

Overview of chemical parameters monitored in Lake Stechlin between 1970 and 2020, including information on the measurement periods, instruments used, detection limits and references. Detection limit remarks: * cited from literature, ° given in user manual, # manually determined in the lab, ~ lowest calibration standard, n.d. = not determined

Parameter	Abbreviation	Unit	Period	Instrument	Detection limit
Soluble reactive phosphorus	SRP	mg P L ⁻¹	1970 – 1991 1992 – 12/2005 01/2006 – 10/2009 11/2009 – 2020	Spectrophotometer FIAS [®] Star, Tecator FIACompact, MLE FIAS [®] Star 5000, Foss	0.0002* ¹ 0.002° 0.001~ 0.002#
Total phosphorus	TP	mg P L ⁻¹	1970 – 1991 1992 – 12/2005 01/2006 – 10/2009 11/2009 – 2020	Spectrophotometer FIAS [®] Star, Tecator FIACompact, MLE FIAS [®] Star 5000, Foss	0.0002* ¹ 0.005° 0.005~ 0.003#
Ammonium	NH ₄ ⁺	mg N L ⁻¹	1970 – 1991 1992 – 10/2009 11/2009 – 2020	Flow stream analysis FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	0.1* ² 0.01° 0.003#
Nitrite	NO ₂ ⁻	mg N L ⁻¹	1970 – 1991 1992 – 10/2009 11/2009 – 2020	Flow stream analysis FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	0.01* ³ 0.01° n.d.
Nitrate	NO ₃ ⁻	mg N L ⁻¹	1970 – 1991 1992 – 10/2009 11/2009 – 2020	Flow stream analysis FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	0.01* ³ 0.01° 0.008#
Dissolved silicon	Si	mg SiO ₂ L ⁻¹	1971 – 1991 1992 – 10/2009 11/2009 – 2020	Flow stream analysis FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	0.02* ⁴ 0.1~ 0.001#
Chlorophyll <i>a</i>	chl <i>a</i>	µg L ⁻¹	1980 – 2008 2009 – 2020	Lambda 2, Perkin-Elmer U-2900, Hitachi	n.d. 0.45#
Total alkalinity	Alkalinity	mmol L ⁻¹	1984 – 1990 1991 – 2010 2011 – 2020	Manual titrimeter Titroprocessor 686 Titrand 888	n.d. n.d. n.d.
Calcium carbonate	CaCO ₃	mg L ⁻¹	1988 – 2020	Infralyt 50	0.001#
Total nitrogen	TN	mg N L ⁻¹	1993 – 10/2009 11/2009 – 2020	FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	0.1~ 0.018#
Dissolved calcium	Ca ²⁺	mg L ⁻¹	1993 – 10/2009 11/2009 – 2020	FIAS [®] Star, Tecator FIAS [®] Star 5000, Foss	nd 0.708#
Non-purgeable organic carbon	NPOC	mg L ⁻¹	1994 – 10/2007 11/2007 – 11/2009 12/2009 – 2018 2019 – 2020	TOC-5000/5050 Multi N/C 3100 TOC-VCPH TOC-LCPH	n.d. n.d. 0.297# 0.442#
Dissolved iron (Fe ²⁺ + Fe ³⁺)	Fe	mg L ⁻¹	1996 – 08/2005 09/2005 – 2020	FIAS [®] Star, Tecator FIACompact	0.005~ 0.009#
Total inorganic carbon	TIC	mg L ⁻¹	1996 – 10/2007 11/2007 – 11/2009 12/2009 – 2018 2019 – 2020	TOC-5000/5050 Multi N/C 3100 TOC-VCPH TOC-LCPH	n.d. n.d. 0.106# 0.281#
Dissolved aluminium	Al	mg L ⁻¹	2003 – 2020	FIACompact	0.01#
Dissolved organic carbon	DOC	mg L ⁻¹	2013, 2015	TOC-VCPH	0.297#

¹Mothes, G. Physikalische und chemische Parameter der Wasserbeschaffenheit des Stechlinseegebietes. *Limnologica* **13**, 1-53 (1981).

²Vogler, P. Analysenautomation in Wasserlaboratorien mit flow-stream-Automaten. III. Die kombinierte automatische Bestimmung von Ammonium und Gesamtsalzgehalt in Wässern. *Acta hydrochim. hydrobiol.* **3**, 307-326 (1975).

³Vogler, P. Analysenautomation in Wasserlaboratorien mit flow-stream-Automaten. Teil 6. Die automatische Bestimmung von Nitrit und Nitrat im Wasser. *Acta hydrochim. hydrobiol.* **4**, 227-238 (1976b).

⁴Vogler, P. Analysenautomation in Wasserlaboratorien mit flow-stream-Automaten. II. Die kombinierte automatische Bestimmung von Orthophosphat und Orthosilikat in Wässern. *Acta hydrochim. hydrobiol.* **3**, 145-158 (1975c)