ingestion of ammonia salts. Yale J Biol Med 45:543-549.
- *Coon RA, Jones RA, Jenkins LJ Jr, et al. 1970. Animal inhalation studies on ammonia, ethylene, glycol, formaldehyde, dimethylamine and ethanol. Toxicol Appl Pharmacol 16:646-655.
- Córdoba J, Crespín J, Gottstein J, et al. 1999. Mild hypothermia modifies ammonia-induced brain edema in rats after portacaval anastomosis. Gastroenterology 116(3):686-693.
- *Córdoba J, Gottstein J, Blei AT. 1998. Chronic hyponatremia exacerbates ammonia-induced brain edema in rats after portacaval anastomosis. J Hepatol 29(4):589-594.
- *Cormier Y, Israel-Assayag E, Racine G, et al. 2000. Farming practices and the respiratory health risks of swine confinement buildings. Eur Resp J 15(3):560-565.
- *Corsi RL, Torres VM, Fredenberg S, et al. 2000. A screening assessment of non-point source ammonia emissions in Texas. Proceedings of the Air & Waste Management Association's, 93rd Annual Meeting & Exhibition: Salt Lake City, Utah, June 18-22, 2000. Pittsburgh, PA: Air and Waste Management Association, 4279-4292.
- *Coude FX, Grimber G. 1984. Inhibition of urea synthesis by pent-4-enoic acid: Potentiation by ammonia. Biochem Biophys Res Commun 118(1):47-52.
- *Couturier Y, Barbotin M, Bobin P, et al. 1971. [Apropos of three cases of toxic lung caused by vapors of ammonia and hydrogen sulfide.] Bull Soc Med Afr Noire Lang Fr 16:250-252. (French)
- *CPSC. 2001. Hazardous substances and articles; administration and enforcement regulations. Substances named in the Federal Caustic Poison Act. Consumer Product Safety Committee. Code of Federal Regulations. 16 CFR 1500.129(1). <http://frwebgate.access.gpo.gov/cgi>. May 02, 2002.
- *CRIS. 2003. Ammonia. Current Research Information Systems. <http://cris.csrees.usda.gov/>. July 01, 2004.
- *Crook B, Robertson JF, Travers Glass SA, et al. 1991. Airborne dust, ammonia, microorganisms, and antigens in pig confinement houses and the respiratory health of exposed farm workers. Am Ind Hyg Assoc J 52(7):271-279.
- *Crumpton WG, Isenhard TM. 1988. Diurnal patterns of ammonium and un-ionized ammonia in streams receiving secondary treatment effluent. Bull Environ Contam Toxicol 40(4):539-544.

9. REFERENCES

- *Crutzen PJ. 1983. Atmospheric interactions--homogeneous gas reactions of C, N, and S containing compounds. In: Bolin B, Cook RB, eds. The major biogeochemical cycles and their interactions. Chichester: John Wiley & Sons, 67-113.
- *Cuesta-Santos OA, Ortiz-Bulto PL, Gozalez MLG. 1998. Deposition and atmospheric nitrogen concentrations trends in Cuba. *Water Air Soil Pollut* 106(1-2):163-169.
- Cummings JH, Stephen AM, Branch WJ. 1981. Implications of dietary fiber breakdown in the human colon. *Banbury Rep* 7:71-81.
- *da Fonseca J, Brito MJ, Freitas J, et al. 1998. Acute colitis caused by caustic products. *Am J Gastroenterol* 93(12):2601-2602.
- *da Fonseca-Wollheim F. 1995. The influence of pH and various anions on the distribution of NH_4^+ in human blood. *Eur J Clin Chem Clin Biochem* 33(5):289-294.
- *Dalhamn T. 1963. Effect of ammonia alone and combined with carbon particles on ciliary activity in the rabbit trachea in vivo, with studies of the absorption capacity of the nasal cavity. *Int J Air Water Pollut* 7:531-539.
- Damm CJ, Lucas D, Sawyer RF, et al. 2001. Excimer laser fragmentation-fluorescence spectroscopy as a method for monitoring ammonium nitrate and ammonium sulfate particles. *Chemosphere* 42(5-7):655-661.
- *Daubert TE, Danner RP. 1989. Physical and thermodynamic properties of pure chemicals: Data compilation. Washington, DC: Taylor & Francis.
- *Davies BMA, Yudkin J. 1952. Studies in biochemical adaptation. The origin of urinary ammonia as indicated by the effect of chronic acidosis and alkalosis on some renal enzymes in the rat. *Biochem J* 52:407-412.
- *Dawson GA. 1977. Atmospheric ammonia from undisturbed land. *J Geophys Res* 82(21):3125-3133.
- *Dawson GA, Farmer JC. 1984. Highly soluble atmospheric trace gases in the Southwestern United States. I. Inorganic species: NH_3 , HNO_3 , SO_3 . *J Geophys Res* 89(D3):4779-4787.
- Debreczeni K, Berecz K. 1998. Monitoring of gaseous nitrogen losses from nitrogen fertilizers in model experiments. *Commun Soil Sci Plant Anal* 29(11-14):2207-2216.
- De Datta SK. 1995. Nitrogen transformations in wetland rice ecosystems. *Fert Res* 42(1-3):193-203.
- de Knecht RJ, Schalm SW, van der Rijt CC, et al. 1994. Extracellular brain glutamate during acute liver failure and during acute hyperammonemia simulating acute liver failure: An experimental study based on in vivo brain dialysis. *J Hepatol* 20(1):19-26.
- *de la Hoz RE, Schlueter DP, Rom WN. 1996. Chronic lung disease secondary to ammonia inhalation injury: A report on three cases. *Am J Ind Med* 29(2):209-214.
- *Demerec M, Bertani G, Flint J. 1951. A survey of chemicals for mutagenic action on *E. coli*. *Am Nat* 85:119-136.

9. REFERENCES

- *Denmead OT, Freney JR, Simpson JR. 1982. Atmospheric dispersion of ammonia during application of anhydrous ammonia fertilizer. *J Environ Qual* 11:568-572.
- *De Sousa RC, Harrington JT, Ricanati ES, et al. 1974. Renal regulation of acid-base equilibrium during chronic administration of mineral acid. *J Clin Invest* 53:465-476.
- DeSutter TM, Clay SA, Clay DE. 1998. Atrazine, alachlor, and total inorganic nitrogen concentrations of winter wind-eroded sediment samples. *J Environ Sci Health B* 33(6):683-691.
- *Diekman MA, Scheidt AB, Sutton AL, et al. 1993. Growth and reproductive performance, during exposure to ammonia, of gilts afflicted with pneumonia and atrophic rhinitis. *Am J Vet Res* 54(12):2128-2131.
- *Dimmock NA, Marshall GB. 1986. The determination of free ammonia in ambient air with diffusion/denuder tubes. *Anal Chim Acta* 185:159-169.
- *Dodd KT, Gross DR. 1980. Ammonia inhalation toxicity in cats: A study of acute and chronic respiratory dysfunction. *Arch Environ Health* 35:6-14.
- *DOI. 1985. Nitrogen (ammonia). Bureau of mines Bulletin 675. Washington, DC: Department of the Interior.
- *Doig PA, Willoughby RA. 1971. Response of swine to atmospheric ammonia and organic dust. *J Am Vet Med Assoc* 159:1353-1361.
- Dolinska M, Hilgier W, Albrecht J. 1996. Ammonia stimulates glutamine uptake to the cerebral non-synaptic mitochondria of the rat. *Neurosci Lett* 213(1):45-48.
- *Donham KJ. 1991. Association of environmental air contaminants with disease and productivity in swine. *Am J Vet Res* 52(10):1723-1730.
- *Donham KJ, Pependorf WJ. 1985. Ambient levels of selected gases inside swine confinement buildings. *Am Ind Hyg Assoc J* 46:658-661.
- *Donham KJ, Cumro D, Reynolds SJ, et al. 2000. Dose-response relationships between occupational aerosol exposures and cross-shift declines of lung function in poultry workers: recommendations for exposure limits. *J Occup Environ Med* 42(3):260-269.
- *Donham KJ, Knapp LW, Monson R, et al. 1982. Acute toxic exposure to gases from liquid manure. *J Occup Med* 24:142-145.
- *Donham KJ, Reynolds SJ, Whitten P, et al. 1995. Respiratory dysfunction in swine production facility workers: dose-response relationships of environmental exposures and pulmonary function. *Am J Ind Med* 27(3):405-418.
- Dow SW, Fettman MJ, Smith KR, et al. 1990. Effects of dietary acidification and potassium depletion on acid-base balance, mineral metabolism and renal function in adult cats. *J Nutr* 120(6):569-578.
- *Doyle GJ, Tuazon EC, Graham RA, et al. 1979. Simultaneous concentrations of ammonia and nitric acid in a polluted atmosphere and their equilibrium relationship to particulate ammonium nitrate. *Environ Sci Technol* 13:1416-1419.

9. REFERENCES

Doyle J, Watts S, Solley D, et al. 2001. Exceptionally high-rate nitrification in sequencing batch reactors treating high ammonia landfill leachate. *Water Sci Technol* 43(3):315-322.

*Drummond JG, Curtis SE, Simon J, et al. 1980. Effects of aerial ammonia on growth and health of young pigs. *J Anim Sci* 50(6):1085-1091.

*Duda GD, Handler P. 1958. Kinetics of ammonia metabolism in vivo. *J Biol Chem* 232:303-314.

Dueck TA, Van der Eerden LJ. 2000. Interactions between climate change and nitrogen deposition, with emphasis on ammonia. In: Singh SN, ed. *Trace gas emissions and plants*. Dordrecht, The Netherlands: Kluwer Academic Publishers, 291-307.

Duke JA. 1977. Phytotoxin tables. *CRC Crit Rev Toxicol* 5:189-237.

Duke-Elder S, MacFaul PA. 1972. In: Duke-Elder S, ed. *System of ophthalmology*. Injuries. Non-mechanical injuries. St. Louis, MO: The C.V. Mosby Company, 1079-1085.

Duncan K, Jennings E, Hettenbach S, et al. 1998. Nitrogen cycling and nitric oxide emissions in oil-impacted prairie soils. *Biorem J* 1(3):195-208.

*Eaton WC, Rickman EE, Jayanty RKM, et al. 1996. Method 301 evaluation of a technique for collection and measurement of ammonia in stationary source emissions. Measurement of toxic and related air pollutants: Proceedings of an international specialty conference, May 7-9, 1996, Research Triangle Park, North Carolina. Pittsburgh, PA: Air and Waste Management Association, 583-588.

Edwards PJ, Kochenderfer JN, Seegrift DW. 1991. Effects of forest fertilization on stream water chemistry in the Appalachians. *Water Resour Bull* 27(2):265-274.

Effler SW, Brooks CM, Auer MT, et al. 1990. Free ammonia and toxicity criteria in a polluted urban lake. *Res J Water Pollut Control Fed* 62(6):771-779.

*Effler SW, Gelda RK, Matthews CM. 2001. Implications of industrial loads for ammonia pollution in an urban lake. *Water Environ Res* 73(2):192-203.

*Egle JL. 1973. Retention of inhaled acetone and ammonia in the dog. *Am Ind Hyg Assoc J* 34:533-539.

*Englande AJ, Smith JK, English JN. 1978. Potable water quality of advanced wastewater treatment plant effluents. *Prog Water Technol* 10:17-39.

*EPA. 1979. Effects of endogenous ammonia on neutralization of inhaled sulfuric acid aerosols. Cincinnati, OH: U.S. Environmental Protection Agency, Health Effects Research Lab. EPA600179045. PB80147978.

*EPA. 1980. Source category survey: Ammonia manufacturing industry. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Air Quality, EPA450380014.

*EPA. 1983. Methods for chemical analysis of water and wastes. Ammonia. U.S. Environmental Protection Agency. EPA600479020.

9. REFERENCES

- *EPA. 1987a. Extremely hazardous substances (EHS) chemical profiles and emergency first aid guides. Ammonia. U.S. Environmental Protection Agency. <http://www.epa.gov/swercepp/ehs/ehslist.html>. July 06, 2004.
- *EPA. 1987b. Toxic air pollutant/source crosswalk—a screening tool for locating possible sources emitting air pollutants. ResearchTriangle Park, NC: U.S. Environmental Protection Agency. Code of Federal Regulations. EPA4504487023A.
- EPA. 1988. Analysis of clean water act effluent guidelines pollutants: Summary of the chemicals regulated by industrial point source category. Washington, DC: U.S. Environmental Protection Agency. 40 CFR Parts 400-475.
- *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. EPA600890066A.
- *EPA. 1994. Methods for derivation of inhalation reference concentrations and application of inhalation dosimetry. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development. EPA600890066F.
- *EPA. 1997a. Determination of ammonia in estuarine and coastal waters by gas segmented continuous flow colorimetric analysis. Method 349.0. U.S. Environmental Protection Agency.
- *EPA. 1997b. Special report on environmental endocrine disruption: An effects assessment and analysis. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA630R96012.
- *EPA. 2001a. Ammonia-N in water and biosolids by ion-selective electrode potentiometry with preliminary distillation. Method 1689. Washington, DC: U.S. Environmental Protection Agency. EPA821R01012.
- *EPA. 2001b. Ammonia-N in water and biosolids by automated colorimetry with preliminary distillation. Method 1690. Washington, DC: U.S. Environmental Protection Agency. EPA821R01009.
- *EPA. 2002a. Chemical accident prevention provisions. List of substances. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 68.130. Table 1. <http://ecfr.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002b. Chemical accident prevention provisions. Table of toxic endpoints. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 68. Appendix A. <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002c. Emergency planning and notification. The list of extremely hazardous substances and their threshold planning quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 355. Appendix A. <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002d. Superfund, emergency planning, and community right-to-know programs. Designation, reportable quantities, and notification. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.4(a). <http://ecfrback.access.gpo.gov/>. May 02, 2002.

9. REFERENCES

- *EPA. 2002e. Tolerances and exemptions from tolerances for pesticide chemicals in food. Exemptions from the requirement of a tolerance. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 180.1001(c) and (d). <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002f. Tolerances and exemptions from tolerances for pesticide chemicals in food. Ammonia; exemption from the requirement of a tolerance. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 180.1003. <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002g. Toxic chemical release reporting: Community right-to-know. Chemicals and chemical categories to which this part applies. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 372.65(a). <http://ecfr.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002h. Water programs. Designation of hazardous substances. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 116.4. Table A. <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002i. Water programs. Determination of reportable quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 117.3. <http://ecfrback.access.gpo.gov/>. May 02, 2002.
- *EPA. 2002j. Effluent guidelines and standards. CFR Title 40: Protection of Environment. U.S. Environmental Protection Agency. <http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-N.htm>. May 31, 2002.
- *EPA. 2004. Acute exposure guideline levels (AEGs). Ammonia results. U.S. Environmental Protection Agency.
- *EPIWIN. 2000. Ammonia. <http://www.epa.gov/oppt/p2framework/docs/epiwin.htm>. July 1, 2004.
- Erismann J-W, Vermetten AWM, Asman WAH. 1988. Vertical distribution of gases and aerosols the behavior of ammonia and related components in the lower atmosphere. *Atmos Environ* 22(6):1153-1160.
- *Erxleben H, Simon J, Moskvina LN, et al. 2000. Automated procedures for the determination of ozone and ammonia contents in air by using the chromatomembrane method for gas-liquid extraction. *Fresenius J Anal Chem* 336(4):332-335.
- *Fangmeier A, Hadwiger-Fangmeier A, Van Der Eerden L, et al. 1994. Effects of atmospheric ammonia on vegetation: A review. *Environ Pollut* 86(1):43-82.
- *Farmer JC, Dawson GA. 1982. Condensation sampling of soluble atmospheric trace gases. *J Geophys Res* 87(C11):8931-8942.
- Farmer PM, Mulakkah T. 1990. The pathogenesis of hepatic encephalopathy. *Ann Clin Lab Sci* 20(2):91-97.
- *Fazekas IG. 1939. Experimental suprarenal hypertrophy induced by ammonia. *Endokrinologie* 21:315-337.
- FDA. 1973. GRAS (generally recognized as safe) food ingredients - ammonium ion. U.S. Food and Drug Administration. PB221235.

9. REFERENCES

- *FDA. 2001a. Direct food substances affirmed as generally recognized as safe. Ammonium chloride. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 184.1138. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001b. Direct food substances affirmed as generally recognized as safe. Ammonium hydroxide. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 184.1139. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001c. Direct food substances affirmed as generally recognized as safe. Ammonium sulfate. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 184.1143. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001d. Drug products containing certain active ingredients offered over-the-counter. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 310.545(a). <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001e. Food additives permitted in feed and drinking water of animals. Anhydrous ammonia. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 573.180. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001f. Substances generally recognized as safe. Ammonium hydroxide. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 582.1139. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FDA. 2001g. Substances generally recognized as safe. Ammonium sulfate. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 582.1143. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *FEDRIP. 2002. Federal research in Progress. Dialog Information Services, Inc.
- *FEDRIP. 2003. Federal research in Progress. Dialog Information Services, Inc.
- *Felipo V, Butterworth RF. 2002. Neurobiology of ammonia. *Prog Neurobiol* 67:259-279.
- *Felipo V, Grau E, Miñana MD, et al. 1993. Ammonium injection induces an *n*-methyl-d-aspartate receptor-mediated proteolysis of the microtubule-associated protein MAP-2. *J Neurochem* 60:1626-1630.
- *Felipo V, Hermenegildo C, Montoliu C, et al. 1998. Neurotoxicity of ammonia and glutamate: molecular mechanisms and prevention. *Neurotoxicology* 19(4-5):675-681.
- Felipo V, Miñana MD, Cabedo H, et al. 1994. L-Carnitine increases the affinity of glutamate for quisqualate receptors and prevents glutamate neurotoxicity. *Neurochem Res* 19(3):373-377.
- Felipo V, Monfort P, Fernandez-Marticorena I, et al. 2000. Activation of NMDA receptors in rat brain in vivo following acute ammonia intoxication. Characterization by in vivo brain microdialysis. *Eur J Neurosci* 12(Suppl 11):40.
- *Ferguson WS, Koch WC, Webster LB, et al. 1977. Human physiological response and adaptation to ammonia. *J Occup Med* 19:319-326.

9. REFERENCES

- *Fernandez JM, Croom WJ, Johnson AD, et al. 1988. Subclinical ammonia toxicity in steers: Effects on blood metabolite and regulatory hormone concentrations. *J Anim Sci* 66(12):3259-3266.
- *Fernandez JM, Croom WJ, Tate LP, et al. 1990. Subclinical ammonia toxicity in steers: Effects on hepatic and portal-drained visceral flux of metabolites and regulatory hormones. *J Anim Sci* 68(6):1726-1742.
- *Ferrier B, Martin M, Baverel G. 1988. Valproate-induced stimulation of renal production and excretion in the rat. *J Clin Chem Clin Biochem* 26:65-67.
- Ferreira EB, Ceddia RB, Curi R, et al. 1998. Swimming-exercise increases the capacity of perfused rat liver to produce urea from ammonia and L-glutamine. *Res Commun Mol Pathol Pharmacol* 102(3):289-303.
- Flessner MF, Wall SM, Knepper MA. 1992. Ammonium and bicarbonate transport in rat outer medullary collecting ducts. *Am J Physiol* 262(1 Pt 2):F1-F7.
- *Flury KE, Dines DE, Rodarte JR, et al. 1983. Airway obstruction due to inhalation of ammonia. *Mayo Clin Proc* 58:389-393.
- *Fox DL. 1987. Air pollution. *Anal Chem* 59:280R-294R.
- Freedman LR, Beeson PB. 1961. Experimental pyelonephritis. VIII. The effect of acidifying agents on susceptibility to infection. *Yale J Biol Med* 33:318-332.
- *Fürst P, Josephson B, Maschio G, et al. 1969. Nitrogen balance after intravenous and oral administration of ammonium salts to man. *J Appl Phys* 26:13-22.
- *Gaafar H, Girgis R, Hussein M, et al. 1992. The effect of ammonia on the respiratory nasal mucosa of mice. A histological and histochemical study. *Acta Otolaryngol (Stockh)* 112(2):339-342.
- Gad HA, El-Nasr ES, El-Naasan A, et al. 1994. The effect of some environmental conditions on the pregnant does and its maternal behavior. *J Anim Sci* 72(Suppl 1):155.
- *Galbally IE. 1985. The emission of nitrogen to the remote atmosphere: Background paper. *NATO ASI Ser C* 159:27-53.
- Galbally IE, Roy CR. 1983. The fate of nitrogen compounds in the atmosphere. *Dev Plant Soil Sci* 9:265-284.
- Garcia MV, Lopez-Mediavilla C, Juanes de la Pena MC, et al. 2003. Tolerance of neonatal rat brain to acute hyperammonemia. *Brain Res* 973:31-38.
- *Gay WMB, Crane CW, Stone WD. 1969. The metabolism of ammonia in liver disease: A comparison of urinary data following oral and intravenous loading of [¹⁵N]ammonium lactate. *Clin Sci* 37:815-823.
- *George A, Bang RL, Lari AR, et al. 2000. Liquid ammonia injury. *Burns* 26(4):409-413.
- George JD, Fail PA, Grizzle TB, et al. 1993. Reproductive toxicity evaluation of a pesticide/fertilizer mixture administered in the drinking water to mice. *Toxicologist* 13(1):77.

9. REFERENCES

- *Georgii HW, Gravenhorst G. 1977. The ocean as source or sink of reactive trace-gases. *Pure Appl Geophys* 115:503-511.
- Gibson GE, Zimmer A, Krook L, et al. 1971. Nucleic acids and brain and intestinal lesions in ammonia intoxicated mice [Abstract]. *Fed Proc* 30:578.
- *Gilbert GJ. 1988. Acute ammonia intoxication 37 years after ureterosigmoidostomy. *South Med J* 81(11):1443-1445.
- *Gilliam JW, Daniels RB, Lutz JF. 1974. Nitrogen content of shallow ground water in the North Carolina Coastal Plain. *J Environ Qual* 3(2):147-151.
- Giroux M, Bremont F, Salles JP, et al. 2002. Exhaled NH₃ and excreted NH₄⁺ in children in unpolluted or urban environments. *Environ Int* 28:197-202.
- *Giwerzman 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.
- Goldman AS, Yakovac WC. 1964. Salicylate intoxication and congenital anomalies. *Arch Environ Health* 8:648-656.
- *Gomzi M. 1999. Indoor air and respiratory health in preadolescent children. *Atmos Environ* 33(24-25):4081-4086.
- *Gomzi M, Šarić M. 1997. Respiratory impairment among children living in the vicinity of a fertilizer plant. *Int Arch Occup Environ Health* 70(5):314-320.
- *Goulding KWT, Bailey NJ, Bradbury NJ, et al. 1998. Nitrogen deposition and its contribution to nitrogen cycling and associated soil processes. *New Phytol* 139(1):49-58.
- *Graedel TE. 1978. Inorganic nitrogen compounds: Emission and detection. In: *Chemical compounds in the atmosphere*. New York, NY: Academic Press, 19.
- *Grant WM. 1974. Ammonia. In: *Toxicology of the eye*. 2nd edition. Springfield, IL: Charles C Thomas, 121-127.
- *Greenberg AE, Trussell RR, Clesceri LS, eds. 1985. Nitrogen (ammonia) standard methods for the examination of water and wastewater. Washington, DC: American Public Health Association, American Water Works Association, Water Pollution Control Federation, 374-391.
- Gregory JW, Beail N, Boyle NA, et al. 1989. Dietary treatment of hyperlysinemia. *Arch Dis Child* 64(5):716-720.
- *Gupta BN, Khanna RN, Data KK. 1979. Toxicological studies of ammonium sulfamate in rat after repeated oral administration. *Toxicology* 13:45-49.
- *Gustin P, Urbain B, Prouvost JF, et al. 1994. Effects of atmospheric ammonia on pulmonary hemodynamics and vascular permeability in pigs: Interaction with endotoxins. *Toxicol Appl Pharmacol* 125(1):17-26.

9. REFERENCES

*Guyton AC. 1981. The body fluids and kidneys. Textbook of medical physiology. Philadelphia: WB Saunders Company, 456-458, 889.

*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.

Hagiwara A, Shibata M, Kurata Y, et al. 1983. Long-term toxicity and carcinogenicity test of ammonia-process caramel colouring given to B6C3F1 mice in the drinking-water. Food Cosmet Toxicol 21:701-706.

*Harada K, Murawaki Y, Hirayama C. 1985. Comparative studies of nicotino-hydroxamic acid and neomycin on ammonia and urea metabolism in rats. Res Commun Chem Pathol Pharmacol 49:309-312.

*Hargreaves JA. 1998. Nitrogen biogeochemistry of aquaculture ponds. Aquaculture 166(3-4):181-212.

*Harper LA, Sharpe RR. 1995. Nitrogen dynamics in irrigated corn: Soil-plant nitrogen and atmospheric ammonia transport. Agron J 87(4):669-675.

Harrison RM, Sturges WT, Kitto A-MN, et al. 1990. Kinetics of evaporation of ammonium chloride and ammonium nitrate aerosols. Atmos Environ 24(7):1883-1888.

*Harward CN, McClenny WA, Hoell JM, et al. 1982. Ambient ammonia measurements in coastal Southeastern Virginia. Atmos Environ 16(10):2497-2500.

Hatch DJ, Jarvis SC, Dollard GJ. 1990. Measurements of ammonia emission from grazed grassland. Environ Pollut 65(4):333-346.

*Hatton DV, Leach CS, Beaudet AL, et al. 1979. Collagen breakdown and ammonia inhalation. Arch Environ Health 34:83-86.

*Hauser JR. 1984. Use of water hyacinth aquatic treatment systems for ammonia control and effluent polishing. J Water Pollut Control Fed 56(3):219-225.

Hawkins PA, DeJoseph MR, Hawkins RA. 1996. Eliminating metabolic abnormalities of portacaval shunting by restoring normal liver blood flow. Am J Physiol 270(6 PT 1):E1037-E1042.

Hawkins RA, Miller AL, Nielsen RC, et al. 1973. The acute action of ammonia on rat brain metabolism *in vivo*. Biochem J 134:1001-1008.

*HazDat. 2004. HazDat Database: ATSDR's Hazardous Substance Release and Health Effects Database. Atlanta, GA: Agency for Toxic Substances and Disease Registry. www.atsdr.cdc.gov/hazdat.html. July 02, 2004.

Hazell AS, Norenberg MD. 1996. Ammonia and manganese increase arginine uptake in cultured astrocytes. J Neurochem 66(Suppl 1):S69.

Hazell AS, Norenberg MD. 1998. Ammonia and manganese increase arginine uptake in cultured astrocytes. Neurochem Res 23(6):869-873.

9. REFERENCES

- *Heederik D, Brouwer R, Biersteker K, et al. 1991. Relationship of airborne endotoxin and bacteria levels in pig farms with the lung function and respiratory symptoms of farmers. *Int Arch Occup Environ Health* 62(8):595-601.
- *Heederik D, van Zwieten R, Brouwer R. 1990. Across-shift lung function changes among pig farmers. *Am J Ind Med* 17(1):57-58.
- *Hegg DA, Radke LF, Hobbs PV, et al. 1987. Nitrogen and sulfur emissions from the burning of forest products near large urban areas. *J Geophys Res* 92:701-714.
- *Hegg DA, Radke LF, Hobbs PV. 1988. Ammonia emissions from biomass burning. *Geophys Res Lett* 15(4):335-337.
- *Heifer U. 1971. [Casuistic contribution to acute lethal inhalation poisoning by ammonia.] *Lebensversicherungsmedizin* 22:60-62. (German)
- Heindel JJ, Chapin RE, Gulati DK, et al. 1994. Assessment of the reproductive and developmental toxicity of pesticide/fertilizer mixtures based on confirmed pesticide contamination in California and in Iowa groundwater. *Fundam Appl Toxicol* 22:605-621.
- Heindel JJ, George JD, Fail PA, et al. 1997. Reproductive toxicology. Pesticide/fertilizer mix III (Iowa). *Environ Health Perspect Suppl* 105(Suppl 1):375-376.
- Heindel JJ, Price CJ, George JD, et al. 1992. Developmental toxicity evaluation in rats of a pesticide/fertilizer mixture selected to mimic environmental exposure. *Teratology* 45(5):500.
- *Helmers S, Top FH, Knapp LW. 1971. Ammonia injuries in agriculture. *J Iowa Med Soc* 61:271-280.
- *Henderson Y, Haggard HW. 1927. Group II. Irritant gases, their action, acute and chronic, and sequelae. Noxious gases and the principles of respiration influencing their action. New York: Chemical Catalog Company.
- *Henry RJ. 1964. Non-protein nitrogenous constituents. In: *Clinical chemistry principles and technics*. Los Angeles, CA: Harper & Row, 325-331.
- Herbst E, DeFrees DJ, Talbi D, et al. 1991. Calculations on the rate of the ion-molecule reaction between NH_3^+ and H_2 . *J Chem Phys* 94(12):7842-7849.
- Hermenegildo C, Marcaida G, Montoliu C, et al. 1996. NMDA receptor antagonists prevent acute ammonia toxicity in mice. *Neurochem Res* 21(10):1237-1244.
- Hermenegildo C, Monfort P, Felipo V. 2000. Activation of N-methyl-d-aspartate receptors in rat brain in vivo following acute ammonia intoxication: Characterization by in vivo brain microdialysis. *Hepatology* 31(3):709-715.
- *Herrera L, Kazemi H. 1980. Interaction between ammonia and CO_2 as ventilatory stimulants. *Bull Eur Physiopathol Respir* 16:459-468.
- *Hilado CJ, Casey CJ, Furst A. 1977. Effect of ammonia on swiss albino mice. *J Combust Toxicol* 4:385-388.

9. REFERENCES

- *Hilado CJ, Cumming HG, Machado AM, et al. 1978. Effect of individual gaseous toxicants on mice. *Proc West Pharmacol Soc* 21:159-160.
- *Hindfelt B, Plum F. 1975. L-methionine DL-sulphoximine and acute ammonia toxicity. *J Pharm Pharmacol* 27:456-458.
- Hindfelt B, Siesjo BK. 1971. Cerebral effects of acute ammonia intoxication II. The effect upon energy metabolism. *Scand J Clin Lab Invest* 28:365-374.
- *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.
- *Hoff JD, Nelson DW, Sutton AL. 1981. Ammonia volatilization from liquid swine manure applied to cropland. *J Environ Qual* 10(1):90-95.
- *Holness DL, Purdham JT, Nethercott JR. 1989. Acute and chronic respiratory effects of occupational exposure to ammonia. *Am Ind Hyg Assoc J* 50(12):646-650.
- *HSDB. 2003. Ammonia. Hazardous Substances Data Bank. National Library of Medicine. <http://toxnet.nlm.nih.gov>. June 27, 2004.
- Huddleston GM, Gillespie WB, Rodgers JH. 2000. Using constructed wetlands to treat biochemical oxygen demand and ammonia associated with a refinery effluent. *Ecotoxicol Environ Saf* 45(2):188-193.
- Hunt RD. 1977. Measurement of partial pressure of ammonia in breath and arterial blood: evidence for secretion of ammonia into expired gas by metabolism of monoamines in the lung. *Diss Abstr Int B* 37:3279.
- *Huizenga JR, Tangerman A, Gips CH. 1994. Determination of ammonia in biological fluids. *Ann Clin Biochem* 31(6):529-543.
- *Huizenga JR, Gips CH, Tangerman A. 1996. The contribution of various organs to ammonia formation: A review of factors determining the arterial ammonia concentration. *Ann Clin Biochem* 33:23-30.
- Hultberg B, Isaksson A, Bugge M. 1988. The effect of porta-caval shunt ammonia infusion and alcohol administration on rat plasma beta hexosaminidase. *Liver* 8(3):129-131.
- *Hutchinson GL, Viets FG. 1969. Nitrogen enrichment of surface water by absorption of ammonia volatilized from cattle feedlots. *Science* 166:514-515.
- *Hutchinson GL, Mosier AR, Andre CE. 1982. Ammonia and amine emissions from a large cattle feedlot. *J Environ Qual* 11:288-293.
- Hytonen M, Leino T, Sala E, et al. 1997. Nasal provocation test in the diagnostics of hairdressers' occupational rhinitis. *Acta Otolaryngol Suppl (Stockh)* 529:133-136.
- *IBT. 1974. Irritation threshold evaluation study with ammonia. Report to International Institute of Ammonia Refrigeration by Industrial Biotest Laboratories, Inc. 663-03161. (as cited in NIOSH 1974)

9. REFERENCES

- *Iles JF, Jack JJB. 1980. Ammonia: Assessment of its action on postsynaptic inhibition as a cause of convulsions. *Brain* 103:555-578.
- Ilies P, Mavinic DS. 2001. A pre- and post-denitrification system treating a very high ammonia landfill leachate: Effects of pH change on process performance. *Environ Technol* 22(3):289-300.
- *Industrial Bio-Test Laboratories, Inc. 1973. Irritation threshold evaluation study with ammonia. Report to international institute of ammonia refrigeration (IBT No. 663-03160). Northbrook, IL: Industrial Bio-Test Laboratories, Inc.
- *IRIS. 2004. Integrated Risk Information System. <http://www.epa.gov/iris>. May 02, 2002.
- *Irwin JG, Williams NL. 1988. Acid rain: Chemistry and transport. *Environ Pollut* 50:29-59.
- Itzhak Y, Norenberg MD. 1994. Attenuation of ammonia toxicity in mice by PK 11195 and pregnenolone sulfate. *Neurosci Lett* 182(2):251-254.
- *Iwaoka WT, Krone CA, Sullivan JJ, et al. 1981. Effect of pH and ammonium ions on mutagenic activity in cooked beef. *Cancer Lett* 12:335-341.
- *Izumi H, Karita K. 1993. Reflex vasodilatation in the cat lip elicited by stimulation of nasal mucosa by chemical irritants. *Am J Physiol* 265(4 Pt 2):R733-R738.
- Jaffe HL, Bodansky A, Blair JE. 1932. The effects of parathormone and ammonium chloride on the bones of rabbits. *J Exp Med* 55:695-701.
- *Janicki RH. 1970. Renal adaptation during chronic NH₄Cl acidosis in the rat: No role for hyperplasia. *Am J Physiol* 219:613-618.
- *Jarudi MD, Golden MD. 1973. Ammonia eye injuries. *J Iowa Med Soc* 63:260-263.
- *Jeffers LJ, Dubow RA, Zieve L, et al. 1988. Hepatic encephalopathy and orotic aciduria associated with hepatocellular carcinoma in a noncirrhotic liver. *Hepatology* 8(1):78-81.
- *Jin H, Yang X, Yu H, et al. 1999. Identification of ammonia and volatile phenols as primary toxicants in a coal gasification effluent. *Bull Environ Contam Toxicol* 63(3):399-406.
- *Jingsheng C, Xuemin G, Dawei H, et al. 2000. Nitrogen contamination in the Yangtze river system, China. *J Hazard Mater* 73(2):107-113.
- *Johnson CA, Sigg L, Zobrist J. 1987. Case studies on the chemical composition of fogwater: The influence of local gaseous emissions. *Atmos Environ* 21(11):2365-2374.
- Johnson L. 1975. The effects of anhydrous ammonia on the environment and its direct effect on humans. *J Environ Health* 37:462-465.
- *Jones JG, Simon BM, Horsley RW. 1982. Microbiological sources of ammonia in freshwater lake sediments. *J Gen Microbiol* 128:2823-2831.
- Jones RD, Schwab AP. 1993. Nitrate leaching and nitrite occurrence in a fine-textured soil. *Soil Sci* 155(4):272-282.

9. REFERENCES

- *Jones W, Morring K, Olenchock SA, et al. 1984. Environmental study of poultry confinement buildings. *Am Ind Hyg Assoc J* 45(11):760-766.
- *Kalandarov S, Bychkov VP, Frenkel ID, et al. 1984. [Effect of an increased ammonia content in an enclosed atmosphere on the adrenocortical system in man.] *Kosm Biol Aviakosm Med* 18:75-77. (Russian)
- Kamin H, Handler P. 1957. Amino acid and protein metabolism. *Annu Rev Biochem* 26:419-490.
- Kanamori K, Ross BD, Chung JC, et al. 1996. Severity of hyperammonemic encephalopathy correlates with brain ammonia level and saturation of glutamine synthetase in vivo. *J Neurochem* 67(4):1584-1594.
- Kapeghian JC, Jones AB, Waters IW. 1985. Effects of ammonia on selected hepatic microsomal enzyme activity in mice. *Bull Environ Contam Toxicol* 35:15-22.
- *Kapeghian JC, Mincer HH, Jones AL, et al. 1982. Acute inhalation toxicity of ammonia in mice. *Bull Environ Contam Toxicol* 29:371-378.
- *Kass I, Zamel N, Dobry CA, et al. 1972. Bronchiectasis following ammonia burns of the respiratory tract. *Chest* 62(3):282-285.
- *Kauppinen T. 1986. Occupational exposure to chemical agents in the plywood industry. *Ann Occup Hyg* 30(1):19-29.
- *Kawano S, Tsujii M, Fusamoto H, et al. 1991. Chronic effect of intragastric ammonia on gastric mucosal structures in rat. *Dig Dis Sci* 36(1):33-38.
- *Kelly TJ, Tanner RL, Newman L, et al. 1984. Trace gas and aerosol measurements at a remote site in the Northeast U.S. *Atmos Environ* 18(12):2565-2576.
- *Kemp MK, Dodds WK. 2002. The influence of ammonium, nitrate, and dissolved oxygen concentrations on uptake, nitrification, and denitrification rates associated with prairie stream substrata. *Limnol Oceanogr* 47(5):1380-1393.
- Kerr LA, McCoy CP, Boyle CR, et al. 1990. Effects of ammoniation of endophyte fungus-infested fescue hay on serum prolactin concentration and rectal temperature in beef cattle. *Am J Vet Res* 51(1):76-78.
- *Kerstein MD, Schaffzin DM, Hughes WB, et al. 2001. Acute management of exposure to liquid ammonia. *Mil Med* 166(10):913-914.
- Khera KS. 1991a. Chemically-induced alterations in maternal homeostasis and conceptual histology: their etiologic significance in rat fetal anomalies [Abstract]. *Teratology* 43(5):414.
- Khera KS. 1991b. Chemically induced alterations in maternal homeostasis and histology of conceptus: their etiologic significance in rat fetal anomalies. *Teratology* 44(3):259-297.
- *Kienzle E, Wilms-Eilers S. 1994. Struvite diet in cats: effect of ammonium chloride and carbonates on acid base balance of cats. *J Nutr* 124(Suppl 12):2652S-2659S.

9. REFERENCES

- *Kimura T, Budka H. 1986. Glial fibrillary acidic protein and S-100 protein in human hepatic encephalopathy: Immunocytochemical demonstration of dissociation of two glia associated proteins. *Acta Neuropathol* 70:17-21.
- *Kirchner M, Braeutigam S, Ferm M, et al. 1999. Field intercomparison of diffusive samplers for measuring ammonia. *J Environ Monitor* 1(3):259-265.
- *Klein J, Olson KR, McKinney HE. 1985. Caustic injury from household ammonia. *Am J Emerg Med* 3:320.
- *Kleinman MT, Hyde DM, Bufalino C, et al. 2003. Toxicity of chemical components of fine particles inhaled by aged rats: Effects of concentration. *J Air Waste Manage Assoc* 53:1080-1087.
- *Klendshoj NC, Rejent TA. 1966. Tissue levels of some poisoning agents less frequently encountered. *J Forensic Sci* 11(1):75-80.
- Kligerman AD, Chapin RE, Erexson GL, et al. 1993. Analyses of cytogenetic damage in rodents following exposure to simulated groundwater contaminated with pesticides and a fertilizer. *Mutat Res* 300(2):125-134.
- Knapka JJ, Smith KP, Judge FJ. 1977. Effect of crude fat and crude protein on reproduction and weanling growth in four strains of inbred mice. *J Nutr* 107:61-69.
- *Knapp KT, Durham JL, Ellestad TG. 1986. Pollutant sampler for measurements of atmospheric acidic dry deposition. *Environ Sci Tech* 20:633-637.
- *Koenig H, Koenig R. 1949. Production of acute pulmonary edema by ammonium salts. *Proc Soc Exp Biol Med* 70(3):375-380.
- Konsenko E, Felip V, Minana MD, et al. 1991. Ammonium ingestion prevents depletion of hepatic energy metabolites induced by acute ammonium intoxication. *Arch Biochem Biophys* 290(2):484-488.
- *Konsenko E, Kaminsky YG, Felipo V, et al. 1993. Chronic hyperammonemia prevents changes in brain energy and ammonia metabolites induced by acute ammonium intoxication. *Biochim Biophys Acta* 1180(3):321-326.
- *Kosenko E, Kaminisky Y, Grau E, et al. 1994. Brain ATP depletion induced by acute ammonia intoxication in rats is mediated by activation of the NMDA receptor and Na⁺, K⁽⁺⁾-ATPase. *J Neurochem* 63(6):2172-2178.
- Kosenko E, Kaminsky Y, Grau E, et al. 1995. Nitroarginine, an inhibitor of nitric oxide synthetase, attenuates ammonia toxicity and ammonia-induced alterations in brain metabolism. *Neurochem Res* 20(4):451-456.
- Kosenko E, Kaminiski Y, Lopata O, et al. 1999. Blocking NMDA receptors prevents the oxidative stress induced by acute ammonia intoxication. *Free Radic Biol Med* 22(11/12):1369-1374.
- Kosenko E, Llansola M, Montoliu C. 2003a. Glutamine synthetase activity and glutamine content in brain: modulation by NMDA receptors and nitric oxide. *Neurochem Int* 43:493-499.

9. REFERENCES

- Kosenko E, Venediktova N, Kaminsky Y, et al. 2003b. Sources of oxygen radicals in brain in acute ammonia intoxication in vivo. *Brain Res* 981:193-200.
- Koyuncuoglu H, Keyer M, Simsek S, et al. 1978. Ammonia intoxication: Changes of brain levels of putative neurotransmitters and related compounds and its relevance to hepatic coma. *Pharmacol Res Commun* 10(9):787-807.
- *Krajenbrink GJW, Ronen D, Van Duijvenbooden W, et al. 1988. Monitoring of recharge water quality under woodland. *J Hydrol* 98:83-102.
- *Kramer DA. 2000. Nitrogen. U.S. Geological survey minerals yearbook. <http://minerals.usgs.gov/minerals/pubs/commodity/nitrogen/480400.pdf>. June 05, 2001.
- *Kramer DA. 2002. Nitrogen (fixed)-ammonia. U.S. Geological survey, mineral commodity summaries. <http://minerals.usgs.gov/minerals/pubs/commodity/nitrogen/480302.pdf>. July 06, 2002.
- Kramer DA. 2003. Nitrogen. U.S. Geological survey minerals yearbook. <http://minerals.usgs.gov/minerals/pubs/commodity/nitrogen/nitromyb02.pdf>. July 19, 2003.
- Kramer DA. 2004. Nitrogen (fixed)-ammonia. U.S. Geological survey, mineral commodity summaries. <http://minerals.usgs.gov/minerals/pubs/commodity/nitrogen/nitromcs04.pdf>. June 15, 2004.
- *Kretzschmar HA, DeArmond SJ, Forno LS. 1985. Measurement of GFAP in hepatic encephalopathy by ELISA and transblots. *J Neuropathol Exp Neurol* 44:459-471.
- *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.
- *Kucey RMN. 1988. Ammonia loss following surface application of urea fertilizers to a calcareous soil. *Commun Soil Sci Plant Anal* 19(4):431-445.
- Kukkonen J, Savolainen AL, Valkama I, et al. 1993. Long-range transport of ammonia released in a major chemical accident at Ionava, Lithuania. *J Hazard Mater* 35(1):1-16.
- Kullman GJ, Thorne PS, Waldron F, et al. 1998. Organic dust exposures from work in dairy barns. *Am Ind Hyg Assoc J* 59:403-413.
- *Kumar S. 1985. An eulerian model for scavenging of pollutants by raindrops. *Atmos Environ* 19(5):769-778.
- *Kupprat I, Johnson RE, Hertig BA. 1976. Ammonia: A normal constituent of expired air during rest and exercise. *Fed Proc* 35:478.
- Kuta CC, Maickel RP, Borowitz JL. 1984. Modification of drug action by hyperammonemia. *J Pharmacol Exp Ther* 229:85-90.

9. REFERENCES

- *Lamar C. 1970. Ammonia toxicity in rats: Protection by α -methylglutamic acid. *Toxicol Appl Pharmacol* 17:795-803.
- *Landahl HD, Herrmann RG. 1950. Retention of vapors and gases in the human nose and lung. *Arch Ind Hyg Occup Med* 1:36-45.
- *Lane M, Gardner DK. 1994. Increase in postimplantation development of cultured mouse embryos by amino acids and induction of fetal retardation and exencephaly by ammonium ions. *J Reprod Fertil* 102(2):305-312.
- *Langland M. 1992. Atmospheric deposition of ammonia from open manure-storage lagoons in south-central Pennsylvania. *Environ Professional* 14:28-37.
- Larsen FS, Gottstein J, Blei AT. 2001. Cerebral hyperemia and nitric oxide synthase in rats with ammonia-induced brain edema. *J Hepatol* 34(4):548-554.
- *Larson T, Frank R, Covert D, et al. 1980. The chemical neutralization of inhaled sulfuric acid aerosol. *Am J Ind Med* 1:449-452.
- Last JA. 1989. Effects of inhaled acids on lung biochemistry. *Environ Health Perspect* 79:115-119.
- *Latenser BA, Lucktong TA. 2000. Anhydrous ammonia burns: Case presentation and literature review. *J Burn Care Rehab* 21(1 PT 1):40-42.
- *Lau N-C, Charlson RJ. 1977. On the discrepancy between background atmospheric ammonia gas measurements and the existence of acid sulfates as a dominant atmospheric aerosol. *Atmos Environ* 11:475-478.
- *LeBlanc JR, Madhavan S, Porter RE. 1978. Ammonia. In: Grayson M, Eckroth D, eds. *Kirk-Othmer encyclopedia of chemical technology*. 3rd ed. Vol. 2. New York, NY: John Wiley & Sons, Inc., 470-516.
- *Leduc D, Gris P, Lheureux P, et al. 1992. Acute and long term respiratory damage following inhalation of ammonia. *Thorax* 47(9):755-757.
- *Lee DS, Bouwman AF, Asman WAH, et al. 1997. Emissions of nitric oxide, nitrous oxide and ammonia from grasslands on a global scale. In: Jarvis SC, Pain BF, eds. *Gaseous nitrogen emissions from grasslands*. New York, NY: Cab International, 353-371.
- *Lee HS, Chan CC, Tan KT, et al. 1993. Burnisher's asthma-a case due to ammonia from silverware polishing. *Singapore Med J* 34(6):565-566.
- Lee JH, Kim WH, Cho H, et al. 1998. N-carbamoyl-L-glutamate plus L-arginine can protect ammonia intoxication in rats with reduced functional liver mass. *Biochem Biophys Res Commun* 248(2):391-394.
- Lee WM, Huang WM, Chen YY. 2001. Effect of relative humidity on mixed aerosols in atmosphere. *J Environ Sci Health Part A* 36(4):533-544.
- *Legters L, Morton JD, Nightingale TE, et al. 1981. Biological effects of short, high-level exposure to gases: Ammonia, carbon monoxide, sulfur dioxide and nitrogen oxides: Final summary report. Fort Detrick, MD: U.S. Army Medical Research and Development Command.

9. REFERENCES

- *Lehninger AL. 1975. *Biochemistry: The molecular basis of cell structure and function*. 2nd ed. New York: Worth Publishers, Inc., 579-585.
- Lemann J, Litzow JR, Lennon EJ. 1966. The effects of chronic acid loads in normal man: Further evidence for the participation of bone mineral in the defense against chronic metabolic acidosis. *J Clin Invest* 45(10):1608-1614.
- *Leonard JJ, Feddes JJR, McQuitty JB. 1984. Air quality in commercial broiler housing. *Can Agric Eng* 26(1):65-72.
- Leonard KM, Swanson GW. 2001. Comparison of operational design criteria for subsurface flow constructed wetlands for wastewater treatment. *Water Sci Technol* 43(11):301-307.
- *Leonardos G, Kendall D, Barnard N. 1969. Odor threshold determinations of 53 odorant chemicals. *J Air Pollut Control Assoc* 19:91-95.
- *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.
- *Levine JS, Augustsson TR, Hoell JM. 1980. The vertical distribution of tropospheric ammonia. *Geophys Res Lett* 7(5):317-320.
- *Levy DM, Divertie MB, Litzow TJ, et al. 1964. Ammonia burns of the face and respiratory tract. *JAMA* 190(10):95-98.
- *Liao CM, Bundy DS. 1995. Quantification of ventilation on distribution of gaseous pollutants emitted from stored swine manure. *J Environ Sci Health B* 30(6):859-893.
- Lide DR, ed. 1988. *CRC handbook of chemistry and physics*. 68th ed. Boca Raton, FL: CRC Press, Inc., 4-39.
- *Lide DR, ed. 1998. *CRC handbook of chemistry and physics*. 79th ed. Boca Raton, FL: CRC Press, Inc.
- *Liebhardt WC, Golt C, Tupin J. 1979. Nitrate and ammonium concentrations of ground water resulting from poultry manure applications. *J Environ Qual* 8(2):211-215.
- Lin S, Raabe W. 1985. Ammonia intoxication: Effects on cerebral cortex and spinal cord. *J Neurochem* 44:1252-1258.
- Lipsky RH, Vemuri MC, Silverman SJ. 1988. Changes in nuclear proteins of astrocytes as a result of acute ammonia or ethanol exposure. *Neurochem Int* 12(4):519-524.
- *Livingston, AL. 1978. Forage plant estrogens. *J Toxicol Environ Health* 4:301-324.
- *Llansola M, Erceg S, Hernandez-Viadel M. 2002. Prevention of ammonia and glutamate neurotoxicity by carnitine: molecular mechanisms. *Metab Brain Dis* 17(4):389-397.

9. REFERENCES

- *Lobasov M, Smirnov F. 1934. On the nature of the action of chemical agents on mutational process in *Drosophila melanogaster*. II. The effect of ammonia on the occurrence of lethal transgenerations. *C R Seances Acad Sci Roum* 3:177-178.
- Lobley GE, Connell A, Lomax MA, et al. 1995. Hepatic detoxification of ammonia in the ovine liver: possible consequences for amino acid catabolism. *Br J Nutr* 73(5):667-685.
- *Lopez G, Dean BS, Krenzlok EP. 1988. Oral exposure to ammonia inhalants: A report of 8 cases. *Vet Hum Toxicol* 30:350.
- *Lotspeich WD. 1965. Renal hypertrophy in metabolic acidosis and its relation to ammonia excretion. *Am J Physiol* 208:1135-1142.
- Lu Y, Wassmann R, Neue HU, et al. 2000. Dissolved organic carbon and methane emissions from a rice paddy fertilized with ammonium and nitrate. *J Environ Qual* 29(6):1733-1740.
- *MacCarthy P, Klusman RW, Rice JW. 1987. Water analysis. *Anal Chem* 59:308R-337R.
- *MacEwen JD, Vernot EH. 1972. Toxic hazards research unit - annual technical report. Wright Patterson AFB, OH: Aerospace Medical Research Laboratory, AD755358. AMRLTR7262, 70-73.
- *MacEwen JD, Theodore J, Vernot EH. 1970. Human exposure to EEL concentrations of monomethylhydrazine. In: Proceedings 1st annual conference on environmental toxicology Wright-Patterson Air Force Base, OH: Aerospace Medical Research Laboratory. AMRLTR70102, 355-363.
- *Mahendrappa MK. 1982. Effects of SO₂ pollution on nitrogen transformation in some organic soils of northeastern New Brunswick: Ammonia volatilization. *Can J For Res* 12:458-462.
- *Malcolm SJ, Battersby NS, Stanley SO, et al. 1986. Organic degradation, sulphate reduction and ammonia production in the sediments of Loch Eil, Scotland. *Estuarine Coastal Shelf Sci* 23:689-706.
- *Manninen A. 1988. Analysis of airborne ammonia: Comparison of field methods. *Ann Occup Hyg* 32(3):399-404.
- *Manninen ATA, Savolainen H. 1989. Effect of short-term ammonia inhalation on selected amino acids in rat brain. *Pharmacol Toxicol* 64(3):244-246.
- Manninen A, Anttila S, Savolainen H. 1988. Rat metabolic adaptation to ammonia inhalation. *Proc Soc Exp Biol Med* 187(3):278-281.
- *Marcaggi P, Coles JA. 2001. Ammonium in nervous tissue: transport across cell membranes, fluxes from neurons to glial cells, and role in signalling. *Prog Neurobiol* 64:157-183.
- *Marcaida G, Felipo V, Hermenegildo C, et al. 1992. Acute ammonia toxicity is mediated by the NMDA type of glutamate receptors. *FEBS Lett* 296(1):67-68.
- Marconi AM, Battaglia FC, Meschia G, et al. 1989. A comparison of amino acid arteriovenous differences across the liver and placenta of the fetal lamb. *Am J Physiol* 257(6 Pt 1):E909-E915.
- Martinelle K, Haggstrom L. 1993. Mechanisms of ammonia and ammonium ion toxicity in animal cells: Transport across cell membranes. *J Biotechnol* 30(3):339-350.

9. REFERENCES

- *Maswoswe SM, Cyr DM, Griffith AD, et al. 1986. The effect of sodium benzoate on ammonia toxicity in rats. *Biochem Biophys Res Commun* 138(1):369-373.
- Matkowskyj KA, Marrero JA, Carroll RE, et al. 1999. Azoxymethane-induced fulminant hepatic failure in C57BL/6J mice: characterization of a new animal model. *Am J Physiol* 277(2 PT 1):G455-G462.
- Matsuoka M, Igisu H. 1993. Comparison of the effects of L-carnitine, D-carnitine and acetyl-L-carnitine on the neurotoxicity of ammonia. *Biochem Pharmacol* 46(1):159-164.
- Matsuoka M, Igisu H, Kohriyama K, et al. 1991. Suppression of neurotoxicity of ammonia by L-carnitine. *Brain Res* 567(2):328-331.
- *Matthews DA, Effler SW, Matthews CM. 2000. Ammonia and toxicity criteria in polluted Onondaga Lake, New York. *Water Environ Res* 72(6):731-741.
- Mautz WJ, Kleinman MT, Bhalla DK, et al. 2001. Respiratory tract responses to repeated inhalation of an oxidant and acid gas-particle air pollutant mixture. *Toxicol Sci* 61(2):331-341.
- *Mayan MH, Merilan CP. 1972. Effects of Ammonia inhalation on respiration rate of rabbits. *J Anim Sci* 34:448-452.
- Mayan MH, Merilan CP. 1976. Effects of ammonia inhalation on young cattle. *N Z Vet J* 24:221-224.
- *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.
- McBurney MI, Van Soest PJ, Jeraci JL. 1987. Colonic carcinogenesis: the microbial feast or famine mechanism. *Nutr Cancer* 10:23-28.
- McCandless DW. 1981. Metabolic turnover in the reticular activating system in ammonia induced coma. *Neurobehav Toxicol Teratol* 3:257-260.
- McCandless DW, Schenker S. 1981. Effect of acute ammonia intoxication on energy stores in the cerebral reticular activating system. *Exp Brain Res* 44:325-330.
- McCandless DW, Looney GA, Modak AT, et al. 1985. Cerebral acetylcholine and energy metabolism changes in acute ammonia intoxication in the lower primate *Tupaia glis*. *J Lab Clin Med* 106:183-186.
- McCubbin DR, Apelberg BJ, Roe S, et al. 2002. Livestock ammonia management and particulate-related health benefits. *Environ Sci Technol* 36(6):1141-1146.
- *McGuinness R. 1969. Ammonia in the eye. *Br Med J* 2:575.
- McKhann GM, Tower DB. 1961. Ammonia toxicity and cerebral oxidative metabolism. *Am J Physiol* 200:420-424.
- McKinney PE, Brent J, Kulig K. 1994. Acute zinc chloride ingestion in a child: Local and systemic effects. *Ann Emerg Med* 23(6):1383-1387.

9. REFERENCES

Megarbane B, Bruneel F, Bedos JP, et al. 2000. Ammonium chloride poisoning: a misunderstood cause of metabolic acidosis with normal anion gap. *Intensive Care Med* 26(12):1869.

*Mégraud F, Neman-Simha V, Brugmann D. 1992. Further evidence of the toxic effect of ammonia produced by *Helicobacter pylori* urease on human epithelial cells. *Infect Immun* 60(5):1858-1863.

*Melbostad E, Eduard W. 2001. Organic dust-related respiratory and eye irritation in Norwegian farmers. *Am J Ind Med* 39(2):209-217.

*Metges CC, Petzke KH, El-Khoury AE, et al. 1999. Incorporation of urea and ammonia nitrogen into ileal and fecal microbial proteins and plasma free amino acids in normal men and ileostomates. *Am J Clin Nutr* 70(6):1046-1058.

*Meybeck M. 1982. Carbon, nitrogen, and phosphorus transport by world rivers. *Am J Sci* 282:401-450.

*Meyerhoff ME, Robins RH. 1980. Disposable potentiometric ammonia gas sensors for estimation of ammonia in blood. *Anal Chem* 52(14):2383-2387.

Michaels RA. 1999. Emergency planning and the cute toxic potency of inhaled ammonia. *Environ Health Perspect* 107(8):617-627.

Michoudet C, Chauvin MF, Baverel G. 1994. Glutamine synthesis from glucose and ammonium chloride by guinea-pig kidney tubules. *Biochem J* 297:69-74.

*Millea TP, Kucan JO, Smoot EC. 1989. Anhydrous ammonia injuries. *J Burn Care Rehab* 10(5):448-453.

Miñana MD, Felipe V, Grisolia S. 1988. Protective effect of long term ammonium ingestion against acute ammonium intoxication. *Biochem Biophys Res Commun* 153(3):979-983.

*Miñana MD, Felipe V, Grisolia S. 1989a. Assembly and disassembly of brain tubulin is affected by high ammonia levels. *Neurochem Res* 14(3):235-238.

*Miñana MD, Felipe V, Quel A, et al. 1989b. Selective regional distribution of tubulin induced in cerebrum by hyperammonemia. *Neurochem Res* 14(12):1241-1243.

Miñana MD, Hermenegildo C, Llsansola M, et al. 1996. Carnitine and choline derivatives containing a trimethylamine group prevent ammonia toxicity in mice and glutamate toxicity in primary cultures of neurons. *J Pharmacol Exp Ther* 279(1):194-19.

*Miñana MD, Marcaida G, Grisolia S, et al. 1995. Prenatal exposure of rats to ammonia impairs NMDA receptor function and affords delayed protection against ammonia toxicity and glutamate neurotoxicity. *J Neuropathol Exp Neurol* 54(5):644-650.

Minelli A, Lyons S, Nolte C, et al. 2000. Ammonium triggers calcium elevation in cultured mouse microglial cells by initiating Ca²⁺ release from thapsigargin-sensitive intracellular stores. *Pflugers Arch* 439(3):370-377.

9. REFERENCES

- *Mishra S, Singh V, Jain A, et al. 2001. Simultaneous determination ammonia, aliphatic amines, aromatic amines and phenols at microgram 1-1 levels in environmental waters by solid-phase extraction of their benzoyl derivatives and gas chromatography-mass spectrometry. *Analyst* 126(10):1663-1668.
- *Mitz SV, Giesy JP. 1985. Sewage effluent biomonitoring. II. Biochemical indicators of ammonia exposure in channel catfish. *Ecotoxicol Environ Saf* 10:40-52.
- *Mohanachari V, Reddy KS, Indiri K. 1984. Metabolic fate of ammonia in the rat after ethanol loading. *Toxicol Lett* 20:225-228.
- *Moller D, Schieferdecker H. 1985. A relationship between agricultural NH₃ emissions and the atmospheric SO₂ content over industrial areas. *Atmos Environ* 19(5):695-700.
- Monfort P, Kosenko E, Erceg S. 2002. Molecular mechanism of acute ammonia toxicity: role of NMDA receptors. *Neurochem Int* 41:95-102.
- *Montague TJ, Macneil AR. 1980. Mass ammonia inhalation. *Chest* 77:496-498.
- *Morgan SE. 1997. Ammonia pipeline rupture: Risk assessment to cattle. *Vet Hum Toxicol* 39(3):159-161.
- *Mori S, Kaneko H, Mitsuma T, et al. 1998. Implications of gastric topical bioactive peptides in ammonia-induced acute gastric mucosal lesions in rats. *Scand J Gastroenterol* 33(4):386-393.
- Morimoto Y, Ukida M, Tsuji T. 1988. Dynamic relationship between urea and glutamine synthesis in the mechanism of ammonia detoxication: A tracer study using ¹⁵NH₄Cl in fulminant hepatic failure rats. *Gastroenterol Jpn* 23(5):538-545.
- *Morris JC. 1978. Chemistry of aqueous chlorine in relation to water chlorination. In: Jolley RL, ed. *Water chlorination: Environmental impact and health effects*. Ann Arbor, MI: Ann Arbor Sci Pub, 21-36.
- *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.
- *Mossberg SM, Ross G. 1967. Ammonia, movement in the small intestine: Preferential transport by the ileum. *J Clin Invest* 46(4):490-498.
- Mouille B, Morel E, Robert V, et al. 1999. Metabolic capacity for L-citrulline synthesis from ammonia in rat isolated colonocytes. *Biochim Biophys Acta* 1427(3):401-407.
- *Mulder JS, Van der Zalm HO. 1967. [Fatal case of ammonia poisoning.] *T Soc Genesck* 45:458. (German)
- *Munger JW. 1982. Chemistry of atmospheric precipitation in the North-Central United States. *Atmos Environ* 16(7):1633-1645.
- *Muntwyler E, Iacobellis M, Griffin GE. 1956. Kidney glutaminase and carbonic anhydrase activities and renal electrolyte excretion in rats. *Am J Physiol* 184:83-90.

9. REFERENCES

- *Murakami M, Asagoe K, Dekigai H, et al. 1995. Products of neutrophil metabolism increase ammonia-induced gastric mucosal damage. *Dig Dis Sci* 40(2):268-273.
- Murakami M, Saita H, Teramura S, et al. 1993. Gastric ammonia has a potent ulcerogenic action on the rat stomach. *Gastroenterology* 105(6):1710-1715.
- Nadelhoffer K, Downs M, Fry B, et al. 1999. Controls on N retention and exports in a forested watershed. *Environ Monit Assess* 55(1):187-210.
- Nagamine T, Saito S, Kaneko M, et al. 1995. Effect of biotin on ammonia intoxication in rats and mice. *J Gastroenterol* 30(3):351-355.
- *Nagy L, Kusstatscher S, Hauschka PV, et al. 1996. Role of cysteine proteases and protease inhibitors in gastric mucosal damage induced by ethanol or ammonia in the rat. *J Clin Invest* 98(4):1047-1054.
- Nakasaki K, Ohtaki A, Takano H. 2001. Effect of bulking agent on the reduction of NH₃ emissions during thermophilic composting of night-soil sludge. *Waste Manage Res* 19(4):301-307.
- Nakatsuka T, Fukikake M, Katoh M, et al. 1992. Amelioration of furosemide-induced fetal wavy ribs by co-administration of ammonium chloride in rats. *Teratology* 46(6):19B.
- Nakatusa T, Fujikake N, Hasebe M, et al. 1993. Effects of sodium bicarbonate and ammonium chloride on the incidence of furosemide-induced fetal skeletal anomaly, wavy rib, in rats. *Teratology* 48(2):139-147.
- Nakazawa S, Quastel JH. 1968. Inhibitory effects of ammonium ions and some amino acids on stimulated brain respiration and cerebral amino acid transport. *Can J Biochem* 46:543-548.
- *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.
- NASA. 1967. Means of determining the maximum allowable concentration of toxic products of natural human metabolism. Washington, DC: National Aeronautics and Space Administration.
- *Nason GE, Pluth DJ, McGill WB. 1988. Volatilization and foliar recapture of ammonia following spring and fall application of nitrogen-15 urea to a douglas-fir ecosystem. *Soil Sci Soc Am J* 52:821-828.
- NATICH. 1988. NATICH data base report on state, local and EPA air toxics activities. Research Triangle Park, NC: National Air Toxics Information Clearinghouse, U.S. Environmental Protection Agency.
- Naumovski D, Pilovski G, Cibisev A, et al. 2001. Pulmonary injuries after exposure to irritative fumes of household cleaners. *Toxicol Lett* 123(Suppl 1):91-92.
- Navazio F, Gerritsen T, Wright GJ. 1961. Relationship of ammonia intoxication to convulsions and coma in rats. *J Neurochem* 8:146-151.
- NCI. 1975. In: Fraumeni JF, ed. *Persons at high risk of cancer: An approach to cancer etiology and control*. Bethesda, MD: National Cancer Institute.

9. REFERENCES

Nemitz E, Sutton MA, Gut A, et al. 2000. Sources and sinks of ammonia within an oilseed rape canopy. *Agric For Meteorol* 105(4):385-404.

Nemitz E, Sutton MA, Schjoerring JK, et al. 2000. Resistance modelling of ammonia exchange over oilseed rape. *Agric For Meteorol* 105(4):405-425.

*Neumann R, Mehlhorn G, Buchholz I, et al. 1987. [Experimental studies of the effect of chronic exposure of suckling pigs to aerogenous toxic gas with ammonia of varying concentrations.] *J Vet Med* B34:241-253. (German)

New Jersey Department of Health. 1996a. Ammonium fluoride. Trenton, NJ: New Jersey Department of Health, Right to Know Program. www.state.nj.us/health/eoh/rtkweb/0099.pdf. April 1996

New Jersey Department of Health. 1996b. Ammonium carbamate. Trenton, NJ: New Jersey Department of Health, Right to Know Program. www.state.nj.us/health/eoh/rtkweb/0091.pdf. January 1996

Niden AH. 1968. Effects of ammonia inhalation on the terminal airways. *Proc 11th Aspen Emphysema Conf* 11:41-44.

Nieto R, Calder AG, Anderson SE, et al. 1996. Method for the determination of $^{15}\text{NH}_3$ enrichment in biological samples by gas chromatography electron impact ionization mass spectrometry. *J Mass Spectrom* 31(3):289-294.

*NIOSH. 1974. Occupational exposure to ammonia: Criteria for a recommended standard. Cincinnati, OH: National Institute for Occupational Safety and Health. NIOSH 74-136.

NIOSH. 1982. Background information on ammonia. Cincinnati, OH: U.S. National Institute for Occupational Safety and Health. PB82109984.

NIOSH. 1984. Ammonia Method 6701. NIOSH manual of analytical methods 1. Cincinnati, OH: National Institute for Occupational Safety and Health, 6701-1 to 6701-4.

NIOSH. 1985. NIOSH pocket guide to chemical hazards. Washington, DC: National Institute for Occupational Safety and Health.

*NIOSH. 1987. Health hazard evaluation report. Cincinnati, OH: National Institute for Occupational Safety and Health. PB87232948.

*NIOSH. 1988. National Occupational Exposure Survey (NOES). Cincinnati, OH: National Institute for Occupational Safety Health, 93.

*NIOSH. 1994. Ammonia. NIOSH manual of analytical methods (NMAM), August 15, Fourth edition, 1994. National Institute for Occupational Safety and Health.

*NIOSH. 1996. Ammonia by ICNIOSH manual of analytical methods (NMAM), May 15, Fourth edition, 1996. National Institute for Occupational Safety and Health.

*NIOSH. 2002a. Ammonia. NIOSH pocket guide to chemical hazards. National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/npg/npgd0028.html>. June 06, 2004.

9. REFERENCES

- *NIOSH. 2002b. Ammonia and ammonium chloride fume. NIOSH pocket guide to chemical hazards. National Institute for Occupational Safety and Health. [wysiwyg://92/http://www.cdc.gov/niosh/npg/npg.html](http://www.cdc.gov/niosh/npg/npg.html). May 02, 2002.
- *Noda K, Chikamori K. 1976. Effect of ammonia via prepyriform cortex on regulation of food intake in the rat. *Am J Physiol* 231:1263-1266.
- *NOES. 1989. Ammonia. National Occupational Exposure Survey. March 29, 1989, 19.
- Norenberg MD. 1996. Astrocytic-ammonia interactions in hepatic encephalopathy. *Semin Liver Dis* 16(3):245-253.
- *NRC. 1979. Transport and distribution of ammonia and the effect of pH. In: National Research Council, ed. Ammonia. Baltimore, MD: University Park Press.
- *NRC. 1993. Pesticides in the diets of infants and children. Washington, DC: National Academy Press, National Research Council.
- *NSF. 1999. Interim report: Environmental science and engineering for the 21st century. The role of the National Science Foundation. Arlington, VA: National Science Foundation. NSB 99-133.
- O'Connor JE, Costell M, Grisolia S. 1984. Prevention of ammonia toxicity by L-carnitine: Metabolic changes in the brain. *Neurochem Res* 9(4):563-570.
- *O'Connor JE, Costell M, Grisolia S. 1987. The potentiation of ammonia toxicity by sodium benzoate is prevented by L-Carnitine. *Biochem Biophys Res Commun* 145(2):817-824.
- O'Connor JE, Costell M, Grisolia S. 1989. Carbamyl glutamate prevents the potentiation of ammonia toxicity by sodium benzoate. *Eur J Pediatr* 148(6):540-542.
- *O'Connor JE, Guerri C, Grisolia S. 1982. Protective effect of ethanol on acute ammonia intoxication in mice. *Biochem Biophys Res Commun* 104(2):410-415.
- *O'Deen WA, Porter LK. 1986. Continuous flow system for collecting volatile ammonia and amines from senescing winter wheat. *Agron J* 78:746-749.
- OHM-TADS. 1988. Oil and Hazardous Materials Technical Assistance Data System. Washington, DC: Environmental Protection Agency, National Institute of Health.
- Ohtsuka Y, Griffith OW. 1991. L-carnitine protection in ammonia intoxication. Effect of aminocarnitine on carnitine-dependent metabolism and acute ammonia toxicity. *Biochem Pharmacol* 41(12):1957-1961.
- Okita M, Watanabe A, Tsuji T. 1988. Effect of branched-chain amino acid on ¹⁵N incorporation into liver and skeletal muscle proteins following [¹⁵N]-ammonium chloride administration to carbon tetrachloride-intoxicated rats. *J Nutr Sci Vitaminol* 34(1):85-96.
- *Olavarria JS, Artacho E, Sánchez F, et al. 1986. Synergistic effect of ammonia and potassium ions on pyruvate kinase from Ehrlich ascites tumor cells. *Enzyme* 35:34-41.

9. REFERENCES

- *Olivier JGJ, Bouwman AF, Van der Hoek KW, et al. 1998. Global air emission inventories for anthropogenic sources of NO_x, NH₃ and N₂O in 1990. *Environ Pollut* 102:135-148.
- Onay TT, Pohland FG. 2001. Nitrogen and sulfate attenuation in simulated landfill bioreactors. *Water Sci Technol* 44(2-3):367-372.
- OSHA. 1985. Permissible exposure limits (Table Z-1). Occupational Safety and Health Administration. Code of Federal Regulations. CFR 29(1910.1000):655-659.
- *OSHA. 1998. U. S. Department of Labor. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000.
- *OSHA. 2001. Occupations in agriculture particularly hazardous for the employment of children below the age of 16. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 570.71. <http://frwebgate.access.gpo.gov/>. May 02, 2002.
- *OSHA. 2002a. Air contaminants. Occupational safety and health standards for shipyard employment. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000. <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002b. Blasting and the use of explosives. Safety and health regulations for construction. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.914(e). <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002c. Gases, vapors, fumes, dusts, and mists. Safety and health regulations for construction. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.55. Appendix A. <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002d. Limits for air contaminants. Occupational safety and health standards. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000. Table Z-1. <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002e. List of highly hazardous chemicals, toxics and reactives. Occupational safety and health standards. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.119. Appendix A. <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002f. List of highly hazardous chemicals, toxics and reactives. Safety and health regulations for construction. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.64. <http://www.osha.gov/>. May 02, 2002.
- *OSHA. 2002g. Storage and handling of anhydrous ammonia. Occupational safety and health standards. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.111. <http://www.osha.gov/>. May 02, 2002.
- Paik WK, Lawson D, Kim S. 1975. Effect of endocrine glands on the protection of rat from ammonia intoxication. *Life Sci* 15:1189-1196.
- Pal T, Pal A, Miller GH, et al. 1992. Passive dosimeter for monitoring ammonia vapor. *Anal Chim Acta* 263(1-2):175-178.

9. REFERENCES

- Paramasivam S, Alva AK, Fares A. 2000. Transformation and transport of nitrogen forms in a sandy entisol following a heavy loading of ammonium nitrate solution: Field measurements and model simulations. *J Soil Contam* 9(1):65-86.
- *Parris N. 1984. An improved fluorometric method for the determination of ammonia and volatile amines in meat tissue by high-performance liquid chromatography. *J Agric Food Chem* 32:829-831.
- *Parris N, Foglia TA. 1983. Simplified alcoholic extraction procedure for ammonia in meat tissue. *J Agric Food Chem* 31:887-889.
- *Parton WJ, Morgan JA, Altenhofen JM, et al. 1988. Ammonia volatilization from spring wheat plants. *Agron J* 80:419-425.
- Pascuzzi TA, Storrow AB. 1998. Mass casualties from acute inhalation of chloramine gas. *Mil Med* 163(2):102-104.
- Paul V. 2003. Inhibition of acute hyperammonemia-induced convulsions by systemically administered gamma aminobutyric acid in rats. *Pharmacol Biochem Behav* 74:523-528.
- *Payne WJ. 1981. Denitrification. New York, NY: John Wiley and Sons.
- Perry GF. 1995. Occupational medicine forum. *J Occup Environ Med* 37(10):1187-1188.
- Pinson DM, Schoeb TR, Lin SL, et al. 1988. Promotion of mycoplasma-pulmonis growth in rat tracheal organ cultures by ammonium chloride. *Lab Anim Sci* 38(2):143-147.
- *Pitts RF. 1971. The role of ammonia production and excretion in regulation of acid-base balance. *N Engl J Med* 284:32-38.
- *Plerson WR, Brachaczek WW. 1983. Emissions of ammonia and amines from vehicles on the road. *Environ Sci Technol* 17:757-760.
- *Pranitis DM, Meyerhoff ME. 1987. Continuous monitoring of ambient ammonia with a membrane-electrode-based detector. *Anal Chem* 59:2345-2350.
- *Price SK, Hughes JE, Morrison SC, et al. 1983. Fatal ammonia inhalation-A case report with autopsy findings. *S Afr Med J* 64:952-955.
- Prokop'eva AS, Yushkov GG. 1975. [Materials for a toxicological characteristic of the repeated effects of ammonia on the organs of animals after brief exposure.] *Gig Tr Prof Zabol* 9:54-55. (Russian)
- *Prokop'eva AS, Yushkov GG, Ubashev IO. 1973. [Materials for a toxicological characteristic of the one-time effect of ammonia on the organisms of animals after brief exposures.] *Gig Tr Prof Zabol* 6:56-57. (Russian)
- *Prudhomme JC, Shusterman DJ, Blanc PD. 1998. Acute-onset persistent olfactory deficit resulting from multiple overexposures to ammonia vapor at work. *J Am Board Fam Pract* 11(1):66-69.
- Raabe W. 1989. Neurophysiology of ammonia intoxication. In: Butterworth RF, Pomier Layrargues G, eds. *Hepatic encephalopathy: Pathophysiology and treatment*. Clifton, NJ: Humana Press, 49-77.

9. REFERENCES

- *Raabe W. 1992. Ammonium ions abolish excitatory synaptic transmission between cerebellar neurons in primary dissociated tissue culture. *J Neurophysiol* 68:93-99.
- Raabe W, Gumnit RJ. 1975. Inhibition of cat motor cortex by ammonia. *J Neurophysiol* 38:347-355.
- Raabe W, Lin S. 1984. Ammonia, postsynaptic inhibition and CNS-energy state. *Brain Res* 303:67-76.
- *Rabkin R, Palathumpat M, Tsao T. 1993. Ammonium chloride alters renal tubular cell growth and protein turnover. *Lab Invest* 68(4):427-438.
- *Rajagopal R. 1978. Impact of land use on ground water quality in the Grand Traverse Bay Region of Michigan. *J Environ Qual* 7(1):93-98.
- Rama Rao KV, Jayakumar AR, Norenberg MD. 2003. Ammonia neurotoxicity: Role of the mitochondrial permeability transition. *Metab Brain Dis* 18(2):113-127.
- *Rapsomanikis S, Wake M, Kitto AMN, et al. 1988. Analysis of atmospheric ammonia and particulate ammonium by a sensitive fluorescence method. *Environ Sci Technol* 22:948-952.
- *Reynolds CM, Wolf DC. 1988. Effects of field methods and soil cover on estimating ammonia loss from nitrogen-15-urea. *Soil Sci Soc Am J* 52:706-712.
- *Reynolds SJ, Donham KJ, Whitten P, et al. 1996. Longitudinal evaluation of dose-response relationships for environmental exposures and pulmonary function in swine production workers. *Am J Ind Med* 29(1):33-40.
- *Richard D, Bouley G, Boudene C. 1978a. [Effects of continuous inhalation of ammonia in the rat and mouse.] *Bull Eur Physiopathol Respir* 14:573-582. (French)
- *Richard D, Jouany JM, Boudene C. 1978b. [Acute toxicity of ammonia gas in the rabbit by inhalation.] *C R Acad Hebd Seances Acad Sci Ser D* 287:375-378. (French)
- *Richards P, Brown CL, Houghton BJ, et al. 1975. The incorporation of ammonia nitrogen into albumin in man: the effects of diet, uremia and growth hormone. *Clin Nephrol* 3(5):172-179.
- *Robin ED, Travis DM, Bromberg PA, et al. 1959. Ammonia excretion by mammalian lung. *Science* 129:270-271.
- *Rogers HH, Anjea VP. 1980. Uptake of atmospheric ammonia by selected plant species. *Environ Exp Bot* 20:251-257.
- Ros M, Gantar A. 1998. Possibilities of reduction of recipient loading of tannery wastewater in Slovenia. *Water Sci Technol* 37(8):145-152.
- *Rosenbaum AM, Walner DL, Dunham ME, et al. 1998. Ammonia capsule ingestion causing upper aerodigestive tract injury. *Otolaryngol Head Neck Surg* 119(6):678-680.
- *Rosenfeld M. 1932. [Experimental modification of mitosis by ammonia.] *Arch Exp Zellforsch Besonders Gewebebeziehung* 14:1-13. (German)

9. REFERENCES

- *Rosswall T. 1981. The biogeochemical nitrogen cycle. In: Likens GE, ed. Some perspectives of the major biogeochemical cycles. New York, NY: John Wiley and Sons, 25-49.
- Rostron WM, Stuckey DC, Young AA. 2001. Nitrification of high strength ammonia wastewaters: comparative study of immobilisation media. *Water Res* 35(5):1169-1178.
- *Roy GS, Poricha RR. 1982. Ammonia nitrogen in fertiliser industry effluents - present status. *Proc No R&D (Fert Assoc India)*3:126-132.
- *RTECS. 1988. Registry of toxic effects of chemical substances. Cincinnati, OH: National Institute for Occupational Safety and Health.
- Rupp W, Sauer R, Hinz A. 1995. CO₂-laser sensor system for ammonia. *Proc SPIE Int Soc Opt Eng* 2506:162-166.
- *Russell AG, McCue KF, Cass GR. 1988. Mathematical modeling of the formation of nitrogen-containing air pollutants. 1. Evaluation of an Eulerian photochemical model. *Environ Sci Technol* 22:263-271.
- *Ryan JA, Keeney DR. 1975. Ammonia volatilization from surface-applied wastewater sludge. *J Water Pollut Control Fed* 47:386-393.
- *Ryden JC, Whitehead DC, Lockyer DR, et al. 1987. Ammonia emission from grassland and livestock production systems in the UK. *Environ Pollut* 48:173-184.
- Ryer-Powder JE. 1991. Health effects of ammonia. *Plant/Oper Prog* 10(4):228-232.
- Sadasivudu B, Murthy RK. 1978. Effects of ammonia on monoamine oxidase and enzymes of GABA metabolism in mouse brain. *Arch Int Physiol Biochim* 86:67-82.
- Sadasivudu B, Murthy CRK, Rao GN, et al. 1983. Studies on acetylcholinesterase and gamma-glutamyltranspeptidases in mouse brain in ammonia toxicity. *J Neurosci Res* 9:127-134.
- Sadasivudu B, Rao TI, Radhakrishna C. 1977. Acute metabolic effects of ammonia in mouse brain. *Neurochem Res* 2:639-655.
- Sadasivudu B, Rao TI, Radhakrishna M. 1979. Chronic metabolic effects of ammonia in mouse brain. *Arch Int Physiol Biochim* 87:871-885.
- *Salvatore F, Bocchinti V, Cimino F. 1963. Ammonia intoxication and its effects on brain ammonia levels. *Biochem Pharmacol* 12:1-6.
- Saran T, Hilgier W, Kocki T, et al. 1998. Acute ammonia treatment in vitro and in vivo inhibits the synthesis of a neuroprotectant kynurenic acid in rat cerebral cortical slices. *Brain Res* 787(2):348-350.
- Sato A, Gonmori K, Yoshioka N. 1999. A case of fatal intoxication with ammonium sulfate and a toxicological study using rabbits. *Forensic Sci Int* 101(2):141-149.
- *Saul RL, Archer MC. 1984. Oxidation of ammonia and hydroxylamine to nitrate in the rat and in vitro. *Carcinogenesis* 5(1):77-81.

9. REFERENCES

- *Sax NI, Lewis RJ, eds. 1987. *Hawley's condensed chemical dictionary*. New York, NY: Van Nostrand Reinhold, 1288.
- *Schaerdel AD, White WJ, Lang CM, et al. 1983. Localized and systemic effects of environmental ammonia in rats. *Lab Anim Sci* 33(1):40-45.
- Schenker S, Mendelson JH. 1964. Cerebral adenosine triphosphate in rats with ammonia-induced coma. *Am J Physiol* 206:1173-1176.
- Schenker S, Warren KS. 1962. Effect of temperature variation on toxicity and metabolism of ammonia in mice. *J Lab Clin Med* 60(2):291-301.
- Schenker S, McCandless DW, Brophy E, et al. 1967. Studies on the intracerebral toxicity of ammonia. *J Clin Invest* 46:838-848.
- *Schubiger G, Bachmann C, Barben P, et al. 1991. N-acetylglutamate synthetase deficiency: diagnosis, management and follow-up of a rare disorder of ammonia detoxication. *Eur J Pediatr* 150(5):353-356.
- *Scurkes JAAR, Maenen MMJ, Roelofs JGM. 1988. Chemical characteristics of precipitation in NH₃-affected areas. *Atmos Environ* 22(8):1689-1698.
- *Seegal BC. 1927. Chronic acidosis in rabbits and in dogs. *Arch Intern Med* 39:550-563.
- Seiler N. 1993. Is ammonia a pathogenetic factor in Alzheimer's disease? *Neurochem Res* 18(3):235-245.
- *Seiler N. 2002. Review: Ammonia and Alzheimer's disease. *Neurochem Int* 41:189-207.
- Seiler N, Sarhan S, Knoedgen B, et al. 1993. Enhanced endogenous ornithine concentrations protect against tonic seizures and coma in acute ammonia intoxication. *Pharmacol Toxicol* 72(2):116-123.
- *Seitzinger SP. 1987. Nitrogen biogeochemistry in an unpolluted estuary: The importance of benthic denitrification. *Mar Ecol Prog Ser* 41:177-186.
- *Sekizawa SI, Tsubone H. 1994. Nasal receptors responding to noxious chemical irritants. *Respir Physiol* 96(1):37-48.
- Semama DS, Huet F, Gouyon JB, et al. 1995. Use of peritoneal dialysis, continuous arteriovenous hemofiltration, and continuous arteriovenous hemodiafiltration for removal of ammonium chloride and glutamine in rabbits. *J Pediatr* 126:742-746.
- Seo Y, Murakami M. 1991. Monitoring of intracellular ammonium in perfused rat salivary gland by nitrogen-14 nuclear magnetic resonance spectroscopy. *Proc R Soc London, Ser B* 244(1311):191-196.
- Sharara FI, Seifer DB, Flaws JA. 1998. Environmental toxicants and female reproduction. *Fertil Steril* 70(4):613-622.
- Shibata M-A, Tamano S, Kurata Y, et al. 1989. Participation of urinary sodium potassium and L-ascorbic acid in the proliferative response of the bladder epithelium after the oral administration of various salts and-or ascorbic acid to rats. *Food Chem Toxicol* 27(6):403-413.

9. REFERENCES

- *Shimkin MB, de Lorimier AA, Mitchell JR, et al. 1954. Appearance of carcinoma following single exposure to a refrigeration ammonia-oil mixture. *Arch Ind Hyg Occup Med* 9:186-193.
- Shitara Y, Kato Y, Sugiyama Y. 1998. Effect of brefeldin A and lysosomotropic reagents on intracellular trafficking of epidermal growth factor and transferrin in Madin-Darby canine kidney epithelial cells. *J Controlled Release* 55:35-43.
- *Sine C, ed 1987. *Farm chemicals handbook*. Willoughby, OH: Meister Publishing Co., B16-B19.
- Silver SD, McGrath FP. 1948. A comparison of acute toxicities of ethylene imine and ammonia to mice. *J Ind Hyg Toxicol* 30:7-9.
- *Silverman L, Whittenberger JL, Muller J. 1949. Physiological response of man to ammonia in low concentrations. *J Ind Hyg Toxicol* 31:74-78.
- *Sjöblom E, Hojer J, Kulling PE, et al. 1999. A placebo-controlled experimental study of steroid inhalation therapy in ammonia-induced lung injury. *J Toxicol Clin Toxicol* 37(1):59-67.
- *Sloan CH, Morie GP. 1974. Determination of ammonia in tobacco and tobacco smoke with an ammonia electrode. *Anal Chim Acta* 69:243-247.
- *Slot GMJ. 1938. Electrocardiograms in 80 cases of angina of effort. *Lancet* 2:1356-1357.
- Smith LG, Busch RH, Buschbom RL, et al. 1989. Effects of sulfur dioxide or ammonium sulfate exposure, alone or combined, for 4 or 8 months on normal and elastase-impaired rats. *Environ Res* 49(1):60-78.
- *Snodgrass WJ, Ng PS. 1985. Biochemical models for the hypolimnetic oxygen depletion in lakes impacted by wastewater discharges 1. Alternative models. *Arch Hydrobiol Suppl* 72:81-109.
- Soar JB, Buttery PJ, Lewis D. 1973. Ammonia toxicity in sheep. *Proc Nutr Soc* 32:77A-78A.
- *Sobel RA, DeArmond SJ, Forno LS, et al. 1981. Glial fibrillary acidic protein in hepatic encephalopathy. *J Neuropathol Exp Neurol* 40:625-632.
- *Sobonya R. 1977. Fatal anhydrous ammonia inhalation. *Hum Pathol* 8:293-299.
- *Socolow RH. 1999. Nitrogen management and the future of food: Lessons from the management of energy and carbon. *Proc Natl Acad Sci USA* 96:6001-6008.
- Sorial GA, Smith FL, Suidan MT, et al. 2001. Removal of ammonia from contaminated air by trickle bed air biofilters. *J Air Waste Manage Assoc* 51(5):756-765.
- Sotiropoulos G, Kilaghbian T, Dougherty W, et al. 1998. Cold injury from pressurized liquid ammonia: a report of two cases. *J Emerg Med* 16(3):409-412.
- Spengler JD, Koutrakis P, Dockery DW, et al. 1996. Health effects of acid aerosols on North American children: Air pollution exposures. *Environ Health Perspect* 104(5):492-499.
- *Sprenger U, Bachmann K. 1987. Determination of ammonium in aerosols, cloud and rain water, and of gaseous ammonia in the troposphere. *Fresenius Z Anal Chem* 327:16.

9. REFERENCES

- *SRI. 1988. Directory of chemical producers USA. Menlo Park, CA: SRI International, 457-465.
- *SRI. 2000. Directory of chemical producers USA. Menlo Park, CA: SRI International, 457-463.
- *Stabenau JR, Warren KS, Rall DP. 1958. The role of pH gradient in the distribution of ammonia between blood and cerebro-spinal fluid, brain and muscle. *J Clin Invest* 38:373-383.
- Steppuhn H, Coxworth E, Kernan JA, et al. 1994. Response of *Kochia scoparia* to nitrogen fertilization on a saline soil. *Can J Soil Sci* 74(3):267-275.
- *Stombaugh DP, Teague HS, Roller WL. 1969. Effects of atmospheric ammonia on the pig. *J Anim Sci* 28:844-847.
- *Strogies M, Kallweit D. 1996. Nitrogen emissions in Germany and potential for their reduction. In: Sutton MA, Lee DS, Dollard GJ, et al., eds. Atmospheric ammonia: Emission deposition and environmental impacts: Poster proceedings. Midlothian, UK: Institute of Terrestrial Ecology, 53-56.
- *Stroud S. 1981. Ammonia inhalation-A case report. *Crit Care Nurse* 1:23-26.
- Stumpe JM, Vlek PLG. 1991. Acidification induced by different nitrogen sources in columns of selected tropical soils. *Soil Sci Soc Am J* 55(1):145-151.
- *Stupfel M, Romary F, Magnier M, et al. 1971. [Comparative acute toxicity of several atmospheric pollutants, in male and female mice: Automobile exhaust gases, nitrogen oxides, sulfur dioxide, ozone, ammonia and carbon dioxide.] *C R Seances Soc Biol Fil* 19:1869-1872. (French)
- *Suárez I, Bodega G, Arilla E, et al. 1992. Different response of astrocytes and Bergmann glial cells to portacaval shunt. An immunohistochemical study in the rat cerebellum. *Glia* 6:172-179.
- Suárez I, Bodega G, Fernandez B. 2002. Glutamine synthetase in brain: effect of ammonia. *Neurochem Int* 41:123-142.
- *Suh HH, Spengler JD, Koutrakis P. 1992. Personal exposures to acid aerosols and ammonia. *Environ Sci Technol* 26(12):2507-2517.
- *Summerskill WHJ, Wolpert E. 1978. Ammonia metabolism in the gut. *Am J Clin Nutr* 23:633-639.
- *Sunesson AL, Gullberg J, Blomquist G. 2001. Airborne chemical compounds on dairy farms. *J Environ Monitor* 3(2):210-216.
- Suzuki H, Yanaka A, Nakahara A, et al. 2000. The mechanism of gastric mucosal apoptosis induced by ammonia. *Gastroenterology* 118(Suppl 2):AGA A734.
- Swotinsky RB, Chase KH. 1990. Health effects of exposure to ammonia: Scant information. *Am J Ind Med* 17(4):515-521.
- Takagaki G, Berl S, Clarke DD, et al. 1961. Glutamic acid metabolism in brain and liver during infusion with ammonia labelled with nitrogen-15. *Nature* 189:326.

9. REFERENCES

- *Takahashi H, Koehler RC, Brusilow SW, et al. 1991. Inhibition of brain glutamine accumulation prevents cerebral edema in hyperammonemic rats. *Am J Physiol* 261:H825-H829.
- *Takeuchi K, Ohuchi T, Harada H, et al. 1995. Irritant and protective action of urea-urease ammonia in rat gastric mucosa. *Dig Dis Sci* 40(2):274-281.
- Tannenbaum SR, Young VR. 1980. Endogenous nitrite formation in man. *J Environ Pathol Toxicol* 3:357-368.
- *Tanner RL. 1982. An ambient experimental study of phase equilibrium in the atmospheric system: aerosol H^+ , NH_4^+ , SO_4^{2-} , $NO_3^-NH_3(g)$, $HNO_3(g)$. *Atmos Environ* 16(12):2935-2942.
- *Taplin GV, Chopra S, Yanda RL, et al. 1976. Radionuclidic lung-imaging procedures in the assessment of injury due to ammonia inhalation. *Chest* 69:582-586.
- *Targowski SP, Klucinski W, Babiker S, et al. 1984. Effect of ammonia on in vivo and in vitro immune response. *Infect Immun* 43(1):289-293.
- Tarr MA, Wang W, Bianchi TS, et al. 2001. Mechanisms of ammonia and amino acid photoproduction from aquatic humic and colloidal matter. *Water Res* 35(15):3688-3696.
- *Tepper A, Constock GW, Levine M. 1991. A longitudinal study of pulmonary function in fire fighters. *Am J Ind Med* 20(3):307-316.
- *Tepper JS, Weiss B, Wood RW. 1985. Alterations in behavior produced by inhaled ozone or ammonia. *Fundam Appl Toxicol* 5:1110-1118.
- Thomas RC. 1974. Intracellular pH of snail neurons measured with a new pH-sensitive glass micro-electrode. *J Physiol* 238:159-180.
- Thomson CJ, Marschner H, Roemheld V. 1993. Effect of nitrogen fertilizer form on pH of the bulk soil and rhizosphere and on the growth, phosphorus, and micronutrient uptake of bean. *J Plant Nutr* 16(3):493-506.
- Thornton FC, Bock BR, Tyler DD. 1996. Soil emissions of nitric oxide and nitrous oxide from injected anhydrous ammonium and urea. *J Environ Qual* 25:1378-1384.
- *Tian G, Cai Z, Cao J, et al. 2001. Factors affecting ammonia volatilisation from a rice-wheat rotation system. *Chemosphere* 42(2):123-129.
- *Tietz NW, ed. 1970. *Fundamentals of clinical chemistry*. Philadelphia, PA: W.B. Saunders Company.
- Tonkiss J, Trzcinska M, Galler JR, et al. 1998. Prenatal malnutrition-induced changes in blood pressure: dissociation of stress and nonstress responses using radiotelemetry. *Hypertension* 32(1):108-114.
- Topping DC, Visek WJ. 1976. Nitrogen intake and tumorigenesis in rats injected with 1,2-dimethylhydrazine. *J Nutr* 106:1583-1590.
- Torda C. 1952. Ammonium ion content and electrical activity of the brain during the preconvulsive and convulsive phases induced by various convulsants. *J Pharmacol Exp Ther* 197:197-203.

9. REFERENCES

- Torres VE, Keith DS, Offord KP, et al. 1994. Renal ammonia in autosomal dominant polycystic kidney disease. *Kidney Int* 45(6):1745-1753.
- *Toth B. 1972. Hydrazine, methylhydrazine and methylhydrazine sulfate carcinogenesis swiss mice. Failure of ammonium hydroxide to interfere in the development of tumors. *Int J Cancer* 9:109-118.
- *TRI 01. 2003. Toxic Chemical Release Inventory. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *Tsibulski V, Yatsenko-Khmelevskaya M, Milyaev V, et al. 1996. Ammonia emissions in Russia. In: Sutton MA, Lee DS, Dollard GJ, et al., eds. *Atmospheric ammonia: Emission deposition and environmental impacts: Poster proceedings*. Midlothian, UK: Institute of Terrestrial Ecology, 50-52.
- Tsuji M, Kawano S, Tsuji S, et al. 1992a. Ammonia: A possible promotor in *Helicobacter pylori*-related gastric carcinogenesis. *Cancer Lett* 65(1):15-18.
- *Tsuji M, Kawano S, Tsuji S, et al. 1992b. Mechanism of gastric mucosal damage induced by ammonia. *Gastroenterology* 102(6):1881-1888.
- *Tsuji M, Kawano S, Tsuji S, et al. 1993. Cell kinetics of mucosal atrophy in rat stomach induced by long-term administration of ammonia. *Gastroenterology* 104(3):796-801.
- *Tsuji M, Kawano S, Tsuji S, et al. 1995. Mechanism for ammonia-induced promotion of gastric carcinogenesis in rats. *Carcinogenesis* 16(3):563-566.
- Turtureanu M. 1994. Ammonia production. In: Hodge CA, Popovici NN, eds. *Pollution control in fertilizer production*. New York, NY: Marcel Dekker, Inc, 35-50.
- *Tuskes PM, Tilton MA, Graff RM. 1988. Ammonia exposures of blue-line printers in Houston, Texas. *Appl Ind Hyg* 3:155-157.
- *Tyor MP, Owen EE, Berry JN, et al. 1960. The relative role of extremity, liver, and kidney as ammonia receivers and donors in patients with liver disease. *Gastroenterology* 39:420-424.
- *Urbain B, Gustin P, Prouvost JF, et al. 1994. Quantitative assessment of aerial ammonia toxicity to the nasal mucosa by use of the nasal lavage method in pigs. *Am J Vet Res* 55(9):1335-1340.
- *U.S. Army Corps of Engineers. 1980. *Wastewater treatment in cold regions by overland flow*. Washington, DC: U.S. Army Corps of Engineers.
- *USC. 2002a. Assurances of availability of adequate supplies of chemicals necessary for treatment of water. United States Code. 42 USC 300j. <http://www4.law.cornell.edu/uscode/42/300j.html>. May 02, 2002.
- *USC. 2002b. Definitions and special rules. United States Code. 26 USC 4662. <http://www4.law.cornell.edu/uscode/26/4662.html>. May 02, 2002.
- *USC. 2002c. Definitions and special rules. United States Code. 26 USC 4672. <http://www4.law.cornell.edu/uscode/26/4672.html>. May 02, 2002.

9. REFERENCES

- *USC. 2002d. Imposition of tax. United States Code. 26 USC 4661. <http://www4.law.cornell.edu/uscode/26/4661.html>. May 02, 2002.
- *Utell MJ, Mariglio JA, Morrow PE, et al. 1989. Effects of inhaled acid aerosols on respiratory function: The role of endogenous ammonia. *J Aerosol Med* 2:141-147.
- *Uzvolgyi E, Bojan F. 1980. Possible in vivo formation of a carcinogenic substance from diethyl pyrocarbonate and ammonia. *J Cancer Res Clin Oncol* 97:205-207.
- *Uzvolgyi E, Bojan F. 1985. In vivo formation of a carcinogenic substance from diethyl pyrocarbonate in the presence of ammonia. *Arch Toxicol Suppl* 8:490-493.
- Valdes-Solis T, Marban G, Fuertes AB. 2001. Low-temperature SCR of NO_x with NH₃ over carbon-ceramic cellular monolith-supported manganese oxides. *Catal Today* 69(1-4):259-264.
- van Dongen U, Jetten MSM, van Loosdrecht MCM. 2001. The SHARON-Anammox process for treatment of ammonium rich wastewater. *Water Sci Technol* 44(1):153-160.
- *Van Hoesen SD, Dreibelbis WG. 1984. University of Minnesota-Duluth low-BTU gasifier workplace environment. In: Cowser KE, Jacobs VE, eds. *Proceedings of the 5th life science symposium: Synthetic fossil fuel technologies*. Boston, MA: Butterworth, 149-184.
- *Van Slyke DD, Phillips RA, Hamilton PB, et al. 1943. Glutamine as source material of urinary ammonia. *J Biol Chem* 150:481-482.
- *Verberk MM. 1977. Effects of ammonia in volunteers. *Int Arch Occup Environ Health* 39:73-81.
- *Verschueren K. 1983. *Handbook of environmental data on organic chemicals*. 2nd ed. New York, NY: Van Nostrand Reinhold Company, 194.
- Vernot EH, MacEwen JD, Haun CC, et al. 1977. Acute toxicity and skin corrosion data for some organic and inorganic compounds and aqueous solutions. *Toxicol Appl Pharmacol* 42:417-423.
- Visek WJ. 1984. Ammonia: Its effects on biological systems, metabolic hormones, and reproduction. *J Dairy Sci* 67(3):481-498.
- *Visek WJ, Kolodny GM, Gross PR. 1972. Ammonia effects in cultures of normal and transformed 3T3 cells. *J Cell Physiol* 1972:373-381.
- *Vitti TG, Vukmirovich R, Gaebler OH. 1964. Utilization of ammonia nitrogen, administered by intragastric, intraperitoneal, and subcutaneous routes: Effects of growth hormone. *Arch Biochem Biophys* 106:475-482.
- *Vogelzang PFJ, van der Gulden JWJ, Folgering H, et al. 2000. Longitudinal changes in bronchial responsiveness associated with swine confinement dust exposure. *Chest* 117(5):1488-1495.
- *Vogelzang PFJ, van der Gulden JWJ, Preller L, et al. 1997. Bronchial hyperresponsiveness and exposure in pig farmers. *Int Arch Occup Environ Health* 70(5):327-333.
- *Voisin C, Guerrin H, Furon D, et al. 1970. Sequelles fonctionnelles respiratoires des intoxications par l'ammoniac (a propos de 8 obserbations). *Le Poumon et le Coeur* 26:1079-1095.

9. REFERENCES

- Walker CO, Schienker S. 1970. Pathogenesis of hepatic encephalopathy- with special reference to the role of ammonia. *Am J Clin Nutr* 23(5):619-632.
- *Walton M. 1973. Industrial ammonia gassing. *Br J Ind Med* 30:78-86.
- *Wands RC. 1981. Alkaline materials. In: Clayton GD, Clayton FE, eds. *Patty's industrial hygiene and toxicology*, Vol. II, 4th ed. New York, NY: John Wiley & Sons, Inc., 3045-3069.
- *Ward K, Costello GP, Murray B. 1983. Acute and long-term pulmonary sequelae of acute ammonia inhalation. *Ir Med J* 76(6):279-281.
- Warland JS, Dias GM, Thurtell GW. 2001. A tunable diode laser system for ammonia flux measurements over multiple plots. *Environ Pollut* 114(2):215-221.
- Warren KS. 1958. The differential toxicity of ammonia salts. *J Clin Invest* 37:497-501.
- Warren KS, Nathan DG. 1958. The passage of ammonia across the blood-brain-barrier and its relation to blood pH. *J Clin Invest* 37:1724-1728.
- *Warren KS, Schenker S. 1964. Effect of inhibitor glutamine synthesis (methionine sulfoximine) on ammonia toxicity and metabolism. *J Lab Clin Med* 64(3):442-449.
- Wason S, Stephan M, Breide C. 1990. Ingestion of aromatic ammonia smelling salts capsules. *Am J Dis Child* 144(2):139-140.
- Weast RC, Astle MJ, Beyer WH, eds. 1983. *CRC handbook of chemistry and physics*. Boca Raton, FL: CRC Press, Inc., B-69, D-163, D-222-223.
- *Weast RC, Astle MJ, Beyer WH, eds. 1988. *CRC Handbook of chemistry and physics*. Boca Raton, Florida: CRC Press, Inc.
- *Weatherby JH. 1952. Chronic toxicity of ammonia fumes by inhalation. *Proc Soc Exp Biol Med* 81:300-301.
- *Weber FL, Veach GL. 1979. The importance of the small intestine in gut ammonium production in the fasting dog. *Gastroenterology* 77:235-240.
- *Weedon FR, Hartzell A, Setterstrom C. 1940. Toxicity of ammonia, chlorine, hydrogen cyanide, hydrogen sulphide, and sulphur dioxide gases. V. Animals. *Contrib Boyce Thompson Inst* 11:365-385.
- *Weir DC, Robertson AS, Jones S, et al. 1989. Occupational asthma due to soft corrosive soldering fluxes containing zinc chloride and ammonium chloride. *Thorax* 44(3):220-223.
- *Weiser JR, Mackenroth T. 1989. Acute inhalatory mass ammonia intoxication with fatal course. *Exp Pathol* 37(1-4):291-295.
- Weisskopf MG, Drew JM, Hanrahan LM, et al. 2003. Hazardous ammonia releases: Public health consequences and risk factors for evacuation and injury, United States, 1993-1998. *J Occup Environ Med* 45:197-204.

9. REFERENCES

- *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.
- Westra HG, van Doorn JE, Tigchelaar RG. 2001. A method for the determination of volatile ammonia in air, using a nitrogen-cooled trap and fluorometric detection. *Anal Biochem* 296(2):225-231.
- *White ES. 1971. A case of near fatal ammonia gas poisoning. *J Occup Med* 13:543-550.
- *WHO. 1986. Ammonia. Environmental Health Criteria. Vol. 54. Geneva, Switzerland: World Health Organization.
- *WHO. 2002. Guidelines for drinking water. World Health Organization. http://www.who.int/water_sanitation_health/GDWQ/Chemicals/ammonsum.htm. May 02, 2002.
- *Wibbenmeyer LA, Morgan LJ, Robinson BK, et al. 1999. Our chemical burn experience: Exposing the dangers of anhydrous ammonia. *J Burn Care Rehab* 20(3):226-231.
- *Wicherski B. 2000. Groundwater quality investigation and wellhead protection study. City of Fruitland, Idaho. Boise, Idaho: Idaho Department of Environmental Quality. Technical Services Division.
- Wieslander G, Norback D, Edling C. 1994. Occupational exposure to water based paint and symptoms from the skin and eyes. *Occup Environ Med* 51(3):181-186.
- *Wilkin DC, Flemal RC. 1980. Feasibility of water quality improvement in three Illinois rivers. *J Water Pollut Control Fed* 52(2):293-298.
- Williams PI, Gallagher MW, Choularton TW, et al. 2000. Aerosol development and interaction in an urban plume. *Aerosol Sci Technol* 32(2):120-126.
- Wilson RP, Muhrer ME, Bloomfield RA. 1968. Comparative ammonia toxicity. *Comp Biochem Physiol* 25:295-301.
- *Windholz M, Budavari S, Blumetti RF, et al., eds. 1983. The Merck index, 10th ed. Rahway, NJ: Merck & Co., Inc.
- *Withers J, Ten Berge W, Gordon J, et al. 1986. The lethal toxicity of ammonia: A report to the MHAP. *Northwestern Branch Papers* 1986 1:6.1-6.27.
- Wood CW, Marshall SB, Cabera ML. 2000. Improved method for field-scale measurement of ammonia volatilization. *Commun Soil Sci Plant Anal* 31(5-6):581-590.
- Wood RW. 1979. Behavioral evaluation of sensory irritation evoked by ammonia. *Toxicol Appl Pharmacol* 50:157-162.
- Worcel A, Erecinska M. 1962. Mechanism of inhibitory action of ammonia on the respiration of rat-liver mitochondria. *Biochim Biophys Acta* 65:27-33.
- Wrenn C. 2000. Real-time measurement of ammonia gas. *Occup Health Safe* 69(12):64-67.

9. REFERENCES

- Wu G, Pond WG, Ott T, et al. 1998. Maternal dietary protein deficiency decreases amino acid concentrations in fetal plasma and allantoic fluid of pigs. *J Nutr* 128(5):894-902.
- Wysmyk U, Oka SS, Saransaari P, et al. 1994. Long-term treatment with ammonia effects the content and release of taurine in cultured cerebellar astrocytes and granule neurons. *Neurochem Int* 24(4):317-322.
- *Yadav JS, Kaushik VK. 1997. Genotoxic effect of ammonia exposure on workers in a fertility factory. *Indian J Exp Biol* 35(5):487-492.
- *Yang GY, Tominack RL, Deng JF. 1987. An industrial mass ammonia exposure. *Vet Hum Toxicol* 29:476-477.
- Yeldandi AV, Tan X, Dwivedi RS, et al. 1990. Coexpression of glutamine synthetase and carbamoylphosphate synthase I genes in pancreatic hepatocytes of rat. *Proc Natl Acad Sci U S A* 87(3):881-885.
- *Yoo KP, Lee SH, Lee WH. 1986. Ionization and Henry's law constants for volatile, weak electrolyte water pollutants. *Korean J Chem Eng* 3(1):67-72.
- Zago C, Capodaglio G, Ceradini S, et al. 2000. Benthic fluxes of cadmium, lead, copper and nitrogen species in the northern Adriatic Sea in front of the River Po outflow, Italy. *Sci Total Environ* 246(2-3):121-137.
- Zange J, Gronczewski J, Jans AW. 1993. NH_4^+ metabolism and the intracellular pH in isolated perfused rat liver. *Biochem J* 293:667-673.
- Zejda JE, Barber E, Dosman JA, et al. 1994. Respiratory health status in swine producers relates to endotoxin exposure in the presence of low dust levels. *J Occup Med* 36(1):49-56.
- *Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12:29-34.
- Zielinska M, Hilgier W, Law RO, et al. 1999. Effects of ammonia in vitro on endogenous taurine efflux and cell volume in rat cerebrocortical minislices: Influence of inhibitors of volume-sensitive amino acid transport. *Neuroscience* 91(2):631-638.
- Zielinska M, Law RO, Albrecht J. 2003. Excitotoxic mechanism of cell swelling in rat cerebral cortical slices treated acutely with ammonia. *Neurochem Int* 43:299-303.
- *Zieve L, Doiaki WM, Zieve FJ. 1974. Synergism between mercaptans and ammonia or fatty acids in the production of a coma: A possible role for mercaptans in the pathogenesis of hepatic coma. *J Lab Clin Med* 83:16-28.
- *Zimmer A, Visek WJ. 1972a. Effect of urease injections on DNA synthesis in mice. *Am J Physiol* 233:1004-1008.
- *Zimmer A, Visek WJ. 1972b. Effect of urease injections on ehrlich ascites tumor growth in mice. *Proc Soc Exp Biol Med* 139:43-149.

9. REFERENCES

*Zissu D. 1995. Histopathological changes in the respiratory tract of mice exposed to ten families of airborne chemicals. *J Appl Toxicol* 15:207-213.