Over 500 References Supporting EDTA Chelation

1. Toyota H, Shibata S (Kyoto University). Supplementary studies on pharmacology of disodium ethylenediaminetetraacetate (EDTA salt). Nippon Yakuriguku Zasshi. 1956;52:1-9. (CA51:11567e)

2. Uhl HSM, Brown HH, Zlatkis A, Zak, B, Myers GB, Boyle AJ. Effect of ethylenediamine-tetraacetic acid (EDT) on cholesterol metabolism in man. Preliminary report of effect of parenteral and oral administration of disodium and calcium salts. Am J Clin Pathol. 1953; 23:1226-1233. (CA48:2257d)

3. Vasil'eva OG. (Inst Ind Hyg Occup Dis, Acad Med Sci, USSR) Side effects of CaNa2 ethylene-diaminetetraacetate in experimental lead intoxication. Gigiena 1 Sanitariya. 1961;26:22-5 (Mar.). (979)

4. Vozar L. Complexons in food products and their effect on the metabolic processes. Prumysl potravin. 1958; 9:649-653. (CA53:8461i)

5. Vozar L. Effect of complexon III on the distribution of calcium and phosphorus in bones. Biologia. 1958; 13:695-699. (CA55:5762e)

6. Williams JD, Leigh DA. (Edgware General Hospital) Lead poisoning. Letters to the editor. British Med J. 1964; 1:1511 (June 6). (2841)

7. Williams JD, Matthews GA, Judd AW. (St. Paul's Hospital) Oral calcium disodium versenate in treatment of lead poisoning. British J Ind Med. 1962; 19-211-215 (July). (2491)

8. Windsor E, Cronheim GE (Riker Labs, Inc.). Gastrointestinal absorption of heparin and synthetic heparinoids. Nature. 1961; 190:203-204. (CA55:23818a) [Heparin Na U.S.P. and the K salt of sulfopolyglucin can be absorbed from the gastrointestinal tract when given orally with an alk. salt of ethylenediaminetetraacetic acid (I). The chelation of Ca and (or) Mg ions by I may be involved.]

9. Windsor E (to Riker Laboratories). Orally active therapeutic compositions, especially polysaccharide sulfates. U.S. 3,088,868 (Cl 167-55). May 7, 1963, Appl Aug. 18, 1958. (CA59:12598d)

10. Wynn JE, Van't Riet B, Borzelleca JF (Med. Coll. of Virginia). Toxicity and pharmaco-dynamics of EGTA: oral administration to rats and comparisons with EDTA. Toxicol Appl Pharmacol. 1970; 16(3):807-817. (CA73)

11. Yang SS. Toxicological investigations of ethylenediaminetetraacetic acid. Dissertation. Univ. Mass. 1952:94 p.

12. Rieders F, Copeland JE (Jefferson Med Coll). Inhibition of accumulation of chronically ingested lead in rats by simultaneous feeding of edathamil calcium disodium (Na2CaEDTA). Federation Proceedings. 1956; 15:Abstract No. 1541 (Mar.). (693)

13. Schuttmann C, Schuttmann W (Inst. Of Occup Med, Berlin-Lichtenberg). The medical prevention of occupational lead poisoning by oral administration of calciumdinatrium ethylenediaminetetraacetate. Zeitschrift fur Arztliche Fortbildung. 1963; 57:1301-1307 (Dec.). (2621)

14. Shiels DO, Thomas DLG, Kearley E. Treatment of lead poisoning by edathamil calcium-disodium. AMA Arch of Ind Health. 1956; 13:489-498 (May). (1718)

15. Savicevic M, Petrovic L. Prevention of industrial lead poisoning. Vojnosanitetski Pregled. 1962; 19:531-535 (July-Aug.). (3191)

16. Salvini M (Univ. Padua). The calcium chelate of disodium ethylenediamine tetraacetate in the treatment of saturnism. Folia Medica (Naples). 1955; 38:2:111-126. (1616)

17. Saruta N, Yamaguchi S. A new diagnostic method of occupational lead poisoning for group inspection. J Sci of Labour (Japan). 1957; 33:540 (July). (1855)

18. Ritter J, Dacquet J (Inst. Hyg. Rabat, Morocco). Detection and ambulatory treatment of lead poisoning by oral administration of calcium di-sodium versenate. Maroc Medical. 1961; 40:377-382 (Apr.). (2323)

19. Remy R (Inst. Physiol. Vet. Coll.). Experimental studies on lead poisoning in animals. I. Toxicology. II. Therapy and prophylaxis. Deutsche Tierurztliche Wochenschrift. 1956; 63:385-388; 405-408 (Oct. 1; 15). (692)

20. Pott R. Control of lead exposure as practiced in a lead foundry. Zentralplatt fur Arbeltsmedizin Arbeitsschutz. 1961; 11:211-214 (Sept.). (2317)

21. Pott R. Is prophylaxis of lead poisoning with EDTA possible? Archiv fur Gewerbe-pathologie Gewerbehygiene. 1959; 17:4:354-364. (2053)

22. Pettinati L, Gribaudo C, Rasetti L. Oral and intravenous versenate in the therapy of chronic lesions caused by lead. Minerva Medica. 1962; 53:2092-2097 (July). (2458)

23. Pendergrass JC. The effects of the chronic ingestion of low levels of inorganic mercury(11) and mercury(11) complexed with EDTA on the rodent neuronal cytoskeleton: possible role of these forms of environmental mercury exposure in the etiology of Alzheimer's disease. Diss Abstr Int B (Avail. Univ. Microfilms Int., Order No. DA9527428. 1975; 1995:56(4). (CA)

24. Oser BL, Oser M, Spencer HC. Safety evaluation studies of calcium EDTA. Toxicol Appl Pharmacol. 1963; 5:142-162. (CA59: 9223a)

25. Moeschlin S. The clinical picture and therapy of lead poisoning. Zeitschrift fur Unfallmedizin Berufskrankheiten 51. 1958; 2:129-149. (1936)

26. Myslak Z, Buczkowski M. The effect of calcium versenate (Ca-EDTA) on the kidney in the treatment of lead poisoning. Polskie Archiwum Medycyny Wewnetrznej. 1961; 31:853-856. (2304) [Kidney function tests (creatinine clearance, RN) were carried out on 20 out of 120 cases of chronic Pb poisoning treated by oral administration of CaEDTA. The results showed no harmful effect of EDTA on the kidneys during treatment.]

27. Myslak Z. Treatment of chronic saturnism by oral administration of calcium versenate. Medycyna Pracy. 1960; 11:353-368. (2169)

28. Nakaue HS, Thomas JM, Reid BL. Comparison of EDTA, terephthalic acid, sodium sulfate and acetyl-salicylic acid as antibiotic potentiating agents in broiler chicks. Poultry Sci. 1967; 46:417-421. (NA38)

29. Vozar L. Relation between peroral application of complexon 3 (ethylenediaminetetraacetic acid disodium salt) and the activity of alkaline phosphatase of blood serum. Biologia. 1960; 15:208-211. Z Inn Med. 1959; 14:676. (CA54:25290h)

30. Thomsen MK, Jacobsen C, Skibsted L II. Mechanism of initiation of oxidation in mayonnaise enriched with fish oil as studied by electron spin resonance spectroscopy. Eur Food Res Technol. 2000; 211(6):381-386. (CA)

31. Sidbury JB Jr., Bynum JC, Fetz LL. (US Public Health Serv.) Effect of chelating agent on urinary lead excretion. Comparison of oral and intravenous administration. Proceedings of Soc Experimental Biol and Med. 1953; 82:226-228. (1444)

32. McMahon FG. Comparison of the effect of Fe 3-specific (N, N-dihydroxyethylglycine), versenol, and calcium disodium versenate on urinary iron excretion in a patient with hemochromatosis. J Lab Clin Med. 1956; 48:589-602. (CA51:3027c)

33. McPhail AP, Patel RC, Bothwell TH, Lamparelli RD. EDTA and the absorption of iron from food. Amer J Clin Nutr. 1994; 59(3):644-648. (NA64)

34. Manville IA, Moser R. Recent developments in the care of workers exposed to lead. The effect of the calcium chelate of disodium ethylenediamine-tetraacetic acid on led in the blood and urine of battery workers. AMA Arch Ind Health. 1955; 12:528-538 (Nov.). (1587)

35. Heimbach J, Rieth S, Mohamedshah F, Slesinski R, Samuel-Fernando P, Sheehan T, Dickmann R, Borzelleca J. Safety assessment of iron EDTA (sodium iron (Fe3+) ethylenediaminetetraacetic acid): summary of toxicological, fortification and exposure data. Food Chem Toxicol. 2000; 38(1):99-111. (CA) [A review with many refs. Iron EDTA

36. Davidsson L, Kastenmayer P, Hurrell RF. Sodium iron EDTA (NaFe(III)EDTA) as a food fortification: the effect on the absorption and retention of zinc and calcium in women. Amer J Clin Nutr. 1994; 60(2):231-237. (NA64)

37. Foreman H, Trujillo TT. Metabolism of carbon14-labeled ethylenediaminetetraacetic acid in human beings. J Lab Clin Med. 1954; 43:566-571. (CA48: 8949a)

38. Foreman H. The pharmacology of some useful chelating agents. Metal Binding Med, Proc Symposium, Philadephia 1959. 1960; 82:94. (CA54:17719e)

39. Bradley JE, Powell AM Jr. Oral calcium EDTA in lead intoxication of children. J Ped. 1954; 45:297-301 (Sept.). (2882)

40. Capellaro F, Galdo PC, Alliod R. Possibility of treating saturnism by versenate by the oral route. Minerva Medica. 1963; 54:474-477. (2508)

41. Calabrese A, Astolfi E, Mariani F. Oral treatment of lead intoxication with calcium versenate. Clinical and experimental study. Dia Medico. 1961; 33:2292-2294 (Oct. 5). (2239)

42. Cotter LH. Treatment of lead poisoning by chelation. JAMA. 1954; 155:906-908. (CA52:10388a)

43. Choie DD, Copley MP, Gindhart TD. Mitigation of intestinal cytotoxicity of cisplatin by EDTA in rats. Cancer Lett. 1983; 19(2):195-198. (CA)

44. Cohn SH. The effect of chemical agents on the skeletal content and excretion of internally deposited fission products. US Atomic Energy Comm. ANL-5584. 1956; 144-149. (CA51:4557f)

45. Flanagan PR, Chamberlain MJ, Valberg LS. The relationship between iron and lead absorption in humans. Am J Clin Nutr. 1982; 36(5):823-9. (CA)

46. Forbes RM. Excretory patterns and bone deposition of zinc, calcium, and magnesium in the rat as influenced by zinc deficiency, EDTA, and lactose. J Nutr. 1961; 74:194-200. (CA59:7921b)

47. Davidson L, Almgren A, Hurrell RF. Sodium iron EDTA (NaFe(III) EDTA) as a food fortificant does not influence absorption and urinary excretion of manganese in healthy adults. J Nutr. 1998; 128(7): 1139-1143. (CA)

48. Desoille H, Albahary C, Truhaut R, Boudene C. The lead mobilization test using CaNa2EDTA. XII Intern Cong Occup Health. Helsinki, Finland. 1957; Vol. 111, Proceedings, pp. 287-290. (1773)

49. Davies NM, Jamali F. Pharmacological protection of NSAID-induced intestinal permeability in the rat: effect of tempo and metronidazole as potential free radical scavengers. Hum Exp Toxicol. 1997; 16(7):345-349. (CA)

50. Kalz F, Quastel J II, Telner P, Schafer A, MacIntyre W. Changes in the electrophoretic patterns of the serums of psoriatics under various forms of therapy. J Invest Dermatol. 1958; 31:161-166. (CA53:20529a)

51. Kehoe RA. Misuse of edathamil calcium-disodium for prophylaxis of lead poisoning. J Amer Med Assoc. 1955; 157:341-342 (Jan. 22). (1582)

52. Mariani B, Bisetti A, Romeo V. Blood-cholesterol-lowering action of the sodium salt of calciumethylenediaminetetraacetic acid. Gazs Intern Med Chir. 1957; 62:1812-1823. (CA51:16953c) [Two g. daily of the drug, in 2 intravenous administrations, or (with a lower effect) by mouth or rectum, caused in humans a decrease of blood cholesterol, especially of its free fraction.]

53. Stankovic M, Petrovic LJ, Poleti D (Inst. Public Health, Belgrade, Serbia). A contribution to the laboratory diagnostics of early saturnism. Arhiv za Higijenu Rada 1 Toksikologiju. 1962; 13:189-194. (2480)

54. Srbova J, Telsinger J (Clinic Occup. Dis., Prague). Absorption of calcium disodium salt of ethylenediaminetetraacetic acid after oral administration in the treatment of lead poisoning. Archiv fur Gewerbepatholgie und Gewerbehygiene 15. 1957; 6:572-580. (1858)

55. Suenaka T, Kosaka H, Miyama K, Tabuchi T, Hirata M, Hara I, Masumoto D, Akaboshi S (Osaka Prefect Inst. Public Health, Osaka). The effects of repeated oral administration of calcium-EDTA on patients with chronic lead poisoning. Osaka-furitsu Koshu Eisei Kenkyusho Kenkyu Hokoku, Rodo Eisei Hen. 1979; 17:1-9. (CA)

56. Suenaka T, Miyajima K, Kosaka H, Tbuchi T, Hara I. Urinary excretion of heavy metals following oral administration of calcium EDTA. Osaka furitsu Koshu Eisei Kenkyusho Kenkyu Hokoku, Rodo Eisei Hen. 1976; 14:19-23. (CA)

57. Swenerton H, Hurley L S (Dept. Nutr. Univ. Calif., Davis, Calif.). Teratogenic effects of a chelating agent and their prevention by zinc. Science. 1971; 173 (3991), 62-64 (Eng). (CA75)

58. Telsinger J, Srbova J. Effect of D-penicillinamine on the urinary excretion of mercury and lead. Pracovni Lekarstvi 16. 1964; 10:433-435. (2827) [Seven patients with chronic Pb poisoning were treated with daily oral doses of 150 mg D-penicillinamine for 4-7 days. Urinary excretion of Pb increased about 4-fold which is practically as much as after administration of 0.5-g tablets of CaEDTA, 4 times/day. If future studies confirm its lower toxicity in long-term administration, D-penicillinamine may replace EDTA.]

59. Tripod J. General pharmacodynamic aspects of mobilizing iron with chelators. Atti Acad Med Lombarda, Suppl 20. 1965; 2025-2027. (CA67)

60. Tufft LS, Nockels CF. The effects of stress, escherichia coli, dietary ethylenediamine-tetraacetic acid, and their interaction of tissue trace elements in chicks. Poult. Sci. 1991; 70(12):2439-2449. (CA)

61. Tolot F, Jaquis GM, Soubrier R, Bresson JR. Lead mobilization in, and the &-aminolevulinic acid (ALA) content of the urine of lead-exposed subjects. Egesesegiudomany. 1966; 10(4):375-380. (CA66)

62. Tolot F, Jaquis GM, Soubrier R, Bresson JR. The use of chelating agents "per os" in the treatment of prophylaxis of lead poisoning. Proceedings of the Society of Ind Med at Lyon. 1962; 23:376-379 (June). (2484)

63. Perrault M. Truhaut R, Klotz B, Boudene C, Dreux C, Clavel B, Chain F. The effectiveness of CaEDTA, in occupational lead poisoning. Archiv des Maladies Professionelles de Medecine du Travail et de Securite Sociale. 1956; 17:423-429; discussion 470-472. (1702)

64. Mitchell Jr PH, Schroeder HA. Depression of cholesterol levels in human plasma following ethylenediamine tetracetate and hydralazine. J Chron Dis. 1955; 2:520-533. (CA54:18787i)

65. Prasad T, Chhabra A, Atreja PP. Effect of feeding chelating agent (EDTA) on trace mineral balances in goats. Indian J Dairy Sci. 1994; 47(3):219-221. (CA)

66. Rodriguez A. Substances that potentiate the absorption of vitamin B12 administered orally. Anales Inst. Farmacol. Espan. 1961; 9-10, 57-61. (CA61:2373a)

67. Rotta C, Parigi A. Prevention of lead intoxication by oral administration of calcium versenate. Med del Lavoro. 1961; 52:769-779 (Dec.). (2325)

68. Saita G, Moreo L. Lead and porphyrins in the bile of patients with lead poisoning treated with calcium versenate. Med del Lavoro. 1958; 49:376-384 (May). (1956)

69. Scadding G, Bjarnason I, Brostoff J, Levi AJ, Peters TJ. Intestinal permeability to 51CR-labelled ethylenediaminetetraacetate in food-intolerant subjects. Digestion. 1989; 42(2):104-109. (NA59)

70. Sidbury Jr JB. Lead poisoning, treatment with disodium calcium ethylenediamine-tetraacetate. Am J Med. 1955; 18:932-946 (June). (1622)

71. Bersworth Chemical Co. The versenes for exacting chemical control of cations in solution. Technical Bulletin No. 2, 4th ed. 1952; 102 pp. (1313)

72. Berti T. Pharmacological investigation on sodium bismuth ethylenediaminetetraacetate (Bi-EDTA). Arch Ital. Sci. Farmacol. 1956; 6:293-298. (CA51:9939h)

73. British Industrial Biological Research Association. The metabolism of EDTA. Food and Cosmetics Toxicol. 1964; 2:741-745 (Dec.). (2670)

74. Gervais MJ. The medical prevention of lead poisoning in an electrolytic zinc factory. Montpellier Medical. 1962; 61:12-27 (Jan.). (2401)

75. Jugo S, Maljkovic T, Kostial K. Influence of chelating agents on the gastrointestinal absorption of lead. Toxicol. Appl. Pharmacol. 1975; 34(2):259-263. (CA)

76. Teisinger J, Zumanova R, Zezula I. Effect of calcium salt of ethylenediaminetetraacetic acid on the binding of lead by erythrocytes and blood proteins. Pracovni lekufstvi. 1957; 9:277-280. (CA52:9447g)

77. Stancev S. Prophylaxis of chronic lead poisoning by oral administration of CaNa2EDTA. First National Congress of Industrial Health. Abstracts of papers. 1963; 37-38. (2634)

78. Taucin EJ, Svilane ABV. Effect of EDTA and chlortetracycline on assimilation of trace elements by chickens. Fiziologiceski aktivnye komponenty pitanija zivotnyh. 1969; 163-170 Russian. (NA41)

79. Suenaka T, Miyajima K, Kosaka H, Tabuchi T, Hara I. Urinary excretion of heavy metals following oral administration of calcium-EDTA. Osaka-furitsu Koshu Eisei Kenkyusho Kenkyu Hokoku, Rodo Eisei Hen. 1977; 15:27-31. (CA) [Ca EDTA, administered to workers dealing with Pb, significantly increased Pb and Zn excretion in urine. There was a high correlation between urinary total metal and Zn concns.]

80. Nishino S. Effect of oral administration of calcium ethylenediaminetetraacetate in lead poisoning. Kokumin Eisel. 1957; 26:90-95. (1834)

81. Nottbohm L. The supervisory physician in plants presenting lead hazards. Medizinische Welt. 1963; 44:224-228. (2596)

82. Pagnotto LD, Elkins HB, Bayka I. Oral administration of edathamil calcium disodium (calcium disodium versenate). AMA Archives of Ind. Health. 1958; 17:29-33 (Jan.). (P1943)

83. Parigi A, Rasetti L. Action of orally administered CaEDTA on the metabolism of the porphyrinic precursors in lead poisoning. Lavoro e Medicina 16. 1962; 3:44-50. (2452)

84. Peters HA, Eichman PL, Price JM, Kozelka FL, Reese HH. Abnormal copper and trytophan metabolism and chelation therapy in anticonvulsant drug intolerance. Diseases Nervous System. 1966; 27(2):97-107. (CA64:16509c)

85. Petrovic LJ, Stankovic M, Savicevic M, Poleti D. Our experiences with calcium disodium edathamil. Proc. 13th Int. Congr. on Occup. Health July 25-29, 1960. 1961; pp 338-341. (2176)

86. Pilat L, Moscovici B, Iorga M. CaNa2EDTA treatment in mercury intoxication. Proc. 13th Int. Congr. Occup. Health, 1960. 1961; p. 341-343.

87. Prevot PA, Sulotto F, Poli G, Parigi A. Environmental lead pollution and the principal biological indexes for evaluating the risk of lead poisoning. Lav. Um. 1969; 21(5):200-209. (CA72)

88. Reinl W. Prophylaxis of lead workers with orally administered Ca2EDTA. Zentralblatt fur Arbeitsmedizin und Arbeitsschutz. 1956; 6:5-8 (Jan.). (1709)

89. Reinl W. Modern therapy of lead intoxication. Regensburger Jahrbuch fur Hrztliche Fortbildung. 1959/60; 8:(8 pp). (2184)

90. Roxburgh RC, Haas L. The diagnostic importance of glycosuria in lead poisoning in childhood. Arch Dis in Childhood. 1959; 34:70-73 (Feb.). (2957)

91. Selander S. Treatment of lead poisoning. A comparison between the effects of sodium calcium-edetate and penicillamine administered orally and intravenously. Brit J Indust Med. 1967; 24:272-281.

92. Bell RF, Gilliland JC, Boland JR, Sullivan BR. Effect of oral edathamil calcium-disodium on urinary and fecal lead excretion. Comparative excretory studies with intravenous therapy. AMA Arch Ind Health. 1956; 13:366-371 (Apr.). (1642)

93. Bersworth FC, Rubin M. Prophylactic calcium chelate compositions for heavy metal poisoning. U.S. Patent. 1959; 1,875,129 (Feb. 24), to Dow Chemical Co. From Chemical Abstracts 53:10672. (1982)

94. Bersworth FC, Rubin M. Organo-metallic detoxicants. U.S. Patent. 1955; 2,698,823 (Jan. 4) to F.C. Bersworth. From Chemical Abstracts 49:Abst. No. 4244. (1552)

95. Bjarnason I, Peters TJ, Veall N. A persistent defect in intestinal permeability in coeliac disease demonstrated by 51Cr-labelled EDTA absorption test. Lancet. 1983; 1:323-325.

96. Blomquist L, Bark T, Hedenborg G, Norman A. Evaluation of lactulose/mannitol and 51Cr-ethylenediaminetetraacetic acid/14C-mannitol methods for intestinal permeability. Scand. J Gastro. 1997; 32(6):805-812. (BA 104)

97. Blumer W, Reich T. Leaded gasoline - A cause of cancer. Environment Int. 1980; 3:465-471.

98. Blumer W. Calcium-disodium-EDTA treatment for cardiovascular symptoms. Plzen Lek Sborn Suppl. 1990; 62:157-159.

99. Cann HM, Verhulst HL. Edathamil calcium-sodium (EDTA) in lead poisoning. Tennessee Ind. Hygiene News 15. 1958; 1:3-4. (2936)

100. Cho SS, Mejia L, Morel L, Samuel-Fernando P. Cooked cereal ingredient-containing products fortified with EDTA/iron compositions and methods for use. PCT Int. Appl. WO 99 05,920, 1999, US Appl. 54,428 1997, 24 pp. (CA)

101. Cowan TKJ, Phillips GD, Bragg DB. Effect of dietary EDTA on the ability of chicks to tolerate sodium chloride in the water. Canadian J Animal Sci. 1971; 51(3):633-637. (NA42)

102. Engstroem B, Norin H, Jawait M, Ingman F. Influence of different cadmium-EDTA complexes on distribution and toxicity of cadmium in mice after oral or parenteral administration. Acta Pharmacol. Toxicol. 1980; 46(3):219-234. (CA)

103. Gehres RF, Raymond S. A new chemical approach to the solution of urinary calculi. J Urol. 1951; 65:474-483. (CA47:8241c)

104. Greig JB. Sodium iron ethylenediamine tetraacetic acid (EDTA). WHO Food Addit. Serv. 2000; 44:105-111 (Safety Evaluation of Certain Food Additives and Contaminants). (CA) A review with 9 refs. on toxicity of NaFeEDTA, including acute and short-term toxicity, genotoxicity, developmental toxicity and food and nutritional toxicity.

105. Harishima S, Tsuchiya K, Kondo H, Motouchi M, Sakaguchi T, Mori A. Therapy and prevention of lead poisoning with calcium versenate. Keio J. Med. 7. 1958; 93-105. (1914)

106. Hathcock JN, Hill CH, Matrone G. Vanadium toxicity and distribution in chicks and rats. J. Nutr. 1964; 82(1):106-110. (CA60:12576g)

107. Hurrell RF, Ribas S, Davidsson L. NaFe3+EDTA as a food fortificant: influence on zinc, calcium and copper metabolism in the rat. British J Nutr. 1994; 71(1):85-93. (NA64)

108. Kojima S, Kiyozumi M, Matsumoto S, Yamamoto M, Nakamura C, Niho K. Studies on poisonous metals. III. Effects of chelating agents on gastrointestinal absorption, distribution, and excretion of cadmium chloride in rats. Eisei Kagaku. 1977; 23(1):43-47. (CA)

109. Krari N, Allain P. Effects of three chelating agents, EDTA, NTA, and TPP, on the concentration of elements in rat tissues. Biol. Trace Elem. Res. 1991; 29(2):125-131. (CA)

110. Makashev KK. Effect of calcium and disodium salts of ethylenediaminetetraacetic acid on lead absorption, accumulation, and excretion from the system after lead intoxication. Trudy Inst Kraevol Patologil, Akademiya Nauk Kazakhskoi SSR. 1962; 10:180-189. (1008)

111. Madsen JL, Scharff O, Rabol A, Krogsgaard OW. Relationship between small-intestinal transit rate and intestinal absorption of 14C-labelled mannitol and 51Cr-labelled ethylenediamine-tetraacetic acid in healthy subjects. Scand. J Gastro. 1996; 31(3):254-259. (NA66)

112. MacPhail AP, Bothwell TH, Torrance JD, Derman DP, Bezwoda WR, Charlton RW, Mayet F. Factors affecting the absorption of iron from Fe(III)EDTA. British J Nutr. 1981; 45(2):25-227. (NA52)

113. Merville R, Dequidt J, Fontaine G. Ambulatory treatment of occupational lead poisoning by calcium disodium edetic acid. Lille Med. 4. 1959; 5:291-293. (2035)

114. Stankovic M, Petrovic LJ, Poleti D. Application of Ca2EDTA (dicalcium ethylenediamine-tetraacetate) for the diagnosis of lead poisoning. Acta Pharm. Jugoslav. 1960; 10:155-159. (2202) The compound was administered orally to 24 printers, 18 persons with severe Pb poisoning, and 8 controls with no Pb exposure. The upper limit of Pb excretion in urine after 3 g CaEDTA was 0.340 mg/24 hr.

115. Suso FA, Edwards Jr HM. Influence of various chelating agents on absorption of cobalt-60, iron-59, manganese-54, and zinc-65 by chickens. Poultry Sci. 1968; 47(5):1417-1425. (CA70)

116. Vozar L. The action of complexon 3 on the copper balance and level in the organism after oral administration. J'harmazie. 1959; 14:459-466. (CA54:7892d)

117. Nielsen FH, Sunde ML, Hockstra WG. Effect of some dietary synthetic and natural chelating agents on the zinc-deficiency syndrome in the chick. J Nutr. 1966; 89(1):35-42. (CA65:14176h)

118. Pedinelli M, Stringari M. Observations on the treatment "per os" with chelating agents in tetraethyl lead production workers. Rassegna di Medicina Industriale. 1959; 28:514-525 (Nov.-Dec.) (2048)

119. Preda N, Niculescu T, Rafaila E. The treatment of lead intoxication with chelating agents. Igiena (Bucharest)13. 1964; 3:233-242. (2784) Treatment of Pb-poisoned patients in the Clinic for Occupational Diseases, Bucharest, with iv injections of 2 g CaNa2EDTA/day for 2-20 days markedly increased urinary excretion of Pb. Oral doses of 4-6 g EDTA/day were less effective.

120. Sapeika N. Actions of lead ethylenediaminetetraacetic acid (EDTA) complex. Arch. Intern. Pharmacodynamie. 1955; 101:488-494. (CA49:14168e)

121. Savicevic M, Petrovic LJ. New views on the treatment of occupational lead poisoning. Vojnosanitetski Pregled. 1964; 21:173-177. (2804)

122. Svicevic M, Petrovic L, Stankovic M, Djordjevic S. Experiences with CaNa2EDTA (mosatil bayer) in chronic Pb exposure. Zentralblatt fur Arbeitsmedizin und Arbeitsschutz. 1959; 9:6-12 (Jan.) (2062)

123. Rubin M. Design of chelates for therapeutic objectives. Fed. Proceed. 20, Suppl. 10. 1961; 2:149-157 (Sept.) (2327)

124. Rosenman RH, Smith MK. The effect of certain chelating substances, salts of ethylenediamine-tetraacetic acid (EDTA), upon cholesterol metabolism in the rat. J Clin. Invest. 1956; 35:11-19. (CA50:6676b)

125. Roldan M, Suarez CL, Perdomo GM, Camarero SC, Escobar CH. Study of intestinal permeability in celiac disease with 51 Cr-EDTA. Acta Gastroenterol Latinoam. 1994; 24:37-40.

126. Proescher F. Anti-coagulant properties of ethylene bisiminodiacetic acid. Proc. Soc. Exptl. Biol. Med. 1951; 76:619-620.

127. Pommier SA, Lapierre H, de Passille AM, Gariepy C. Control of the bioavailibility of iron in heavy veal production by different feeding management systems: use of Ca-EDTA as an iron chelating agent. Can. J Anim. Sci. 1995; 75(1):37-44. (CA)

128. Aamoth HL, Butt FJ. Maintaining food quality with chelating agents. Ann. N.Y. Acad. Sci. 1960; 88:526-531. (CA55:12687e) Ethylenediaminetetraacetic acid (EDTA) and its di- or tetra-Na salts alleviate a wide variety of problems caused by trace-metal ions in food products.

129. Ainsworth M, Eriksen J, Waever Rasmussen J, Schaffalitzky De Muckadell OB. Intestinal permeability of 51Cr-labelled ethylenediaminetetraacetic acid in patients with Crohn's disease and their healthy relatives. Scand. J Gastroenterol. 1989; 24:993-998.

130. Albahary C, Truhaut R, Boudene C. The diagnosis of lead poisoning following urinary elimination of lead induced by calcium disodium versenate. Archiv. Maladies Professionnelles de Med. Du Travail et de Securite Sociale. 1958; 19:121-131 (Mar.-Apr.). (1883)

131. Albahary C, Truhaut R, Boudene C. Lead poisoning and detoxication by calcium versenate: new observations. Archiv. Maladies Professionnelles de Med. Du Travail et de Securite Sociale. 1957; 18(1):40-46. (1739)

132. Bastenier H. Considerations on the diagnosis and treatment of occupational lead poisoning. Acta Clinica Belgica. 1963; 18:144-151. (2501)

133. Bartolozzi O, Zurlo N. Effects of the preventive treatment with calcium versenate in workers exposed to lead. Medicina del Lavoro. 1960; 51:607-611 (Oct.). (2094)

134 . Barnes WS, Weisburger JH. Formation of mutagens in cooked foods. VI. Modulation of mutagen formation by iron and ethylenediaminetetracetic acid (EDTA) in fried beef. Cancer Lett. 1984; 24(2):221-226. (CA)

135. Atkinson J, Vohra P, Kratzer FH. Effect of available dietary zinc on the utilization of protein by the chick and Japanese quail. Brit. J Nutr. 1972; 27(3):461-466. (CA77) [By using chicks and quail to measure net protein utilization (NPU) and true digestibility of N of isolated soybean protein and a mixt. of gelatin and casein in Zn-deficient diets, it was found that NPU for both was increased when the diets were supplemented with Zn or di-Na EDTA, as was the true digestibility of N of isolated soybean protein.]

136. Ashmead H, Mencimer FR. Methods for controlling and treating renal calculi. U.S. 3,281,322 (Cl. 167-55), Oct. 25, 1966. Appl. September 11, 1961. (CA66)

137. Basinger MA, Jones MM, Holscher MA, Vaughn WK. Antagonists for acute oral cadmium chloride intoxication. J Toxicol. Environ. Health. 1988; 23(1):77-89. (CA)

138. Ashmead H, Mencimer FR. Drugs for urinary calculi. U.S. 3,184,381 (Cl. 167-53), May 18, 1965. Appl. Feb. 28, 1961; 3 pp. (CA63:5459c)

139. Ashmead H, Mencimer FR. Drugs containing sequestering and chelating agents for preventing lithiasis and atherosclerotic plaques. Brit. 1,132,233 (Cl. A 61k) 30 Oct. 1968. Appl. 22 Oct. 1965, 21 pp. (CA70)

140. Bartolozzi O. Report of nine year of prophylactic treatment with calcium versenate in a storage battery plant. Medicina del Lavoro. 1964; 55:315-316 (Apr.). (2668)

141. Batskor IA, Timar M. The treatment of lead poisoning with CaEDTA per os. Egeszsegtudomany 5. 1961; 3:259-263. (2230)

142. Belknap EL, Perry MC. Treatment of inorganic lead poisoning with edathamil calcium-disodium. AMA Archiv. Ind. Hygiene Occup. Med. 1954; 10:530-547 (Dec.). (1463)

143. Batskor IA, Kovacs I, Pasceri I. The effectiveness of CaEDTA-treatment in the prophylaxis of lead intoxication. Zentralblatt fur Arbeitsmedizin Arbeitsschutz. 1961; 11:261-264 (Nov.) (2229)

144. Bonazzi P, Lanzoni J, Marcucci F, Mussini E. Pharmacokinetic studies of ethylenediamine-tetraacetic acid (EDTA) in rats. Eur. J Drug Metab. Pharmacokinet. 1981; 6:21-26.

145. Bickel H, Neale FC, Hall G. Clinical and biochemical study of hepatolenticular degeneration (Wilson's disease). Quart. J Med. 1957; 26:527-528. (CA52:3994f).

146. Blomquist L, Bark T, Hedenborg G, Svenberg T, Norman A. Scand. J Gastroenterol. 1993; 28:274-280.

147. Brykalski D, Wronowa B. The effect of oral administration of EDTA on the absorption and elimination of lead administered in the same manner. Medycyna Pracy 14. 1963; 4:313-320. (1044)

148. Brykalski D, Bolanowska W. Further studies on the effect of orally administered EDTA on lead absorption and excretion. Medycyna Pracy 15. 1964; 3:133-138. (1111)

149. Buescher R, Hamilton C. Protection of cucumber pickle quality of CaNa2 EDTA. J Food Qual. 2000; 23(4):429-441. (CA)

150. Brul S, Coote P. Preservative agents in foods. Mode of action and microbial resistance mechanisms. Int. J Food Microbiol. 1999; 50(1-2):1-17. (CA)

151. Byers RK. Review of the literature and report on 45 cases. Pediatrics. 1959; 23:585-603 (March). (2951)

152. Cranton EM. What about oral chelation. J Advancement Med. 1999; 12:237-239.

153. Comar C, Wasserman RH, Twardock AR, Lengemann FW. Effect of various substances on secretion of radiostrontium into milk. Health Phys. 1966; 12(12):1661-1669. (CA66)

154. David OJ, Hoffman SP, Sverd J, Clark J, Voeller K. Lead and hyperactivity. Behavioral response to chelation: a pilot study. Am. J Psychiat. 1976;133:1155-1158.

155. Foreman H. Use of chelating agents in treatment of metal poisoning (with special emphasis on lead). Fed. Proceed. 20, Suppl. 10. 1961; 2:191-196. (2256)

156. Food and Drug Administration, HHS (USA). Food additives permitted for direct addition to food for human consumption; calcium disodium EDTA and disodium EDTA. Fed. Regist. 2000; 65(153):48377-48379. (CA)

157. Freedman L, Blitz M, Sabine DB, Eigen E (to U.S. Vitamin & Pharmaceutical Corp.). Stable vitamin B12 solutions. U.S. 2,939,821, June 7, 1960. (CA54:20101i)

158. Escobar H, Perdomo M, Vasconez F, Camarero C, del Olmo MT, Suarez L. Intestinal permeability to 51Cr-EDTA and orocecal transit time in cystic fibrosis. J Pediat. Gastroenterol. Nutr. 1992; 14:204-207.

159. Dizon GD, Anselmo JE, Almonte JB, Aquino R, Navarro A. Study of health hazards in the storage battery manufacture in the Philippines. Excerpta Medica Foundation. 1964; Vol. III, pp. 1004-1010. (2688)

160. Edwards PJ, Morwood K. Pharmaceutical compositions against gastric disorders containing bacteriocins. PCT Int. Appl. WO 92 18,143 (Cl. A61K37/02), 29 Oct. 1992. GB Appl. 91/8,129, 15 Apr. 1991, 15 pp. (CA)

161. Domingo JL, Llobet JM, Corbella J. The effects of EDTA in acute cobalt intoxication in rats. Toxicol. Eur. Res. 1983; 5(6):251-255. (CA)

162. Eisenberg GM, Weiss W, Flippin HF. Effect of ethylenediaminetetraacetic acid and ascorbic acid on tetracycline blood serum concentrations. J Lab. Clin. Med. 1958; 52:895-898. (CA53:3499f)

163. Dunkley WL, Franke AA, Robb J, Ronning M. Influence of dietary copper and ethylenediamine-tetraacetate on copper concentration and oxidative stability of milk. J Dairy Sci. 1968; 51(6):863-866. (CA69)

164. Davin JC, Forget P, Mahieu PR. Increased intestinal permeability to (51 Cr) EDTA is correlated with IgA immune complex-plasma levels in children with IgA-associated nephropathies. Acta Paediat. Scand. 1988; 77:118-124.

165. De Freitas Tavares J, Porto AL. The use of chelating agents in the treatment of lead poisoning. Jornal do Medico (Porto). 1961; 44:925-929 (Apr. 29). (2250)

166. Davis PS, Deller DJ. Effect of orally administered chelating agents EDTA, DTPA, and fructose on radioiron absorption in man. Australas. Ann. Med. 1967; 16(1):70-74. (CA67)

167. Davidsson L, Walczyk T, Zavaleta N, Hurrell RF. Improving iron absorption from a Peruvian school breakfast meal by adding ascorbic acid or Na2EDTA. Am. J Clin. Nutr. 2001; 73(2):283-287. (CA)

168. Fritz JC, Pla GW, Boehne JW. Influence of chelating agents on utilization of calcium, iron and manganese by the chick. Poultry Sci. 1971; 50(5): 1444-1450. (CA75)

169. Gordon GF. EDTA and chelation therapy: history and mechanisms of action - an update. Clin. Pract. Altern. Med. 2001; 2:36-45.

170. Gordon GF. EDTA safe in treating patients with mercury toxicity. Townsend Lett. For Doctors & Patients. 1997; 163, 164:102.

171. Gordon G. Oral chelation for improved heart function. Life Enhancement. 1997 (Apr.); p. 7-15.

172. Gordon GF. Oral chelation: the other side of the story. Clin. Pract. Altern. Med. 2000; 1:113-115.

173. Gordon GF. Oral chelation with EDTA. J Holistic Med. 1986; 8:79-80.

174. Guepin J. A case of occupational lead poisoning. Ouest Metical. 1964; 17:570-573 (May 10). (2719)

175. Hutchinson HE, Stark JM. The anemia of lead poisoning. J Clin. Path. 1961; 14:548-549 (Sept.). (2277)

176. Horiuchi K, Noma H, Asano I, Hashimoto K. Studies on the industrial lead poisoning. An experimental study of lead intake in human beings through the respiratory tract. Osaka City Med. J 8. 1962; 2:151-169. (2413)

177. Hurrell RF, Reddy MB, Burri J, Cook JD. An evaluation of EDTA compounds for iron fortification of cereal based foods. Br. J Nutr. 2000; 84(6):903-910. (CA)

178. Hublet P. Comments relating to the preventive administration of EDTA for the prevention of lead poisoning. Third World Cong. On Prevention of Occup. Risks. 1961:492. (2275)

179. Itoh H, Yamaguchi T, Yamasawa S. Inhibition of hematopoietic action of iron by ethylene-diaminetetraacetate (EDTA). Yokohama Med. Bull 13. 1962; 1:9-16. (CA57:7863b)

180. Jenkins RT, Ramage JK, Jones DB, Collins SM, Goodacre RL, Hunt RH. Small bowel and colonic permeability to 51Cr-EDTA in patients with active inflammatory bowel disease. Clin. Invest. Med. 1988; 11:151-155.

181. Karunajeewa H. Influence of high calcium rearing diets, Christmas Island phosphate and ethylenediaminetetraacetic acid on the laying performance of White Leghorn X Australorp hens. Aust. J Exp. Agric. Anim. Husb. 1977; 17(89):944-948. (CA)

182. Karunajeewa H. Effect of some feed additives on the performance of broiler chicks fed diets containing high levels of meat and bone meal. Aust. J Exp. Agric. Anim. Husb. 1976; 16(82):685-690. (CA)

183. LaChance LE. Ingestion of ethylenediaminetetraacetic acid and the effect on life span of irradiated and control Habrobracon females. Nature. 1958; 182:870-871. (CA53:4587h)

184. Kimmel CA. Effect of route of administration on the toxicity and teratogenicity of EDTA in the rat. Toxicol. 1977; (40(2):299-306. (CA)

185. Leigh MJ, Miller DD. Effects of pH and chelating agents on iron binding by dietary fiber: implications for iron availability. Am. J Clin. Nutr. 1983; 38(2):202-213. (CA)

186. Lilis R, Fischbein A. Chelation therapy in workers exposed to lead. A critical review. JAMA. 1976; 235:2823-2824.

187. McGivern J, Mason J. The effect of chelation on the absorption of cadmium from rat intestine in vivo. J Comp. Pathol. 1979; 89(2):293-300. (CA)

188. Sprague G. The effect of dietary administration of ethylenediamine-tetraacetic acid upon the mineral content of mouse tissues. Trans. Nebr. Acad. Sci. 1976; 3:61-68. (CA)

189. Herta S. Studies of the effect of chelating agents in man. Ann. N.Y. Acad. Sci. 1960; 88:435-449. (CA55:2903c)

190. Sigthorsson G, Jacob M, Wrigglesworth J, Somasundaram S, Tavares I, Foster R, Roseth A, Rafi S, Mahmud T, Simpson R, Bjarnason I. Scand. J Gastroenterol. Comparison of indomethacin and nimesulide, a selective cyclooxygenase-2 inhibitor, on key pathophysiologic steps in the pathogenesis of nonsteroidal anti-inflammatory drug enteropathy in the rat. Scand. J. Gastroenterol. 1998; 33(7):728-735. (CA)

191. Solomons N, Viteri F, Pineda O, Jacob R. The effects of NaFeEDTA and ascorbic acid (AA) on zinc bioavailability in man. Fed. Proceed. 1979; 38(3, I):704. (NA49)

192. Sullivan TJ. Effects of metallic edetates on the growth and blood formation of rats. Arch. Intern. Pharmacodynamie. 1960; 124:225-236. (CA54:23068b)

193. Vohra P, Bond DC. The effect of various levels of dietary EDTA on the mineral contents of some tissues of Coturnix Coturnix Japonica. Poultry Sci. 1970; 49:565-568. (NA41)

194. Vozar L, Bobek P. The influence of complexon 3 on the composition of the blood serum protein spectrum in rats and guinea pigs. Pharmazie. 1958; 13:704-707. (CA53:12473d)

195. Vohra P, Heil JR. Growth-promoting properties of crude soybean phospholipids. Poultry Sci. 1969; 48(5):1661-1667. (CA72)

196. Will JJ, Vilter RW. The absorption and utilization of an iron chelate in iron-deficient patients. J Lab. Clin. Med. 1954; 44:499-505. (CA49:1961g) Ferric sodium ethylenediaminetetraacetate (I) was given orally, and the absorption and utilization were compared with oral FeSO4 (II). I and II were labeled with isotopic Fe. I was absorbed to the same extent as II (about 6%). No detectable amt. was excreted in the urine. I and II produced identical reticulocyte responses. The observations suggested that I is split in the gastrointestinal tract into ionized Fe and that this is absorbed in the usual manner.

197. Yokel RA, Kostenbauder HB. Assessment of potential aluminum chelators in an octanol/aqueous system and in the aluminum-loaded rabbit. Toxicol. Appl. Pharmacol. 1987; 91(2):281-294. (CA)

198. Zizine LA. Action of a chelating agent on thyroid activity of the rat. Compt. Rend. Soc. Biol. 1958; 152:31-35. (CA52:20623a) Addn. of 0.5% of di-Na Ca ethylenediaminetetraacetate to the diet of rats resulted in a significant decrease in activity of the thyroid.

199. Zarembski PM, Hodgkinson A. Factors influencing the urinary excretion of oxalic acid in man. Clin. Chim. Acta. 1969; 25(1):1-10. (CA71)

200. Zorina LA, Vanshtein IA. Therapeutic value of complexing compounds in chronic lead poisoning. Gigiena Truda Professional'nye Zabolevaniya 3. 1959; 1:7-11. (2085)

201. Zambrano A, Mangieri A, Silvestroni A. Calcium salt of versene in experimental lead poisoning. (Urinary and fecal lead excretion. Electrolytes and alkaline phosphatase in the blood). Folia Medica (Naples). 1955; 38:813-837 (Aug.). (655)

202. Parks PF, Salmon WD. An evaluation of factors affecting survival of choline deficient weaning rats with special emphasis on dietary sodium. J Nutr. 1967; 91(3): part I, 307-313. (CA67)

203. Morgan JM. Chelation therapy in lead nephropathy. South Med. J. 1975; 68:1001-1006. (CA)

204. Oberleas D, Muhrer ME, O'Dell BL. Dietary metal-complexing agents and zinc availability in the rat. J Nutr. 1966; 90:56-62. (NA37)

205. O'Dell BL, Emery M, Xia J, Browning JD. In vitro addition of glutathione to blood from zinc-deficient rats corrects platelet defects: impaired aggregation and calcium uptake. J Nutr. Biochem. 1997; 8(6):346-350. (CA)

206. Parigi A, Giovanelli E. Side effects of oral treatment with CaNa2EDTA. Lavoro e Medicina 16. 1962; 3:48-51. (2451)

207. Owen AA, Peo Jr ER, Cunningham PJ, Moser BD. Effect of EDT on utilization of dietary zinc by G-F swine. J Animal Sci. 1973; 37(2):470-478. (NA44)

208. Aabakken L. 51Cr-Ethylenediaminetetraaceteic acid absorption test. Methodologic aspects. Scand. J Gastroenterol. 1989; 24:351-358.

209. Abels J, Woldring MG, Nieweg HO, Faber JG, de Vries JA. Ethylenediaminetetraacetate (EDTA) and the intestinal absorption of vitamin B12. Nature. 1959; 183:1395-1396. (CA55:1839e)

210. Albahary C. Prevention of lead poisoning. Third World Congress on the Prevention of Occupational Risks, Paris, France. 1961;491. (2222)

211. Alberts JC, Lang JA, Reyes PS, Briggs GM (Dept. Nutr. Sci., Univ. California, Berkeley). Zinc requirement of the young guinea pig. J Nutr. 1977; 107(8):1517-1527. (CA)

212. Ali RAM, Evans JL (Rutgers State Univ., New Brunswick, NJ). Body composition in the growing rat as affected by dietary lactose, calcium, buffering capacity and EDTA. J Anim. Sci. 1971; 33(4):765-770. (CA76)

213. Ali R, Evans JL (Coll. Agr. Cairo Univ., Giza, UAR). Effect of dietary calcium buffering capacity, lactose and EDTA on pH of and calcium absorption from gastrointestinal segments in the growing rat. J Nutr. 1967; 93(3):273-279. (BA49)

214. Mohamed-Ali RA (Rutgers State Univ., New Brunswick, NJ). Effects of dietary calcium level, buffering capacity, lactose, and EDTA (ethylenediaminetetraacetic acid) on calcium metabolism in the growing rat. Diss. Abstr. B. 1967; 27(11):3776-3777. University Microfilms (Ann Arbor, Mich.), Order No. 67-5271, 161 pp. (CA68)

215. Amery WK, Forget PP. The role of the gut in migraine: the oral 51-Cr EDTA test in recurrent abdominal pain. Cephalalgia. 1989; 9:227-229.

216. Alsmeyer WL. Influence of salts of ethylenediaminetetraacetic acid on the tryptophan load test in pyridoxine-deficient swine. Diss. Abstr. B. 1967; 27(11):3730. Univ. Microfilms (Ann Arbor, Mich.), Order No. 67-6541, 99 pp.

217. Anderson WA, Cole MB, Gould GW, Jones MV. Antibacterial food additives for prevention of growth of Listeria and other bacteria. Eur. Pat. Appl. EP 466,244 (Cl. A23L3/3571), 15 Jan 1992, EP Appl. 90/307,694, 13 Jul 1990; 13 pp. (CA)

218. Anon. Avoid "chelation therapy" pills. FDA Consumer. Sept. 1985:19(7):34.

219. Anon. Calcium disodium ethylenediaminetetraacetate: permitted addition to certain foods. Federal Register. 1960; 25:7316. (CA54:25345b)

220. Anon. Black-eye peas, potatoes: order listing disodium EDTA and calcium disodium EDTA as optional ingredients. Federal Register, cf. CA 61, 12544d. Nov. 1964; 29:14984-14985. (CA62: 3316c)

221. Anon. The complexities of EDTA. Food Cosmet. Toxicol. 1972; 10:697-700.

222. Anon. Disodium EDTA (Disodium ethylenediaminetetraacetate). Federal Register, cf. CA 57, 12964d. Nov. 1962; 27:11257. (CA58:3821f) [The previous regulation under the Federal Food, Drug, and Cosmetic Act is extended to permit the use of a max. of 100 p.p.m. of the title compd. as a color preservative in frozen white potatoes.]

223. Anon. Dressings for foods. Food additives. Calcium disodium ethylenediamine-tetraacetate, disodium ethylenediaminetetraacetate; order affecting nomenclature and listing as optional ingredients of mayonnaise, french dressing, and salad dressing. Oleomargarine; order amending identity standard to permit calcium disodium ethylenediaminetetraacetate as optional preservative ingredient. Federal Register cf. CA 55, 14742f; 58, 3821f, 59, 14495d. Feb. 12, 1964; 29:2382-2384. (CA60:13801c)

224. Anon. Food additives. Boiler water additives. Federal Register, cf. CA 58, 10661b. Oct. 16, 1964; 29:14224. (16697c) [Tetrasodium EDTA may be used under the Federal Food, Drug and Cosmetic Act as a boiler water additive in the prepn. of steam that will contact food.]

225. Anon. Food additives. Adhesives. Federal Register, CF. ca 59, 13261c. Dec. 31, 1963; 28:14493. (CA60:6131a) [The previous regulation under the Federal Food, Drug, and Cosmetic Act is revised to permit the use of ferric salts of ethylenediaminetetraacetic acid in food-packaging adhesives.]

226. Anon. Food additives. Calcium disodium EDTA. Federal Register, cf. CA 62, 3316c. May 21, 1965; 30:6915-6916. (CA63:6236e) [The previous regulation under the Federal Food, Drug, and Cosmetic Act was revised to provide for the use of a max. of 310 ppm. of Ca di-Na EDTA as a color stabilizer in canned, cooked, and dried lima beans.]

227. Anon. Food additives. Calcium disodium EDTA. Federal Register, cf. CA 55. August 29, 1961; 26:8072. (CA55:23853h) [One hundred p.p.m. of the title compd. may be used under the Food, Drug, and Cosmetic Act in pecan pie fillings to prevent discoloration.]

228. Anon. Food additives. Calcium disodium ethylenediaminetetraacetate. Federal Register, cf. CA 55, 4811c. Apr. 4, 1961; 26:2780. (CA55:10737c) [The previous regulations under the Food, Drug, and Cosmetic Act are revised to permit 275 p.p.m. of the title compd. (calcd. as anhyd. compd.) in or on cooked, canned crabmeat and 250 p.p.m. in or on cooked, canned shrimp to retard struvite formation and to promote color retention.]

229. Anon. Food additives. Calcium disodium EDTA. Federal Register, cf. CA 66:94047h. May 2, 1967; 32:6686. (CA67) [The title compd. may be used under the Federal Food, Drug and Cosmetic Act at a max. level of 200 ppm. to stabilize the color of canned mushrooms.]

230. Anon. food additives. Calcium disodium ethylenediaminetetraacetate. Federal Register, cf. CA 55, 10737c. July 13, 1961; 26:6271-6272. (CA55:20243a)

231. Anon. Food additives. Chelating agents. Federal Register, cf. CA 55, 20246a. Jan. 12, 1962; 27:339. (CA56:7755e) [Di-Na ethylenediaminetetraacetate is included under the Fed. Food, Drug, and Cosmetic Act as a chelating agent in the list of substances that may be used in the manuf. of paper and paperboard that contacts food.]

232. Anon. Food additives. Calcium disodium EDTA (calcium disodium ethylenediaminetetraacetate; calcium disodium (ethylenedinitrilo)tetraacetate). Federal Register, cf. CA 58, 3822b. Sept. 25, 1963; 28:10377-10378. (CA59:14495e) [The title compd. may be used as a stabilizer of the color of canned clams under the Federal Food, Drug, and Cosmetic Act at a max. level of 340 p.p.m.]

233. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 62, 3316c. Nov. 25, 1964; 29:15814. (CA62:7027h) [A max. of 500 ppm. di-Na EDTA may be used under the Federal Food, Drug, and Cosmetic Act in canned strawberry pie filling to promote color retention.]

234. Anon. Food additives. Disodium EDTA (Disodium ethylenediaminetetraacetate). Federal Register, cf. CA 56, 12040a. Aug. 23, 1962; 27:8424. (CA57:12964d) [A max. of 165 p.p.m. di-Na EDTA may be used under the Federal Food, Drug and Cosmetic Act as a preservative in canned kidney beans.]

235. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 60, 13801c. Aug. 28, 1964; 29:12364-12365. (CA61:12544d) [The previous regulation under the Federal Food, Drug, and Cosmetic Act is revised to permit the use of di-Na EDTA to promote color retention in dried banana products (315 p.p.m. max.) used as a component of cereal products and in canned cooked chickpeas (165 p.p.m. max.).]

236. Anon. Food additives. Disodium EDTA. Federal Register. June 18, 1965; 30:7895. (CA63:6238b) [Disodium EDTA, min. 99% dihydrate, may be used under the Federal Food, Drug, and Cosmetic Act as a max. level of 240 ppm. to solubilize trace minerals in aq. solns. which are added to ruminant feeds.]

237. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 71:100539s. Jun 10, 1970;35(112):8930-8931. (CA73) [Di-Na EDTA may be used under the U.S. Federal Food, Drug, and Cosmetic Act in gefilte fish balls or patties in the packaging medium at a max. level of 50 ppm (total wt. of fish and medium) to inhibit discoloration.]

238. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 67:2133c. Aug 14, 1969; 34(155):13153-13154. (CA71) [The title compd. may be used under the U.S. Federal Food, Drug, and Cosmetic Act in cooked sausage at a max. level of 36 ppm. as a cure accelerator with Na ascorbate or ascorbic acid.]

239. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 62:7027h. April 25, 1967; 32:6393. (CA67) [Di-Na EDTA may be used under the Federal Food, Drug, and Cosmetic Act as a sequestrant with nonnutritive sweeteners designed for use in aq. soln. at a max. level, calcd. as anhyd. Ca di-Na EDTA, of 0.1% of the wt. of the dry nonnutritive sweetener.]

240. Anon. Food additives. Disodium EDTA. Federal Register, cf. CA 63:6238b. Nov 6, 1968; 33(217):16272. (CA70) [The previous regulation under the US Federal Food, Drug, and Cosmetic Act is revised to permit the use of di-Na EDTA as a solubilizer for trace minerals in aq. solns. in all animal feeds instead of ruminant feeds.]

241. Anon. Food additives. Disodium EDTA (disodium ethylenediaminetetraacetate). Federal Register, cf. CA 55, 20243a. Jan. 31, 1962; 27:883. (CA56:12040a) [A tolerance of 150 p.p.m. of the title compd. is established under the Food, Drug, and Cosmetic Act for use with Fe salts as a stabilizer for vitamin B?? in aq. multivitamin prepns.]

242. Anon. The metabolism of EDTA. Fd. Cosmet. Toxicol. 1964; 2:741-745.

243. Appel MJ, Kuper CF, Wouteren RA (Dept of General Toxicology, TNO Nutrition and Food Research, Zeist, Neth.). 352654b Disposition, accumulation and toxicity of iron fed as iron (II) sulfate or as sodium iron EDTA in rats. Food Chem. Toxicol. 2001; 39(3):261-269. (CA)

244. Asami T, Takhashi M, Andrews JF, Boettcher TE. (Minnesota Mining and Mfg. Co.) 123:349936n Oral disinfectant for companion animals. US 5,460,802 (Cl. 424-49; A61K7/16). 1995; Appl. 276,531, 18 Jul 1994: 8 pp. (CA)

245. Ashbel SI, Khil RG, Shatrova SP (Inst. Ind. Hyg. and Occupat. Diseases, Gorki). Fate in the organism of the Ca disodium salt of ethylenediaminetetracetic acid with different modes of introduction. Farmakol. I Toksikol. 1966; 29(2):235-237. (CA65:6154e)

246. Ballot DE, MacPhail AP, Bothwell TH, Gillooly M, Mayet FG. Fortification of curry powder with NaFe(111) EDTA in an iron-deficient population: initial survey of iron status. Am. J Clin. Nutr. 1989; 49:156-161.

247. Ballot DE, MacPhail AP, Bothwell TH, Gillooly M, Mayet FG. Fortification of curry powder with NaFe(111) EDTA in an iron-deficient population: report of a controlled iron-fortification trial. Am. J Clin. Nutr. 1989; 49:162-169.

248. Bauer RO, Rullo FR, Spooner C, Woodman E. Acute and subacute toxicity of ethylene diamine tetraacetic acid (EDTA) salts. Fed. Proc. 1952; 11:321.

249. Bautista ZP (Harper Hosp., Detroit, Mich.). Lead poisoning. A review and report of seven cases. Harper Hosp. Bulletin. 1963; 21:43-55 (Mar.-Apr.). (3016)

250. Belyaev YA. Effect of oral administration of some chelating agents on the excretion of plutonium in rats. Raspredelenic, Biol. Deistvie, Uskorenic Vyvedeniya Radioaklivn. Izotopov, Sb. Rabol. 1964; 338-342. (CA62:16608a)

251. Belknap EL. Modern trends in the treatment of lead poisoning. A review of the literature on the use of edathamil calcium-disodium. J of Occup. Med. 1961; 3:380-391 (Aug.). (2231)

252. Belknap EL. Review of ten years of published experiences of treatment of inorganic lead absorption in the adult with edathamil or calcium sodium EDTA. Proceedings 13th Intl. Congress on Occup. Health, NY, July 25-29, 1960. 1961; pp. 217-226. (2095)

253. Benard A, Desreumeaux P, Huglo D, Hoorelbeke A, Tonnel A-B, Wallaer B. Increased intestinal permeability in bronchial asthma. J Allerg. Clin. Immunol. 1996; 97:1173-1178.

254. Benoni C, Prytz H. Effects of smoking on the urine excretion of oral 51Cr EDTA in ulcerative colitis. Gut. 1998; 42:656-658.

255. Berjak J (Johannesburg, S. Africa). Clinical aspects of an outbreak of metallic poisoning at By-Products Ltd. Proceed. Mine Med. Officers' Assoc. 1963; 43:7-11 (May-June). (2503)

256. Bersin T, Muller A, Schwarz H. Pharmacological action of some inorganic-organic complex compounds. Arch. Biochem. and Biophys. 1957; 69:507-513. (706)

257. Berstad A, Jorgensen H, Frey H, and Lund EM. Intestinal absorption of calcium from three commercial calcium preparations in man. Scand. J Gastroenterol. 1976; 11:747-751.

258. Berti T, Ferrari M. Anti-spirochetic action of hydrosoluble organic compounds of bismuth. I. Infections from Borrelia duttonii in mice. Boll. ist. sieroterap. Milan. 1959; 38:318-323. (CA54:3710g)

259. Berti T, Francheschini V. Chemotherapeutic action of sodium bismuth ethylenediamine-tetraacetate (Bi-EDTA) in experimental infection by Borrelia duttonii. Atti ist. veneto sci. lettere ed arti. Classe sci. mat. nat. 1957; 115:63-68; cf. C.A. 51, 9939i. (CA53:2477d)

260. Bessman SP, Doorenbos NJ. Chelation (editorial). Ann. Intern. Med. 1957; 47:1036-1041.

261. Bezzubov AD, Vasil'eva OG, Khatina AI (Inst. Ind. Hyg. Occup. Dis., Acad. Med. Sci., USSR). Influence of pectin on the elimination of lead from the body. Gigiena Truda I Prof. Zabolevaniya 4. 1960; 3:32-37. (888)

262. Bi C-P (Chang-Tai Co. Ltd., Taiwan). Use of EDTA in foods. Shih P'in Kung Yeh (Hsinchu, Taiwan). 1978; 10(2):23-30. (CA) [A review with no refs. on the application of EDTA (60-00-4) in food processings; the phys. and chem. properties of EDTA are also discussed.]

263. Billerbeck FW, Hing FS, Purvis GA (Gerber Products Co.). Infant cereal. U.S. 3,429.711 (Cl. 99-83; A 231), 25 Feb 1969. Appl. 26 Nov 1965; 2 pp. (CA70)

264. Bjarnason I, O'Morain C, Levi AJ, Peters TJ. Absorption of 51chromium-labeled ethylene-diaminetetraacetate in inflammatory bowel disease. Gastroenterology. 1983; 85:318-322.

265. Bjarnason I, MacPherson A, Hollander D. Intestinal permeability: an overview. Gastroenterology. 1995; 108:1566-1581.

266. Bjarnason I, Goolamali SK, Levi AJ, Peter TJ. Intestinal permeability in patients with atopic eczema. Brit. J Dermatol. 1985; 112:291-297.

267. Blackburn P, Projan SJ, Goldberg EB (Applied Microbiology, Inc.) Pharmaceutical bacteriocin compositions. PCT Int. Appl. WO 93 13,793 (Cl. A61K37/02), 22 Jul 1993, US Appl. 822,433. 17 Jan 1992; 35 pp. (CA)

268. Bjarnason I, Peters TJ, Veall N. A persistent defect in intestinal permeability in coeliac disease demonstrated by 51Cr-labelled EDTA absorption test. Lancet. 1983; 1:323-325.

269. Bjarnason I, Smethurst P, Levi AJ, Peters TJ. Intestinal permeability to 51Cr-EDTA in rats with experimentally induced enteropathy. Gut. 1985; 26:569-585.

270. Bovell-Benjamin AC, Allen LH, Frankel EN, Guinard J-X. Sensory quality and lipid oxidation of maize porridge as affected by iron amino acid chelates and EDTA. J Food Sci. 1999; 64(2):371-376, Institute of Food Technologists. (CA)

271. Brieger H. The use of chelating agents in occupational medicine. In: Metal-Binding in Medicine by MJ Seven and LA Johnson, Ed., JB Lippincott Co., Philadelpha. 1960; p. 200-204.

272. Burke LM. Chronic lead poisoning. A case report. West Indian Med. J. 1957; 6(2):105-107. (2922)

273. Burrous SE, Siedler AJ, Eudy WW. Enhancement of ampicillin efficacy by peroral levodopa in rat pyelonephritis. Life Sci. 11(Pt. II). 1972; 1087-1093.

274. Byczkowska Z, Antczak F (Dzialu Clin. Inst. Med. Pracy, Kodz, Poland). The value of the chelation test in provoking urinary excretion of lead in the diagnosis of lead intoxication. Medycyna Pracy 14. 1963; 3:211-222. (2506)

275. Cardon BP (to Erly-Fat Livestock Feed Co.). Chelated metals for improving the digestibility of feeds for ruminants. U.S. 2,960,406, Nov. 15, 1960. (CA55:3872e)

276. Carson RH, Zipkin I, Rubin M. Effect of administration of ethylenediaminetetraacetate (EDTA) by various routes on dental caries in the rat. Arch. Oral Biol. 1961; 5:49-54. (CA56:893a)

277. Carter EB (to Abbott Laboratories). Ferrous chelate compositions for oral administration. U.S. 2,816,060, Dec. 10, 1957. (CA52:4938a)

278. Candela E, Camacho MV, Martinez-Torres C, Perdomo J, Mazzarri G, Acurero G, Layrisse M. Iron absorption by humans and swine from Fe(III)-EDTA. Further studies. J Nutr. 1984; 114:2204-2211.

279. Castellino N, Aloj S. Effects of calcium sodium ethylenediaminetetra-acetate on the kinetics of distribution and excretion of lead in the rat. Brit. J Indust. Med. 1965; 22:172-180.

280. Chan MS. Some toxicological and physiological studies of ethylenediamine tetraacetic acid in the albino rat. Dissertation. Univ. Mass. 1956:118 p.

281. Chenoweth MB. Chelation as a mechanism of pharmacological action. Pharmacol. Rev. 1956; 8:57-87.

282. Child GP. The inhibition of hematopoietic action of cobalt by ethylenediamine tetraacetic acid (EDTA). Science. 1951; 114:466-467. (CA46:2648i) [A Purina dog chow diet contg. 0.1% Co when fed to Wistar rats increased the red cell county and the hemoglobin content. Addn. of 5% EDTA completely inhibited the Co effect, while lower concns. (1% and 0.2%) only diminished the Co action.]

283. Ching GWK, Rogers SM, Braithwaite RA, Vale JA. An oral treatment for lead toxicity (Letters). Postgrad. Med. J. 1991; 67:953.

284. Chisholm Jr. JJ. The use of chelating agents in the treatment of acute and chronic lead intox-ication in childhood. J Pediat. 1968;73:1-38.

285. Cossack ZT, Van der Hamer CJA. Evaluation of the EDTA-washed diet for use in the exper-imental production of zinc deficiency in human subjects. Int. J Vitam. Nutr. Res. 1987; 57(1):99-102. (CA)

286. Cotter LH. Treatment of cadmium poisoning with edathamil calcium disodium. J Am. Med. Assoc. 1958; 166:735-736. (CA52:10388a) [Cd intoxication was treated successfully with oral edathamil Ca di-Na (Ca di-Na ethylenediaminetetraacetate). The Ca of the chelating agent was replaced by Cd and excreted in a nonirritating form through the kidneys.]

287. Clark BJ, Tomich EG. Pharmacological studies on lead E.D.T.A. Brit. Med. J. 1955; 2:831-832.

288. Darwish NM, Kratzer FH. Metabolism of ethylenediaminetetraacetic acid (EDTA) by chickens. J Nutr. 1965; 86:187-192. (NA36)

289. Coltart RS, Howard GC, Wraight EP. The effect of hyperthermia and radiation on small bowel permeability using 51Cr EDTA and 14C mannitol in man. Int. J Hyperthermia. 1988; 4:467-477.

290. Cook JD, Monsen ER. Food iron absorption in man. 2. The effect of EDTA on absorption of dietary nonheme iron. Amer. J Clinc. Nutr. 1976; 29(6):614-620. (NA47)

291. Cook JD, Reusser ME. Iron fortification: an update. Am. J Clin. Nutr. 1983; 38:658-659.

292. Figueroa WG. The enhancement of iron excretion in iron-storage disease. In: Metal-Binding in Medicine by Seven MJ, Johnson LA, Ed., J.B. Lippincott Co., Philadelphia. 1960; p.146-53.

293. Figueroa WG, Adams WS, Davis FW, Bassett SH. A study of the effect of disodium calcium versenate (CaEDTA) on iron excretion in man. J Lab. Clin. Med. 1955; 46:534-543.

294. Fioretti M (Univ. Padua, Italy). Ethylenediaminetetracetic acid and some salts of pharmaceutical interest. Ann. Chim. 1963; 53(8-9):1161-1165. (CA60:3998b)

295. Foley WJ, Charles-Dominique P, Julien-Laferriere D. Nitrogen requirements of the didelphid marsupial Caluromys philander. J Comp. Physiol., B. 2000; 170(5-6):345-350. (CA)

296. Forget P, Sodoyez-Goffaux F, Zappitelli Z. Permeability of the small intestine to (51Cr)EDTA in children with acute gastroenteritis or eczema. J Pediat. Gastroenterol. Nutr. 1985; 4:393-396.

297. Foreman H, Vier M, Magee M. The metabolism of C14-labeled ethylenediaminetetraacetic acid in the rat. J Biol. Chem. 1953; 203:1045-1053.

298. Forth W, Pfleger K, Rummel W, Seifen E, Richmond SI. Effect of various ligands on the absorption, distribution, and excretion of iron following oral administration. Arch. Exptl. Pathol. Pharmakol. 1965; 252(3):242-257. (CA64:8801b)

299. Forth W, Rummel W, Pfleger K, Andrews H. The influence of ligands upon retention of iron by normal and anemic rats after oral application. Naunyn-Schmiedebergs Arch. Pharmakol. Exp. Pathol. 1968; 261(3):225-

300. Fritz JC, Pla GW, Boehne JW. Influence of chelating agents on utilization of calcium, iron, and manganese by the chick. Poultry Sci. 1970; 49:1386.

301. Elia M, Behrens R, Northrop C, Neale G. Evaluation of mannitol, lactulose and 51Cr-labelled ethylenediaminetetra-acetate as markers of intestinal permeability in man. Clin. Sci. 1987; 73(2):197-204. (NA57)

302. Esh GC, Som JM, Bhattacharya H, Bhattacharya S. Stability of vitamins in pharmaceutical preparations. I. Influence of vehicles in liquid multivitamin oral preparations. Indian J Pharm. 1964; 26:133-136. (CA61:9362h)

303. Evans JL, Ali R. Calcium utilization and feed efficiency in the growing rat as affected by dietary calcium, buffering capacity, lactose and EDTA. J Nutr. 1967; 92(4):417-424. (BA49)

304. Ely CM (to National Distillers Products Corp.). Chick feed containing tri- or tetra-sodium ethylenediaminetetraacetate. U.S. 2,604,401, July 22, 1952. (CA46:11504b) [Chick growth is accelerated by the addn. to the diet of 0.15-0.200%, based on the total amt. of food, air-dry basis, of either tri- or tetra-Na ethylenediaminetetraacetate. The addn. of 0.030 to 0.090% (the optimum amt.) accelerates growth 5%, although growth continues to be accelerated up to 0.200%.]

305. Engstrom B. Effects of chelating agents on oral uptake and renal deposition and excretion of cadmium. Environ. Health Perspect. 1984; 54:219-232.

306. Antianemic product. Fr. M484, Mar. 30, 1962, Appl. Aug. 30, 1960; 2 pp. (CA57:16767e)

307. Fairweather-Tait SJ, Wortley GM, Teucher B, Dainty J. Iron absorption from a breakfast cereal: effects of EDTA compounds and ascorbic acid. Int. J Vitam. Nutr. Res. 2001; 71(2):117-122. (CA)

308. Fargeas M-J, Theodorou V, More J, Wal J-M, Foramonti J, Bueno L. Boosted systemic immune and local responsiveness after intestinal inflammation in orally sensitized guinea pigs. Gastroent. 1995; 109:53-62.

309. Erdmann WD, Okonek S. Gastrointestinal absorption of the esterase-reactivating substance, obidoxime, and the possibility of facilitating its absorption. Arch. Toxikol. 1969; 24(2):91-101. (CA70)

310. Dettmar PW, Smith AW. Pharmaceutical compositions containing triclosan or derivatives thereof and EDTA or EGTA. PCT Int. Appl. WO 96 00,569 (Cl. A61K31/195), 11 Jan 1996, GB Appl. 94/13,072, 29 Jun 1994; 27 pp. (CA)

311. Dybing O, Sognen E. Effect of sodium fluoride on the toxicity of red squill. Acta Pharmacol. Toxicol. 1960; 16:242-244. (CA55:6700b)

312. Edwards PJ, Morwood K. Pharmaceutical compositions against gastric disorders containing bacteriocins. PCT Int. Appl. WO 92 18,143 (Cl. A61K37/02), 29 Oct 1992, GB Appl. 91/8,129, 15 Apr 1991; 15 pp. (CA)

313. Eiichi O, Suzuki S, Fukuda R, Shibata K. The excretion and distribution of radioactive zirconium. I. Experiments with mice. Gunma J Med. Sci. 1960; 9:203-211. (CA55:19011i)

314. Domingo JL. Developmental toxicity of metal chelating agents. Reproduct. Toxicol. 1998; 12:499-510.

315. Einstman WJ, Klug SL, Patrizio FJ, Rupp G (General Foods Corp.). Iron-fortified soluble coffee product. Can. 1,032,824 (Cl. 99-81), 13 Jun 1978. Appl. 213,249, 7 Nov 1974, 12 pp. (CA)

316. Durbin PW, Scott KG, Hamilton JC. The distribution of radioisotopes of some heavy metals in the rat. Univ. of Calif. Publ. in Pharmacol 3. 1957; 1:1-34. (716)

317. Davis PN, Norris LC, Kratzer FH. Iron deficiency studies in chicks using treated isolated soybean protein diets. J Nutr. 1962; 78(4):445-453. (CA60:4527b)

318. Delgado JN, Lofgren FV, Burlage HM. The relative stability of an oral liquid vitamin preparation. Drug Standards 26. 1958; 51-56. (CA52:14967a)

319. Davis PN, Norris LC, Kratzer FH. Interference of soybean proteins with the utilization of trace minerals. J Nutr. 1962; 77:217-223.

320. Fukuda S, Lida H, Hseih YY, Chen W. Toxicological study of DTPA as a drug. VI. Effects of intravenously injected calcium diethylenetriamine pentaacetic acid (Ca-DTPA), calcium ethylenediaminetetraacetic acid (Ca-EDTA), catechol-3,6-bis(methyleiminodiacetic acid (CBMIDA) and orally administered zinc DTPA to bone metabolism in beagle dogs. Hoken Butsuri. 1991; 26(2):101-107. (CA)

321. Furia TE. EDTA in foods. A technical review. Food Technol. 1964; 18(12):50-58. (CA62:5796g)

322. Gehres RF, Raymond S. A new chemical approach to the dissolution of urinary calculi. J Urol. 1951; 65:474-483.

323. Gilsanz V, Palacios JM, Rico GG. Treatment of chronic lead poisoning with calcium ethylenediaminetetraacetate (Ca EDTA). Rev. Clin. Espafl. 1955; 57:224-229. (CA50:484e)

324. Gorby CK, Rieders F. The effect of simultaneous oral edathamil calcium disodium and lead acetate on lead accumulation in tissues of rats. Archiv. Internat. de Pharmacodynamie. 1960; 125:153-160. (896)

325. Greenland AJ, Fuentes Mateos AM. Synergistic antifungal composition for food. PCT Int. Appl. WO 99 02,038 (Cl. A01N63/00, 21 Jan 1999. GB Appl. 97/14,564, 10 Jul 1997; 40 pp. (CA)

326. Grassman E, Kirchgessner M, Hampel G. Cu depletion in rats and chicks with ethylenediamine tetra-acetate and adenine. Arch. Tierernahrung. 1970; 20:537-544. (NA41)

327. Greene DE, Rinehart KE, Stephenson EL. Influence of EDTA on blood antibiotic levels following oral administration of tetracycline compounds. Poultry Sci. 1968; 47(5):1500-1504. (CA70)

328. Hall EJ, Batt RM, Brown A. Assessment of canine intestinal permeability, using 51Cr-klabeled ethylenediaminetetraacetate. Am. J Vet. Res. 1989; 50:2069-2074. (H)

329. Hallberg L. Bioavailability of dietary iron in man. Ann. Rev. Nutr. 1981; 1:123-147.

330. Hallberg L. Iron absorption - new physiological and therapeutic findings. Radio-Isotope Haematol., Intern. Symp. I., Freiburg i. B. 1962; 47-64. (CA62:2092d)

331. Hawkins WW, Leonard VG, Maxwell JE, Rastogi KS. A study of the prolonged intake of small amounts of ethylenediaminetetraacetate on the utilization of low dietary levels of calcium and iron by the rat. Can. J Biochem. Physiol. 1962; 40;391-395. (CA56:15920b)

332. Halliday RP, Kinnard WJ, Buckley JP. Evaluation of certain hypotensive agents. V. Substituted polymethylene diamines. J Pharm. Sci. 1964; 53(1):19-23. (CA60:11246h)

333. Hamilton JG, Scott KG. Effect of the calcium salt of Versene on metabolism of plutonium in the rat. Proc. Soc. Exptl. Biol. Med. 1953; 83:301-305. (CA47:10712h)

334. Heindorff K, Aurich O, Michaelis A, Rieger R. Genetic toxicology of ethylenediaminetetraacetic acid (EDTA). Mutat. Res. 1983; 115(2):149-173. (CA) [A review with ~125 refs. on the genetic toxicol. of EDTA.]

335. Hendershot LC, Forsaith J. Effect of various metal salts of ethylenediamine tetraacetic acid on dental caries. J Dent. Res. 1958; 17:32-33.

336. Hendershot LC, Mansell RE, Forsaith J. The effect of zinc, nickel and manganese on rat dental caries and dental enamel metal levels. In: Metal-Binding in Medicine by MJ Seven and LA Johnson, Ed. J.B. Lippincott Co., Philadelphia. 1960; p.306-311.

337. Henuk YL, Dingle JG. The effect of feeding a balanced diet with or without a micro-mineral premix, a chelating agent (EDTA) and phytase on the performance of laying hens kept in cages. Asian-Australas. J Anim. Sci. 2000; 13(Suppl.): 195-198. (CA)

338. Herridge CF. A comparative study of the use of ferric chelate in iron-deficiency anaemia. Brit. Med. J. 1958; 2:140-141.

339. Harmon BG, Becker DE, Jensen AH, Norton HW. Effect of di-Na EDTA in diets of different iron levels on utilization of calcium, phosphorus, and iron by rats. J Anim. Sci. 1968; 27(2):418-423. (CA69)

340. Hiers Jr JM, Miller WJ, Blackmon DM. Effect of dietary cadmium and ethylenediamine-tetraacetate on dry matter digestibility and organ weights in zinc deficient and normal ruminants. J Dairy Sci. 1968; 51:205-209. (NA38)

341. Huo J, Yu B, Lu C. Method for preparing iron enriched nutrient and its products. Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1,192,334 (Cl. A23L1/30), 9 Sep 1998. appl. 98,100,374, 23 Jan 1998; 5 pp. (CA)

342. Hodgkinson R. A comparative study of iron absorption and utilization following ferrous sulphate and sodium ironedetate ("Sytron??"). Med. J Aust. 1961; 1:809-811.

343. Horiguchi S, Iwataki N., Nagao Y, Hasimoto K, Watanabe S, Oda K. A case of lead poisoning complicated with intestinal adhesion, with special reference to Ca-EDTA therapy. Nippon Geka Hokan. 1957; 26:579-585. (1804)

344. Hurrell RE. Preventing iron deficiency through food fortification. Nutr. Rev.

345. Hyde JAJ, Riddington DW, Hutton P, Wilson IC, Boivin CM, Nash G, Graham TR. Prevention of remote organ injury in cardiopulmonary bypass: the impact of flow generation technique. Artif. Organs. 1997; 21:825-829.

346. Jenkins RT, Jones DB, Goodacre, RL, Collins SM, Coates G, Hunt RH, Bienenstock J. Reversibility of increased intestinal permeability to 51Cr-EDTA in patients with gastrointestinal inflammatory diseases. Am. J Gastroenterol. 1987; 82:1159-1164.

347. International Nutritional Anemia Consultative Group, Washington, D.C. Iron EDTA for food fortification. ILSI-Nutrition Foundation. 1993.

348. Igarashi K, Sasaki A, Yoda Y, Inage H, Nakanishi Y, Yanagiya T, Hirunuma R, Enomoto S, Kimura S. Effect of sodium iron ethylenediaminetetraacetic acid on the absorption of various trace elements in anemic rats. RIKEN Rev. 2001; 35:50-54. (CA)

349. Jacobsen C, Hartvigsen K, Thomsen MK, Hansen LF, Lund P, Skibsted LH, Holmer G, Adler-Nissen J, Meyer AS. Lipid oxidation in fish oil enriched mayonnaise: calcium disodium ethylenediaminetetraacetate, but not gallic acid, strongly inhibited oxidative deterioration. J Agric. Food Chem. 2001; 49(2):1009-1019. (CA)

350. Janner M, Muehlbauer RC, Fleisch H. Sodium EDTA enhances intestinal absorption of two bisphosphonates. Calcif. Tissue Int. 1991; 49(4):280-283. (CA)

351. Jenkins RT, Rooney PJ, Jones DB, Bienenstock J, Goodacre RL. Increased intestinal permeability in patients with rheumatoid arthritis: a side-effect of oral nonsteroidal anti-inflammatory drug therapy? Brit. J Rheumatol. 1987; 26:103-107.

352. Kanyuka AI. Effect of unithiol and calcium disodium EDTA on the morphological profile of the blood. Nauk. Pr.-Ukr. Sil's'kogospod. Akad. 1976; 156(2):64-65. (CA)

353. Karunajeewa H. The effect of cockle-shell grit, dietary level of calcium and EDTA on eggshell quality and laying performance of crossbred hens. Aust. J Exp. Agric. Anim. Husb. 1978; 18(94):667-674. (CA)

354. Kearney DR, Kirksey Jr. ST. (The Proctor & Gamble Company, USA). Aminopolycarboxylate- and polyphosphate-containing beverage products having superior vitamin stability. PCT Int. Appl. WO 00 53,036 (Cl. A23L2/02), 14 Sep 2000. US Appl. PV123,271, 8 Mar 1999; 20 pp. (CA)

355. Karunajeewa H. Effects of rearing regime, a chelating agent and the source of supplemental calcium and protein in the laying diet on egg shell thickness and performance of crossbred layers. Aust. J Exp. Agric. Anim. Husb. 1977; 17(89):934-943. (CA)

356. Kim II. K, Benevenga NJ, Grummer RH. Estimation of the fraction of the lactose in a high lactose diet available for fermentation in the cecum and colon of the rat. J Nutr. 1978; 108(1):79-89. (CA)

357. Kim KY, Bom HS, Oh CS, Lee HC, Park RD, Kim HK, Choe KH, Kim YH, Chae KM, Kim JY. Genetic toxicity of chitosan and EDTA in mice. Kichin, Kitosan Kenkyu. 1996; 2(2):122-123. (CA)

358. Kim SC, Kim YH. Effect of EDTA on dental growth in rabbits. J Korean Dent. Acad. Ass. 1970; 8(5):433-438. (CA74)

359. Kealy RD, Greene DE, Waldroup PW, Stephenson EL. Absorption and distribution of ethylenediaminetetraacetic acid (EDTA) ingested by the chick. Poultry Sci. 1969; 48:94-99. (NA40)

360. Kim SW, Kawashima R, Uesaka S. Importance of trace elements in farm animal feeding. XXXIX. Action mechanism of effects of amino acid and protein on trace element toxicity in cellulose digestion by rumen bacteria. Kyoto Daigaku Shokuryo Kagaku Kenkyusho Hokoku.m 1969; 32:17-23. (CA75)

361. Kratzer FH, Starcher B. Quantitative relation of EDTA to availability of zinc for turkey poults. Proc. Soc. Exp. Biol. Med. 1963; 113:424-426. (NA34)

362. Kristoffersen J, Lõkken P. A comparison between phenol red and 51Cr-EDTA as reference substances in rats by a test meal technique. Acta Pharmacol. Toxicol. 1971; 30:97-103.

363. Krum JK, Fellers CR. Clarification of wine by a sequestering agent. Food Technol. 1952; 6;103-106.

364. Krum J. Toxicological and food usage studies of ethylenediaminetetraacetic acid. Dissertation. Univ. Mass. 1948: 44 p.

365. Kimmel CA. Fetal gonad dysgenesis following EDTA administration. Teratology. 1975; 11:26A.

366. Kimmel CA, Sloan CS. Studies on the mechanism of EDTA teratogenesis. Teratology. 1975: 12:330-331.

367. Knasmüller S, Szakmary A, Wottaw A. Investigations on the use of EDTA-permeabilized E. coli cells in liquid suspension and animal-mediated genotoxicity assays. Mutat. Res. 1989; 216:189-196.

368. Kurilov NV, Podshibyakin AE. Utilization and digestibility of pectin-, ethylenediamine-tetraacetic acid - and formaldehyde-treated casein fed to sheep. Byull. Vses. Nauchno-Issled. Inst. Fiziol., Biokhim. Pitan. S-kh. Zhivotn. 1983; 17(1): 28-30. (CA)

369. LaChance LE. The effect of chelation and x-rays on fecundity and induced dominant lethals in Habrobracon (Bracon). Radiation Res. 1959; 11:218-228. (CA54:664a)

370. Kovacs T, Jun L, Schmelczer M, Wagner L, Davin J-C, Nagy J. Do intestinal hyperpermeability and the related food antigens play a role in the progression of IgA nepropathy? 1. Study of intestinal permeability. Am. J Nephrol. 1996; 16;500-505.

371. Kratzer FH, Allred JB, Davis PN, Marshall BJ, Vohra P. The effect of autoclaving soybean protein and the addition of ethylenediaminetetraacetic acid on the biological availability of dietary zinc for turkey poults. J Nutr. 1959; 68:313-322.

372. Lange J, Pickardt E, Weinig E. Diagnosis and therapy of lead injury by complex formers. Arztliche Wochenschrift. 1959; 14:105-111. (2034)

373. Leclercq-Foucart J, Forget P, Sodoyez-Goffaux F, Zappitelli A. Intestinal permeability to (51Cr)EDTA in children with cystic fibrosis. J Pediat. Gastroenterol. Nutr. 1986; 5:384-387.

374. Läpinleimu K, Wegelius R. The intestinal absorption of iron administered orally. Therapeutic effect in infants and children with hypochromic anemia. Antibiotic Med. & Clin. Therapy. 1959; 6:151-155. (CA43:13391f)

375. Larsen BA, Bidwell RGS, Hawkins WW. The effect of ingestion of disodium ethylenediamine-tetraacetate on the absorption and metabolism of radioactive iron by the rat. Can. J Biochem. and Physiol. 1960; 38:51-55. (CA54:4923i)

376. Larsen BA, Hawkins WW, Leonard VG, Armstrong JE. The effect of the prolonged intake of ethylenediaminetetraacetate on the utilization of calcium and iron by the rat. Can. J Biochem. and Physiol. 1960; 38:813-817. (CA54:23067b)

377. Larson RH, Zipkin I, Rubin M. Effect of administration of EDTA by various routes on dental caries in the rat. Possible role of coprophagy. Arch. Oral. Biol. 1961; 5:49-54.

378. Leighton MJ, Bhabuta A, Hill R. Comparison of the retention in chicks and mice of 59Fe given orally as chloride, ethylene diamine tetra-acetate or nitrilotriacetate and in chicks given diets composed of conventional ingredients or semi-purified nutrients. Res. Vet. Sci. 1990; 49:138-143.

379. Layrisse M, Garcia-Casal MN, Solano L, Baron MA, Arguello F, Llovera D, Ramirez J, Leets I, Tropper E. Iron bioavailability in humans from breakfasts enriched with iron bis-glycine chelate, phytates and polyphenols. J Nutr. 2000; 130(9):2195-1999. (CA)

380. Layrisse M, Martinez-Torres C. Fe(III) EDTA complex as iron fortification. Amer. J Clin. Nutr. 1977; 30(7):1166-1174. (NA48)

381. Lea P, Coke M, Morwood K, Smith AW. (Smithkline Beecham PLC) Pharmaceutical composition for the treatment of gastritis. PCT Int. Appl. WO 92 18,111 (Cl. A61K31/045), 29 Oct 1992. GB Appl. 91/8,080, 15 Apr 1991; 14 pp. (CA)

382. Lease, JG, Barnett BD, Lease EJ, Turk DE. The biological unavailability to the chick of zinc in a sesame meal ration. J Nutr. 1960; 72:66-70.

383. Lengemann FW, Wasserman RH, Comar CL. Enhancement of radiocalcium and radiostrontium absorption by lactose in the rat. J Nutr. 1959; 68:443-456. (CA53:22323b)

384. Likuski HJA, Forbes RM. Effect of phytic acid on the availability of zinc in amino acid and casein diets fed to chicks. J Nutr. 1964; 84:145-148. (NA35)

385. Loercher K, Koeppe P, Akkilie M. Influence of EDTA on retention and biological half-life of manganese-54 and zinc-65 in chickens. Trace Elem. Metab. Anim., Proc. WAAP/IBP Int. Symp. 1969 (Pub. 1970); 259-263. (CA75)

386. Lõkken P, Sõgnen E. 51Cr-EDTA as a reference substance in research on gastrointestinal functions. Gen. Pharmacol. 1967; 25(Suppl. 4):39.

387. Loren K. Dr. Garry F. Gordon world's leading medical advocate of oral chelation. Life flow one the solution for heart disease. 21 p. computer printout.

388. Makashev KK, Akhmedova AS. The effect of ethylenediaminetetraacetate (EDTA) and cortisone on the distribution of phosphorus and calcium in organs and tissues and their excretion from the system after lead intoxication. Trudy Instituta Kraevoi Patologii, Akademiya Nauk Kazakhskoi SSR. 1962; 10:190-197. (1009)

389. Makeeva LG, Pavlovskaya NA, Orlyanskaya RL. The distribution of thorium in rat liver depending on the route of administration and chemical nature of the compounds introduced. Med. Radiol. 1968; 13(9):50-63. (CA70)

390. Maestri DM, Labuckas DO, Guzman CA. Chemical and physical characteristics of a soybean beverage with improved flavor by addition of ethylenediaminetetraacetic acid. Grasas Aceites (Sevilla). 2000; 51(5):316-319. (CA)

391. Maxton DG, Bjarnason I, Reynolds AP, Catt SD, Peters TJ, Menzies IS. Lactulose, 51Cr-labeled ethylenediaminetetraacetate, L-rhamnose and polyethyleneglycol 400 (corrected) as probe markers for assessment in vivo of human intestinal permeability. Clin. Sci. 1986; 71:71-80.

392. McCall JT, McLennan KG, Goldstein NP, Randall RV. Copper and zinc homeostasis during chelation therapy. Trace Subst. Environ. Health. 1969; 2:127-140.

393. McLean AEM. Phenergan and versene in dietary liver necrosis. Nature. 1960; 185:191-192. (CA54:16652b) [The decline in O uptake of liver slices of weanling rats fed a necrogenic diet was prevented by the addn. of 10-4M Phenergan or 10-3M Versene. The addn. of Phenergan to the necrogenic diet delayed the onset of massive liver necrosis.]

394. Martinez-Torres C, Romano EL, Renzi M, Layrisse M. Fe(III)-EDTA complex as iron fortification. Further studies. Amer. J Clin. Nutr. 1979; 32(4):809-816. (NA50)

395. Masuda K. Studies on removal of radioactive contamination in body. 2. Removal of Ca45 and Sr90 by oral administration of ethylenediaminetetraacetic acid in rat. J Nara Med. Assoc. 1963; 14:138-142. (NA34)

396. Mathers JC, Smith H, Carter S. Dose-response effects of raw potato starch on small-intestinal escape, large-bowel fermentation and gut transit time in the rat. Brit. J Nutr. 1997; 78:1015-1029.

397. Miller JK, Byrne WF. Absorption, excretion, and tissue distribution of orally and intravenously administered radiocerium as affected by EDTA. J Dairy Sci. 1970; 53:171-175. (NA40)

398. Miller WJ, Powell GW, Blackmon DM, Gentry RP. Zinc and dry matter content of tissues and feces of zinc-deficient and normal ruminants fed ethylenediaminetetraacetate and cadmium. J Dairy Sci. 1968; 51:82-89. (NA38)

399. McWard GW. Effects of phytic acid and ethylenediaminetetraacetic acid (EDTA) on the chick's requirement for magnesium. Poultry Sci. 1969; 48:791-794. (NA40)

400. Milos M, Contrea A, Crista N, Rosu Maria. Effect of chelation of trace minerals (manganese, copper, and cobalt) with EDTA on oxygen consumption in liver tissue and the activity of some enzymes of chicken serum. Lucr. Stiint., Inst. Agron. Timisoara, Ser. Zooteh. 1970; 13:59-66. (CA80)

401. Mendoza C, Viteri FE, Lonnerdal B, Raboy V, Young KA, Brown KH. Absorption of iron from unmodified maize and genetically altered low-phytate maize fortified with ferrous sulfate or sodium iron EDTA. Am. J Clin. Nutr. 2001; 73:80-85.

402. Mittler TE. Ascorbic acid and other chelating agents in the trace-mineral nutrition of the aphid Myzus persicae on artificial diets. Entomol. Exp. Appl. 1976; 20(1):81-98. (CA)

403. Merville R, Dequidt J, Corteel ML, Fontaine G. Electrophoretic study of the serum proteins in chronic occupational lead poisoning. Lille Med. 1958; 3:139-143. CA55:15725b)

404. Sognen E. Reduction of the toxic effect of certain orally administered drugs by co-administration of calcium binding substances. Proc. European Soc. Study Drug Toxicity. 1964; 4:190-197. (CA65:4454g)

405. Sognen E. Calcium-binding substances and intestinal absorption. A survey of literature and own investigations. Acta Pharmacol. Toxicol. 1964; Suppl 1: 31 pp. (CA62:6899d)

406. Mamduh S, Lowry DC, Kratzer FH, Norris LC. Effect of NTA and EDTA on calcium metabolism of chickens and Coturnix. J Nutr. 1978; 108(4):719-730. (CA)

407. Solomons NW, Jacob RA, Pineda O, Viteri FE. Studies on the bioavailability of zinc in man. Effects of the Guatemalan rural diet and of the iron-fortifying agent, NaFeEDTA. J Nutr. 1979; 109(9):1519-1528. (NA50)

408. Skorkowska-Zieleniewska J, Bartnik J, Mentel M. Preliminary studies on the effect of versenates on the organism in the light of views on possibilities of the use of these compounds in the food industry. Przem. spoz. 1969; 23:237-240. (NA40)

409. Stantschew S. Prevention of chronic saturnism by oral use of calcium-sodium-EDTA. Zeitschrift fur die Gesamte Hygiene und Ihre Grenzgebiete. 1964; 10:180-186. (2818)

410. Stevens E, Rosoff B, Weiner W, Spencer H. Metabolism of the chelating agent diethylenetriamine pentaacetic acid (C14DTPA) in man. Proc. Soc. Exptl. Biol. Med. 1962; 111:235-238.

411. Sullivan TJ. Effect of manganese edetate (ethylenediaminetetraacetate) on blood formation in rats. Nature. 1960; 186:87. (CA54:17592e) [A severe but reversible Fe-deficiency anemia was produced in immature but not in adult rats by feeding a diet contg. 4% Mn edetate.]

412. Tada O, Sawano T, Nakaoki K. Effect of calcium EDTA administration on the heavy metal content of liver, kidney, and spleen. Rodo Kagaku. 1964; 40(6):252-258. (CA63:16996f)

413. Suso FA, Edwards Jr. HM. Ethylenediaminetetraacetic acid and zinc-65 binding by intestinal digesta, intestinal mucosa, and blood plasma. Proc. Soc. Exp. Biol. Med. 1971; 138(1):157-162. (CA76)

414. Taylor DM. The absorption of cobalt from the gastrointestinal tract of the rat. Phys. Med. Biol. 1962; 6:445-451. (CA56:12137e)

415. Taylor SM, Mallon TR, Blanchflower WJ, Kennedy DG, Green WP. Effects of diet on plasma concentrations of oral anthelmintics for cattle and sheep. Vet. Rec. 1992; 130:264-268.

416. Teahon K, Somasundaram S, Smith T, Menzies I, Bjarnason I. Assessing the site of increased intestinal permeability in coeliac and inflammatory bowel disease. Gut. 1996; 38:864-869.

417. Thomas PS, Ashton C. An oral treatment for lead toxicity. Postgrad Med. J. 1991; 67:63-65.

418. Thomas RO, Litovitz TA, Geschickter CF. Alterations in dynamics of calcium metabolism by intraintestinal calcium reservoirs. Am. J Physiol. 1954; 176:381-387.

419. Troncon LE de A, Pires CR, Kraus OA, Iazigi N. Estudo de permeabilidade intestinal pelo teste do 51-CrEDTA: utilidade clinica na deteccao de alteracoes estruturais do epitelio do intestino delgado. Arq. Gastroenterol. 1996; 33:66-73.

420. Turck D, Ythier H, Maquet E, Deveaux M, Marchandise X, Farriaux JP, Fontaine G. Intestinal permeability to (51Cr)EDTA in children with Crohn's disease and celiac disease. J Pediat. Gastroenterol. Nutr. 1987; 6:535-537.

421. Valledor T, Borbolla L, Villa Campos J, Garcia Palacio A, Garcia Otero A. Lead poisoning in infants: Recent advances in the treatment; 8 cases in 2 families. Revista Colombiana de Pediatria Puericultura. 1956; 16:173-194. (2917)

422. Verma M, Ganguly NK, Majumdar S, Walia BNS. 51-Cr-labelled ethylenediaminetetraacetic acid and D-xylose absorption test in Escherichia coli enterotoxin-induced diarrhoea in mice. Scand. J Gastroenterol. 1995; 30:886-891.

423. Vinas-Salas J, Biendicho-Palau P, Pinol-Felis C, Miguelsanz-Garcia S, Perez-Holanda S. Calcium inhibits colon carcinogenesis in an experimental model in the rat. Eur. J Cancer. 1998; 34(12):1941-1945. (CA)

424. Valverde A, Murillo A. Endogenous excretion of calcium: effects of sodium oxalate, sodium citrate, sodium lactate and EDTA. Ars. Pharm. 1978; 19(4): 353-360. (CA)

425. Viteri FE, Alvarez E, Batres R, Torun B, Pineda O, Mejia LA, Sylvi J. Fortification of sugar with iron sodium ethylenediaminetetraacetate (FeNaEDTA) improves iron status in semirural Guatemalan populations. Am. J Clin. Nutr. 1995; 61:1153-1163.

426. Varela G, Murillo A. Influence of sodium oxalate and EDTA on the digestibility and endogenous fecal elimination of calcium in rats. An. Bromatol. 1967; 19(1):91-112. (CA67)

427. Varela G, Sanchez FS. Pharmacodynamics of sodium versene. I. Toxicity and action on smooth muscle. Arch. inst. farmacol. exptl. 1952; 4:5-11. (CA47:6554b)

428. Viteri FE, Garcia-Ibanez R, Torun B. Sodium iron EDTA as an iron fortification compound in Central America. Am. J Clin. Nutr. 1978; 31(6):961-971.

429. Vohra P, Gonzales N. Effect of EDTA on the preferential intestinal absorption of zinc than manganese in turkey poults. Poultry Sci. 1969; 48(4):1509-1510. (CA72)

430. Vasiljevic S, Kalic-Filipovic D, Andelovski A. Experiences in oral and parenteral application of CaNa2EDTA. Arh. Hig. Rada. Toksikol. 1969; 20(4):Suppl:113-121.

431. Vergara P, Ferrando C, Jimenez M, Fernandez E, Gonalons E. Factor determining gastrointestinal transit time of several markers in the domestic fowl. Quart. J Exp. Physiol. 1989; 74:867-874.

432. Vohra P, Gottfredson GD, Kratzer FH. The effects of high levels of dietary EDTA, zinc or copper on the mineral contents of some tissue of turkey poults. Poultry Sci. 1968; 47:1334-1343. (NA39)

433. Vozar L, Simko V. The blood picture of rats given Komplexon 3 (disodium ethylenediaminetetraacetate). Biologia. 1959; 14:611-617. (CA54:23065d)

434. Vohra P, Davis MJ, Craig RM. The improvement of hatchability of Coturnix (Japanese Quail) eggs by EDTA. Poultry Sci. 1970; 49:780-783.

435. Vohra P, Kratzer FH. Influence of various chelating agents on the availability of zinc. J Nutr. 1964; 82:249-256. (NA34)

436. Vozar L. Iron balance and level in the organism after the administration of disodium salt of ethylenediaminetetraacetic acid. Ceskoslov. gastroenterol. vyziva. 1959; 13:261-269. (CA54:10158c)

437. Vohra P, Kratzer FH. Influence of various phosphates and other complexing agents on the availability of zinc for turkey poults. J Nutr. 1966; 89(1):106-112. (CA65: 14177d)

438. Vohra P, Kratzer FH. Zinc, copper, and manganese toxicities in turkey poults and their alleviation by EDTA. Poultry Sci. 1968; 47(3):699-704. (CA69)

439. Waldroup PW, Bowen TE, Morrison HL, Hull SJ, Tollett VE. The influence of EDTA on performance of chicks fed corn-soybean meal diets with and without trace mineral supplementation. Poultry Sci. 1968; 47:956-960. (NA39)

440. Whittaker P, Vanderveen JE, Dinovi MJ, Kuznesof PM, Dunkel VC. Toxicological profile, current use, and regulatory issues on EDTA compounds for assessing use of sodium iron EDTA for food fortification. Regulatory Toxicol. Pharmacol. 1993; 18:419-427.

441. Weerden EJ Van. Reduced availability of iron in diets for fattening calves. Landbouwkundig Tijdschrift. 1973; 85(11):388-394. (NA44)

442. Westrom BR, Wang Q, Pantzar N, Jeppsson B, Karlsson B. Intestinal passage of 51-Cr-EDTA and ovalbumin in the rat with intra-abdominal sepsis. Adv. Exp. Med. Biol. 1995; 371B:887-889.

443. White HH. Diagnosis and treatment of lead poisoning. World Neurology. 1960; 1:137-145. (2218)

444. Willoughby RPN, Harris KA, Carson MW, Martin CM, Troster M, DeRose G, Jamieson WG, and Potter RF. Intestinal mucosal permeability to 51-Cr-ethylenediaminetetraacetic acid is increased after bilateral lower extremity ischemia-reperfusion in the rat. Surgery. 1996; 120:547-553.

445. Whittaker P, Vanderveen JE. Effect of EDTA on the bioavailability to rats of fortification iron used in Egyptian balady bread. British J Nutr. 1990; 63(3):587-595. (NA60)

446. Wilson BB, Wortharm JS. (Allied Chemical Corp.) Urea-containing ruminant feed comprising inhibitors of urease enzymes. U.S. 3,644,642 (Cl. 424-319; A61k), 22 Feb 1972. 1969; Appl. 816,107, 3 pp. (CA76)

447. Yip R. The challenge of controlling iron deficiency: sweet nets from Guatemala. Am. J Clin. Nutr. 1995; 61:1164-1165.

448. Wittgens H, Heider. Inflammation of the optic nerves and lead poisoning. Arztliche Dienst DB. 1958; 19:71-73. (1977)

449. Woods WR, Smith KJ. Control of bloat in ruminants. U.S. 3,317,378 (Cl. 167-53), May 2, 1967. Appl. June 18, 1962; 3 pp. (CA67) [The administration of a chelating agent such as EDTA prevents bloat in ruminants by reducing free Mg and Ca ions in the rumen. The chelating agent should be given orally at least once every 24 hours. The dose depends on species and age of the animals.]

450. Wu CL. Zinc and manganese requirements of Tsai Ya ducklings and factors affecting requirements. Chung-hua Nung Hsueh Hui Pao. 1982; 119:75-85. (CA)

451. Zahorski W, Myslak Z. Use of Ca-EDTA in the organized action against plumbism in industry. XII Internatl. Cong. Occup. Health, Helsinki, Finland. 1957; Vol. III, pp. 242-243. (1881)

452. Zimmer FE. Lead poisoning in scrap-metal workers. J Amer. Med. Assoc. 1961; 175:238-240. (2356)

453. Zipkin I. Caries-potentiating effect of ethylenediaminetetraacetic acid in the rat. Proc. Soc. Exptl. Biol. Med. 1953; 82:80-83. (CA47:4972f)

454. Zipkin I, Larson RH. Caries potentiating effect of Na EDTA, Ca EDTA, and Mg EDTA in the rat. J Dent. Res. 1959; 38:1240.

455. Zipkin I. Further studies on in vivo decalcifying agents. Versene (ethylene diamine tetra acetic acid), various polycarboxylic acids and various polyphosphates at pH 6.5. J Dent. Res. 1951; 30:484.

456. Mochmann H, Zwierzchowski J, Hering L, Molenda J, Ocklitz HW, Bocianowski M, Austenat L, Walachowski W, Janas Z. The protective effect of an EDTA-sodium-extract-vaccine obtained from swine-pathogenic E. coli in a field trial. 1. Communication: Direct and indirect immunization of suckling piglets. Zentralbl. Bakteriol. A. 1980; 247;192-207.

457. Mochmann H, Zwierzchowski J, Hering L, Molenda J, Ocklitz HW, Bocianowski M, Austenat L, Walachowski W, Janas Z. The protective effect of an EDTA-sodium-extract-vaccine obtained from swine-pathogenic E. coli in a field trial. 2. Communication. Immunization of weanling piglets. Zentralbl. Bakteriol. A. 1980; 247:208-220.

458. Mochmann H, Zwierzchowski J, Hering L, Molenda J, Ocklitz HW, Bocianowski M, Austenat L, Walachowski W, Janas Z. Preliminary results of an antiepizootic field test using EDTA-Na extract vaccine from Escherichia coli strains pathogenic to swine in swine production industrial units. Arch. Exp. Veterinarmed. 1979; 33:489-494.

459. Miyao N, Hayashi M. Strontium metabolism following strontium-calcium discrimination in domestic animals. V. Effects of various salts and whole-body cobalt-60 gamma irradiation on the strontium-calcium discrimination in the goat and fowl. Nippon Juigaku Zasshi. 1961; 23:181-189. (CA56:14785i)

460. Murillo A, Campos MS, Varela G. Factors affecting digestibility, absorption and retention of calcium. Effect of oxalate, ethylenediamine tetraacetic acid (disodium salt), nitrilotriacetic acid, lysine and protein quality. Revista Espanola de Fisiologia. 1972; 28(2):115-123. (NA43)

461. Morello MJ, Franz SL. EDTA supplementation of L-ascorbic acid-containing beverages for increased stability of color and clarity. Eur. Pat. Appl. EP 1,121,868 (Cl. A23L2/68) 8 Aug 2001. US Appl. 495,768, 1 Feb 2000; 8 pp. (CA)

462. Morris AJ, Howden CW, Robertson C, Duncan A, Torley H, Sturrock RD, Russell RI. Increased intestinal permeability in ankylosing spondylitis - primary lesion or drug effect? Gut. 1991; 32:147-1472.

463. Moustfa HH, Collins EB. Effects of selected food additives on growth of Pseudomonas fragi. J Dairy Sci. 1968; 52:335-340.

464. Muralidhara NK. Assessment of in vivo mutagenic potency of ethylenediaminetetraacetic acid in albino mice. Food Chem. Toxicol. 1991; 29(12):845-849. (CA)

465. Naylor GJ. Treatment of pre-menstrual syndrome. U.S. US 4,414,212 (Cl. 424-247; A61K31/54) 08 Nov 1983. Appl. 354,065, 02 Mar 1982; 3 pp. (CA)

466. Nielsen JB, Andersen O, Svendsen P. Chelators and cadmium toxicology after oral exposure. Plzen Lek Sborn. 1985; Suppl. 49:37-42.

467. Nigrovic V, Catsch A. The treatment of acute iron poisoning in animals. Arch. Exptl. Pathol. Pharmakol. 1965; 251(2):225-232. (CA63:13918g)

468. O'Dell BL, Yohe JM, Savage JE. Zinc availability in the chick as affected by phytate, calcium and ethylenediaminetetraacetate. Poultry Sci. 1964; 43:415-419. (NA34)

469. Oman H, Blomquist L, Henriksson AE.K., Johansson S.G.O. Comparison of polysucrose 15000, 15-Cr-labelled ethylenediaminetetraacetic acid, and 14-C-mannitol as markers of intestinal permeability in man. Scand. J Gastroenterol. 1995; 30:1172-1177.

470. Omah H, Henriksson AEK, Johansson SGO, Blomquist L. Detection of naproxen-induced intestinal permeability change may be facilitated by adding a standardized mea but not by forming marker ratios. Scand. J Gastroenterol. 1996; 31:1182-1188.

471. O'Morain CA, Abelow AC, Chervu LR, Fleischner GM, and Das, KM. Chromium 51-ethylenediaminetetraacetate test: a useful test in the assessment of inflammatory bowel disease. J Lb. Clin. Med. 1986; 108:430-435.

472. Onning G, Wang Q, Westrom BR, Asp NG, Karlsson BW. Influence of oat saponins on intestinal permeability in vitro and in vivo in the rat. Brit. J Nutr. 1996; 76;141-151.

473. Orita J. Experimental studies on the effect of monocalcium disodium ethylenediaminetetraacetate upon lead poisoning. Kokumin Eise. 1956; 25:22-55. (CA51:13185i)

474. Osani H, Motomura H, Makihata M. Continuous oral administration of calcium EDTA. Rodo Kagaku. 1964; 40(3):113-120. (CA63:16996e)

475. Owen AA, Peo Jr. ER, Cunningham PJ, Moser BD. Chelated trace minerals for G-F swine. J of Animal Sci. 1973; 37(1):95-103. (NA44)

476. Paruelle JL, Toullec R, Patureau-Mirand P, Mathieu CM. Utilisation of protein by fattening preruminant calves. 2. Utilisation of fish proteins and the effect of an iron-chelating agent. Annales de Zootechnie. 1974; 23(4):519-535. (NA46)

477. Patrick H. Relation of hydrobiotite and complexing agents to mineral metabolism. Proc. W.Va. Acad. Sci. 1968; 40:77-80. (CA70)

478. Pavlovskaya NA, Provotorov AV, Makeeva LG. Resorption of thorium from the gastrointestinal tract by the blood and its accumulation in organs and tissues of rats. Gig. Sanit. 1971; 36(5):47-50. (CA75)

479. Perry Jr. HM, Camel GH. Effects of calcium disodium ethylenediaminetetraacetate on plasma cholesterol and urinary Zn in man. Metal-Bind Med., Proc. Symposiu, Philadelphia 1959. 1960; 209-215. (CA54:18787i)

480. Podshibyakin AE, Kurilov NV. Effects of dietary protein coating on the nitrogen flow from the forestomach into the abomasum of sheep. Byull. Vses. Nauchno-Issled. Inst. Fiziol. Biokhim. Pitan. S-kh. Zhivotn. 1983; 16(4):30-33. (CA)

481. Peters HA. Chelation therapy in acute, chronic and mixed porphyria. In: Metal-Binding in Medicine by MJ Seven and LA Johnson, Ed. J.B. Lippincott Co., Phila. 1960; p.190-199.

482. Powell GW. Effects of dietary EDTA and cadmium on absorption, excretion, and retention of orally administered 65Zn in various tissues of zinc-deficient and normal goats and calves. Dissertation Absts. (B). 1967; 28:2203B. (NA38)

483. Powell GW, Miller WJ, Blackmon DM. Effects of dietary EDTA and cadmium on absorption, excretion and retention of orally administered 65Zn in various tissues of zinc-deficient and normal goats and calves. J Nutr. 1967; 93:203-212. (NA38)

484. Princiotto JV, Zapolski EJ, Bagley Jr. DH, Laskey A, Morgan R, Rubin M. Absorption of oral chelated iron. Biochem. Med. 1970 3:289-297.

485. Radnai I, Szabo V, Varhegyi J. Effectiveness of various manganese preparations (for cattle feeds). Magy. Allatory. Lapja. 1969; 24(9):501-502. (CA72)

486. Rieders F. Current concepts in the therapy of lead poisoning. In: Metal-Binding in Medicine; Seven MJ and Johnson LA, ed., Lippincott, Phila. 1960; pp. 143-145. (2185)

487. Rieders F. Effect of oral Na2Ca ethylenediamine tetraacetate on urinary and fecal excretion of lead in rabbits. Fed. Proc. 13. 1954; Abstract No. 1303. (601)

488. Rieders F. Effects of oral Na2Ca ethylenediamine tetraacetate (EDTA) on distribution of Fe, Cu, Zn, and Pb in rats. J Pharmacol. Exper. Therapy. 1955; 113:45. (643)

489. Rieders F, Brieger H. Edathamil disodium calcium (Na2CaEDTA): Absorption by the oral route - interactions with metals in vivo - diagnostic and therapeutic use. Proc. 7th Annual Mtg. Amer. Acad. Occup. Med. 1955; pp. 83-84. (1607)

490. Rubin MI, Martell AE, Bersworth FC. The biological actions of the versenes. Versenes, Inc., Framingham, Mass. 1954, 84 pp.

491. Rubin M, Princiotto JV. Synthetic amino acid chelating agents and iron metabolism. Ann. NY Acad. Sci. 1960; 88:450-459. (CA55:2903f)

492. Sanchez Sanchez ML, Arroyo Vicente M, Elias Arcalis A, Rubio Perez P. Comparative study of oral and intravenous tests using calcium-EDTA to measure lead deposits in the body. Rev. Clin. Esp. 1983; 169:241-244.

493. Ruiz R, Van Soest PJ, Van Amburgh ME, Fox DG, Robertson JB. Use of chromium mordanted neutral detergent residue as a predictor of fecal output to estimate intake in grazing high producing Holstein cows. Anim. Feed Sci. Technol. 2001; 89(3-4):155-164. (CA)

494. Sassi C, Finuli M, Nava C. Lead intoxication in workers exposed to lead stearate. Med. Lavoro. 1961; 52:658-667. (2329)

495. Savicevic M, Ptrovic L, Stankovic M, Poleti D. Prophylactic oral administration of Mosatil in lead exposed workers. II. Administration of 1- and 3-g, Mosatil tablets per day. Zentralblatt Arbeitsmedizin Arbeitsschutz. 1959; 9:289-292. (2064)

496. Sawamura R, Fernandes MIM, Troncon LE de A. Alteracoe da permeabilidade intestinal em criancas. Arq. Gastroenterol. 1994; 31:30-38.

497. Sawamura R, Fernandes MIM, Troncon LE de A, Iazigi N. Aumento da permeabilidade intestinal ao 51Cr-EDTA em criancas com diarreia persistente. Arq. Gastroenteroo. 1997; 34:55-59.

498. Schardein JL, Sakowski R, Petrere J, Humphrey RR. Teratogenesis studies with EDTA and its salts in rats. Toxicol. App. Pharmacol. 1981; 61:423-428.

499. Savicevic M, Petrovic L, Stankovic M, Djordjevic S. Prophylactic oral administration of Ca2EDTA (Mosatil-Bayer) to workers exposed to lead. I. Administration of 2 g Ca2EDTA per day. Zentralblatt Arbeitsmedizin Arbeitsschutz. 1959; 9:180-185. (2063)

500. Schmidt P. Nutritional and hematological disturbances in rats after gastrectomy in rats. Kiserl. Orvostud. 1974; 26(6):655-664. (CA82)

501. Schroeder HA, moderator. Discussion. In: Metal-Binding in Medicine by MJ Seven and LA Johnson, Ed., JB Lippincott Co., Phila. 1960; p. 154-159.

502. Schroeder HA. A practical method for the reduction of plasma cholesterol in man. Chron. Dis. 1956; 4:461-468.

503. Seeberg VP, Hidalgo J, Wilken W. Hemoglobin regeneration following oral administration of chelated iron. Science. 1954; 119-608-609.

504. Shibata S. Toxicological studies of EDTA salt (disodium ethylenediaminetetraacetate). Nippon Yakurigaku Zasshi. 1956; 52:113-119. (CA51:9918b)

505. Shaw JH, Gupta OP. The relation of a chelating agent to smooth-surface lesions in the white rat. J Nutr. 1956; 60:311-322. (CA51:12323a) [The results suggest that the smooth surface lesions observed were more likely to be closely related or identical to smooth surface caries than to be the result of the simple process of decalcification of tooth substance by chelation with ethylenediaminetetraacetic acid.]

506. Shapiro R. Chelates in contrast roentgenography. In: Metal-Binding in Medicine, by MJ Seven and LA Johnson, Ed., JB Lippincott Co., Phila. 1960; p. 249-254.

507. Semenov AI, Moskalev YI. Effect of age and chelating agents on the absorption of curium-244 from the gastrointestinal tract. Radiobiologiya. 1975; 15(5):780-783. (CA)