

VII. RESEARCH NEEDS

Long-term epidemiologic studies of worker populations exposed at or below the recommended environmental limits are needed. Such studies should consider not only the subjective complaints of workers but should also address changes in blood chemistry, thyroid function, and the urinary excretion of thiocyanate. As a minimum, these studies should include breathing zone air measurements, medical histories, smoking habits and histories of previous exposure.

The permeability of gloves, chemical suits, and other protective clothing to hydrogen cyanide should be determined. Methods for automatic, continuous monitoring should be designed and/or tested for sensitivity, accuracy, and specificity by comparison with a reliable standard method. Since one of the primary functions of automatic continuous monitoring is serving as a warning device, alarm systems should be incorporated and tested for reliability.

Animal studies should be conducted to document and verify the dose-response relationship between chronic exposure to low-concentrations of HCN and neural lesions. These studies should also address the issues of carcinogenicity, mutagenicity, and teratogenicity as they pertain to HCN and its metabolites. Information should also be collected to evaluate the possibility of neural lesions as a consequence of human chronic cyanide exposure.

An improved analytical method for urinary thiocyanate should be tested and validated for assessing occupational exposure to cyanide and the normal ranges of cyanide and thiocyanate determined for differing habits of

intake of food, drink, and other xenobiotic substances and for various body fluids.

A compilation of cyanide salt exposure concentrations and the incidence of nasal and mucosal lesions is lacking. Other needed research is in the area of cyanide antidotes. There are indications that dicobalt ethylenediaminetetraacetate and hydroxocobalamin may prove to be useful.

VIII. REFERENCES

1. Weast RC (ed): Handbook of Chemistry and Physics, ed 56. Cleveland, Chemical Rubber Co, 1975, pp B-149, B-70, B-81, B-92, B-97, B-105, B-110, B-113, B-126, B-138, B-141, B-158
2. Chemical Safety Data Sheet SD-67, Properties and Essential Information for Safe Handling and Use of Hydrocyanic Acid. Washington, DC, Manufacturing Chemists' Association Inc, 1961, pp 5-22
3. Hardy HL, Boylen GW Jr: Cyanogen, hydrocyanic acid, cyanides, in International Labour Office: Encyclopedia of Occupational Safety and Health. Geneva, ILO, 1972, vol 1, pp 352-54
4. Jennings BH: Hydrogen Cyanide - HCN, in Hazardous Vapors and Dusts in Industry. Chicago, Ventilating and Air Conditioning Contractors Association of Chicago, 1957, pp 4-109 to 4-110
5. Kirk RL, Stenhouse NS: Ability to smell solutions of potassium cyanide. Nature 171:698-99, 1953
6. Voorhoeve RJH, Patel CKN, Trimble LE, Kerl RJ: Hydrogen cyanide production during reduction of nitric oxide over platinum catalysts. Science 190:149-51, 1975
7. Dunlevey FM, Lee CH: Hydrogen cyanide formation over automotive catalytic converters. Science 192:809-10, 1976
8. Faith WL, Keyes DB, Clark RL: Hydrogen Cyanide-HCN, in Industrial Chemicals, ed 3. New York, John Wiley and Sons Inc, 1965, pp 450-57
9. Hydrogen Cyanide. Chemical Economics Handbook, Stanford Research Institute, Menlo Park, California, Nov 1975, p 664.5020A-I
10. Shreve RN: Chemical Process Industries, ed 3. New York, McGraw-Hill Book Co, 1967, pp 220-21, 476-83, 696-99
11. Stock PG, Monier-Williams GW: Preliminary report on the use of hydrogen cyanide for fumigation purposes--Reports on Public Health and Medical Subjects No 19. London, Ministry of Health, 1923
12. Fuhner H: [The poisoning by cyanic acid and its treatment.] Dtsch Med Wochenschr 45:847-50, 1919 (Ger)
13. Gettler AO, St George AV: Cyanide poisoning. Am J Clin Pathol 4: 459-37, 1934

14. Scott HG, Littig KS: Insecticidal Equipment for the Control of Insects of Public Health Importance, Publication 774. Training Guide--Insect Control Series. US Dept of Health, Education, Welfare, Public Health Service, Center for Disease Control, Atlanta, 1959, pp 26-27
15. Frear DEH (ed): Pesticide Handbook--Entoma, ed 24. State College, Pennsylvania, College Science Publishers, 1972, pp 63,81,86,114,254, 255
16. Cousineau A, Legg FG: Hydrocyanic acid gas and other toxic gases in commercial fumigation. Am J Public Health 25:277-94, 1935
17. Jaroschka R, Kropp R: [Chronic cyanide poisoning.] Int Arch Gewerbepathol Gewerbehyg 22:202-07, 1966 (Ger)
18. Williams CL: An unusual case of cyanide poisoning during fumigation. Public Health Rep 53:2094-95, 1938
19. Polson CJ, Tattersall RN: Clinical Toxicology. London, Pittman Medical and Scientific Publishing Co Ltd, 1971, chap 9, pp 128-59
20. Bernstein P, Avital YM: [HCN poisoning in a tobacco warehouse.] Harefuah 62:165-67, 1962 (Heb)
21. Sunshine I, Finkle B: The necessity for tissue studies in fatal cyanide poisonings. Int Arch Gewerbepathol Gewerbehyg 20:558-61, 1964
22. Saia B, DeRosa E, Galzigna L: [Remarks on the chronic poisoning from cyanide.] Med Lav 61:580-86, 1970 (Ita)
23. Dinca C, Pod L, Galetariu I: [Considerations on leukocytic oxidative enzyme changes in subjects exposed to the prolonged action of cyanhydric acid in industry.] Med Int 24:1385-92, 1972 (Rum)
24. Hardy HL, Jeffries WM, Wasserman MM, Waddell WR: Thiocyanate effect following industrial cyanide exposure--report of two cases. N Engl J Med 242:968-972, 1950
25. Wuthrich F: [Chronic cyanide poisoning as industrial intoxicant.] Schweiz Med Wochenschr 84:105-07, 1954 (Ger)
26. Smith AR: Cyanide poisoning. NY Dept Labor Ind Bull 11:169-70, 1932
27. Parmenter DC: Observations on mild cyanide poisoning--report of a case. J Ind Health 8:280-82, 1926

28. Mooney RB, Quin JP: Alkali metal cyanides, in Kirk RE, Othmer DF: Encyclopedia of Chemical Technology, ed 2. New York, Interscience Publishers, 1965, vol 6, pp 585-601
29. Fassett DW: Cyanides and nitriles, in Patty FA (ed): Industrial Hygiene and Toxicology, ed 2 rev; Toxicology (Fassett DW, Irish DD, eds). New York, Interscience Publishers, 1963, vol II, chap 44
30. Chemical Safety Data Sheet SD-30, Properties and Essential Information for Safe Handling and Use of Sodium Cyanide. Washington, DC, Manufacturing Chemists Association Inc, 1967
31. Booth RB: Alkaline earth metal cyanides, in Kirk RE, Othmer DF: Encyclopedia of Chemical Technology, ed 2. New York, Interscience Publishers, 1965, vol 6, pp 601-04
32. Clifford AF: Inorganic Chemistry of Qualitative Analysis. Englewood Cliffs, N.J., Prentice-Hall, 1961, pp 446-47
33. The Merck Index, PG Stecher, ed, 8th edition. Rahway, N.J., Merck and Co, 1968, pp 191, 193, 853, 855, 957, 960
34. Dean JA (ed): Lange's Handbook of Chemistry, ed 11. New York, McGraw-Hill Book Co, 1973, pp 5-7, 5-9, 5-11, 5-71, 5-73
35. Fahrenwald AW: The Cyanide Process--Its Control and Operation. New York, John Wiley & Sons, 1918, 256 pp
36. Dorr JVN, Bosqui FL: Cyanidation and Concentration of Gold and Silver Ores, ed 2. New York, McGraw-Hill Book Co, 1950, 511 pp
37. Hamilton EM: Manual of Cyanidation. New York, McGraw-Hill Book Co, 1920, 277 pp
38. James A: Cyanide Practice, ed 2. London, E & FN Spon Ltd, 1902, 104 pp
39. Williams CL: Fumigants. Public Health Rep 46:1013-31, 1931
40. Creel RH: Fumigation by cyanide gas. Mil Surg 39:282-87, 1916
41. MacFarren HW: Text Book of Cyanide Practice. New York, McGraw-Hill Book Co, 1912, pp 43-50
42. Johnstone RT: Occupational Medicine and Industrial Hygiene. St Louis, CV Mosby Co, 1948, pp 130-35
43. Williams CL: The use of hydrocyanic acid for fumigation purposes. Can Public Health J 23:567-70, 1932

44. Gleason MN, Gosselin RE, Hodge HC, Smith RP: Clinical Toxicology of Commercial Products, ed 3. Baltimore, Williams & Wilkins Co, 1969, pp 26-31, 33-42, 44-45, 52-53
45. Scheele CW: Experiments concerning the colouring in prussian blue, in The Collected Papers of Carl Wilhelm Scheele. London, G Bell and Sons Ltd, 1931, pp 238-55
46. De Tatham H: Temporary amaurosis from exposure to the vapour of dilute hydrocyanic acid. Br Med J, 1:409, 1884
47. International Labour Office: Occupation and Health--Encyclopedia of Hygiene, Pathology, and Social Welfare. Geneva, Noirclerc et Fenetrier SA, 1930, vol I, pp 993-98
48. International Labour Office: Cyanogen and its compounds, in Occupation and Health: Encyclopedia of Hygiene, Pathology and Social Welfare. Geneva, Noirclerc et Fenetrier SA, 1930, vol I, pp 553-60
49. Rambousek J: Industrial Poisoning from Fumes, Gases and Poisons of Manufacturing Processes. TM Legge (trans-ed). London, Edward Arnold, 1913, pp 93-95, 195-97, 280, 341, 348-49
50. Souwers GF: A case of peculiar poisoning by cyanide of potassium. Philadelphia Med Times 8:345-46, 1878
51. McKelway JI: Three cases of poisoning by potassium cyanide. Am J Med Sci 129:684-88, 1905
52. Kobert R: [Cyangas, prussic acid, and cyanide], in Lehrbuch der Intoxikationen, ed 2. Stuttgart, Ferdinand Enke, 1906, vol 2 , pp 835-63 (Ger)
53. Binkley, F: On the nature of serine dehydrase and cysteine desulfurase. J Biol Chem 150:261-62, 1943
54. Altschul AM, Abrams R, Hogness TR: Cytochrome c peroxidase. J Biol Chem 136:777-94, 1940
55. Albaum HG, Tepperman J, Bodansky O: A spectrophotometric study of the competition of methemoglobin and cytochrome oxidase for cyanide in vitro. J Biol Chem 163:641-47, 1964
56. Dixon M, Webb EC: Enzymes. New York, Academic Press Inc, 1958, pp 373-76
57. Schubert J, Brill WA: Antagonism of experimental cyanide toxicity in relation to the in vivo activity of cytochrome oxidase. J Pharmacol Exp Ther 162:352-59, 1968

58. Rieders F: Noxious gases and vapors--I.: carbon monoxide, cyanides, methemoglobin, and sulfhemoglobin, in J Dipalma (ed): Drill's Pharmacology in Medicine, ed 4. New York, McGraw-Hill Book Co, 1971, pp 1189-94, 1203
59. Lang K: [Rhoadanyl formation in the animal body.] Biochem Z 259:24356, 1933 (Ger)
60. Sorbo B: Enzymatic conversion of cyanide to thiocyanate, in Uvnas B (ed): Metabolic Factors Controlling Duration of Drug Action. Proceedings of the First International Pharmacological Meeting. New York, The Macmillan Co, 1962, pp 121-36
61. Goldstein F, Reiders F: Conversion of thiocyanate to cyanide by an erythrocytic enzyme. Am J Physiol 173:287-290, 1953
62. Himwich WA, Saunders JP: Enzymatic conversion of cyanide to thiocyanate. Am J Physiol 153:348-54, 1948
63. Young MA: Health hazards of electroplating. J Occup Med 7:348-52, 1965
64. Thienes CH, Holly TJ: Cyanides, in Clinical Toxicology. Philadelphia, Lea & Febiger, 1964, pp 282-86
65. Wood JL, Biochemistry; in Chemistry and Biochemistry of Thiocyanic Acid and its Derivatives, Newman AA, ed, Academic Press, New York, 1975, pp 156-221
66. Williams RT: The metabolism of nitriles, in Detoxication Mechanisms. London, Chapman and Hall Ltd, 1959, chap 12, pp 390-409
67. Ansell M, Lewis FAS: A review of cyanide concentrations found in human organs--a survey of literature concerning cyanide metabolism, 'normal', non-fatal, and fatal body cyanide levels. J Forensic Med 17:148-55, 1970
68. McNamara BP: Estimates of the toxicity of hydrocyanid acid vapors in man. Edgewood Arsenal Technical Report EB-TR-76023, Dept of the Army, August, 1976
69. Feldstein M, Klendshoj NC: The determination of cyanide in biologic fluids by microdiffusion analysis. J Lab Clin Med 44:166-70, 1954
70. Ermans AM, Delange F, Van Der Velden M, Kinthaert J: Possible role of cyanide and thiocyanate in the etiology of endemic cretinism. Adv Exp Med Biol 30:455-86, 1972
71. Chronic cyanide neurotoxicity. Lancet (edit) 2:942-43, 1969

72. Rylander R: Toxicity of cigarette smoke components--free lung cell response in acute exposures. *Am Rev Respir Dis* 108:1279-82, 1973
73. Djuric D, Raicevic P, Konstantinovic I: Excretion of thiocyanates in urine of smokers. *Arch Environ Health* 5:12-15, 1962
74. Wilson J, Matthews DM: Metabolic inter-relationships between cyanide, thiocyanate and vitamin B12 in smokers and non-smokers. *Clin Sci* 31:1-7, 1966
75. Heaton JM: Chronic cyanide poisoning and optic neuritis. *Trans Ophthalmol Soc UK* 82:263-69, 1962
76. Maehly AC, Swensson A: Cyanide and thiocyanate levels in blood and urine of workers with low-grade exposure to cyanide. *Int Arch Arbeitsmed* 27:195-209, 1970
77. Pettigrew AR, Fell GS: Microdiffusion method for estimation of cyanide in whole blood and its application to the study of conversion of cyanide to thiocyanate. *Clin Chem* 19:466-71, 1973
78. Pettigrew AR, Fell GS: Simplified colorimetric determination of thiocyanate in biological fluids and its application to investigation of toxic amblyopias. *Clin Chem* 18:996-1000, 1972
79. Radojicic B: [Determining thiocyanate in urine of workers exposed to cyanides] *Arh Hig Rada* 24:227-232, 1973 (Yugoslavian)
80. Moskowitz S: Health hazards in the plating room and their control. *Plating* 38:1141-52, 1951
81. Merzbach, G: [On a case of chronic industrial hydrocyanic acid intoxication.] *Beilage Hyg Ranschau* 9:45-56, 1899, (Ger)
82. Chaumont AJ: [Chronic intoxication caused by cyanides and by hydrocyanic acid.] *Soc de Medecine et D' Hygiene Du Travail*, 660-662, 1960, (Fre)
83. Colle R: [Chronic hydrogen cyanide poisoning.] *Maroc Med* 50:750-57, 1972, (Fre)
84. Sato T, Fukuyama T, Yamada M: The allowable concentration of hydrogen cyanide in air. *Bull Inst Public Health (Tokyo)* 4:3-5, 1955
85. Wexler J, Whittenberger JL, Dumke PR: The effect of cyanide on the electrocardiogram of man. *Am Heart J* 34:163-73, 1947
86. Barcroft J: The toxicity of atmospheres containing hydrocyanic acid gas. *J Hyg* 31:1-34, 1931

87. Thomas TA, Brooks JW: Accidental cyanide poisoning. *Anaesthesia* 25:110-14, 1970
88. Sandberg CG: A case of chronic poisoning with potassium cyanide? *Acta Med Scand* 181(fasc 2):233-36, 1967
89. Courville CB: Forensic neuropathology--X. Common chemical, metallic, and metalloid poisons. *J Forensic Sci* 8:481-502, 1963
90. Barsky MH: Ulcerations of the nasal membranes and perforation of the septum in a copperplating factory--unusual and sudden incidence. *NY State J Med* 37:1031-34, 1937
91. Elkins HB: *The Chemistry of Industrial Toxicology*, ed 2. New York, John Wiley & Sons Inc, 1959, pp 94-95
92. Cohen SR, Davis DM, Kramkowski RS: Clinical manifestations of chromic acid toxicity--nasal lesions in electroplate workers. *Cutis* 13:558-68, 1974
93. Lowenheim FA: Electroplating, in Kirk RE, Othmer DF: *Encyclopedia of Chemical Technology*, ed 2. New York, Interscience Publishers, 1965, vol 8, pp 36-74
94. Nolan JW: Potassium cyanide poisoning. *JAMA* 50:365, 1908
95. Collins J, Martland HS: Disease of the primary motor neurones causing the clinical picture of acute anterior poliomyelitis: the result of poisoning by cyanide of potassium--a clinical and experimental contribution to the toxic effects of cyanide of potassium upon the peripheral motor neurones. *J Nerv Ment Dis* 35:417-26, 1908
96. Tovo S: [Poisoning due to KCN absorbed through skin.] *Minerva Med* 75:158-61, 1955 (Ita)
97. Raestrup: [On cutaneous damage caused by potassium cyanide.] *Zentralbl Gewerbehyg* 3:103-06, 1926 (Ger)
98. Muller-Hess B: [Intoxication caused by absorption of hydrocyanic acid through the skin.] *Muerch Med Wocheschr* 89:492, 1942 (Ger)
99. Chen KK, Rose CL: Nitrite and thiosulfate therapy in cyanide poisoning. *JAMA* 149:113-19, 1952
100. Wolfsie JH: Treatment of cyanide poisoning in industry. *Arch Ind Hyg Occup Med* 4:417-25, 1951
101. Chen, KK, Rose CL, Clowes GHA: The modern treatment of cyanide poisoning. *Indiana State Med Assoc J* 37:344-50, 1944

102. Ingegno AP, Franco S: Cyanide poisoning--successful treatment of two cases with intra-venous sodium nitrite and sodium thiosulfate. *Ind Med* 6:573-76, 1937
103. Lee-Jones M, Bennett MA, Sherwell JM: Cyanide self-poisoning. *Br Med J* 4:780-1, 1970
104. De Busk RF, Seidl LG: Attempted suicide by cyanide--a report of two cases. *Calif Med* 110:394-96, 1969
105. Hirsch FG: Cyanide poisoning. *Arch Environ Health* 8:622-24, 1964
106. Mascarenhas BR, Geller AC, Goodman AI: Cyanide poisoning--medical emergency. *NY State J Med* 69:1782-84, 1969
107. Wolfsie JH, Shaffer CB: Hydrogen Cyanide--hazards, toxicology, prevention and management of poisoning. *J Occup Med* 1:281-88, 1959
108. Smith RP, Gosselin RE: Current concepts about the treatment of selected poisonings--nitrite, cyanide, sulfide, barium, and quinidine. *Ann Rev Pharmacol Toxicol* 16:189-199, 1976
109. Carmelo, S: [New contributions to the study of subacute-chronic hydrocyanic acid intoxication in man.] *Rass Med Ind* 24:254-71, 1955 (Ita)
110. El Ghawabi SH, Gaafar MA, El-Saharti AA, Ahmed SH, Malash KK, Fanes R: Chronic cyanide exposure: a clinical, radioisotope, and laboratory study. *Br J Ind Med* 32:215-19, 1975
111. Wollman SH: Nature of the inhibition by thiocyanate of the iodide concentrating mechanism of the thyroid gland. *Amer J Physiol* 186:453-459, 1956
112. Heymans JF, Masoin P: [The diachronic toxicity of some cyanogen compounds.] *Arch Int Pharmacodyn Ther* 7:297-306, 1900 (Fre)
113. Lehmann, KB: [About the toxicity of gaseous HCN and hydrogen phosphide with a demonstration.] *Klin Wochensch* 40:918-19, 1903 (Ger)
114. Creel RH, Faget FM, Wrightson WD: Hydrocyanic acid gas--its practical use as a routine fumigant. *Public Health Rep* 30:3537-50, 1915
115. Grubbs SB: Detection of hydrocyanic acid gas--use of small animals for this purpose. *Weekly Public Health Rep* 32:565-70, 1917
116. Walton DC, Witherspoon MG: Skin absorption of certain gases. *J Pharmacol Exp Ther* 26:315-24, 1926

117. Fairley A, Linton EC, Wild FE: The absorption of hydrocyanic acid vapour through the skin--hydrocyanic acid, prussic acid, with notes on other matters relating to acute cyanide poisoning. *J Hyg* 34:283-94, 1934
118. Flury F, Zernik F: [HCN (hydrocyanic acid, prussic acid).] in *Noxious Gases--Vapors, Mist, Smoke and Dust Particles*. Berlin, Verlag von Julius Springer, 1931, pp 400-15 (Ger)
119. Trautman JA: Methylene blue in the treatment of HCN gas poisoning. *Public Health Rep* 48:1443-47, 1933
120. Gettler AO, Baine JO: The toxicology of cyanide. *Am J Med Sci* 195:182-98, 1938
121. Etteldorf JN: The treatment of gaseous hydrocyanic acid poisoning by sodium thiosulfate and sodium nitrite combination. *J Pharmacol Exp Ther* 66:125-31, 1939
122. Jandorf BJ, Bodansky O: Therapeutic and prophylactic effect of methemoglobinemia in inhalation poisoning by hydrogen cyanide and cyanogen chloride. *J Ind Hyg Toxicol* 28:125-32, 1946
123. Gordh T, Norberg B: Studies on oxygen treatment in connection with experimental hydrocyanic poisoning. *Acta Physiol Scand* 13:26-34, 1947
124. Moss RH, Jackson CF, Seiberlich J: Toxicity of carbon monoxide and hydrogen cyanide gas mixtures--a preliminary report. *Arch Ind Hyg Occup Med* 4:53-64, 1951
125. Haymaker W, Ginzler AM, Ferguson RL: Residual neuropathological effects of cyanide poisoning--a study of the central nervous system of 23 dogs exposed to cyanide compounds. *Mil Surg* 111:231-46, 1952
126. Valade P: [Injuries to the central nervous system in chronic experimental poisoning by hydrocyanic acid gas.] *Bull Acad Natl Med Paris* 136:280-85, 1952 (Fre)
127. Howard JW, Hanzal RF: Chronic toxicity for rats of food treated with HCN. *Agric Food Chem* 3:325-29, 1955
128. Levine S, Stypulkowski W: Experimental cyanide encephalopathy. *Arch Pathol* 67:306-23, 1959
129. Levine S, Weinstein B: Neurotoxicity of hydrogen cyanide. *J Am Pharm Assoc* 48:224-26, 1959
130. Ibrahim MZM, Briscoe PB Jr, Bayliss OB, Adams CWM: The relationship between enzyme activity and neuroglia in the prodromal and

- demyelinating stages of cyanide encephalopathy in the rat. *J Neurol Neurosurg and Psychiatry* 26:479-486, 1963
131. Smith ADM, Duckett S, Waters AH: Neuropathological changes in chronic cyanide intoxication. *Nature* 200:179-181, 1963
 132. Hirner A: [Electron microscopic findings concerning the pathogenesis of callosal lesions after experimental cyanide intoxication.] *Acta Neuropathol (Berl)* 13:350-68, 1969
 133. Higgins EA, Fiorca V, Thomas AA, Davis HV: Acute toxicity of brief exposures to HF, HCl, NO₂, and HCN with and without CO. *Fire Technol* 8:120-30, 1972
 134. Ballantyne B, Bright J, Swanston DW, Williams P: Toxicity of cyanides given by intramuscular injection. *Br J Pharmacol* 41:423P-24P, 1971
 135. Ballantyne B, Bright J, Swanston DW, Williams P: Toxicity and distribution of free cyanides given intramuscularly. *Med Sci Law* 12:209-19, 1972
 136. Ballantyne B, Bright J, Williams P: Levels of cyanide in whole blood and serum following lethal intramuscular injections to experimental mammals. *Med Sci Law* 10:225-29, 1970
 137. Levi G, Amaducci L: Effect of acute cyanide intoxication on the active transport of amino acids in brain slices. *J Neurochem* 15:459-69, 1968
 138. Perry IH: The effect of prolonged cyanide treatment on body and tumor growth in rats. *Am J Cancer* 25:592-98, 1935
 139. Hrizu D, Gaspar A, Teodorescu M, Mogos I: [Cytostatic effects of potassium sulfocyanate in vivo and in vitro.] *Arch Roum Pathol Exp Microbiol* 32:155-158, 1973, (Fre)
 140. Nowinski WW, Pandra J: Influence of sodium thiocyanate on the development of the chick embryo. *Nature* 157:414. 1946
 141. Ortolani G: The action of sodium thiocyanate (NaSCN) on the embryonic development of the ascidians. *Acta Embryol Exp* 27-34, 1969
 142. Lazareff NV (ed): [Toxic Substances in Industry. Inorganic and Elementary Compounds. A Manual for Chemists, Engineers, and Physicians], ed 6. Leningrad, Khimiya, 1971, pp 228-240, (Rus)
 143. Lazareff NV: [Harmful substances in industry-part II - inorganic and organometallic compounds.] State Technical Publishings, Warsaw, 1956, p 224-235 (Rus)

144. Finck PA: Postmortem distribution studies of cyanide--report of three cases. *Med Ann DC* 38:357-58, 1969
145. Hamilton A, Hardy HL: *Industrial Toxicology*, ed 2. New York, Paul B Hoeber Inc, 1949, pp 248-62
146. Davis HJ: Industrial dermatitis--481 cases. *Ind Med* 12:381-83, 1943
147. Drinker P: Hydrocyanic acid gas poisoning by absorption through the skin. *J Ind Hyg* 14:1-2, 1932
148. Potter AL: The successful treatment of two recent cases of cyanide poisoning. *Br J Ind Med* 7:125-30, 1950
149. Henderson Y, Haggard H: *Noxious Gases and the Principles of Respiration Influencing Their Action*, ed 2. >35 in ACS Monograph Series. New York, Reinhold Publishing Corp, 1943, pp 172-76
150. Grabois, B: Exposure to hydrogen cyanide in the processing of apricot kernels. *NY State Dept Labor Month Rev, Div Ind Hyg* 33:33-36, 1954
151. Landahl HD, Herrmann RG: Retention of vapors and gases in the human nose and lung. *Arch Ind Hyg Occ Med* 1:36-45, 1950
152. Sollmann T: *A Manual of Pharmacology*, ed 8. Philadelphia, WB Saunders Co, 1957, pp 982-90
153. Liebowitz D, Schwartz H: Cyanide poisoning--report of a case with recovery. *Am J Clin Pathol* 18:965-70, 1948
154. Dermatitis in the manufacture and use of alkalis, in *Skin Hazards in American Industry*, Part II, Public Health Bulletin 229. US Public Health Service, 1936, pp 69-75
155. Somov BA, Khaimovsky GD: [Allergic dermatitis caused by aurum compounds in watch industry.] *Vestn Dermatol Venerol* 38:33-36, 1964 (Rus)
156. Liebig J: [Method for determination of the hydrocyanic acid content of medicinal hydrocyanic acid, bitter-almond and cherry laurel water.] *Ann Chem* 77:102-07, 1851 (Ger)
157. Thienes CH, Haley TJ: *Clinical Toxicology*. Philadelphia, Lea and Febiger, 1964, pp 376-80
158. Rapid method for the determination of inorganic substances in the air, in Levine BS (trans): *USSR Literature on Air Pollution and Related Occupational Diseases--A Survey*. Springfield, Va, US Dept

- of Commerce, National Technical Information Service, 1964, vol 10, pp 70-75 (NTIS TT-64-11761)
159. Bark LS, Higson HG: A review of the methods available for the detection and determination of small amounts of cyanide. *Analyst* 88:751-60, 1963
 160. Guatelli MA: The toxicology of cyanides, in Curry AS (ed): *Methods of Forensic Science*. New York, Interscience Publishers, 1964, vol 3, pp 233-65
 161. Hanson NW, Reilly DA, Stagg HE (eds): *The Determination of Toxic Substances in Air*. Cambridge, England, W Heffer and Sons Ltd, 1965, pp 23-28, 138-46
 162. Ruch W (ed): *Chemical Detection of Gaseous Pollutants*. Ann Arbor, Mich, Science Publications, 1966, pp 103-11
 163. Jacobs MB: *The Analytical Toxicology of Industrial Inorganic Poisons*. New York, Interscience Publishers, 1967, pp 721-41
 164. Maehly AC: Volatile toxic compounds, in Stolman A (ed): *Progress in Chemical Toxicology*. New York, Academic Press, 1967, vol 3, pp 88-91
 165. Jacobs MB: *War Gases--Their Identification and Decontamination*. New York, Interscience Publishers Inc, 1942, pp 36-37, 119-21
 166. Katz SH, Longfellow ES: Tests for hydrocyanic acid gas in air. *J Ind Hyg* 5:97-104, 1923
 167. Robbie WA, Leinfelder PJ: A rapid and simple method for measuring small amounts of cyanide gas in air. *J Ind Hyg* 27:136-39, 1945
 168. Gisclard JB, Rook JH, Andresen WV, Bradley WR: A simple device for air analysis. *Am Ind Hyg Assoc Q* 14:23-25, 1953
 169. White NG: Hydrogen Cyanide as an industrial hazard--methods of detection and control. *Am Ind Hyg Assoc Q* 9:81-84, 1948
 170. Baumeister R, Schievelbein H: [Simple method for determining small quantities of cyanide in cigarette smoke and biological material.] *Z Anal Chem* 255:362-63, 1971 (Ger)
 171. Lester D: The quantitative determination of cyanide in air. *J Ind Hyg* 26:61-63, 1944

172. Hori T, Yasue G, Kobayashi Y: [A rapid method for microdetermination of hydrogen cyanide in air by means of detector tubes.] Bunseki Kagaku (Japan Analyst) 17:613-15, 1968 (Jap)
173. Gettler AO, Goldbaum L: Detection and estimation of microquantities of cyanide. Anal Chem 19:270-71, 1947
174. Aldridge WN: A new method for the estimation of micro quantities of cyanide and thiocyanate. Analyst 69:262-65, 1944
175. Saltzman BE: Preparation and analysis of calibrated low concentrations of sixteen toxic gases. Anal Chem 33:1100-12, 1961
176. Orsos S: [Determination of the atmospheric cyanide content by the pyrazolone-pyridine method.] Egeszsegtudomány 16:388-91, 1972 (Hung)
177. Goulden PD, Afghan BK, Brooksbank P: Determination of nanogram quantities of simple and complex cyanides in water. Anal Chem 44:1845-49, 1972
178. Ludzack FJ, Moore WA, Ruchhoft CC: Determination of cyanides in water and waste samples. Anal Chem 26:1784-92, 1954
179. Epstein J: Estimation of microquantities of cyanide. Anal Chem 19: 272-74, 1947
180. Boxer GE, Rickards JC: Chemical determination of vitamin B12--II. The quantitative isolation and colorimetric determination of millimicrogram quantities of cyanide. Arch Biochem 30:372-81, 1951
181. Baker MO, Foster RA, Post BG, Hiatt TA: Determination of micro quantities of cyanide in presence of a large excess of sulfide. Anal Chem 27:448-49, 1955
182. Hanker JS, Gelberg A, Witten B: Fluorometric and colorimetric estimation of cyanide and sulfide by demasking reactions of palladium chelates. Anal Chem 30:93-95, 1958
183. Lambert JL, Manzo DJ: Spectrophotometric determination of cyanide ion with tris - (1,10-phenanthroline) - iron(II)-triiodide ion association reagent. Anal Chem 40:1354-55, 1968
184. Fisher FB, Brown JS: Colorimetric determination of cyanide in stack gas and waste water. Anal Chem 24:1440-44, 1952
185. Guilbault GG, Kramer DN: A specific fluorometric method for the detection of cyanide. Anal Chem 37:918, 1965
186. American Society for Testing and Materials: Standard methods of test for cyanides in water, in Annual Book of ASTM Standards, part

- 23: Water; atmospheric analysis. Philadelphia, ASTM, 1973, pp 498-507
187. American Public Health Association, American Water Works Association, Water Pollution Control Federation: Cyanide, in Standard Methods for the Examination of Water and Wastewater, ed 13. Washington, DC, American Public Health Association, 1971, pp 397-406
188. Miller GW, Long LE, George GM, Sikes WL: Submicromicrogram determination of cyanide by a polarographic method. Anal Chem 36:980-83, 1964
189. Jura WH: Shielded dropping mercury electrode for polarographic analysis of flowing solutions--determination of cyanide ion. Anal Chem 26:1121-23, 1954
190. Jenkins SH, Hey AE, Cooper JS: The determination of cyanide in low concentration. Air Wat Pollut Int J 10:495-519, 1966
191. Shinozuka F, Stock JT: Voltammetry and amperometric titrimetry of cyanide at the rotating platinum microelectrode. Anal Chem 34:926-30, 1962
192. McCloskey JA: Direct amperometry of cyanide at extreme dilution. Anal Chem 33:1842-43, 1961
193. Laitinen HA, Jennings WP, Parks TD: Amperometric titration of cyanide with silver nitrate, using the rotating platinum electrode. Ind Eng Chem Anal Ed 18:574-75, 1946
194. Przybylowicz EP, Rogers LB: Coulometric titrations with mercury (I and II)-- determination of cyanide. Anal Chem 30:65-69, 1958
195. Strange JP: Potentiometric recorder for hydrogen sulfide and hydrogen cyanide. Anal Chem 29:1878-81, 1957
196. Baker BB, Morrison JD: Determination of microgram quantities of fluoride and cyanide by measurement of current from spontaneous electrolysis. Anal Chem 27:1306-07, 1955
197. Breuer W: [New methods of continuous trace gas analysis.] Presented at the 4th Interkama Meeting, Dusseldorf, Germany, Bayer-Leverkusen, 1968, 23 pp (Ger)
198. Collombel C, Durand JP, Bureau J, Cotte J: [Determination of the cyanide ion level in the atmosphere, drinking water, industrial effluents and biological mediums by means of a specific electrode.] J Eur Toxicol 3:291-99, 1970 (Fre)
199. Frant MS, Ross JW Jr, Riseman JH: Electrode indicator technique for measuring low levels of cyanide. Anal Chem 44:2227-30, 1972

200. Fleet B, von Storp H: The determination of low levels of cyanide ion using a silver responsive ion selective electrode. Anal Lett 4:425-35, 1971
201. Durst RA (ed): Ion-Selective Electrodes. National Bureau of Standards Special Publication 314. US Dept of Commerce, National Bureau of Standards, 1969, pp 84-86, 364-67, 430, 501-02,
202. Penland JL, Fischer G: [Cyanide determination using ion-selective electrodes subsequent to distillation.] Metalloberflaeche 26:391-94, 1972 (Ger)
203. Cyanide in air, in NIOSH Manual of Analytic Methods. Cincinnati, US Dept of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, Physical and Chemical Analysis Branch, Division of Laboratories and Criteria Development, 1974
204. Gyorgy B, Andre L, Stehli L, Pungor E: Direct potentiometric determination of cyanide in biological systems. Anal Chim Acta 46:318-21, 1969
205. Toth K, Pungor E: Determination of cyanides with ion-selective membrane electrodes. Anal Chim Acta 51:221-30, 1970
206. Schneider CR, Freund H: Determination of low level hydrocyanic acid in solution using gas-liquid chromatography. Anal Chem 34:69-74, 1962
207. Isbell RE: Determination of hydrogen cyanide and cyanogen by gas chromatography. Anal Chem (Corresp) 35:255-56, 1963
208. Claeys RR, Freund H: Gas chromatographic separation of HCN on porapak Q-- analysis of trace aqueous solutions. Environ Sci Technol 2:458-60, 1968
209. Danchik RS, Boltz DF: Indirect atomic absorption spectrometric methods for the determination of cyanide. Anal Chim Acta 49:567-69, 1970
210. Brown F, Graham J: Microturbidimetry for the detection of hydrogen cyanide. Anal Chem 24:1032, 1952
211. Bartholomew ET, Raby EC: Photronic photoelectric turbidimeter for determining hydrocyanic acid in solutions. Ind Eng Chem, Anal Ed 7: 68-69, 1935
212. Hill R, Holt JH, Miller B: Rapid test paper methods for hydrogen cyanide in the atmosphere. Ann Occup Hyg 14:289-94, 1971

213. Hydrogen Cyanide Vapour, booklet No 2 in Methods for the Detection of Toxic Substances in Air. London, HM Factory Inspectorate, Dept Employment, 1973, pp 3-11
214. Witten B, Prostack A: Sensitive detector crayons for phosgene, hydrogen cyanide, cyanogen chloride, and lewisite. Anal Chem 29:885-87, 1957
215. Lester D, Ordnung PF: A sensitive, portable, self-contained phototube colorimeter for the field determination of cyanide in air. J Ind Hyg Toxicol 26:197-200, 1944
216. Church FW, Campbell EE: The elimination of background color in colorimetric determination of cyanides and hydrocyanic acid. Am Ind Hyg Assoc J 11:109-10, 1950
217. Quantitative determination of hydrogen cyanide in the air, in Levine BS (trans): USSR Literature on Air Pollution and Related Occupational Diseases--A Survey. Springfield, Va, US Dept of Commerce, National Technical Information Service, 1963, vol 8, pp 15-18, (NTIS TT-63-11570)
218. Mel'nikova LV, Belyakov AA: Determination of atrazine, cyanuric chloride, hydrogen cyanide and aliphatic amines in air. Hyg Sanit 36:408-11, 1969
219. Belyakov AA, Mel'nikova LV: Determination of cyanogen chloride, hydrogen cyanide, cyanuric chloride and simazin in air. Hyg Sanit 34:207-10, 1969
220. Ionescu C, Nestorescu B: A new method for the determination of cyanhydric acid and cyanides in the air and in biologic products. Rom Med Rev 9:17-20, 1965
221. Truhaut R, Boudene C, Phu-lich N: [Specific microdetermination of hydrocyanic acid in the atmosphere and in biological material.] Ann Biol Clin (Paris) 22:901-07, 1964 (Fre)
222. Hydrocyanic acid and cyanides. American Industrial Hygienists Assoc, Anal Abstr, 1965
223. Tada O: Methods for determinations of toxic substances in air--inorganic compounds. J Sci Labour 44:10-22, 1968
224. Stolman A (ed): Progress in Chemical Toxicology, New York, Academic Press, Vol 3, 1967
225. Free AH, Free HM: Laboratory detection of cyanide poisoning, in Sunderman FW, Sunderman FW Jr: Laboratory Diagnosis of Diseases Caused by Toxic Agents. St Louis, Warren H Green Inc, 1970, chap 27, pp 286-91

226. Conway EJ: Volatile weak inorganic acids and phenol cyanide, azide, sulphide, phenols, in Microdiffusion Analysis and Volumetric Error. London, Crosby Lockwood & Sons Ltd, 1962, chap xxx, pp 241-42
227. Boxer GE, Rickards JC: Determination of traces of HCN in respiratory air. Arch Biochem 39:287-91, 1952
228. Tompsett SL: A note on the determination and identification of cyanide in biologic materials. Clin Chem 5:587-91, 1959
229. Ballantyne B; The forensic diagnosis of acute cyanide poisoning in Forensic Toxicology, B. Ballantyne, ed, Bristol, J. Wright and Sons Limited, 1974, pp 99-113
230. Toxgard Analyzer, Bulletin No. 0710-2. Pittsburgh, Mine Safety Appliance Co
231. ACGIH Committee on Industrial Ventilation: Industrial Ventilation - A Manual of Recommended Practices, ed 12. Lansing, Mich, Conference of Governmental Industrial Hygienists, 1972
232. Fundamentals Governing the Design and Operation of Local Exhaust Systems, Z9.2. New York, American National Standards Institute Inc, 1971
233. Hydrogen Cyanide, AIHA Hygienic Guide Series. Am Ind Hyg Assoc J 31:116-19, 1970
234. American Conference of Governmental Industrial Hygienists: Threshold Limit Values adopted at April 1948 Meeting of ACGIH, Boston, Mass
235. American Conference of Industrial Hygienists: Documentation of the Threshold Limit Values for Substances in Workroom Air. Cincinnati, ACGIH, 1971, pp 130-31
236. American Conference of Governmental Industrial Hygienists: Documentation of the Threshold Limit Values for Substances in Workroom Air. Cincinnati, ACGIH, 1971, p 64
237. Mancuso TF: Industrial poisoning--cyanides. Ohio State Med J 51: 1210-11, 1955
238. Cyanides and nitriles, Chief Employment Medical Adviser's Notes of Guidance, number 17. EMAS, Department of Employment, Great Britain, 1972
239. Johnstone RJ, Miller SE: Noxious Gases in Occupational Diseases and Industrial Medicine. Philadelphia, WB Saunders Co, 1960, pp 119-22, 146-47

240. Kobert R: [Treatment of Poisonings], Chapter 9 in Kompend der prak Toxicol, ed 5, 1912, p 45 (Ger)
241. Griffon H, LeBreton R: [A case of fatal acute intoxication by massive ingestion of pure potassium cyanide.] Ann Med Leg 31:266-69, 1951 (Fre)
242. Halstrom F, Moller KO: The content of cyanide in human organs from cases of poisoning with cyanide take by mouth--with a contribution to the toxicology of cyanides. Acta Pharmacol Toxicol (Kbh) 1:18-28, 1945
243. Robinson A: A case of cyanide poisoning. J R Nav Med Serv 45:93-95, 1959
244. Ernst W: [Is there such a thing as a slowly progressing oral potassium cyanide poisoning?] Dtsch Med Wochenschr 54:1373-74, 1928 (Ger)
245. Thompson TM: Accidental cyanide poisoning--its prevention and treatment. Occup Med 4:419-24, 1947
246. Aero Liquid HCN, Fumigation Manual. Princeton, NJ, American Cyanamid Co, 36 pp
247. Knowles EL, Bain JTB: Medical cover required in large scale production of cyanides and hydrocyanic acid. Chem Ind pp 232-35, February 24, 1968
248. Hydrogen Cyanide. Hygienic Information Guide No 21. Harrisburg, Commonwealth of Pennsylvania Department of Environmental Resources, Occupational Health, 1971
249. Davison V: Cyanide poisoning--kelocyanor - a new treatment. Occup Health 21:306-08, 1969
250. Craig A, Jones RWL: O.H. in the metal finishing industry (2). Occup Health 23:251-61, 1971
251. Fleming AJ: Chemical health hazards, in Fleming AJ, D'Alonzo CA (eds): Modern Occupational Medicine. Philadelphia, Lea & Febiger, 1960, pp 386-88
252. Plating and cyanide wastes--general problems of the metal plating industry. J Water Pollut Control Fed 42:1211-30, 1970
253. Schiede EP, Hughes EE, Taylor JK: A system for producing test atmospheres containing hydrogen cyanide. Final Report NBSIR 73-257, October 1973.

254. Montgomery PD: Hydrogen cyanide, in Kirk RE, Othmer DF: Encyclopedia of Chemical Technology, ed 2, New York, Interscience Publishers, 1965, vol 6, pp 574-585
255. Winter EA, Montesinso MJ, Singley JE: Copper compounds, in Kirk RE, Othmer DF (eds): Encyclopedia of Chemical Technology, ed 2. New York, Interscience Publishers, 1965, vol 6, pp 270-71
256. Bratt J: Mercury compounds, in Kirk RE, Othmer DF (eds): Encyclopedia of Chemical Technology, ed 2. New York, Interscience Publishers, 1967, vol 13, pp 235-38
257. Thompson AP: Zinc compounds, in Kirk RE, Othmer DF, (eds): Encyclopedia of Chemical Technology, ed 2. New York, Interscience Publishers, 1970, vol 22, p 607
258. Gafafer WM (ed): Occupational Diseases--A Guide to Their Recognition, Public Health Service Publication No. 1097, US Dept of Health Education, and Welfare, 1964, pp 7, 77, 160, 161, 249, 336, 348
259. Cyanides, in A Guide to the Diagnosis of Occupational Diseases--A Reference Manual for Physicians. Ottawa, Dept National Health and Welfare, Industrial Health Div and Dept Health for Ontario, Div Industrial Hygiene, 1949, pp 168-69
260. Gonzales TA, Vance M, Helpern M, Umberger CJ: Legal Medicine--Pathology and Toxicology, ed 2. New York, Appleton-Century-Crofts Inc, 1954, pp 801-13
261. Moeschlin S: Poisoning--Diagnosis and Treatment. New York, Grune and Stratton, 1965, pp 255-61
262. Czechoslovak Committee of MAC: Documentation of MAC in Czechoslovakia. The Committee, Praha, 1969, pp 91-92
263. McNerney JM, Schrenk HH: The acute toxicity of cyanogen. Am Ind Hyg Assoc J 21:121-124, 1960
264. Dudley HC, Sweeney TR, Miller JW: Toxicology of acrylonitrile (vinyl cyanide)--II. Studies of effects of daily inhalation. J Ind Hyg Toxicol 24:255-58, 1942
265. Thomas MR, Calaresu FR: Hypothalamic inhibition of chemoreceptor-induced bradycardia in the cat. Am J Physiol 225:201-08, 1973
266. Wheatley MD, Lipton B, Ward AA Jr: Repeated cyanide convulsions without central nervous pathology. J Neuropathol Exp Neurol 6:408-11, 1947

267. Olsen NS, Klein JR: Effect of cyanide on the concentration of lactate and phosphates in brain. *J Biol Chem* 167:739-46, 1947
268. Ward AA Jr, Wheatley MD: Sodium cyanide--sequence of changes of activity induced at various levels of the central nervous system. *J Neuropathol Exp Neurol* 6:292-94, 1947
269. Leimdorfer A: About anoxia of the heart produced by intravenous sodium cyanide injections. *Arch Int Pharmacodyn Ther* 84:181-88, 1950
270. Wheatley MD: Mechanisms of cerebral death with doses of NaCN from which the heart recovers. *J Neuropathol Exp Neurol* 6:295-98, 1947
271. Ferraro A: Experimental toxic encephalomyelopathy--(Diffuse sclerosis following subcutaneous injections of potassium cyanide.) *Psychiatr Q* 7:267-83, 1933
272. Smith RG, Mukerji B, Seabury JH: Thiocyanate formation in cyanide poisoning as affected by methylene blue and sodium nitrite. *J Pharmacol Exp Ther* 68:351-64, 1940
273. Suzuki T, Saito K, Kobayasi Y: Adrenaline secretion of the suprarenal glands in cyanide anoxia. *Tohoku J Exp Med* 54:343-50, 1951
274. Fujimoto M, Nash FD, Kessler RH: Effects of cyanide, Qo, and dinitrophenol on renal sodium reabsorption and oxygen consumption. *Am J Physiol* 206:1327-32, 1964
275. Rose CL, Worth RM, Kikuchi K, Chen KK: Cobalt salts in acute cyanide poisoning. *Proc Soc Exp Biol Med* 120:780-83, 1965
276. Chen KK, Rose CL, Clowes GHA: Comparative values of several antidotes in cyanid poisoning. *Am J Med Sci* 188:767-81, 1934
277. Lappo VG: Experimental standardization of simulataneously present cyanides and mercury in water basins (reservoirs), from *Gig Sanit* 25: 11-17, 1960; in *USSR Literature on Water Supply and Pollution Control*, 1962, vol 2, pp 145-53
278. Dilley JV: Effect of cyanide on liver enzyme activity, in *US Atomic Energy Commision, BNWL-280*, 1966, pp 72-74
279. Hall SM: The effects of injection of potassium cynaide into the sciatic nerve of the adult mouse--in vivo and electron microscopic studies. *J Neurocytol* 1:233-54, 1972
280. Mushett CW, Kelley KL, Boxer GE, Rickards JC: Antidotal efficacy of vitamin B12a (hydroxo-cobalamin) in experimental cyanide poisoning. *Proc Soc Exp Biol Med* 81:234-37, 1952

281. Sheehy M, Way JL: Effect of oxygen on cyanide intoxication-III. Mithridate. *J Pharmacol Exp Ther* 161:163-68, 1968
282. Ferguson HC: Dilution of dose and acute oral toxicity. *Toxicol Appl Pharmacol* 4:759-62, 1962
283. Isom G, Way JL: Cyanide intoxication--protection with cobaltous chloride. *Toxicol Appl Pharmacol* 24:449-56, 1973
284. Hanzlik PJ, Richardson AP: Cyanide antidotes. *JAMA* 102:1740-45, 1934
285. Bell R Jr, Northup DW: Adaption to histotoxic anoxia. *Am J Physiol* 163:125-28, 1950
286. Dilley JV: Effect of cyanide on clearance of inhaled particles, in US Atomic Energy Commission, BNWL-280, 1966, pp 70-72
287. Suzuki T: Ultrastructural changes of heart muscle in cyanide poisoning. *Tohoku J Exp Med* 95:271-79, 1968
288. Rose CL, Harris PN, Chen KK: Effect of cyanide poisoning on the central nervous system of rats and dogs. *Proc Soc Exp Biol Med* 87:632-36, 1954
289. Albaum HG, Tepperman J, Bodansky O: The in vivo inactivation by cyanide of brain cytochrome oxidase and its effect on glycolysis and on the high energy phosphorus compounds in brain. *J Biol Chem* 164:45-51, 1946
290. Lessell S: Experimental cyanide optic neuropathy. *Arch Ophthalmol* 86:194-204, 1971
291. American Conference of Governmental Industrial Hygienists: TLVs--Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1975. Cincinnati, ACGIH, 1975, pp 15, 21
292. Permissible Levels of Toxic Substances in the Working Environment. Occupational Health and Safety Series. Geneva, International Labour Office, 1970, pp 190, 195, 197, 198, 200, 202, 209, 213, 218, 225, 235, 242, 247, 250, 256, 259, 262, 264, 265, 270, 273, 278, 281, 288, 292, 294, 334, 347, 349