

REFERENCES

IV. REFERENCES

1. Azorlosa, J.L., U.S. Pat., 2,592,107 (1952).
2. Urbain, O.M., and Stemen, W.R., U.S. Pat., 2,275,210 (1942).
3. Manecke, G., and Heller, H., Angew Chem., 72, 523 (1960).
4. Kennedy, J., Brit. Pat., 8,55,009 (1960).
5. Stach, H., Angew Chem., 63, 263 (1951).
6. Gregor, H.P., Taifer, M., Citarel, L., and Becker, E.T., Ind. Eng. Chem., 44, 2834 (1952).
7. Haug, A., Acta Chem. Scand., 5, 1794 (1961).
8. Cerma, E., Bull. Soc. Adv. Sci. Tiresic., 56, 97 (1968).
9. Syviner, A.B., and Mc Neely, W.H., Ind. Engg. Chem., 43, 207 (1951).
10. van der Borcht, O., van Puymbroeck, S., and Colard, J., Health Phys., 23, 181 (1971).
11. Cozzi, D., Desideri, P.G., Lepri, L., and Giantelli, G., J. Chromatogr., 35, 396 (1968).

12. Cozzi, D., Desideri, P.G., and Lepri, L.,
J. Chromatogr., 35, 405 (1968); 40, 130 (1969).
13. Cozzi, D., Desideri, P.G., Lepri, L., and Coas, V.,
J. Chromatogr., 40, 138 (1969).
14. Deniel, R., Physiology of crustacea - Vol I (ed. by
Waterman T.H.), Academic Press, London, 447 (1960).
15. Bowen, H.J.M., Trace elements in biochemistry,
Academic Press, London, 241 (1966).
16. Peniston, Q.P., and Johnson, E.L., U.S. Pat.,
3,553,940 (1970).
17. Muzzarelli, R.A.A., Natural chelating polymers,
Pergamon Press, New York, 173 (1973).
18. Muzzarelli, R.A.A., Anal. Chim. Acta., 54, 133 (1971).
19. Haug, A., and Smidrod, O., Acta Chem. Scand., 24,
843 (1970).
20. Kononova, M.M., Solid organic matter, Pergamon Press,
New York, (1966).
21. Mortensen, J.L., Solid Sci. Soc. Proc., 179 (1963).
22. Martin, J.P., and Richards, S.J., J. Bacteriol., 85,
1288 (1963).
23. Duston, J.R., Biochem. J., 72, 456 (1959).

24. Brady, P.R., Shoskinson, R.M., J. Chromatogr., 54, 55, 65 (1971).
25. Shock, J., and Bynum, B.S., Nature, 184, 635 (1959).
26. Katz, S., Nature, 194, 474 (1962); 195, 997 (1962).
27. Vanner, H., and Zimmer, C., Naturewiss, 51, 173 (1964).
28. Yaman, T., and Davidson, N., J. Am. Chem. Soc., 83, 2599 (1961).
29. Rosset, R., Bull. Soc. Chim. France, 1, 59 (1966).
30. Hering, R., Z. Chem., 5, 29, 194, (1965).
31. Hanra, G., and Pochette, F., Ann. Chim., 55, 1000 (1965).
32. Blasius, E., and Brozio, B., J. Chromotogr., 18, 57 (1965).
33. Cornaz, J.P., and Deuel, H., Experientia, 10, 137 (1954).
34. Lions, F., and Martin, K.V., J. Am. Chem. Soc., 79, 2733 (1957).
35. Marvel, C.S., and Tarkoy, N., J. Am. Chem. Soc., 79, 6000 (1957); 80, 832 (1958).
36. Bayer, E., Chem. Ber., 90, 2785 (1957).
37. Berlin, A.A., and Matveeva, N.G., Vysokomol. Soedin., 1, 1643 (1959).

38. Parino, V.P., Kazokova, Z.S., Dkorokova, N.N.,
and Berlin, A.A., Vysokomol. Soedin., 3, 402 (1961).
39. Parino, V.P., Kazakova, Z.S., Dkorokova, N.N., and
Berlin, A.A., Vysokomol. Soedin., 4, 510 (1962).
40. Berlin, A.A., Ragimov, A.V., and Liogonskii,
Izv. Akad. Nauk SSSR otd. Khim. Nauk, 1962 (1963)
41. Paushkin, V.M., Iunin, A.F., and Komissarov, V.I.,
Dokl. Akad. Nauk. SSSR., 195, 1125 (1970).
42. Hunt, S.E., and Lindsey, A.S., (a) Chem. and Ind., 32,
1272 (1961); (b) J. Chem. Soc., 4550 (1962).
43. Stutle, J.K., Marinon, E.L., Freebuya, M.E., and
Harris, F.W., Polymer preprints A.C.S., 8, 244 (1967).
44. Bayer, E., Angew Chem., 71, 426 (1959).
45. Bayer, E., in Anomalien bei Ionenaustausch - Vorgängen
(ed. by Issleib, K.), Akademic - Verlag, Berlin,
305 (1962).
46. Bayer, E., and Fiedler, H., Angew Chem., 72, 921 (1960).
47. Bayer, E., Fiedler, H., Hock, L.-L., Otterbach, D.,
Schenk, G., and Voelter, W., Angew Chem., 76, 76 (1964).
48. Blasius, E., and Bock, I., J. Chromatogr., 14,
244 (1964).
49. Gregor, H.P., Angew Chem., 64, 341 (1952); 66, 143 (1954).

50. Hering, R., Z. Chem., 3, 30, 69, 108, 153, 233 (1963).
51. Hering, R., J. Inorg. Nucl. Chem., 24, 1399 (1963).
52. Hering, R., J. Prakt. Chem., 14, 285 (1961).
53. Hering, R., Kruger, W., and Kuhn, G., Z. Chem., 2, 374 (1962).
54. Hering, R., and Wolf, L., Chem. Tech., Berlin, 10, 661 (1958).
55. Hering, R., Z. Chem., 5, 29, 113, 149, 195 (1965).
56. Kuhn, G. and Hering, R., Z. Chem., 5, 316 (1965).
57. Hering, R., Z. Chem., 5, 402 (1965).
58. Kennedy, J., U.S. Pat., 2,882,248 (1959).
59. Kennedy, J. and Davies, R.V., Chem. and Ind. (London), 378 (1956).
60. Kennedy, J. and Ficken, G.E., J. Appl. Chem., 8, 465 (1958).
61. Kennedy, J., Lane, E.S., and Robinson, B.K., J. Appl. Chem., 8, 459 (1958).
62. Kennedy, J. and Wheeler, V.J., Anal. Chim. Acta, 20, 412 (1959); Chem. and Ind. (London), 1577 (1959).
63. Manecke, G., and Danhauser, Makromol. Chem., 56, 208 (1962).

64. Manecke, G., and Heller, H., Makromol. Chem., 55, 51 (1962); Heller, H., Dissertation, Freie Univ., Berlin (1962).
65. Schmuckler, G., Talanta, 11, 1394 (1964); 12, 281 (1965).
66. De Geiso, R.C., Donaruma, L.G., and Tomic, E.A., Anal. Chem., 34, 845 (1962).
67. Skogseid, A., Dissertation, Oslo (1948).
68. Topp, N.E., "Manufacture of Wofatit base exchange resins" BIOS final report, 621, Stationery Office, London.
69. Komiya, T., Jap. Pat., 1093 (1953).
70. Rabek, T., and Zielinski, W., Zeszyty, Nauk. Politech. Wroclaw, 31, 3 (1959).
71. Davies, R.V., Kennedy, J., Lane, E.B., and Williams, J.L., J. Appl. Chem., 9, 368 (1959).
72. Jenckel, E., and Lillin, H.V., Kolloid Z., 146, 159 (1956).
73. Hojo, N., Kido, K., and Takizawa, N., Shinshu Daigaku Sen Igakubu. Kenkyu Hokoku, 8, 133 (1958).
74. Soloway, S., and Schwartz, L., Science, 121, 730 (1955).
75. Manecke, G., and Baner, C., Z. Elektro. Chem., 62, 311 (1955).

76. Izoret, G., Compt. rendu., 253, 274 (1961).
77. Lillin, V.H., Angew Chem., 66, 649 (1954).
78. Parrish, J.H., Chem. and Ind. (London), 386 (1955).
79. Tolmacher, V.N., Orlova, N.N., Vysokomol Soedin, Ser. B., 11(4), 284 (1969).
80. Pennington, L.D., and Williams, M.B., Ind. Engg. Chem., 55, 759 (1959).
81. Gregor, H.P., and Gold, D.H., J. Phys. Chem., 64, 1458, 1464 (1959).
82. Szczepaniak, W., Chem. Anal. (Warsaw), 10, 1199 (1965).
83. Blasius, E., and Olbrich, G., Z. Anal. Chem., 151, 81 (1956).
84. Cornaz, J.P., Hutschneker, K., Deuel, H., Helv. Chim. Acta., 40, 2015 (1957).
85. Deuel, H., and Hutschneker, K., Chimia (Aarau), 9, 49 (1955).
86. Kern, W., and Schulz, R.C., Angew Chem., 69, 159 (1957).
87. Hale, D.K., Research, 9, 104 (1956).
88. Parrish, J.H., Chem. and Ind. (London), 137, (1956).
89. Sykora, N., and Dubsky, F., Collection Czech. Chem. Commun., 28, 2149 (1963).
90. Lautsch, W. Broser, W., Biedermann, W., Doring, U., and Zoschke, H., Kolloid-Z, 125, 72 (1952).

91. Lautsch, W., Broser, W., Doring, U., and Zoschke, H., Naturwiss., 38, 210 (1951).
92. Lautsch, W., Broser, W., Rothkegel, W., Biedermann, W., Doring, U., and Zoschke, H., J. Polymer Sci., 8, 191 (1952).
93. Blasius, E., and Kynast, G., Z. Anal. Chem., 203, 321 (1964).
94. De Geiso, R.C., Donaruma, L.G., and Tomic, E.A., J. Appl. Polym. Sci., 7, 1515 (1963).
95. Lastovskii, R.P., Temkina, Y.Va., Dyatlova, N.M., Koleshik, E.S., and Yaroshenko, G.F., Issled. Svoisty. Ionoobmen. Materialov, Akad. Nauk SSSR, Inst. Fiz. Khim., 104 (1964).
96. Gregor, H.P., Dolar, D., and Hoeschele, G.K., J. Am. Chem. Soc., 77, 3675 (1955).
97. Gregor, H.P., Taifer, M., and Becker, E.I., Abstracts, Division of Colloid Chemistry, Am. Chem. Soc. (1950).
98. Mc Burney, C.H., U.S. Pat., 2,513,200 (1952).
99. van Assche, C., Corte, Germ. Pat., 2,434,593 (1976).
100. Akaiwa, H., Nakuta, N., J. Radio and Chem., 36(11), 59 (1977).

101. Yoshizawa, Y., Jap. Pat., 75,158, 591 (1975).
102. Vernon, F., Eccles, H., Anal. Chem. Acta, 83(1), 187 (1976).
103. Amaike, I., Shigeta, M., Jap. Pat., 7,810,692 (1978).
104. King, J.N., Fritz., J.S., J. Chromatogr., 152(2), 507 (1978).
105. Bernhard, I.H., and Grass, F., Monatsh Chem., 98(3), 1950 (1967).
106. De Geiso, R.C., Donaruma, L.G., and Tomic, E.A., J. Appl. Polym. Sci., 9(2), 411 (1965).
107. Hiroshi, and Takiko, Bull. Chem. Soc., Japan, 40(6), 1533 (1967).
108. Vernon, F., Eccles, H., Anal. Chim. Acta, 63(2), 403 (1973).
109. Portnoi, T.D., Morina, B.P., Stanchenko, G.I., and Rogovina, Z.A., Izv. Vyssh.-Uchebn Zaved, Khim. Khim. Tekhnol., 17(11), 1952 (1974).
110. Jones, M., and Nyssen, A., J. Inorg. Nucl. Chem., 40(6), 1235 (1978).
111. Borrowman, S., and Altringer, B., U.S. Pat. 27,134 (1979).
112. Kapadia, R.N., and Dalal, A.K., Indian J. Chem., Sec.A, 19A(3), 281 (1980).

113. Nakatsuka, R., and Hanabusa, I., Jap. Pat., 8,003,408 (1980).
114. Vernon, F., and Nyo K.M., Anal. Chem. Acta., 93, 203 (1977).
115. Orf, G.E., and Fritz, J.S., Anal. Chem., 50, 1328 (1978).
116. Pohlandt, C., and Fritz, J.S., J. Chromatogr., 176, 189 (1979).
117. Fritz, J.S., and Moyers, E.M., Talanta, 23, 590 (1976).
118. Barnes, R.M., and Genna, J.S., Anal. Chem., 51, 1065 (1979).
119. Phillips, R.J., and Fritz, J.S., Anal. Chem., 50, 1504 (1978).
120. Sugii, A., Ogawa, N., and Hashizuma N., Talanta, 26, 970 (1979).
121. Burba, P., Lieser, K.H., and Fresenius Z., Anal. Chem., 291, 205; 298, 373 (1979).
122. Chikuma, M., Nakayama, M., Tanaka, T., and Tanaka, H., Talanta, 26, 911 (1979).
123. Lee, K.S., Lee, W., and Lee, D.W., Anal. Chem., 50, 255 (1978).
124. Berthod, A., Kolosky, M., Rocca, J.L., and Vittori, O., Analysis, 7, 395 (1979).

125. Desai, P.M., Ph.D. Thesis, M.S. University of Baroda (1965).
126. Vyas, H.A., Ph.D. Thesis, M.S. University of Baroda (1980).
127. Sheth, A.D., Ph.D. Thesis, M.S. University of Baroda (1981).
128. Godwani, Neelam, Ph.D. Thesis, M.S. University of Baroda (1982).
129. Parikh, S.O., Ph.D. Thesis, M.S. University of Baroda (1977).
130. Finch, C.A., Polyvinyl Alcohol (Properties and Applications), Croda Polymers Ltd., Luton (1973).
131. Bunn, Cw., Nature, 161, 929 (1948).
132. Fordham, J.W.h., McCain, G.H., and Alexander, L.E., J. Polym. Sci., 39, 335 (1959).
133. Schildknecht, C.E., Gross, S.T., Davidson, H.R., Lambert, J.M. and Zoss, A.O., Ind. Eng. Chem., 40, 2104 (1948).
134. Matsoyan, S.G., J. Polym. Sci., 52, 189 (1961).
135. Arbuzova, I.A., and Rostovskii, E.N., J. Polym. Sci., 52, 325 (1961).
136. Fujii, K., Mochizuki, T., Imoto, S., Ukida, J., and Matsumoto, M.M., J. Polym. Sci, A-2, 2327 (1964).

137. Tsuboi, K., and Mochizuki, T., J. Polym. Sci., B-1, 531 (1963).
138. Zwick, M.M., J. Appl. Polym. Sci., 9, 2393 (1965).
139. Zwick, M.M., J. Polym. Sci., A-1, 1642 (1966).
140. Sakurada, I., and Yoshizaki, O., Kobunshi Kagaku, 10, 306, 310, 315 (1953).
141. Sakaguchi, Y., Nishino, J., Inagaki, K., Sawada, Z., and Tamaki, K., Kobunshi Kagaku, 23, 859 (1966).
142. Matsuzawa, S., Imoto, T. and Okazaki, W., Kobunshi Kagaku, 25, 25 (1968).
143. Kawase, K., Morimoto, O., and Mochizuki, T., Japanese Chem. Soc. Annual Meeting Reports (1968).
144. Sakurada, I., Omura, Y. and Sakaguchi, Y., Kobunshi Kagaku, 24, 341 (1967).
145. Imoto, E., and Motoyama, R., Kobunshi Kagaku, 11, 251 (1954).
146. Okamura, S., Motoyama, T., and Uno, K., Kogyo Kagaku Zasshi, 55, 776 (1952).
147. Motoyama, T. and Okamura, S., Kobunshi Kagaku, 7, 265 (1950).
148. Noma, K., Ko., T., Tsuneda, T., Kobunshi Kagaku, 6, 439 (1949).
149. Hachihama, Y., Imoto, M., and Asao, C., Kogyo Kagaku Zasshi, 47, 919 (1944).

150. Galyer, C.W., U.S. Pat., 2,487,864 (1949).
151. Minato, H. and Fujisawa, T., Bull. Chem. Soc., 40(6), 1533 (1967).
152. Orlova, N.N., Tolmacher, V.N. and Simonenko, E.A., Vysokomol. Soedin., Ser (B), 14(5), 325 (1972).
153. Vernon, F., Chem. Ind., 15, 634 (1977).
154. Donya, A.P., Sokhina, S.I., Sinyarskii, V.G. and Kubrak, Yu. P., Ukr. Khim. Zh., 48(10), 1087 (1982).
155. Kamon, T., Saito, K., Shikizai Kyokaishi, 54(7), 416 (1981).
156. Fock, J., Schedlitzki, D., Wacker, H., Eur. Pat., 56,427 (1982).
157. Domba, E., U.S. Pat., 3,989,636 (1976).
158. Laverty, J.J. and Gordlund, Z.G., J. Polym. Sci., A-1 (1971).
159. Vernon, F., Eccles, M., Anal. Chim. Acta (1974).
160. Patel, H.S., Patel, S.D. and Patel, S.R., Angew. Makromol. Chem., 106, 223 (1982).
161. Manoralam, R. and Patel, M.M., Makromol. Chem., 184(4), 717 (1983).
162. Joshi, R.M. and Patel, M.M., J. Macromol. Sci. Chem., A-19(6), 919 (1983); A-19(5), 705 (1983).
163. Sugii, A. and Ogawa, N., Talanta (1979).

- 164 Kawase, H., Kogyo Kagaku Zasshi, 74(6), 1228
(1971).
- 165 Kawase, H., Kogyo Kagaku Zasshi, 74(6), 1223
(1971).
- 166 Mori, S., Jap.Pat., 7627,718 (1976).
- 167 Twadare, Y. and Suzawa, T., Kobunshi Ronbunshu,
32(3), 153 (1975).
- 168 Nishimura, H., Sato, Y., Fukudu, B. and Jap. Pat.,
77,10,147 (1977).
- 169 Kamenskii, I.V., Eryshev, B.Ya., Filimonova, S.M.
and Soloveva, L.K., Zh. Prikl. Khim., 53(11),
2612 (1980).
- 170 Block, J. and Michaels, A.S., Brit. Pat.,
2,069,506 (1981).
- 171 Emets, L.V., Danilova, E.Ya., Orlova, T.V.,
Bessmertnov, B.I., Ignasheva, A.V. and
Mileshchenko, S.N., Deposited Doc., 107 (1981).
- 172 Westhoff, R.P., Kwolek, W.F. and Otey, F.H.,
Starch/Staerke, 31(5), 163 (1979).
- 173 Lenk, R.S., and Merrall, R.E., Polymer, 22(9),
1279 (1981).
- 174 Speakman, E.L., U.S. Pat., 3,549,618 (1970).
- 175 Speakman, E.L., U.S. Pat., 3,705,046 (1972).

- 176 Kitazawa, Y., Sonehara, R. and Tojima, H.,
Jap.Pat., 73,22,996 (1973).
- 177 Speakman, E.L., Can. Pat., 960,804 (1975).
- 178 Perez, G.F., Span Pat., 475,962 (1979).