

- [24] A.E. GREENBERG; L.S. CLESCERI; A.D. EATON (Eds): 4500-P B. Phosphorus. 5. Persulfate digestion method. Standard Methods for the Examination of Water and Wastewater 18th Ed., APHA, AWWA, WEF, Washington, DC. (1992)
- [25] International Organization for Standardization, ISO 10304-2. Water quality - Determination of dissolved anions by liquid chromatography of ions. Genève, 1995.
- [26] A.E. GREENBERG; L.S. CLESCERI; A.D. EATON (Eds): 5210. Biochemical oxygen demand (BOD). Standard Methods for the Examination of Water and Wastewater 18th Ed., APHA, AWWA, WEF. Washington, DC. (1992)
- [27] A.E. GREENBERG; L.S. CLESCERI; A.D. EATON (Eds): 5220 C. Chemical oxygen demand. Closed reflux, titrimetric method. Standard Methods for the Examination of Water and Wastewater 18th Ed., APHA, AWWA, WEF. Washington, DC. (1992)
- [28] O.-P. PENTTINEN; J. KUKKONEN; J. PELLINEN: Preliminary study to compare body residues and sublethal energetic responses in benthic invertebrates exposed to sediment-bound 2,4,5-trichlorophenol. Environ. Toxicol. Chem. 15 (1996) 160-166
- [29] J. PELLINEN; J. KUKKONEN; A. HERB; P. MÄKELÄ; A. OIKARI: Bioaccumulation of pulp mill effluent-related compounds in aquatic animals. Sci. Tot. Environ. Suppl. (1993) 499-510
- [30] C. HANSCH; A. LEO; D. HOEKMAN: Exploring QSAR. Hydrophobic, Electronic, and Steric Constants. ACS Professional Reference Book. American Chemical Society, Washington, DC. (1995)
- [31] C.C. WALDEN; D.J. MCLEAY; A.B. MCKAGUE: Cellulose production processes. In: The Handbook of Environmental Chemistry. Vol. 3, Part D. Anthropogenic compounds. Hutzinger, O.(Ed.). Springer-Verlag, New York (1986) 1-34
- [32] S. SINKKONEN; E. KOLEHMAINEN; J. PAASIVIRTA; J. KOISTINEN; M. LAHTIPERA; R. LAMMI: Identification and level estimation of chlorinated neutral aromatic sulfur compounds and their alkylated derivatives in pulp mill effluents and sediments. Chemosphere 28(12) (1994) 2049-2066
- [33] R.H. Voss: Chlorinated neutral organics in biologically treated bleached kraft mill effluents. Environ. Sci. Technol. 17 (1983) 530-537
- [34] I.Y.A. ROD'KO; B.F. SCOTT; J.H. CAREY: Analysis of pulp mill black liquor for organosulfur compounds using GC/Atomic Emission detection. In: Environmental Fate and Effects of Pulp and Paper Mill Effluents. Servos, M. R.; Munkittrick, K. R.; Carey, J. H.; van der Kraak, G. J. (Eds.), St. Lucie Press, Delray Beach, FL (1996) 195-202
- [35] J. KOISTINEN; T. NEVALAINEN; J. TARHANEN: Identification and level estimation of aromatic coeluates of polychlorinated dibenzo-*p*-dioxins and dibenzofurans in pulp mill products and wastes. Environ. Sci. Technol. 26 (1992) 2499-2507
- [36] P. MIKKELSON; J. PAASIVIRTA; I.H. ROGERS; M. IKONOMOU: Studies on Eulachon tainting problem: analyses of tainting and toxic aromatic pollutants. In: Environmental Fate and Effects of Pulp and Paper Mill Effluents. Servos, M. R.; Munkittrick, K. R.; Carey, J. H.; van der Kraak, G. J. (Eds.), St. Lucie Press, Delray Beach, FL (1996) 327-333
- [37] W.M.G.M. VAN LOON; J.J. BOON; B. DE GROOT: Quantitative determination of macromolecular chlorolignosulfonic acids in water by Pyrolysis-Gas Chromatography/ Mass Spectrometry with Single Ion Monitoring. Anal. Chem. 65 (1993) 1728-1735
- [38] J. PAASIVIRTA; S. SINKKONEN; T. RANTIO; D. CALAMARI; A. Di GUARDO; M. MATTHIES; S. TRAPP: Modelled and observed fate of selected organochlorines in the Nordic environment. In: The Contaminants in the Nordic Ecosystem: Dynamics, Processes & Fate. Munawar M. & Luotola M. (Eds.). SPB Academic Publishing, Amsterdam. (1995) 11-24
- [39] R. DIERCKS; S. BANERJEE: Lipophilicity of a synthetic bleached kraft effluent. Environ. Sci. Technol. 27 (1993) 2427-2429
- [40] M.E. SCHROCK; E.S. BARROWSAND; L.B. ROSMAN: Biota-to-sediment accumulation factors for TCDD and TCDF in worms from 28-day bioaccumulation tests. Chemosphere 34(5-7) (1997) 1333-1339
- [41] F. HAYER; J.C. PIHAN: Accumulation of extractable organic halogens (EOX) by the freshwater mussel, *Anodonta cygnea* L., exposed to chlorine bleached pulp and paper mill effluents. Chemosphere 32(4) (1996) 791-803
- [42] H. LOONEN; M. TONKES; J.R. PARSONS; H.A.J. GOVERS: Bioconcentration of polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans in guppies after aqueous exposure to a complex PCDD/PCDF mixture: relationship with molecular structure. Aquat. Toxicol. 30 (1994) 153-169
- [43] K. MARTINSEN; A.L. KVERNHEIM; G.E. CARLBERG: Distribution of organohalogen in sediments outside pulp mills using sum parameters. Sci. Tot. Environ. 144 (1994) 47-57
- [44] H. KANKAANPÄÄ; J. TISSARI: Analysis for EOX and AOX in two industry influenced coastal areas in the gulf of Finland. Chemosphere 29(2) (1994) 241-255

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Tracking of a Single Defined Discharge of Pulp Bleaching Wastewater****Kimmo P. Suominen, Timo Jaakkola, Eila Elomaa, Risto Hakulinen, Mirja S. Salkinoja-Salonen**

Please note p. 25, Fig. 4, 5a,b,c: The lettering of the y-axis is "depth cm" instead of "depth m".