UNIVERSITAS GADJAH MADA
SINTESIS ESTER HUMAT DAN APLIKASINYA SEBAGAI IONOFOR PADA ELEKTRODA SELEKTIF ION Fe^3+ BERBASIS MEMBRAN PVC
Dhony Hermanto, Dr. Dwi Siswanta, M.Eng.;Prof. Drs. Mudasir, M.Eng, Ph.D.
Universitas Gadjah Mada, 2009 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Aiken, G.R., McKnight, D.M., Wershaw, R.L., and MacCarthy, P., 1985, *Humic Substances in Soils, Sediment and Water: Geochemistry, Isolation and Characterization*, John Wiley and Sons, Inc., New York.

Andelkovic, T., Perovic, J., Purenovic, M., Blagojevic, S., Nikolic, R., Andjelkovic, D., and Bojic, A., 2006 (a), Acidity of Humic Acid Related to its Oxygen-Containing Functional Groups, *Bulletin of the Chemist and Technologists of Macedonia*, 25, 2, 131-137.

Andelkovic, T., Perovic, J., Purenovic, M., Blagojevic, S., Nikolic, R., Andjelkovic, D., and Bojic, A., 2006 (b), A Direct Potentiometric Titration Study of the Dissociation of Humic Acid with Selectively Blocked Functional Groups, *Ecletica Quimica*, 31, 3, 39-46.

Amman, D., Pretsch, E., and Simon, W., 1985, Lipophilic Salts as Membrane Additive and Their influence on the Properties of Macro and Micro Electrodes Based on Neutral Carries, *Anal. Chim. Acta*, 171, 119-129.

Ammemiya, S., Buhlmann, P., and Umezawa, Y., 1998, A Phase Boundary Potential Model for Apparently "Twice Nernstian" Responses of Liquid Membrane Ion Selective Electrodes. *Anal. Chem.*, 70, 445-454.

Aprilita, N.H., 2000, *Studi Pengaruh Plasticizer dan Aditif Anion Lipofilik Terhadap Karakteristik Elektroda Selektif Ion Amonium dengan Dibenzil Eter Sebagai Ionofor*, Tesis, Universitas Gadjah Mada, Yogyakarta.

Attiyat, A.S., Christian, G.D., Hallman, J.L., and Bartsch, R.A., 1988, A Comparative Study of the Effect o-Nitrophenyl Octyl Ether and o-Nitrophenyl Penthyl Ether as Plasticizer on the Response and Selectivity of Carrier-Based Liquid Membrane Ion Selective Electrodes, *Talanta*, 35, 794-798.

Bakker, E., Malinowska, E., Schiller, R.D., and Mayerhoff, M.E., 1994 (a), Anion Selective Membrane Electrode Based on Metalloporphyrins: The Influence of Lipophilic Anionic and Cationic Sites on Potentiomeric Selectivity, *Talanta*, 41, 881-890.

Bakker, E., Meruva, R.K., Pretsch, E., and Mayerhoff, M.E., 1994 (b), Selectivity of Polymer Membrane Based Ion Selective Electrode: Self-Consistent Model Describing the Potentiometric Response in Mixed Ion Solution of Different Charge, *Anal. Chem.*, 66, 3021-3030.

Bard, A.J., and Faulkner, L.R., 1980, *Electrochemical Methods, Fundamental and Application*, John Wiley & Sons, Inc., New York.

Bouklouze, A.A., Vire, J.C., and Cool, 1993, Barium Ion Selective Electrodes Based on a New Neutral Carrier Complex, *Anal. Chim. Acta*, 273, 153-163.

UNIVERSITAS GADJAH MADA
SINTESIS ESTER HUMAT DAN APLIKASINYA SEBAGAI IONOFOR PADA ELEKTRODA SELEKTIF ION Fe^3+ BERBASIS MEMBRAN PVC
Dhony Hermanto, Dr. Dwi Siswanta, M.Eng.;Prof. Drs. Mudasir, M.Eng, Ph.D.
Universitas Gadjah Mada, 2009 | Diunduh dari http://etd.repository.ugm.ac.id/

Buck, P.P., and Lindner, E., 1994, IUPAC Recommendation for Nomenclature of Ion Slective Electrodes, *Pure and Appl. Chem.*, 66, 2527-2536.

Camman, K., 1979, *Working with Ion Selective Electrodes*, Spring Verlag, Berlin.

Christl, I., Metzger, A., Heidmann, I., and Kretzschmar, R., 2005, Effect of Humic and Fulvic Acid Concentrations and Ionic Strength on Copper and Lead Binding, *Environ. Sci. and Technol.*, 39, 14, 5319-5326.

Crespilho, F.N., Zukolotto, V., Siqueira, J.R., Constantino, C.I.L., Nart, F.C., and Oliveira, O.N., 2005, Immobilization of Humic Acid in Nanostructured Layer-by- Layer Films for Sensing Applications, *Environ. Sci. and Technol.*, 39, 5385-5389.

Eugster, R., Rozalzin, T., Rusterholz, B., Aubersold, B., Pederazza, U., Ruegg, D., Schid, A., Spichiger, U.E., and Simon, W., 1994, Plasticizer for Liquid Polymeric Membranes of Ion Selective Chemical Sensors, *Anal. Chem. Acta*, 289, 1-13.

Evans, A., 1991, *Potentiometry and Ion Selective Electrodes*, John Wiley & Sons, Inc., Chichester.

Faridbod, F., Ganjali, M.R., Dinarvand, R., and Norouzi P., 2008, Development in the Field of Conducting and Non-conducting Polymer Based Potentiometric Membrane Sensors for Ions Over the Past Decade, *Sensors*, 8, 2331-2412.

Fessenden, R.J and Fessenden, J.S., 1982, *Kimia Organik*, Jilid Kedua, Edisi Ketiga, Erlangga, Jakarta.

Furniss, B.S., Hannaford, A.J., Smith, P.W.G., and Tatchell, A.R., 1989, *Vogel's: Practical Organic Chemistry*, John Willey and Sons, Inc., New York.

Galeska, I., Hickey, T., Moussy, F., Kreutzer, D., and Papadimitrakopoulos, F., 2001, Characterization and Biocompatibility Studies of Novel Humic Acids Based Films as Membrane Material for an Implantable Glucose Sensor, *Sensors*, 2, 4, 1249-1255.

Ganjali, M.R., Norouzi, P., Rezapour, M., Faridbod, F., and Pourjavid, M.R., 2007, Supramolecular Based Membran Sensors, *Sensors*, 6, 1018-1086.

Gehrig, P., Morf, W.E., Welti, M., Pretsch, E., and Simon, W., 1990, Catalysis of Ion Transfer by Tetraphenylborates in Neutral Carrier-Based Ion Selective Electrode, *Helv. Chim. Acta*, 73, 203-212.

Gyurcsanyi, R.E., Pergel, E., Nagy, R., Kapui, I., Lan, B.T.T., Toth, K., Bitter, I., and Lidner, E., 2001, Direct Evidence of Ionic Fluxes Across Ion-Selective Membranes: A Scanning Electro-Chemical Microscopic and Potentiometric Study, *Anal. Chem.*, 73, 2104-2111.

Heng, L.Y., and Hall, E.A.H., 2000, Producing "Self-Plastizing" Ion Selective Membrans, *Anal. Chem*, 72, 42-51.

UNIVERSITAS GADJAH MADA
SINTESIS ESTER HUMAT DAN APLIKASINYA SEBAGAI IONOFOR PADA ELEKTRODA SELEKTIF ION Fe^3+ BERBASIS MEMBRAN PVC
Dhony Hermanto, Dr. Dwi Siswanta, M.Eng.;Prof. Drs. Mudasir, M.Eng, Ph.D.
Universitas Gadjah Mada, 2009 | Diunduh dari http://etd.repository.ugm.ac.id/

Hilgenfeld, R., and Saenger, W., 1990, *Structure Chemistry of Natural and Synthetic Ionophore and Their Complexes with Cation,* Max-Planck-Institute fur Experimentelle Medizin, Gotingen.

Huheey, J.E., Keiter, E.A., and Keiter, R.L., 1993, *Inorganic Chemistry: Principles of Structure and Reactivity*, Fourth Edition, Harper Collins College Publisher, New York.

Jaber, A.M.Y., 1989, Potentiometric Behaviour of Lanthanum Polyalkoxylate Complexes in PVC Membrane Electrode: Effect of Plasticizers and Application, *Anal. Chim. Acta*, 233, 449-459.

Karpiouk, L.A., Perminova, I.V., Ponomarenko, S.A., Muzafarov, A.M., and Hatfield, K., 2006, Synthesis of Alkoxysilated Humic Derivatives with Different Modification Rate Capable of Self-Adhering to Mineral Surfaces, *Ecletica Quimica*, 521-524.

Kuswandi, B., Nuriman., Verboom, W., and Reinhoudt, D.N., 2006, Tripodial Receptors for Cation And Anion Sensors, *Sensors*, 6, 978-1017.

Kuswandi, B., 2008, *Sensor Kimia: Teori, Praktek, dan Aplikasi*, PS Farmasi Universitas Jember, Jember.

Laksminarayanaiah, N., 1976, *Membrane Electrode*. Academic Press, London.

Mahajan, R.K., Kaur, I., Sharma, V., and Kumar, M., 2002, Sensor of Silver(I) Ion Based on Schiff-Base-p-tert-Butyl-Calix[4]arene, *Sensor*, 2, 417-423.

Maleki, R., Hosseinzadeh, R., Mehrabi, H., Hassanzadeh, A., and Farhadi, K., 2008, 6-Ketomethyl Phenanthridine as New Carrier in the Construction of Highly Selective Fe(III) Ion-Selective Membrane Electrode, *Turk. J. Chem.*, 33, 1-10.

Moody, G.J. and Thomas, J.R.D., 1973, *Selectivity and Sensitivity of Ion Selective Electrodes*, Akademia Kiado, Budapest.

Morf, W.E., and Simon, W., 1981, *Ion Selective Electrode Based on Neutral Carries in Ion Selective Electrode in Analytical Chemistry* (Freiser, H., ed.), vol. 1, Plenum Press, New York.

Morf, W.E., 1981, *The Principles of Ion Selective Electrodes and Membrane*; Mulder, M., 1996, *Basic Principle of Membrane Technology,* Second Edition, Kluwer Academic Publisher, Amsterdam.

Mulder, M., 1996, *Basic Principle of Membrane Technology,* Second Edition, Kluwer Academic Publisher, Amsterdam.

Okada, T., Sugihara, H., and Hiratani, K., 1995, Role of Plasticizers on the Characteristics of Poly(Vinyl Chloride) Membrane Lithium-Selective Electrode Based on Phenantroline Derivative, *Analyst*, 20, 2381-2386.

Perrin, D.D., 1979, *Buffer for pH and Metal Ion Control*, Chapman and Hall, London.

UNIVERSITAS GADJAH MADA
SINTESIS ESTER HUMAT DAN APLIKASINYA SEBAGAI IONOFOR PADA ELEKTRODA SELEKTIF ION Fe^3+ BERBASIS MEMBRAN PVC
Dhony Hermanto, Dr. Dwi Siswanta, M.Eng.;Prof. Drs. Mudasir, M.Eng, Ph.D.
Universitas Gadjah Mada, 2009 | Diunduh dari http://etd.repository.ugm.ac.id/

Plambeck, J.A., 1982, *Electroanalytical Chemistry*, *Basic Principles and Application*, John Wiley & Sons, Inc., New York.

Schaller, U., Bakker, E., and Pretsch, E., 1995, Carrier Mechanism of Acidic Ionophores in Solvent Polymeric Membrane Ion Selective Electrodes, *Anal. Chem*, 67, 3123-3132.

Sears, J.K. and Darby, J.R., 1982, *The Tecnology of Plasticizers*, John Wiley & Sons, Inc., New York.

Selamat, I.N., 1999, *Pemanfaatan Amileugenol sebagai Plasticizer Membrane Polimer Cair Elektrode Selektif Ion*, Tesis, Universitas Gadjah Mada, Yogyakarta.

Shahrokhian, S., Amini, M.K., Kia, R., and Tangestaninejad, 2000, Salicylate-Selective Electrodes Based on Calix[4]arene Methyl Ketonic Derivative, *Anal. Sci*., 17, 889-892.

Shinohara, T., Higuchi, H., Senba, Y., Ohto, K., Yoshizuka, K., and Inoue, K., 2001, Silver Ion Selective Electrode Based on Calix[4]arene Methyl Ketonic Derivative, *Anal. Sci.*, 17, 889-892.

Silverstein, R.M., Bassler, G.C., and Morill, T.C., 1991. *Spectrometric Identification of Organic Compound*, Fifth Edition, John Wiley and Sons, Inc., New York.

Siswanta, D., 1993, *Design and Syntetis of Highly Selective Ammonium Ionophore for an Ion Selective Electrode*, Thesis, Keio University, Yokohama.

Skoog, D.A., 1985, *Principles of Instrumental Analysis*, Third Edition, Saunders Colleges Publishing, Philadelphia.

Skoog, D.A., West, D.M., and Holler, F.J., 1994, *Analytical Chemistry, An Introduction*, Sixth Edition, Saunders Colleges Publishing, Philadelphia.

Skoog, D.A., Hooler, H., and Nieman, N., 2000., *Principles of Instrumental Analysis*, Saunders, New York.

Stevenson, F.J., 1994, *Humus Chemistry: Genesis, Composition, Reaction*, John Wiley and Sons, Inc., New York.

Teixeira, M.F.D.S., Aniceto, C., and Filho, O.F., 1997, Ion-Selective Electrode for the Determination of Iron (III) in Vitamin Formulation, *J. Braz. Chem. Soc.,* 9, 5, 506-510.

Thomas, J.D.R., 1986, Solvent Polymeric Membrane Ion Selective Electrode, *Anal. Chem. Acta*, 180, 289-297.

Tohda, K., Suzuki, K., Kosuge, N., Nagashima, H., Watanabe, K., Inoure, H., and Shirai, T., 1990, A Sodium Ion Selective Electrode Based on a Highly Liphophilic Monensin Derivative and its Application to the Measurement of Sodium Ion Concentration in Serum, *Anal. Sci*, 6, 227-232.

UNIVERSITAS
GADJAH MADA
SINTESIS ESTER HUMAT DAN APLIKASINYA SEBAGAI IONOFOR PADA ELEKTRODA SELEKTIF ION Fe^3+ BERBASIS MEMBRAN PVC
Dhony Hermanto, Dr. Dwi Siswanta, M.Eng.;Prof. Drs. Mudasir, M.Eng, Ph.D.
Universitas Gadjah Mada, 2009 | Diunduh dari http://etd.repository.ugm.ac.id/

Wilson, D.M., Hoyt, S., Janata, J., Booksh, K., and Obando, L., 2001, Chemical Sensors for Portable, Handheld Field Instruments, *IEEE sensors J.*, 1, 4.

Wulfsberg, G., 2000, *Inorganic Chemistry*, University Science Book, Sausalito California.