Canadian Data Report of

Fisheries and Aquatic Sciences 336

July 1982

PHYTOPLANKTON PRIMARY PRODUCTION, CHLOROPHYLL, BIOMASS AND SUSPENDED CARBON IN THE EXPERIMENTAL LAKES AREA - 1981 DATA

by

E. R. DeBruyn, J. A. Shearer and D. L. Findlay

Western Region

Department of Fisheries and Oceans

Winnipeg, Manitoba R3T 2N6

This is the 48th Data Report

from the Western Region, Winnipeg

Cat. no. FS 97-13/336 ISSN 0706-6465

Correct citation for this publication is:

DeBruyn, E. R., J. A. Shearer, and D. L. Findlay. 1982. Phytoplankton primary production, chlorophyll, biomass and suspended carbon in the Experimental Lakes Area - 1981 data. Can. Data Rep. Fish. Aquat. Sci. 336: iv + 72 p.

TABLE OF CONTENTS

LIST OF APPENDICES

ABSTRACT

DeBruyn, E. R., J. A. Shearer, and D. L. Findlay. 1982. Phytoplankton primary production, chlorophyll, biomass and suspended carbon in the Experimental Lakes Area - 1981 data. Can. Data Rep. Fish. Aquat. Sci. 336: iv + 72 p.

Incubator measurements of photosynthetic carbon uptake by phytoplankton were conducted for twelve lake basins in the Experimental Lakes Area. Chlorophyll and suspended carbon were also measured for these lake basins. Algal cell counts converted to biomass are given for basins studied. The methodology is briefly described with the resultant data tabulated or graphically presented.

Key words: Primary production; photosynthesis; phytoplankton; experimental data; incubation; biomass; chlorophyll; suspended matter.

RESUME

DeBruyn, E. R., J. A. Shearer, and D. L. Findlay. 1982. Phytoplankton primary production, chlorophyll, biomass and suspended carbon in the Experimental Lakes Area - 1981 data. Can. Data Rep. Fish. Aquat. Sci. 336: iv + 72 p.

On a effectué l'analyse en incubateur du phytoplancton des douze lacs de la Région des Lacs Expérimentaux pour en mesurer l'absorption de carbone photosynthétique. On a également mesuré la teneur en chlorophylle et en carbone en suspension de ces lacs. Le nombre de cellules des algues transformées en biomasse est indiqué pour chacun des lacs analysés. Les résultats apparaissent sous forme de tableaux ou de graphiques suivant une courte description de la méthodologie utilisée.

Mots-clés: photosynthèse; phytoplancton; résultats expérimentaux; incubation; matières en suspension.

INTRODUCTION

Using the incubator technique described in previous reports of this series (DeBruyn and Shearer 1981; DeClercq and Shearer 1976, 1978, 1979 and 1980; DeClercq et al. 1977; Shearer 1976; Shearer and Fee 1974), phytoplankton primary production was routinely measured in twelve lake basins in the Experimental Lakes Area (ELA) in 1981. Phytoplankton biomass, chlorophyll and suspended carbon were also measured.

This report is a continuation and revision of the incubator technique methodology previously described by DeBruyn and Shearer (1981) and DeClercq and Shearer (1980). The 1981 data are presented here in either graphic or tabular form for the following parameters: irradiance versus carbon uptake, biomass, chlorophyll and suspended carbon.

FIELD PROCEDURES

This primary production study was conducted for lake basins 114, 222, 223, 224, 226NE, 226SW, 227, 239, 302N, 302S, 661 and 979 during the ice free season. These basins are located in the Experimental Lakes Area (ELA), northwestern Ontario (see Johnson and Vallentyne 1971).

Lake basins 114 and 223 were still undergoing a controlled program of acidification with H_2SO_4 in 1981 (Schindler, Wagemann et al. 1980). Lake 227 was in its thirteenth year of nutrient addition while basins 226NE and 226SW were in their first full recovery year after eight years of nutrient additions (Schindler 1975; Schindler and Fee 1974). The reinforced plastic "sea curtain" was maintained between the NE and SW basins of Lake 226. Lake 302N was in its third year of recovery following six years of hypolimnetic nutrient additions (Schindler, Ruszczynski and Fee 1980). The "sea curtain" which separated the north and south basin was removed in the spring of 1980 and then replaced by a new "curtain" in the spring of 1981.

With the exception of Lakes 661 and 979, lake basins were sampled in a manner similar to that described by DeClercq and Shearer (1978). An integrating sampler (Shearer 1978) was used to collect 4.5 litres of epilimnion, metalimnion or hypolimnion water from the euphotic zone of each basin at 2 week intervals throughout the field season. Concurrent light attenuation measurements (Shearer and DeBruyn 1982) were used for determining euphotic zone depth and calculation of integral production rates (Fee 1977). Because of their shallow depth, less than 1 meter maximum, the two bog lakes, 661 and 979, were sampled using a dip method. Samples were returned to the laboratory as quickly as possible in insulated containers.

LABORATORY PROCEDURES

With only minor variations, the methodology described by DeBruyn and Shearer (1981) and DeClercq and Shearer (1980) for processing field samples was continued through 1981. Subsamples were retained, prior to incubation, for dissolved inorganic carbon (DIC), chlorophyll and suspended carbon analyses. Subsamples preserved with Lugol's solution were taken for algal cell counts, species identification and biomass calculations (Findlay and Saesura 1980).

A gas stripping technique, using an infrared gas analyser (Lira model 202) coupled to a variable span strip chart recorder, was used to determine DIC concentrations throughout the entire sampling season.

Using a repeating injection system, 0.80 mL of 12 μCi mL^{-1} $Na_2{}^{14}CO_3$ stock solution was injected into each 125 mL bottle to be incubated. Because of the variable nature of the stock "label" solution, the radioactivity was standardized each day by direct measurement as described by DeClercq and Shearer (1980).

The acidification and bubbling method (Schindler et al. 1972) was changed from bubbling incubated sample aliquots in ALLIHN tubes to bubbling in aliquots within the scintillation vials enclosed in a specially designed vacuum chamber (Wessels and Birnbaum 1979). After acidification and bubbling, PCS (Amersham/Searle) scintillation cocktail was added to each vial and all vials counted for radioactivity with a Beckman LS8000 counter.

Scalar quantum irradiance in each of the four incubation chambers was measured with either a LI-COR, model LI-193S spherical sensor or a Biospherical Instruments QSL 100 or QSL 200 spherical sensor. Light values reported through mid-June in this report are those obtained with the LI-COR sensor. Subsequent light values were obtained with the QSL sensors.

PRESENTATION OF DATA

Appendix 1 of this report contains the physical, chemical and biological parameters collected in this study.

Appendix 2 of this report graphically presents production versus irradiance data obtained from the incubator experiments.

ACKNOWLEDGMENTS

We wish to express our appreciation to G. Linsey, S. Prychitko, A. Turner and B. Hauser for their assistance in processing the DIC, suspended carbon and chlorophyll samples. A special note of appreciation to S. A. Meron for her assistance in processing incubator samples and data from May through August.

REFERENCES

DEBRUYN, E. R., and J. A. SHEARER. 1981. Phytoplankton primary production, chlorophyll and suspended carbon in the Experi-

mental Lakes Area - 1980 data. Can. Data Rep. Fish. Aquat. Sci. 260: iv + 52 p.

DECLERCQ, D. R., and J. A. SHEARER. 1976. Phytoplankton primary production in the Experimental Lakes Area using an incubator technique - 1975 data. Can. Fish. Mar. Serv. Tech. Rep. 647: 127 p.

DECLERCQ, D. R., and J. A. SHEARER. 1978. Phytoplankton primary production, chlorophyll and suspended carbon in the Experimental Lakes Area - 1977 data. Can. Fish. Mar. Serv. Data Rep. 74: iv + 62 p.

DECLERCQ, D. R., and J. A. SHEARER. 1979. Phytoplankton primary production, chlorophyll and suspended carbon in the Experimental Lakes Area - 1978 data. Can. Fish. Mar. Serv. Data Rep. 137: iv + 69 p.

DECLERCQ, D. R., and J. A. SHEARER. 1980. Phytoplankton primary production, chlorophyll and suspended carbon in the Experimental Lakes Area - 1979 data. Can. Fish. Mar. Serv. Data Rep. 200: iv + 46 p.

DECLERCQ, D. R., J. A. SHEARER, S. L. SCHIFF, and E. J. FEE. 1977. Primary production, respiration, chlorophyll and suspended carbon in the Experimental Lakes Area - 1976 data. Can. Fish. Mar. Serv. Data Rep. 32: v + 94 p.

FEE, E. J. 1977. A computer program for estimating annual primary production in vertically stratified waterbodies with an incubator technique. Can. Fish. Mar. Serv. Tech. Rep. 741: v + 38 p.

FINDLAY, D. L., and G. SAESURA. 1980. Effects on phytoplankton biomass, succession and composition in Lake 223 as a result of lowering pH levels from 7.0 to 5.6. Data from 1974 to 1979. Can. MS Rep. Fish. Aquat. Sci. 1585: iv + 16 p.

JOHNSON, W. E., and J. R. VALLENTYNE. 1971. Rationale, background, and development of experimental lake studies in northwestern Ontario. J. Fish. Res. Board Can. 28: 123-128.

SCHINDLER, D. W. 1975. Whole-lake eutrophication experiments with phosphorus, nitrogen and carbon. Int. Ver. Theor. Angew. Limnol. Verh. 19: 3221-3231.

SCHINDLER, D. W., and E. J. FEE. 1974. Experimental Lakes Area: whole-lake experiments in eutrophication. J. Fish. Res. Board Can. 31: 937-953.

SCHINDLER, D.W., T. RUSZCZYNSKI, and E. J. FEE. 1980. Hypolimnion injection of nutrient effluents as a method for reducing eutrophication. Can. J. Fish. Aquat. Sci. 37: 320-327.

SCHINDLER, D. W., R. V. SCHMIDT, and R. A. REID. 1972. Acidification and bubbling as an alternative to filtration in determining phytoplankton production by the ^{14}C method. J. Fish. Res. Board Can. 29: 1627-1631.

SCHINDLER, D. W., R. WAGEMANN, R. B. COOK, T. RUSZCZYNSKI, and J. PROKOPOWICH. 1980. Experimental acidification of Lake 223, Experimental Lakes Area: background data and the first three years of acidification. Can. J. Fish. Aquat. Sci. 37: 342-354.

SHEARER, J. A. 1976. Phytoplankton primary production in the Experimental Lakes Area using an incubator technique - 1974 data. Can. Fish. Mar. Serv. Tech. Rep. 616: 142 p.

SHEARER, J. A. 1978. Two devices for obtaining water samples integrated over depth. Can. Fish. Mar. Serv. Tech. Rep. 772: iv + 9 p.

SHEARER, J. A., and E. R. DEBRUYN. 1982. Light attenuation in the Experimental Lakes Area. 1981 data. Can. Data Rep. Fish. Aquat. Sci. 337: iv + 51 p.

SHEARER, J. A., and E. J. FEE. 1974. Phytoplankton primary production in the Experimental Lakes Area using an incubator technique - 1973 data. Can. Fish. Mar. Serv. Tech. Rep. 474: 110 p.

WESSELS, C., and E. BIRNBAUM. 1979. An improved apparatus for use with the ^{14}C acid-bubbling method of measuring primary production. Limnol. Oceanogr. 24(1): 187-188.

APPENDIX 1

Data relevant to each sampling time are listed chronologically according to lake basin.

Depths are reported in meters.

The date stated is that of sample collection and incubation. The time of actual field collection is reported as Central Daylight time from 26 April through 24 October after which it is Central Standard time.

Temperature, in degrees Centigrade, is the temperature at which the incubation was carried out. Dissolved inorganic carbon (DIC) analysis was done on pre-incubated water samples. Reported units are micromoles litre^{-1}. Values for suspended carbon and chlorophyll are in micrograms litre^{-1}.

I1 through I4 are incubator irradiances in microeinsteins meter^{-2} sec^{-1}.

P1 through P4 are rates of inorganic carbon uptake at the four separate incubator irradiances in units of milligrams carbon meter^{-3} hour^{-1}. The two values given at each irradiance are those of replicate samples. The coefficient of variation (C.V.) for replicates is given.

Live biomass is calculated from algal cell counts and approximated cell volumes of the species encountered in the sample. Values are reported in grams meter^{-3}.

NOTES:

* Production values are unusually erratic or differ from expected results and should be considered only with caution.

** Missing values are denoted with -10.00. The sample may have been lost during the incubation process.

LAKE 114

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS	
21 APR	0.0- 3.0	1145	5.0	132	680	1.0	11	.57 .40	39	2.07 1.73	153	4.00 4.07	775	5.25 5.36	9.94	1.67	
4 MAY	0.0- 4.0	1005	10.0	99	570	3.1	12	.26 .28	39	1.95 1.87	148	8.72 6.03	746	9.53 9.30	8.99	3.46	
18 MAY	0.0- 4.0	1010	12.0	87	470	3.0	16	.40 .42	56	2.93 2.84	202	8.60 9.10	1005	10.86 12.95	5.14	1.85	
1 JUN	0.0- .5	1040	15.0	78	1180	3.2	13	.11 .10	49	1.01 .87	176	2.37 2.14	910	2.45 2.89	9.12	2.49	
15 JUN	0.0- 4.0	1020	17.5	55	1210	5.3	14	.67 .78	52	5.49 5.80	200	17.64 17.81	980	22.63 21.96	4.48	2.40	
29 JUN	0.0- 4.0	1115	18.5	68	240	8.1	14	2.07 2.19	46	10.71 11.71	174	34.68 34.86	748	44.00 47.97	4.18	5.25	
13 JUL	0.0- 4.0	1045	24.0	58	1730	5.0	17	1.04 1.06	55	6.47 6.14	209	25.13 25.97	844	31.55 32.11	2.12	1.02	
27 JUL	0.0- .5	0935	21.0	40	1490	5.4	12	.48 .54	41	4.44 3.75	157	18.76 21.54	839	34.23 31.84	8.79	5.62	
10 AUG	0.0- 4.0	0945	21.0	38	2230	8.6	14	.87 .98	42	10.20 10.31	169	42.33 45.56	678	62.76 61.01	4.14	14.23	
24 AUG	0.0- 4.0	0945	21.5	25	2510	7.0	15	.97 .99	52	7.54 7.30	175	34.61 32.73	976	44.28 44.94	2.07	22.49	
31 AUG	0.0- 4.0	0900	21.5	34	490	12.8	13	1.30 1.20	45	4.86 4.81	139	22.06 22.01	854	29.58 33.05	3.52	13.62	
1 SEP	0.0- 4.0	1315	15.0	25	500	1.5	11	.21 .22	38	3.15 3.42	140	17.22 19.38	565	27.80 25.20	5.69	9.56	
3 SEP	0.0- 4.0	0915	19.0	30	1950	4.0	12	.27 .30	40	2.62 2.62	156	17.12 14.01	805	23.33 23.82	5.88	-10.00	**
8 SEP	0.0- 4.0	0945	18.0	41	1800	5.2	12	.55 .41	39	3.70 4.00	146	16.14 17.97	757	26.63 25.11	9.20	13.73	
21 SEP	0.0- 4.0	0850	14.0	44	1090	6.4	11	.28 .26	36	1.94 1.84	146	9.23 9.49	797	12.54 14.55	5.69	6.83	
5 OCT	0.0- 4.0	0845	10.0	43	800	3.3	9	.24 .29	30	1.61 1.64	125	6.70 6.74	639	9.15 9.76	4.78	2.69	
14 OCT	0.0- 4.0	0850	10.0	40	1180	3.3	9	.37 .38	31	-10.00 1.97	132	7.17 6.97	742	9.63 9.66	1.36	1.98	**

LAKE 222

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
22 APR	0.0- 4.0	1115	6.0	335	340	1.3	10	2.47	38	.40	134	2.17	719	3.60		
								.10		.76		4.68		2.67	61.87	.44 *
11 MAY	0.0- 2.0	0855	10.5	258	360	1.7	12	.08	38	.71	149	3.31	745	4.11		
								.11		.64		3.48		4.40	10.08	.68
12 MAY	2.0- 4.5	0930	8.5	31	450	3.1	9	.01	31	.11	116	.47	590	.41		
								.02		.15		.43		.41	17.46	.53
25 MAY	0.0- 2.5	0905	14.0	244	350	2.4	14	.43	47	2.64	181	7.12	900	6.40		
								.46		2.60		5.81		6.19	5.95	1.07
26 MAY	2.5- 4.8	0945	10.5	360	440	3.2	13	.52	42	3.58	154	8.17	747	8.36		
								.59		3.21		7.90		8.61	5.30	1.14
22 JUN	0.0- 2.5	0955	17.0	236	440	3.5	15	.36	51	2.28	198	6.19	974	6.42		
								.62		1.89		5.73		7.45	16.71	1.08
23 JUN	2.5- 4.5	0920	13.0	390	350	2.4	8	.26	27	1.31	101	6.22	540	4.65		
								.30		1.46		4.50		5.04	11.64	.65
6 JUL	0.0- 2.5	0720	22.0	211	640	3.0	15	.26	52	1.70	189	6.80	1000	11.90		
								.31		2.11		7.23		11.21	8.64	.82
8 JUL	2.5- 5.0	0930	15.5	440	770	4.8	6	.35	21	.86	83	5.05	448	8.10		
								-.64		.53		5.24		7.96		.63
3 AUG	0.0- 2.0	0940	21.5	223	530	4.4	12	.48	42	2.51	153	9.63	757	11.70		
								.31		2.37		7.96		12.30	12.90	2.03
4 AUG	2.0- 4.3	0950	17.0	406	720	5.8	9	1.80	30	5.32	108	14.22	591	17.17		
								1.77		5.08		18.65		17.20	5.85	2.13
31 AUG	0.0- 2.5	0940	21.5	224	650	2.7	13	.25	45	1.70	139	5.59	854	5.62		
								.29		1.56		5.67		8.53	11.89	1.02
1 SEP	2.5- 4.8	0910	15.0	371	860	7.9	11	.61	38	2.90	140	7.35	565	8.78		
								1.17		3.14		7.86		11.16	17.94	.90
28 SEP	0.0- 3.8	0945	14.0	281	550	2.3	10	.61	35	2.89	138	9.93	789	14.16		
								.56		2.61		11.37		13.31	6.74	1.11

LAKE 223

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS	Day	CHL	BIO
12 APR	0.0-12.0	1040	6.0	76	400	2.7	10	.63 .63	38	2.71 2.87	134	6.14 5.24	746	6.62 7.04	5.03	1.36	112	2.7	1.36
11 MAY	0.0- 5.0	0820	10.5	39	590	2.0	12	.26 .24	38	1.55 1.63	149	4.76 4.33	745	5.14 4.86	4.97	.77			
12 MAY	5.0- 7.0	0835	8.5	30	500	3.2	9	.46 .46	31	1.98 2.17	116	4.75 4.50	590	5.10 5.08	2.68	.94	132	3.94	0.97
13 MAY	7.0-13.0	0820	6.5	65	1220	5.8	7	.50 .58	23	2.49 2.60	88	6.86 6.71	441	7.58 7.28	4.41	1.15			
25 MAY	0.0- 4.5	0815	14.0	45	250	1.1	14	.24 .26	47	1.37 1.46	181	4.25 4.64	900	4.34 4.69	5.24	.75			
26 MAY	4.5- 8.5	0845	10.5	29	480	3.4	13	.78 .86	42	2.99 3.45	154	6.28 6.94	747	6.24 6.44	6.51	.77	146	6.13	
27 MAY	8.5-13.0	0830	8.5	73	1630	13.6	10	1.26 1.29	33	4.97 5.28	124	10.63 10.45	596	10.28 10.53	2.19	1.63		1.06	
8 JUN	0.0- 4.5	0855	18.0	52	340	1.1	15	.09 .10	52	1.02 .90	200	5.71 5.32	1029	8.30 8.71	6.12	1.27			
9 JUN	4.5- 9.0	0810	13.0	41	550	2.5	12	.34 .30	39	1.99 1.96	152	5.16 5.54	810	6.06 6.23	4.27	.73	160	7.95	
10 JUN	9.0-13.0	0820	7.5	133	1400	21.8	11	1.40 1.61	32	6.27 6.33	122	11.58 14.19	630	14.71 12.92	8.51	1.94		1.29	
22 JUN	0.0- 6.5	0855	17.0	30	300	1.7	15	.20 .17	51	1.37 1.41	198	4.36 4.43	974	6.51 6.18	4.31	1.11			
23 JUN	6.5- 9.0	0835	13.0	50	390	1.8	8	.27 .22	27	1.62 1.70	101	5.61 5.57	540	7.59 7.89	5.06	.78	174	7.57	
24 JUN	9.0-12.0	0835	8.5	153	1750	25.1	6	1.67 1.47	22	8.62 9.08	87	25.14 26.77	490	27.57 29.81	5.69	3.98		1.76	
6 JUL	0.0- 5.5	0620	22.0	46	360	1.6	15	.37 .11	52	1.03 1.04	189	4.96 4.78	1000	6.89 7.54	21.65	1.97			
8 JUL	5.5- 9.0	0840	15.5	28	450	2.2	6	-.04 .02	21	.27 .28	83	1.97 2.06	448	3.56 3.73	2.98	1.06	189	8.80	
9 JUL	9.0-12.0	0850	10.0	181	1770	29.7	6	1.60 1.15	20	10.19 8.96	75	28.76 26.13	398	32.88 33.39	9.96	3.26		2.03	
20 JUL	0.0- 4.5	0850	23.0	34	320	1.3	12	.06 .10	41	.65 .58	161	3.79 4.30	849	7.70 7.47	12.18	2.23			
21 JUL	4.5- 9.0	0835	15.0	52	390	1.9	9	.16 .15	31	.97 .97	110	4.40 4.08	686	4.19 4.15	3.29	.92	202	6.33	
22 JUL	9.0-11.0	0825	10.5	160	990	27.6	6	1.69 1.68	22	8.35 8.77	81	26.05 29.72	420	18.51 19.51	4.29	3.03		1.84	
3 AUG	0.0- 6.0	0840	21.5	30	350	2.3	12	.28 .29	42	1.85 1.72	153	8.68 7.34	757	9.87 10.67	6.17	2.11	215	2.79	
4 AUG	6.0-10.8	0830	17.0	112	670	3.4	9	.40 .45	30	2.03 2.17	108	8.55 9.01	591	11.62 11.12	4.68	1.26		1.73	
17 AUG	0.0- 6.8	0830	20.0	15	580	2.2	14	.17 .24	42	1.14 1.13	158	4.87 4.85	744	5.90 5.03	8.67	2.39	229	6.74	
18 AUG	6.8-11.3	0810	15.0	217	890	13.6	9	.89 .75	26	4.97 4.92	111	14.02 14.71	414	20.00 14.78	9.41	1.87		2.18	
31 AUG	0.0- 6.8	0835	21.5	16	-10	2.6	13	.27 .42	45	1.62 1.55	139	7.55 7.20	854	10.01 7.44	14.84	2.25	**		
1 SEP	6.8-11.0	0830	15.0	225	750	6.4	11	.99 1.04	38	4.05 4.63	140	14.13 10.38	565	9.80 10.79	10.27	1.58	243	4.05	1.99

LAKE 223

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
14 SEP	0.0- 8.0	0840	18.0	15	680	3.7	9	.24	36	1.80	144	7.04	805	9.56		
								.23		1.75		6.92		8.57	3.25	1.26
15 SEP	8.0-10.8	0830	13.0	250	840	8.6	6	.63	22	2.32	77	7.97	432	9.58		
								.43		2.61		6.64		9.03	13.18	1.67
28 SEP	0.0-11.0	0900	14.0	47	530	1.0	10	.78	35	3.15	138	8.72	789	9.39		
								.75		3.19		8.21		9.93	3.12	2.78
12 OCT	0.0-10.0	0940	10.0	47	600	4.8	10	.83	26	3.53	107	9.85	525	12.64		
								.81		3.58		10.29		12.93	1.79	1.06
26 OCT	0.0-10.0	0930	6.0	29	840	5.9	9	1.20	32	4.58	126	7.24	583	9.84		
								1.24		4.42		8.19		9.55	3.96	1.38

LAKE 224

	DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS	
5	22 APR	0.0-20.0	1055	6.0	140	420	1.7	10 12.5	.26 .27	38 43	1.05 1.12	134 160	2.32 2.25	719 816	2.84 2.57	3.92	.96	85%
30	11 MAY	0.0- 6.5	0935	10.5	106	450	1.2	12 12.5	.03 .01	38 43	.40 .38	149 160	1.76 1.63	745 816	2.26 2.18	17.85	1.37	85%
30	12 MAY	5.5- 8.5	0950	8.5	115	420	1.6	9 9.5	.03 .03	31 31	.35 .34	116 120	1.77 1.69	590 612	1.88 1.70	3.80	1.16	77%
30	13 MAY	8.5-19.0	1040	6.5	130	660	3.0	7 7.5	.29 .25	23 23	1.29 1.18	88 86	2.91 3.24	441 437	3.25 2.82	9.13	1.13	70%
0	25 MAY	0.0- 5.0	0840	14.0	109	410	1.6	14 12.5	.09 .04	47 43	.93 .90	181 160	3.27 3.36	900 810	2.95 2.04	19.65	2.18	85%
0	26 MAY	5.0- 9.0	0915	10.5	117	560	1.9	13 11.5	.09 .09	42 39	.57 .53	154 145	1.38 1.55	747 738	.84 1.42	12.67	1.89	82%
0	27 MAY	9.0-19.0	0905	8.5	37	650	3.3	10 8.8	.09 .07	33 30	.46 .44	124 110	.92 .99	596 563	1.11 1.06	6.53	1.09	75%
30	8 JUN	0.0- 4.5	0920	18.0	110	480	.7	15 14	.03 -.04	52 50	.41 .37	200 184	1.98 2.15	1029 939	3.27 3.03		1.23	90%
5	9 JUN	4.5- 9.0	0830	13.0	118	400	1.0	12 12	-.06 -.03	39 40	.14 .33	152 150	1.50 1.32	810 763	1.13 1.53	29.49	1.31	83%
0	10 JUN	9.0-19.0	0840	7.5	155	540	3.2	11 10	.33 .35	32 32	1.57 1.69	122 120	2.76 3.23	630 663	3.24 2.86	7.54	1.56	77%
7	22 JUN	0.0- 6.5	0930	17.0	94	290	.5	15 15	.03 .46	51 52	.22 .62	198 194	1.56 .96	974 989	1.02 1.23	59.84	.75	92%
7	23 JUN	6.5-10.0	0900	13.0	96	440	1.0	8 8.8	.09 -.04	27 30	.18 .19	101 110	1.37 .77	540 563	1.24 1.15	93.85	.95	75%
7	24 JUN	10.0-19.0	0900	8.5	158	660	3.0	6 7.5	.11 .12	22 23	.96 .93	87 86	2.70 3.03	490 437	3.16 2.96	4.65	1.42	70%
	6 JUL	0.0- 4.5	0655	22.0	92	420	.5	15 14	.04 .02	52 50	.35 .42	189 184	1.73 1.58	1000 939	2.48 2.46	18.23	.72	90%
	8 JUL	4.5-10.0	0910	15.5	82	600	1.1	6 7.5	-.10 -.14	21 23	-.03 .15	83 86	4.26 1.09	448 437	2.36 1.72	52.88	.82	*70%
	9 JUL	10.0-19.0	0915	10.0	156	670	3.6	6	.12 .22	20	1.16 1.18	75	3.87 4.28	398	5.29 5.21	12.81	1.59	65%
	20 JUL	0.0- 5.0	0915	23.0	96	240	.5	12 12.5	.02 .03	41 43	.26 .27	161 160	1.36 1.61	849 810	2.06 2.39	8.30	.56	85%
	21 JUL	5.0-11.0	0910	16.0	90	330	1.1	9 8.8	.05 .05	31 30	.42 .46	110 110	1.70 1.81	686 563	2.21 2.29	4.51	.50	75%
	22 JUL	11.0-19.0	0845	10.5	211	210	.8	6 7.5	.28 .27	22 23	1.91 1.97	81 86	6.71 6.48	420 437	5.95 5.69	2.46	.66	76%
	3 AUG	0.0- 7.0	0910	21.5	100	210	.8	12 12.5	.01 -.01	42 45	.39 .41	153 160	1.88 1.88	757 810	3.14 3.22		.66	85%
	4 AUG	7.0-12.0	0910	17.0	102	630	1.0	9 8	.06 .04	30 26	.55 .49	108 96	2.76 2.61	591 487	4.07 3.52	11.61	.61	72%
	5 AUG	12.0-19.0	0825	12.0	180	690	3.3	7 7.5	.25 .18	30 23	1.74 1.88	115 86	5.63 5.45	638 437	5.86 5.81	8.32	1.13	76%
	17 AUG	0.0- 7.5	0855	20.0	93	480	.7	13 12.5	.04 -10.00	42 43	-10.00 .30	158 166	1.69 1.77	744 810	1.43 2.38	19.44	.63	**85%
	18 AUG	7.5-12.5	0830	15.0	97	630	1.4	9 8.5	-.02 -.04	26 27	.59 .68	111 101	2.64 2.53	414 512	3.90 3.89	4.10	.66	73%
	19 AUG	12.5-19.5	0810	8.5	218	850	4.1	6	.44 .62	24	2.06 2.25	92	4.95 4.57	457	4.69 4.68	9.10	1.15	68%
	31 AUG	0.0- 7.5	0905	21.5	93	390	.8	13 12.5	.06 .10	45 43	.45 .88	139 160	1.46 1.51	854 810	2.39 2.33	20.85	.57	85%

LAKE 224

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS	
1 SEP	7.5-12.5	0850	15.0	89	670	6.7	11	.19	38	.94	140	3.16	565	4.88			
							9	.19	29	.92	110	3.11	563	3.65	6.16	.59	75%
2 SEP	12.5-19.5	0815	10.0	203	810	3.6	5	.26	20	2.06	74	6.34	486	6.54			
							7.5	1.15	23	2.24	86	6.49	437	7.63	27.02	1.02	70%
14 SEP	0.0- 9.5	0910	18.0	77	360	1.1	9	.00	36	.32	149	1.66	805	2.43			
							12.5	.03	43	.25	160	1.52	810	2.24	35.38	1.15	85%
15 SEP	9.5-14.0	0900	13.0	102	580	3.1	6	.08	22	.63	77	2.14	432	2.57			
							8	.11	26	.67	96	2.23	487	3.17	10.52	.79	72%
16 SEP	14.0-19.0	0835	8.0	244	620	4.7	6	.78	21	3.08	71	6.57	359	7.03			
								.97		2.85		6.82		6.03	8.60	1.28	68%
28 SEP	0.0-11.8	0925	14.0	87	390	3.6	10	.11	35	.49	138	1.87	789	2.32			
							11	.11	36	.52	135	1.76	688	2.22	3.65	.66	80%
29 SEP	11.8-14.0	0820	10.5	116	480	2.3	6	.14	22	.89	86	2.77	468	3.10			
							7.5	.14	23	1.12	86	2.77	437	3.31	5.51	.67	76%
30 SEP	14.0-19.0	0845	8.0	262	670	3.7	5	.53	17	2.38	72	5.04	382	5.07			
								.52		2.06		4.76		4.98	4.16	1.00	68%
12 OCT	0.0-14.0	1015	10.0	103	340	1.4	10	.07	26	.80	107	1.58	525	1.99			
							11	.05	36	.52	135	1.47	688	1.79	17.02	.48	80%
26 OCT	0.0-19.0	1000	6.0	126	420	1.9	9	.14	32	.74	126	2.31	583	1.99			
							9	.23	29	.79	110	1.81	563	1.99	13.79	.50	75%

LAKE 226 NE

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
22 APR	0.0- 9.0	0930	6.0	314	880	4.2	10	.44 .69	38	3.25 1.96	134	5.52 6.50	719	6.30 6.12	20.07	1.76
11 MAY	0.0- 3.0	1045	10.5	184	770	1.6	12	.04 .11	38	2.13 2.25	149	7.73 5.93	745	6.88 6.74	21.88	2.10
12 MAY	3.0- 5.5	1010	8.5	234	860	5.2	9	.48 .16	31	2.61 2.56	116	7.77 7.72	590	10.25 7.91	22.65	1.97
13 MAY	5.5- 9.0	0945	6.5	304	1290	3.0	7	.96 .79	23	3.83 3.10	88	10.71 8.43	441	8.83 9.08	11.87	3.10
25 MAY	0.0- 3.5	1030	14.0	196	590	3.3	14	.35 .33	47	3.51 3.07	181	11.00 11.30	900	12.01 7.61	11.71	1.92
26 MAY	3.5- 6.5	1115	10.5	223	1030	16.3	13	2.42 1.65	42	8.91 8.00	154	20.34 20.51	747	17.69 20.26	11.18	6.09
27 MAY	6.5- 8.5	1050	8.5	43	1240	16.6	10	.24 -10.00	33	.90 -10.00	124	1.64 1.46	596	1.72 1.67	5.33	4.12 **
8 JUN	0.0- 2.5	1030	18.0	178	850	2.7	15	-.03 .04	52	1.27 1.43	200	6.43 6.32	1029	9.04 9.13	3.55	1.40
9 JUN	5.2- 7.0	0925	13.0	223	1040	13.4	12	1.45 1.67	39	5.93 5.16	152	13.72 13.52	810	15.06 15.12	5.24	5.74
10 JUN	7.0- 8.0	0940	7.5	405	1320	15.1	11	1.43 1.51	32	6.01 6.96	122	8.91 9.20	630	8.62 8.51	4.32	3.92
22 JUN	0.0- 3.8	1120	17.0	185	480	1.9	15	.01 .00	51	.91 .93	198	4.43 3.93	974	5.58 4.77	24.86	1.09
23 JUN	3.8- 7.0	1025	13.0	188	660	4.4	8	.26 .26	27	1.81 1.88	101	5.53 4.79	540	6.13 6.35	3.76	1.68
24 JUN	7.0- 8.0	1000	8.5	425	1700	28.1	6	3.07 2.00	22	8.15 8.54	87	24.85 24.02	490	22.85 25.46	10.83	9.97
6 JUL	0.0- 2.5	0840	22.0	172	560	1.8	15	-.36 -10.00	52	.71 .74	189	4.85 4.76	1000	8.60 9.65	3.99	1.14 **
8 JUL	2.5- 8.0	1108	15.5	268	780	7.8	6	.44 .35	21	3.55 3.41	83	11.78 12.13	448	13.94 14.09	5.18	2.50
20 JUL	0.0- 3.3	1025	23.0	173	460	3.0	12	.12 .15	41	2.01 1.70	161	8.99 -10.00	849	12.15 15.68	14.22	2.49 **
21 JUL	3.3- 8.0	1030	16.0	291	680	5.7	9	.13 .40	31	2.91 3.50	110	10.75 9.50	686	9.79 11.34	25.59	1.42
3 AUG	0.0- 4.0	1110	21.5	178	680	2.5	12	.18 .22	42	1.90 2.00	153	8.13 7.64	757	10.56 11.36	6.45	2.01
4 AUG	4.0- 8.0	1115	17.5	376	850	4.6	9	.41 -.69	30	2.56 2.89	108	10.68 7.89	591	10.93 9.84	18.36	.98
17 AUG	0.0- 4.3	1020	20.0	177	1010	3.5	13	.23 .20	42	1.97 -10.00	158	7.73 8.39	744	12.00 12.13	5.32	2.23 **
18 AUG	4.3- 8.3	0930	15.0	385	740	8.2	9	1.21 1.17	26	4.55 4.78	111	12.68 15.91	414	16.04 17.09	6.59	1.14
31 AUG	0.0- 4.0	1125	21.5	170	650	3.2	13	-.02 -.40	45	.92 .80	139	5.00 4.81	854	7.33 7.91	6.03	2.02
1 SEP	4.0- 8.0	1020	15.0	359	2200	4.3	11	1.75 1.04	38	4.56 4.04	140	12.93 12.84	565	12.84 14.52	13.48	1.52
14 SEP	0.0- 5.3	1035	18.0	166	640	5.8	9	.24 .92	36	2.06 1.88	144	9.05 8.47	805	11.84 11.53	24.15	2.89
15 SEP	5.3- 8.0	1010	13.0	392	1850	21.8	6	.95 1.09	22	4.41 4.07	77	10.75 9.42	432	11.03 10.96	6.30	2.38 *
28 SEP	0.0- 7.0	1115	14.0	203	730	1.7	10	.82 .62	35	2.96 -10.00	138	9.95 -10.00	789	13.13 -10.00	19.36	1.84 **

LAKE 226 NE

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
29 SEP	7.0- 8.0	0925	10.5	252	490	5.6	6	.77	22	2.24	86	5.85	468	6.12		
								.66		2.27		6.53		9.46	12.41	1.84
12 OCT	0.0- 8.0	1130	10.0	217	650	5.4	10	.64	26	2.80	107	9.21	525	13.90		
								.77		2.92		8.83		14.17	5.09	1.46
27 OCT	0.0- 8.0	1140	5.0	255	690	6.7	10	.92	28	4.85	133	11.91	739	11.37		
								.64		3.01		8.77		10.51	21.33	2.16

LAKE 226 SW

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
22 APR	0.0- 8.0	0915	6.0	318	720	2.7	10	.89 .56	38	1.79 1.56	134	4.18 3.82	719	4.53 4.64	12.61	.87
11 MAY	0.0- 3.0	1030	10.5	203	740	1.2	12	.11 .09	38	1.20 1.21	149	4.36 3.92	745	5.30 4.74	6.66	1.76
12 MAY	3.0- 5.5	1045	8.5	231	830	4.3	9	.34 .33	31	2.01 1.90	116	5.19 5.09	590	5.64 6.14	3.39	1.83
13 MAY	5.5- 8.5	1050	6.5	295	1130	10.4	7	.84 .61	23	2.72 3.44	88	6.55 7.29	441	7.33 7.74	12.64	1.79
25 MAY	0.0- 3.5	1020	14.0	199	640	3.7	14	.34 .21	47	2.77 3.39	181	5.62 9.35	900	9.90 5.09	32.43	2.00
26 MAY	3.5- 6.5	1110	10.5	244	1030	16.1	13	1.76 1.68	42	7.68 7.09	154	-10.00 13.32	747	15.27 14.44	4.31	2.31
27 MAY	6.5- 8.5	1035	8.5	48	1100	7.2	10	.22 .24	33	.74 .80	124	1.42 1.46	596	1.45 1.44	3.09	1.79
8 JUN	0.0- 2.5	1015	18.0	177	640	3.0	15	.28 .22	52	1.49 1.47	200	6.43 6.72	1029	8.43 7.70	6.72	1.32
9 JUN	2.5- 6.5	0915	13.0	195	880	6.2	12	.92 .88	39	8.92 1.63	152	4.45 8.79	810	9.18 8.70	37.74	4.50 *
10 JUN	6.5- 8.5	0930	7.5	322	1310	24.7	11	2.95 2.43	32	9.00 8.50	122	17.92 16.17	630	15.46 15.61	6.37	6.30
22 JUN	0.0- 4.0	1105	17.0	182	460	2.3	15	.01 .07	51	1.20 1.01	198	4.03 4.22	974	5.05 5.78	35.93	1.17
23 JUN	3.8- 7.0	1020	13.0	212	860	5.1	8	.56 .53	27	2.75 2.77	101	6.68 6.55	540	7.34 7.77	2.40	3.31
24 JUN	7.0- 8.5	0950	8.5	425	1400	20.1	6	1.50 1.36	22	6.52 6.21	87	13.96 13.73	490	14.79 15.10	3.23	5.30
6 JUL	0.0- 2.5	0830	22.0	176	580	1.8	15	.16 .13	52	1.10 1.23	189	4.38 4.42	1000	8.17 7.12	8.21	1.05
8 JUL	2.5- 8.0	1100	15.5	233	810	6.0	6	.38 .43	21	2.68 4.23	83	10.29 10.01	448	12.45 12.90	11.27	3.24
20 JUL	0.0- 3.3	1010	23.0	161	500	2.2	12	.65 -.08	41	.79 .89	161	5.08 5.15	849	7.85 7.89	47.33	.81
21 JUL	3.3- 7.5	1015	16.0	217	940	7.5	9	1.24 1.39	31	5.50 5.65	110	13.46 14.55	686	11.36 13.34	6.79	1.52
3 AUG	0.0- 3.5	1055	21.5	194	550	2.3	12	.06 .10	42	1.30 -10.00	153	6.67 6.73	757	8.04 8.78	14.87	1.19 **
4 AUG	3.5- 7.5	1105	17.0	248	1120	7.4	9	.90 1.79	30	4.51 4.62	108	13.38 12.74	591	14.35 14.11	13.19	2.38
17 AUG	0.0- 4.3	1005	20.0	170	860	2.3	12	.14 .22	42	1.47 1.83	158	4.26 4.24	744	6.43 6.77	11.97	1.89
18 AUG	4.3- 8.0	0920	15.0	292	1130	7.6	9	1.32 1.32	26	5.63 5.07	111	12.95 12.88	414	14.71 12.69	4.65	3.08
31 AUG	0.0- 4.0	1105	21.5	168	530	3.1	13	.20 .10	45	1.05 1.27	139	5.78 6.15	854	6.38 6.35	16.06	2.05
1 SEP	4.0- 8.0	1010	15.0	287	470	3.6	11	1.32 1.93	38	5.14 5.40	140	12.66 12.10	565	12.65 13.15	9.00	1.65
14 SEP	0.0- 5.0	1010	18.0	156	730	4.6	9	.10 .14	36	1.97 1.91	144	7.32 7.41	805	8.75 9.43	7.68	1.82
15 SEP	5.0- 8.3	1000	13.0	331	1150	14.5	6	.86 .81	22	3.99 3.45	77	10.07 8.89	432	18.27 11.44	13.87	1.96

LAKE 226 SW

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
28 SEP	0.0- 7.0	1105	14.0	206	490	3.5	10	.52	35	2.91	138	9.13	789	12.00		
								.51		3.07		10.32		12.55	4.08	2.07
29 SEP	7.0- 8.0	0910	10.5	415	900	4.8	6	.88	22	7.87	86	11.73	468	24.07		
								.97		3.94		15.21		24.21	18.11	1.55
12 OCT	0.0- 8.0	1120	10.0	236	590	5.0	10	.50	26	2.38	107	8.52	525	11.36		
								.73		2.59		7.22		9.57	13.98	1.60
27 OCT	0.0- 8.0	1120	5.0	257	890	4.1	10	.48	28	2.27	133	5.96	739	5.39		
								.54		2.26		5.05		5.35	5.22	1.27

LAKE 227

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
21 APR	0.0- 4.5	0955	5.0	431	2120	6.8	11	2.09 1.90	39	6.60 6.85	153	11.66 12.39	775	11.92 13.80	5.97	2.96
4 MAY	0.0- 1.5	0820	10.0	294	1060	8.1	12	1.78 .91	39	3.02 5.51	148	7.18 5.46	746	11.08 8.02	32.21	3.05
5 MAY	1.5- 3.0	0825	8.0	354	4360	12.8	9	.76 .83	28	3.57 3.31	107	9.13 7.64	531	11.91 10.19	8.73	3.01
6 MAY	3.0- 5.0	0815	6.0	417	2210	21.0	8	1.78 1.79	25	5.95 5.43	89	13.05 11.40	434	12.87 17.65	9.62	4.35
18 MAY	0.0- 2.0	0835	12.0	280	1700	13.4	16	1.39 1.71	56	9.29 7.84	202	16.11 15.35	1005	18.63 16.30	9.85	7.64
19 MAY	2.0- 5.0	0820	9.0	342	1650	15.5	14	2.53 3.26	47	7.67 9.49	171	12.55 18.20	826	15.09 14.31	15.66	8.44
1 JUN	0.0- 2.0	0835	15.0	193	3270	18.4	13	2.09 .55	49	13.99 9.75	176	22.56 38.14	910	38.61 33.92	38.26	15.55
2 JUN	2.0- 5.0	0815	11.0	272	2910	17.2	13	6.91 4.13	46	12.66 20.53	152	38.36 23.49	785	32.49 31.91	26.13	10.02
15 JUN	0.0- 2.0	0845	17.5	178	3040	16.3	14	1.35 3.02	52	10.25 8.33	200	20.80 28.72	980	31.24 25.95	26.05	8.13
16 JUN	2.0- 3.8	0825	13.0	134	3280	30.6	12	6.46 4.50	41	14.52 11.22	158	24.18 25.23	822	23.04 -10.00	15.50	11.33 **
29 JUN	0.0- 1.5	0850	18.5	113	3680	6.9	14	.71 2.05	46	12.80 14.61	174	38.37 32.62	748	49.13 58.42	25.52	4.55
30 JUN	1.5- 3.8	0820	13.5	72	4080	26.8	7	3.71 3.85	25	20.66 20.11	109	42.69 43.77	450	47.80 47.79	1.59	7.44
13 JUL	0.0- 1.5	0830	24.0	57	2610	9.8	17	1.08 1.06	55	6.96 8.22	209	34.19 34.50	844	56.54 55.65	3.80	4.18
15 JUL	1.5- 3.5	0920	16.5	35	4600	38.5	7	9.19 8.73	24	39.69 35.24	89	79.69 84.00	418	82.86 91.50	5.69	4.76
27 JUL	0.0- 2.3	0835	21.0	52	3960	13.0	12	1.51 .95	41	11.78 13.24	157	60.03 58.41	839	84.43 88.92	11.52	5.12
28 JUL	2.3- 3.5	0815	16.0	43	5340	45.2	7	5.71 7.50	26	27.76 41.90	78	95.35 86.99	404	102.09 83.19	17.19	4.02
10 AUG	0.0- 2.3	0840	21.0	48	5240	18.8	14	5.41 6.19	42	42.22 44.58	169	152.95 138.36	678	177.28 156.64	7.29	6.07
11 AUG	2.3- 3.3	0815	15.0	29	4800	52.9	8	10.20 8.01	27	46.05 41.58	98	78.91 79.15	478	78.81 76.58	6.60	2.19
24 AUG	0.0- 2.0	0755	21.0	49	8520	18.4	15	6.76 6.63	49	38.01 41.20	184	139.83 138.97	1088	150.49 151.02	1.94	5.06
25 AUG	2.0- 3.3	0815	15.0	105	7520	25.8	8	8.15 8.10	28	31.29 30.54	97	68.52 60.81	601	54.78 61.09	4.57	4.46
8 SEP	0.0- 3.0	0835	18.0	59	1010	9.1	12	5.47 5.80	39	33.57 32.89	146	111.98 110.24	757	126.34 118.45	2.82	5.94
21 SEP	0.0- 3.5	1115	14.0	83	7160	18.4	11	2.66 2.94	36	16.09 16.88	146	-10.00 57.57	797	69.56 60.80	6.65	4.25 **
5 OCT	0.0- 3.0	1120	10.0	276	3880	34.6	9	4.90 4.26	30	18.19 19.01	125	42.61 48.38	639	49.93 44.61	7.52	8.45
14 OCT	0.0- 3.5	1100	10.0	261	5140	25.6	9	6.43 7.68	31	24.11 26.68	132	56.75 51.75	742	55.31 50.96	8.00	13.53

LAKE 239

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
21 APR	0.0- 9.0	1035	5.0	225	590	1.6	11	.39	39	1.80	153	4.48	775	3.13		
								.42		2.44		3.38		3.39	13.21	1.10
4 MAY	0.0- 7.0	0905	10.0	19	610	3.7	12	.05	39	.31	148	.67	746	.64		
								.06		.23		.62		.67	10.02	1.71
18 MAY	0.0- 4.5	0850	12.0	168	300	3.2	16	.22	56	2.44	202	4.95	1005	4.73		
								.32		2.07		5.10		4.70	9.90	1.89
19 MAY	4.5- 7.0	0920	9.0	174	880	5.9	14	1.49	47	5.52	171	9.64	826	8.45		
								1.60		5.77		9.03		8.03	4.08	2.73
20 MAY	7.0- 8.0	0910	8.0	213	710	6.3	10	.90	31	3.75	114	6.36	571	5.97		
								.85		3.72		6.91		5.35	4.66	1.38
1 JUN	0.0- 3.5	0935	15.0	160	650	2.0	13	.33	49	4.21	176	20.13	910	22.83		
								.43		5.92		20.43		26.93	14.01	1.70
2 JUN	3.5- 6.0	0850	11.0	167	780	5.4	13	1.07	46	4.00	152	6.98	785	7.32		
								1.06		4.76		7.04		6.10	6.68	2.36
3 JUN	6.0- 9.0	0850	8.0	237	490	5.4	10	1.14	32	4.02	122	5.69	643	4.25		
								1.21		3.39		5.45		4.22	4.89	1.49
15 JUN	0.0- 4.5	0940	17.5	147	610	2.3	14	.26	52	1.44	200	3.31	913	3.92		
								.33		1.03		3.78		3.55	14.00	1.51
16 JUN	4.5- 6.5	0930	13.0	167	610	4.4	12	.78	41	3.49	158	6.11	822	5.95		
								.86		3.22		6.31		6.45	5.20	1.66
17 JUN	6.5- 9.0	0910	8.0	221	600	6.4	11	1.47	33	5.41	126	-10.00	630	7.62		
								1.47		-10.00		8.36		6.96	3.24	1.61 **
29 JUN	0.0- 4.5	0930	18.5	142	180	3.1	14	.27	46	1.82	174	3.88	748	5.33		
								.32		1.87		4.13		5.67	5.47	1.37
30 JUN	4.5- 8.0	1005	13.5	187	480	4.7	7	.92	25	3.44	109	7.13	450	7.55		
								.91		3.19		6.73		7.30	3.28	1.31
13 JUL	0.0- 3.5	0900	24.0	139	570	1.4	17	.24	55	1.12	209	3.95	844	4.89		
								.73		1.96		4.09		5.44	29.96	1.08
15 JUL	3.0- 8.0	0855	16.5	175	490	4.3	7	.62	24	2.80	89	7.97	418	7.38		
								.43		2.45		6.25		7.74	13.95	2.40
27 JUL	0.0- 4.5	0930	21.0	148	490	1.6	12	-.16	41	.62	157	4.21	839	4.26		
								-.23		.62		3.37		4.92	8.68	.81
28 JUL	4.5- 7.3	0905	16.0	208	550	4.1	7	.56	26	3.37	78	6.90	404	8.48		
								.65		2.32		7.19		8.54	10.04	1.79
10 AUG	0.0- 4.8	0915	21.0	145	490	2.0	14	1.12	42	1.67	169	5.10	678	6.68		
								-10.00		2.55		5.54		7.66	15.02	.83 **
11 AUG	4.8- 8.5	0945	15.0	220	520	6.4	8	-.03	27	2.87	98	6.27	478	6.24		
								-.59		2.58		6.61		8.43	10.80	2.37
24 AUG	0.0- 5.3	0925	21.5	146	400	3.0	15	-.33	52	1.49	175	4.58	976	5.89		
								-.33		2.12		5.59		5.83	13.28	.94
25 AUG	5.3- 8.5	0855	15.0	240	830	6.4	8	1.20	28	4.27	97	10.26	601	10.08		
								1.13		5.14		13.30		18.18	19.05	1.86
8 SEP	0.0- 6.0	0855	18.0	140	440	26.2	12	-.02	39	1.07	146	4.29	757	5.01		
								.11		1.29		4.09		5.84	9.09	.77
9 SEP	6.0- 7.0	0915	15.0	165	420	30.8	6	.31	20	1.49	81	4.79	413	6.20		
								.37		1.41		4.30		6.42	6.41	.76
21 SEP	0.0- 7.5	0905	14.0	160	320	2.1	11	.29	36	1.21	146	3.68	797	-10.00		
								.28		1.20		3.68		4.28	.86	1.16
5 OCT	0.0- 8.3	0945	10.0	192	390	2.2	9	.30	30	1.57	125	4.28	639	5.34		
								.39		1.49		4.29		5.48	6.01	.91
14 OCT	0.0- 8.0	0910	10.0	173	480	2.9	9	-.06	31	1.12	132	3.94	742	4.11		
								-.09		1.25		3.67		3.70	6.74	1.04
27 OCT	0.0- 8.0	1015	5.0	209	460	2.5	10	.64	28	.99	133	3.06	739	2.70		

LAKE 302 N

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
21 APR	0.0-10.0	1115	5.0	148	870	3.6	11	1.65	39	3.85	153	8.41	775	9.98		
								1.04		3.59		9.10		8.39	13.74	2.48
4 MAY	0.0- 3.0	0925	10.0	9	940	5.0	12	.04	39	.41	148	1.17	746	1.17		
								.04		.40		1.19		1.41	5.97	5.33
5 MAY	3.0- 5.0	0 9	8.0	88	980	6.7	9	.66	28	3.58	107	8.25	531	10.32		
								.74		3.68		8.99		11.58	6.20	3.91
6 MAY	5.0- 9.0	0855	8.0	125	1040	8.6	8	.96	25	3.64	89	8.78	434	9.60		
								.97		3.77		9.50		10.61	3.91	2.40
18 MAY	0.0- 4.0	0935	12.0	80	760	3.1	16	.47	56	2.63	202	6.84	1005	9.15		
								.27		2.35		5.13		7.50	19.95	3.52
19 MAY	4.0- 7.0	0920	9.0	99	1120	4.6	14	-10.00	47	-10.00	171	8.18	826	7.57		
								1.04		4.61		7.49		7.21	4.85	3.19 **
20 MAY	7.0-10.0	0820	8.0	206	1270	13.6	10	1.54	31	6.90	114	14.58	571	12.78		
								1.65		7.11		15.06		13.32	2.97	3.19
1 JUN	0.0- 3.5	1000	15.0	84	720	2.3	13	.26	49	1.67	176	6.73	910	8.28		
								.35		2.10		7.35		7.59	11.87	3.32
2 JUN	3.5- 7.0	0855	11.0	98	890	4.6	13	.85	46	3.85	152	7.33	785	7.57		
								.89		3.58		8.81		8.04	6.34	4.08
3 JUN	7.0- 9.5	0820	8.0	254	770	11.9	10	1.96	32	7.77	122	15.27	643	12.22		
								1.94		6.99		14.01		13.64	5.52	2.05
15 JUN	0.0- 3.5	0940	17.5	79	570	2.4	14	.44	52	2.01	200	6.91	980	6.84		
								.32		1.49		6.93		6.82	10.69	2.04
16 JUN	3.5- 7.5	0925	13.0	96	870	4.8	12	.72	41	4.09	158	7.04	822	8.31		
								.97		3.61		7.96		7.19	12.25	3.02
17 JUN	7.5- 9.5	0815	8.0	264	970	15.3	11	2.17	33	7.64	126	13.36	630	12.87		
								2.15		8.25		12.20		15.58	6.46	3.16
29 JUN	0.0- 4.0	1005	18.5	83	1400	2.4	14	.46	46	2.34	174	8.28	748	8.02		
								-10.00		2.60		7.47		8.89	7.37	1.28 **
30 JUN	4.0- 9.0	0910	13.5	169	940	6.6	7	1.01	25	4.16	109	9.75	450	10.74		
								1.03		4.19		9.83		10.85	.82	2.18
13 JUL	0.0- 3.0	0950	24.0	65	950	2.4	17	.18	55	1.10	209	5.66	844	8.16		
								.18		1.26		6.05		9.37	6.02	1.45
15 JUL	3.0- 8.3	0825	16.5	162	910	6.4	7	.49	24	3.13	89	10.11	418	13.69		
								-10.00		3.09		9.91		11.03	5.79	1.51 **
27 JUL	0.0- 4.0	1000	21.0	65	730	2.3	12	.26	41	1.44	157	5.58	839	9.34		
								.28		1.53		6.70		10.24	7.18	1.38
28 JUL	4.0- 8.3	0905	16.0	215	1130	5.2	7	.54	26	3.18	78	9.69	404	16.56		
								.63		2.82		9.91		13.76	8.74	1.66
10 AUG	0.0- 4.0	1020	21.0	67	920	3.5	14	.32	42	2.44	169	8.87	678	10.66		
								.31		2.68		8.45		11.40	4.40	1.93
11 AUG	4.0- 9.0	0910	15.0	241	1020	16.0	8	1.02	27	4.71	98	16.39	478	16.31		
								1.06		5.85		14.69		16.45	6.60	1.75
24 AUG	0.0- 4.3	1020	21.5	61	850	3.1	15	.24	52	2.05	175	6.60	976	10.56		
								.28		2.06		6.30		9.95	4.97	1.59
25 AUG	4.3- 8.8	0910	15.0	236	1500	7.9	8	1.22	28	4.48	97	15.16	601	16.52		
								2.22		5.47		13.06		-10.00	21.85	2.49 **
8 SEP	0.0- 6.0	1020	18.0	69	560	3.4	12	.33	39	2.06	146	8.54	757	12.53		
								.33		2.18		7.44		11.33	5.43	1.33
9 SEP	6.0- 9.0	0830	15.0	293	840	18.2	6	.89	20	3.70	81	13.96	413	17.69		
								.97		3.44		13.70		19.60	4.93	2.51
21 SEP	0.0- 6.5	0925	14.0	72	930	2.5	11	.26	36	1.29	140	5.13	797	6.29		
								.26		1.40		5.29		-10.00	2.76	1.72 **

LAKE 302 N

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
22 SEP	0.5- 9.0	0840	13.0	321	800	14.0	7	1.03	23	4.49	97	10.51	506	10.13		
								1.16		4.82		12.14		9.64	6.67	2.87
5 OCT	0.0- 9.0	0930	10.0	112	500	3.8	9	.54	30	2.37	125	6.45	639	9.36		
								.50		2.32		7.79		9.71	5.74	1.44
14 OCT	0.0- 9.0	0930	10.0	103	720	5.1	9	.62	31	2.84	132	10.44	742	11.41		
								.68		3.03		8.66		11.27	6.42	1.50
26 OCT	0.0- 9.0	1120	6.0	85	3520	6.8	9	.70	32	3.60	126	9.69	583	10.92		
								.55		3.60		9.81		10.14	5.90	1.88

LAKE 302 S

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
21 APR	0.0- 9.0	1120	5.0	141	630	.1	11	.10 .10	39	1.66 1.41	153	3.87 3.55	775	3.63 3.87	5.71	1.11
4 MAY	0.0- 3.0	0940	10.0	82	800	4.4	12	.36 .34	39	2.73 2.80	148	9.31 8.25	746	9.54 9.16	4.16	4.30
5 MAY	3.0- 5.0	0910	8.0	95	920	3.9	9	.40 .42	28	2.69 2.15	107	6.47 6.51	531	9.09 8.41	6.41	3.76
6 MAY	5.0- 9.0	0905	6.0	135	1250	5.6	8	.68 .63	25	2.69 2.98	89	7.58 7.18	434	8.59 8.34	4.55	2.79
18 MAY	0.0- 4.0	0950	12.0	78	1150	2.7	16	.29 .35	56	2.69 2.10	202	6.75 7.28	1005	7.42 8.58	11.72	3.19
19 MAY	4.0- 6.3	0930	9.0	88	930	4.2	14	.92 .97	47	4.40 4.79	171	8.76 8.25	826	7.08 7.32	3.98	4.11
20 MAY	6.3- 9.0	0835	8.0	211	620	16.3	10	2.02 1.97	31	8.75 8.72	114	21.43 19.71	571	20.06 19.71	2.24	6.27
1 JUN	0.0- 4.0	1110	15.0	84	790	1.8	13	.40 .15	49	1.21 1.25	176	4.34 4.67	910	5.22 5.03	19.16	2.31
2 JUN	4.0- 7.0	0905	11.0	111	980	5.4	13	1.60 .46	46	4.22 4.32	152	8.81 9.68	785	8.84 8.95	21.93	3.41
3 JUN	7.0- 8.5	0830	8.0	342	1810	15.5	10	1.97 1.82	32	7.59 6.68	122	13.71 15.62	643	12.06 13.25	7.55	3.35
15 JUN	0.0- 3.5	0955	17.5	73	630	2.3	7	.28 -.00	52	1.72 1.76	200	5.51 5.59	980	5.23 5.45	36.97	2.06
16 JUN	3.5- 7.5	0950	13.0	160	1200	6.6	12	1.03 .97	41	4.94 5.24	158	10.95 -10.00	822	12.03 10.30	6.36	3.72**
17 JUN	7.5- 8.5	0825	8.0	387	1580	17.8	11	2.35 2.40	33	9.06 9.90	126	10.38 8.53	630	9.22 11.33	9.03	7.28
29 JUN	0.0- 4.0	1035	18.5	85	-10	3.1	14	.30 .28	46	2.21 2.11	174	6.67 8.58	748	7.77 10.40	11.13	1.56
30 JUN	4.0- 8.5	0920	13.5	219	970	5.0	7	1.19 1.31	25	5.27 5.48	109	13.29 14.33	450	15.29 15.00	4.14	2.20
13 JUL	0.0- 3.0	1005	24.0	70	810	1.0	17	1.55 .08	55	1.07 .92	209	4.77 4.81	844	6.80 6.72	34.69	1.09
15 JUL	3.0- 8.3	0835	16.5	224	1070	6.7	7	.99 .97	24	3.95 4.07	89	12.03 12.71	418	13.86 14.93	3.21	1.50
27 JUL	0.0- 4.5	1015	21.0	77	680	2.2	12	.13 .12	41	1.24 1.21	157	5.79 5.66	839	8.46 8.80	2.85	1.58
28 JUL	4.5- 8.0	0915	16.0	299	1270	8.0	7	.92 1.41	26	4.29 6.47	78	12.61 14.11	404	16.79 17.61	17.44	2.08
10 AUG	0.0- 5.0	1050	21.0	78	610	2.2	14	.25 .18	42	1.46 1.62	169	5.67 5.23	678	7.64 7.55	8.93	1.31
11 AUG	5.0- 8.3	0920	15.0	383	1120	20.5	8	1.61 1.62	27	9.15 7.22	98	21.62 23.38	478	18.04 19.55	7.13	1.92
24 AUG	0.0- 5.0	1045	21.5	72	610	2.2	15	-10.00 .30	52	1.72 -10.00	175	6.78 6.31	976	8.74 8.30	4.34	1.32**
25 AUG	5.0- 8.5	0920	15.0	351	1480	15.7	8	1.22 1.27	28	5.29 5.45	97	15.90 13.99	601	14.38 13.54	4.62	2.54
8 SEP	0.0- 6.0	1050	18.0	86	580	3.7	12	.38 .42	39	2.15 2.23	146	8.47 8.40	757	10.64 11.00	3.49	1.47
9 SEP	6.0- 8.5	0840	15.0	235	1050	15.5	6	-.20 .69	20	2.04 1.38	81	9.85 8.62	413	15.05 13.03	15.60	3.77
21 SEP	0.0- 7.5	0925	14.0	72	470	3.2	11	.27 .27	36	1.82 2.04	146	5.90 5.80	797	7.94 7.79	3.17	1.77

LAKE 302 S

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS	
22 SEP	7.5- 8.3	0850	13.0	308	860	15.9	7	.78	23	5.40	97	18.24	506	20.86			*
								-10.00		14.20		31.23		19.59	-35.01	3.07	**
5 OCT	0.0- 9.0	0955	10.0	97	540	4.0	9	.52	30	2.71	125	8.78	639	8.41			
								.54		2.56		7.89		7.88	4.66	1.86	
14 OCT	0.0- 9.0	0945	10.0	87	730	4.6	9	.60	31	2.91	132	7.75	742	9.37			
								.71		2.91		7.45		9.63	4.41	1.82	
26 OCT	0.0- 9.0	1140	6.0	79	610	4.4	9	.42	32	1.90	126	4.08	583	5.33			
								.44		1.80		4.73		6.07	6.89	2.06	

AKE 661

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
L MAY	0.0- .5	0850	10.5	104	1350	2.1	12	.20 .24	38	3.47 2.51	149	14.66 14.58	745	17.92 16.49	10.76	10.35
5 MAY	0.0- .8	1130	14.0	123	1460	7.1	14	.64 .75	47	7.37 7.71	181	33.25 25.92	900	29.46 38.91	12.90	4.68
1 JUN	0.0- .8	1030	15.0	94	1200	4.8	13	.35 .37	49	2.23 2.61	176	10.33 12.05	910	16.83 17.29	7.23	4.67
8 JUN	0.0- .5	0850	18.0	119	850	8.7	15	.89 .72	52	5.91 6.00	200	20.23 24.00	1029	33.90 32.42	7.90	-10.00 **
2 JUN	0.0- .5	0930	17.0	107	970	4.1	15	.37 .37	51	2.47 2.20	198	9.02 9.60	974	14.75 16.23	5.26	1.31
0 JUL	0.0- .5	0935	23.0	154	530	3.1	12	.36 .34	41	1.80 1.84	161	7.39 7.66	849	17.18 15.77	3.57	.61
7 AUG	0.0- .5	0915	20.0	113	760	3.1	13	.17 .28	42	1.06 1.12	158	4.98 4.67	744	8.28 9.66	13.53	.64
4 SEP	0.0- .5	0915	18.0	60	490	5.2	9	.16 .21	36	.55 .48	144	4.31 4.85	805	10.51 11.84	11.06	2.56
2 OCT	0.0- .5	1000	10.0	107	710	2.1	10	.18 .16	26	.61 .62	107	2.41 2.20	525	3.92 4.18	5.48	.87

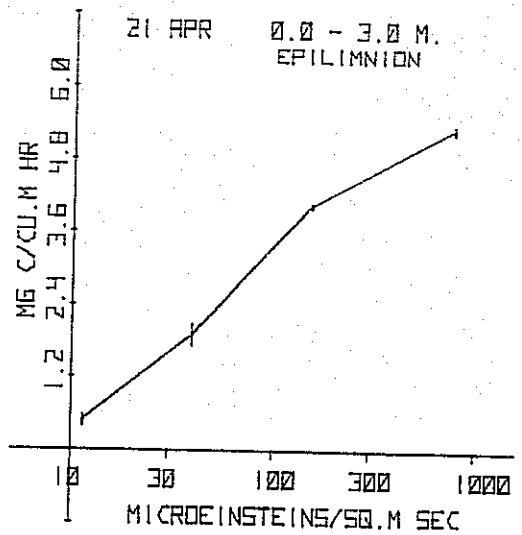
LAKE 979

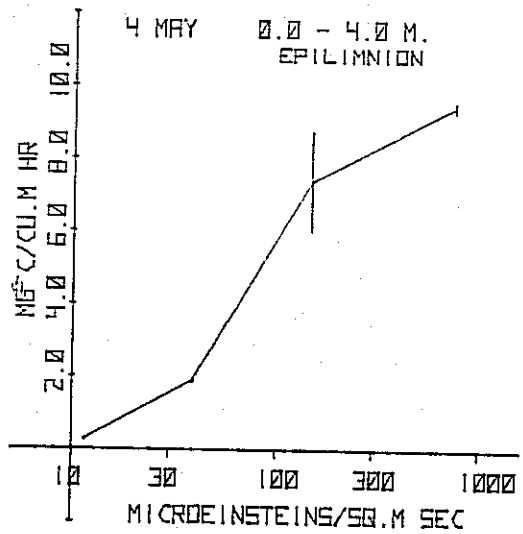
DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	BIOMASS
18 MAY	0.0- .8	0945	12.0	163	690	2.2	16	.07	56	1.18	202	5.37	1005	6.86		
								-10.00		1.15		5.21		6.00	4.50	1.56 **
8 JUN	0.0- .5	0940	18.0	160	710	2.2	15	.14	52	1.03	200	4.79	1029	8.24		
								.07		1.11		4.78		7.72	13.74	.55
15 JUN	0.0- .5	1015	17.5	163	440	1.7	14	.13	52	.99	200	4.34	980	6.48		
								.09		1.15		4.41		6.32	10.92	.53
29 JUN	0.0- .5	1000	18.5	158	620	1.6	14	.63	46	.80	174	3.44	748	5.33		
								.15		1.26		3.26		6.27	33.65	.48
20 JUL	0.0- .5	0850	23.0	158	330	1.3	12	.28	41	.53	161	3.20	849	6.83		
								.03		.54		3.17		7.57	29.85	.52
17 AUG	0.0- .5	0850	20.0	152	790	2.1	13	.01	42	1.05	158	2.63	744	4.62		
								.02		.50		3.75		4.21	28.09	.53
14 SEP	0.0- .5	1000	18.0	127	30	2.7	9	.04	36	1.09	144	2.40	805	4.42		
								-10.00		.44		2.22		4.63	22.80	.79 **
12 OCT	0.0- .5	0900	10.0	147	550	2.1	10	.56	26	1.16	107	4.20	525	4.82		
								.35		.98		3.81		5.02	13.70	.66

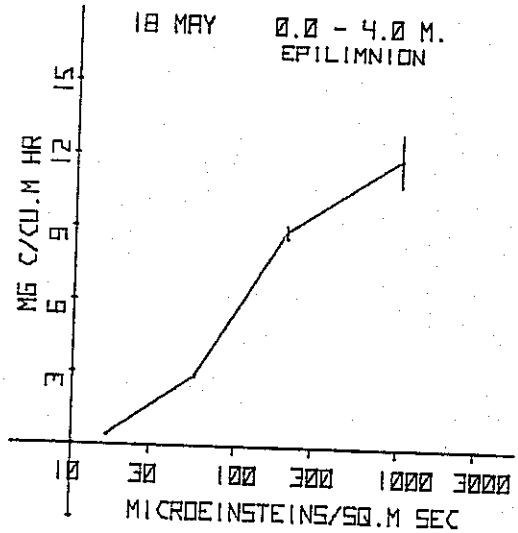
APPENDIX 2

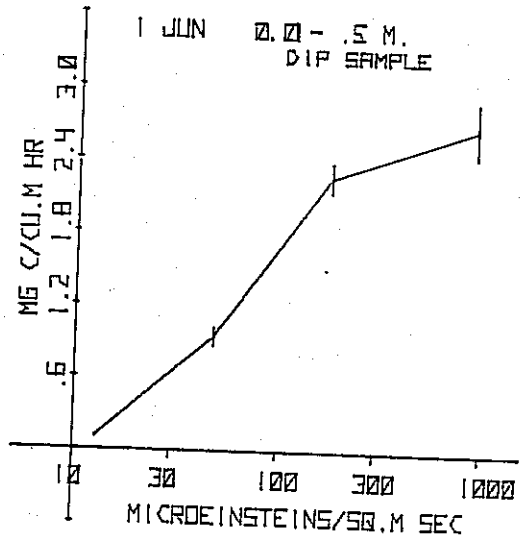
Plots of photosynthetic carbon uptake versus incubator irradiance are arranged chronologically according to lake basin. Irradiance is plotted on a logarithmic scale, production on a linear scale. The vertical bars of the plot join the replicate bottle values for each irradiance.

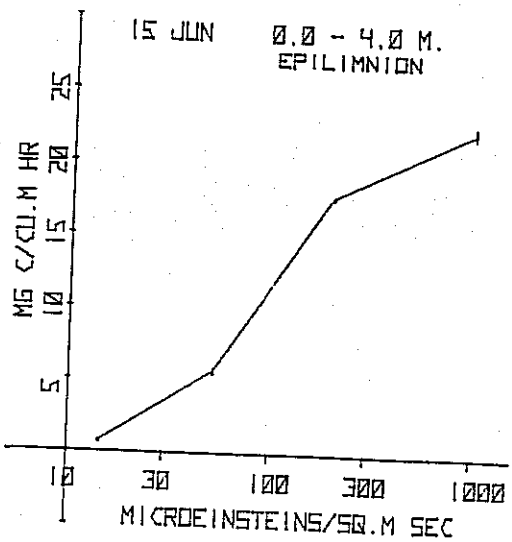
The date, depth and thermal zone are indicated on each plot.

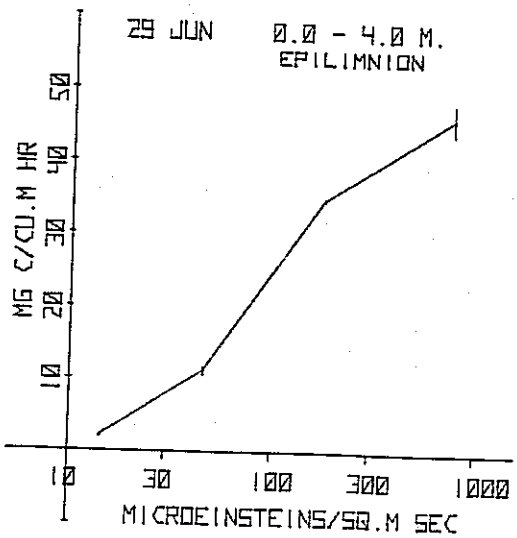

21 APR
0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 MAY
0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

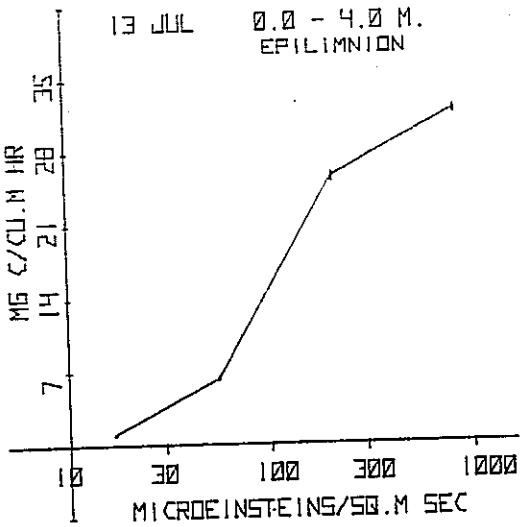

18 MAY
0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

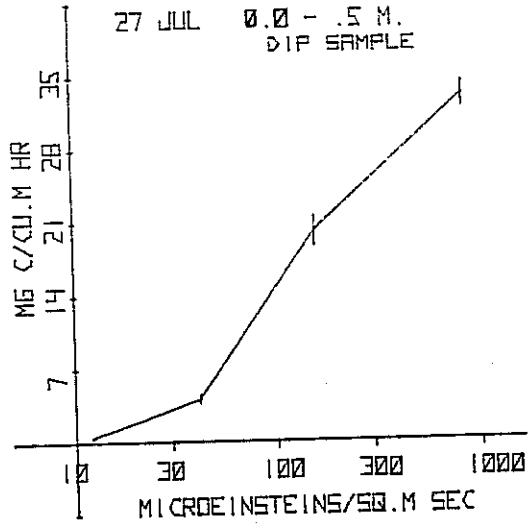

1 JUN
0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

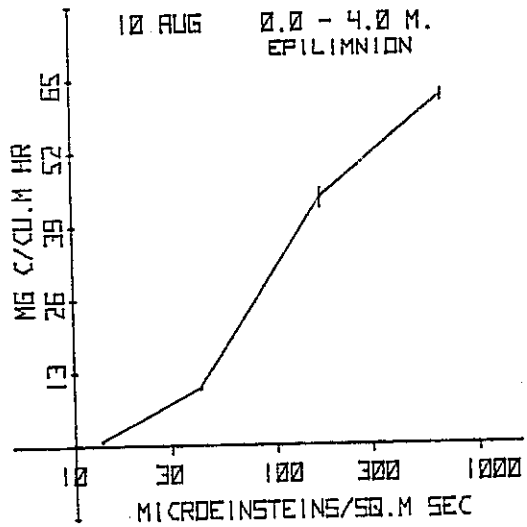

15 JUN
0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
5 10 15 20 25
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

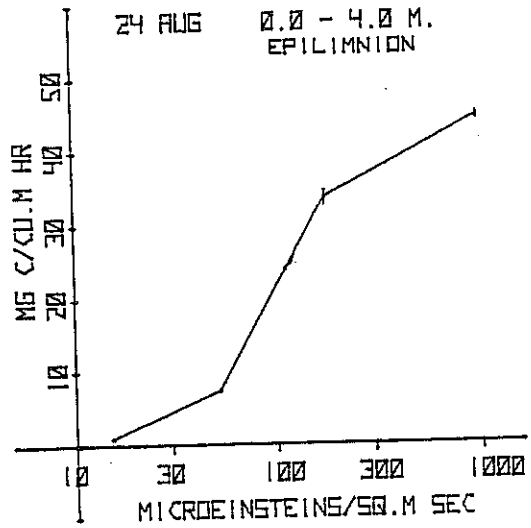

29 JUN
0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
10 20 30 40 50
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

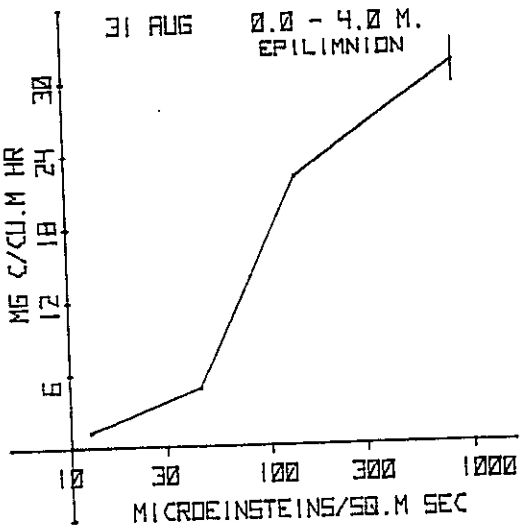
LAKE 114

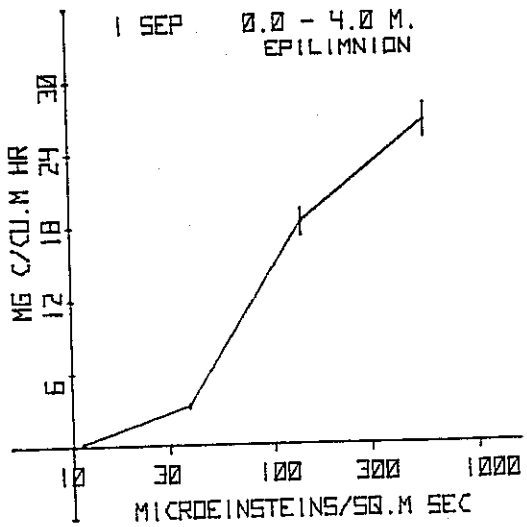

13 JUL 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
7
14
21
28
35
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


27 JUL 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
7
14
21
28
35
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

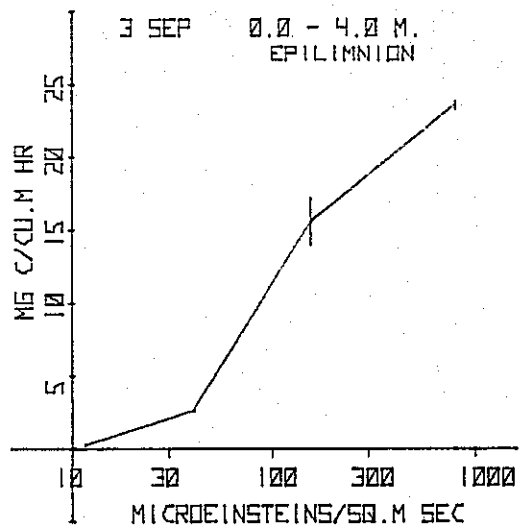

10 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
13
26
39
52
65
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

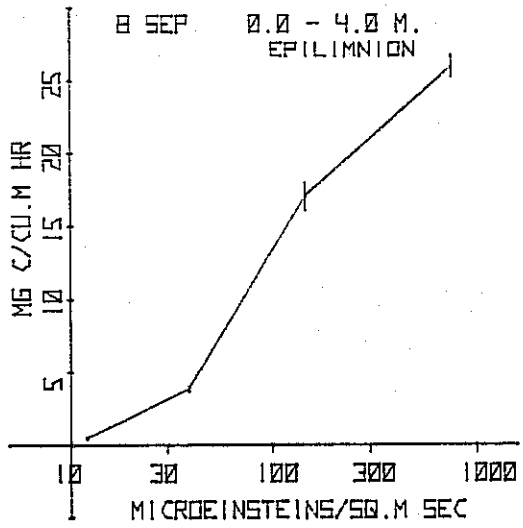

24 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
10
20
30
40
50
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

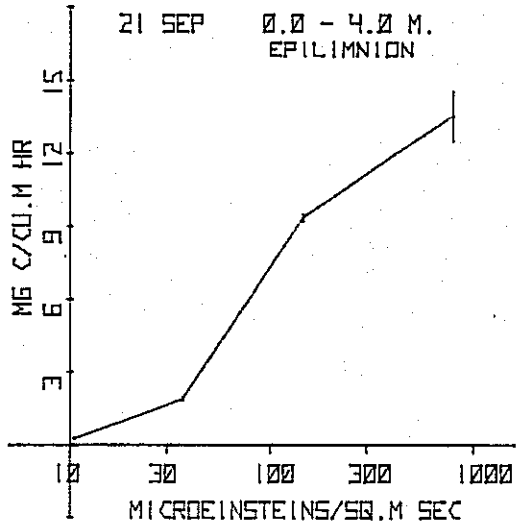

31 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
6
12
18
24
30
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

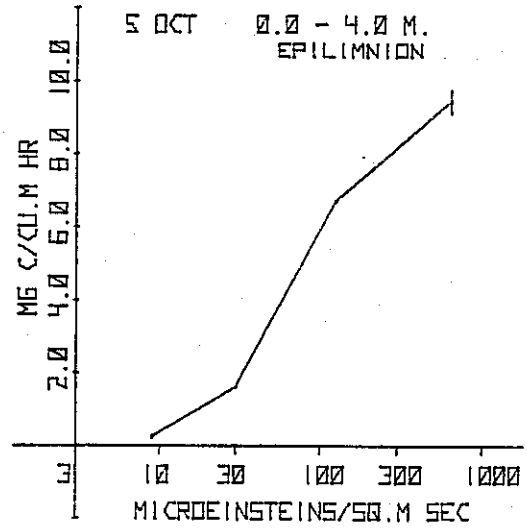

1 SEP 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
6
12
18
24
30
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

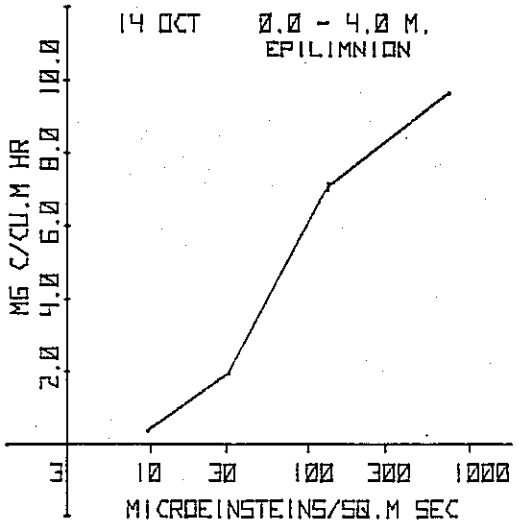
LAKE 114


3 SEP 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
5
10
15
20
25
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

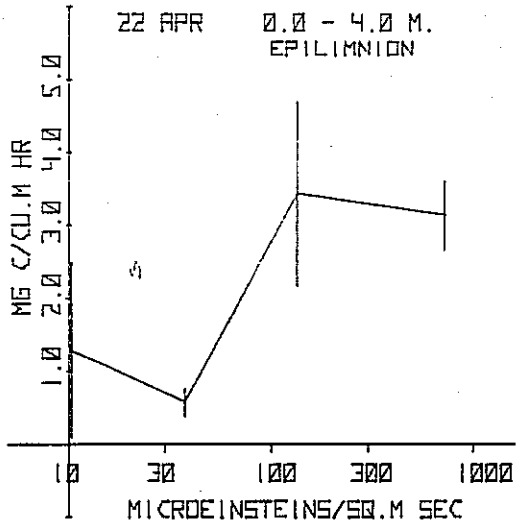

8 SEP 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
5
10
15
20
25
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

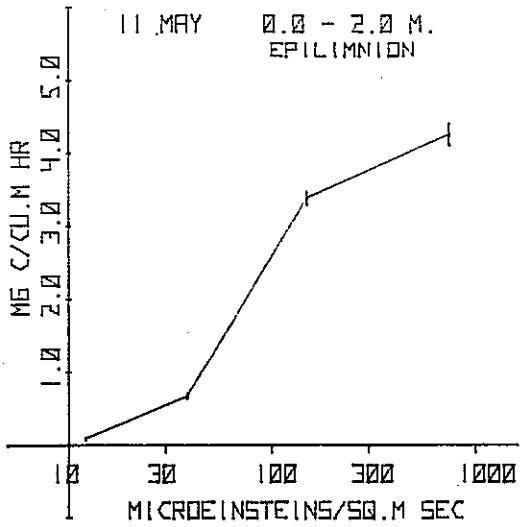

21 SEP 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

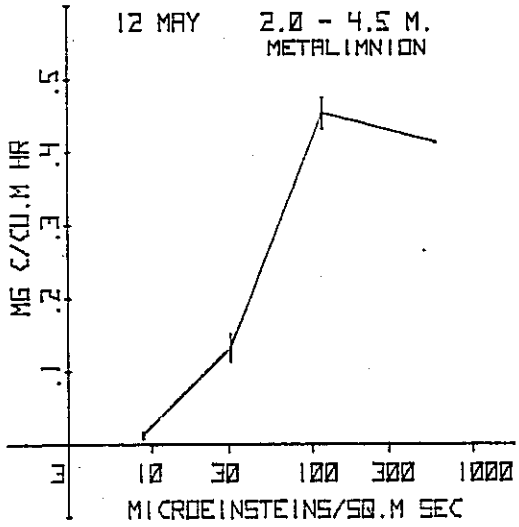

5 OCT 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

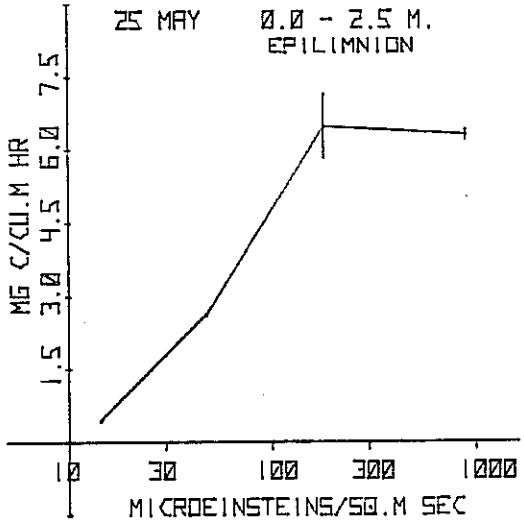

14 OCT 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

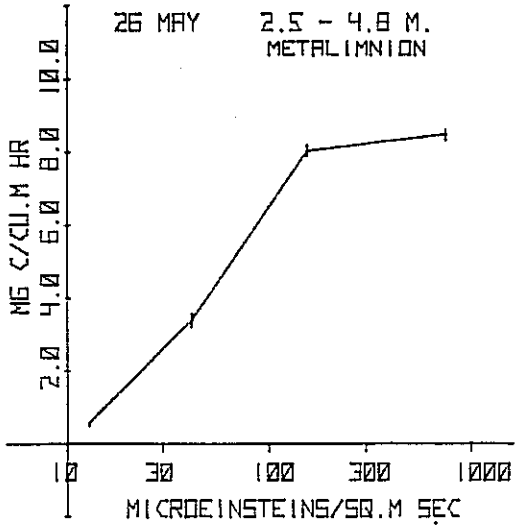
LAKE 222

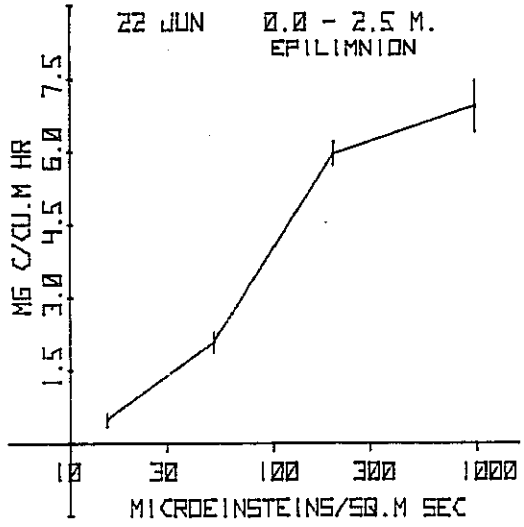

22 APR 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 MAY 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

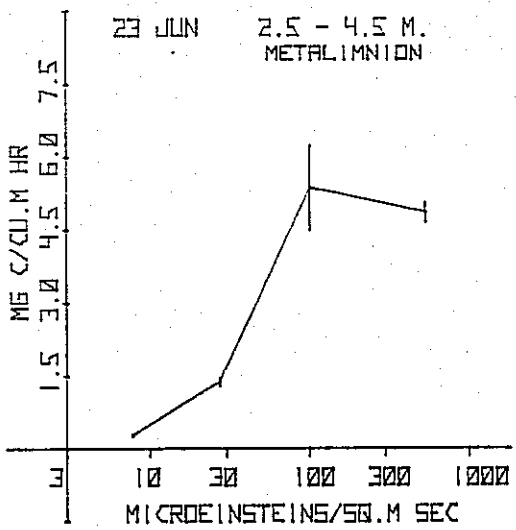

12 MAY 2.0 - 4.5 M.
METALIMNION
MG C/CU.M HR
.1 .2 .3 .4 .5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

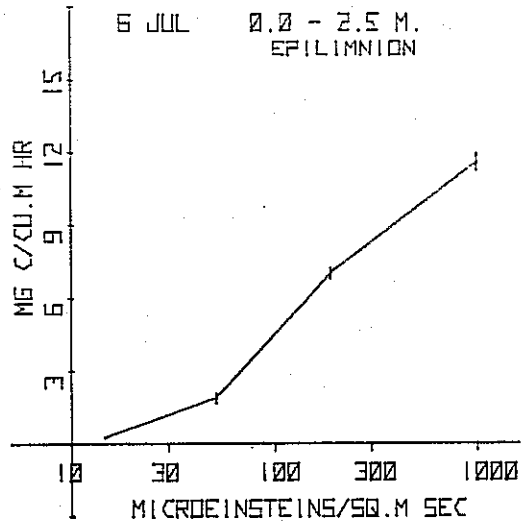

25 MAY 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

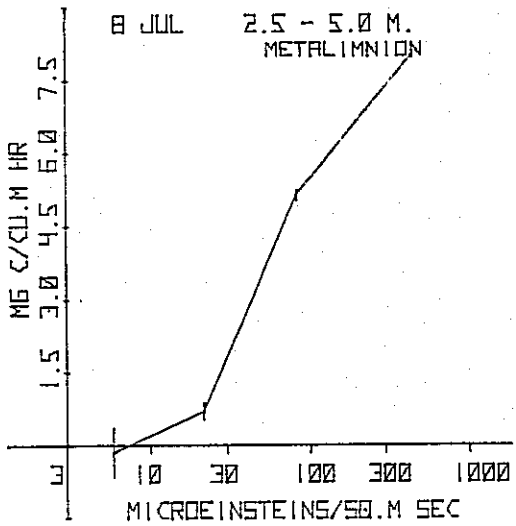

26 MAY 2.5 - 4.8 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

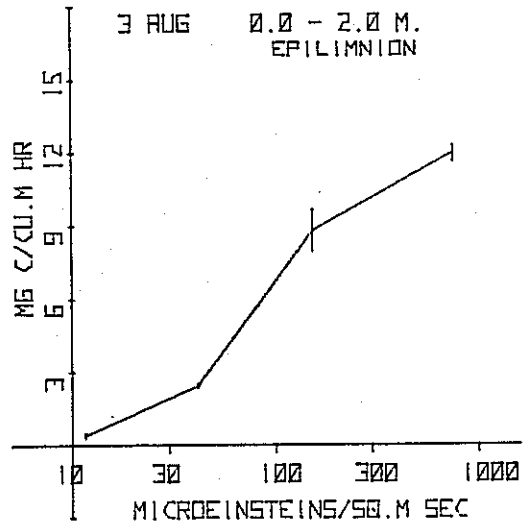

22 JUN 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

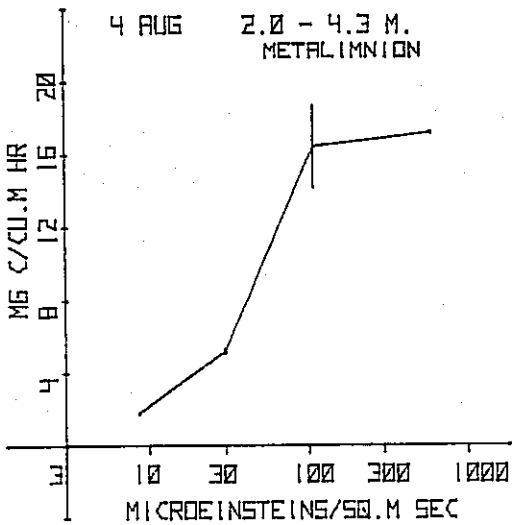
LAKE 222

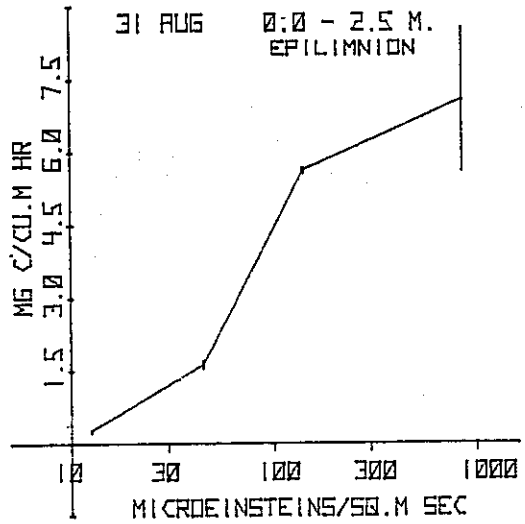

23 JUN 2.5 - 4.5 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


6 JUL 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

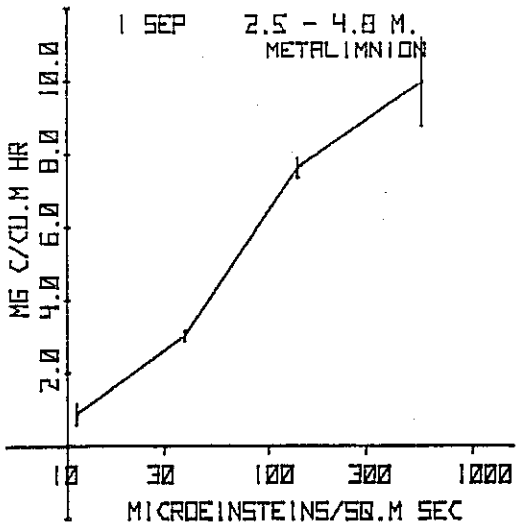

8 JUL 2.5 - 5.0 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

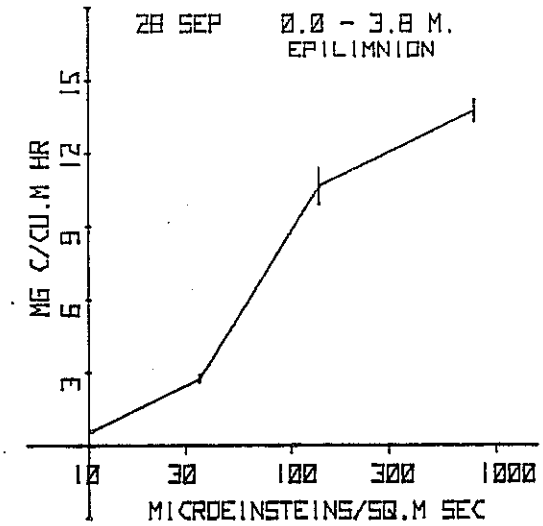

3 AUG 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 AUG 2.0 - 4.3 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

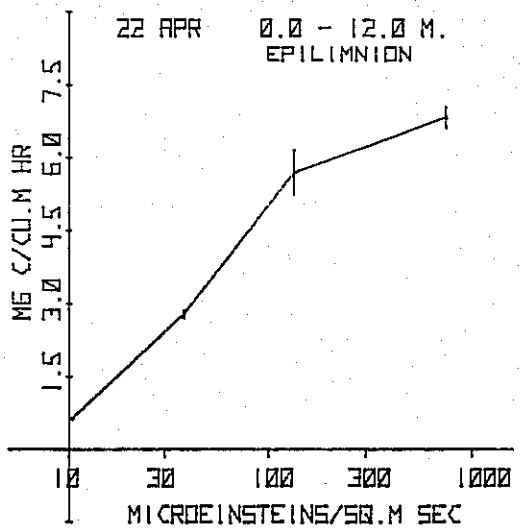

31 AUG 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

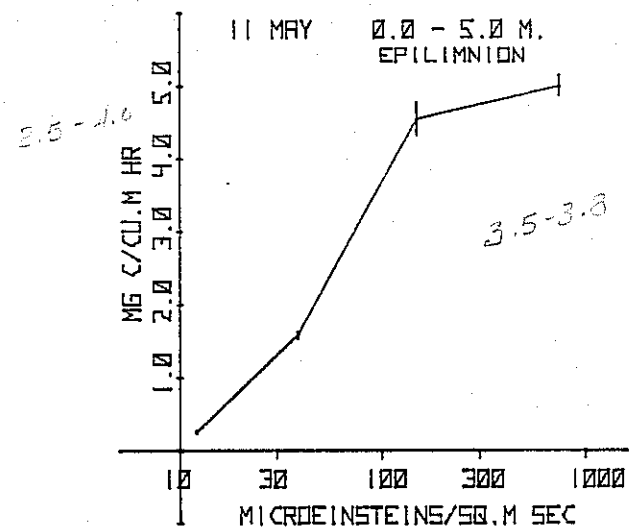
LAKE 222

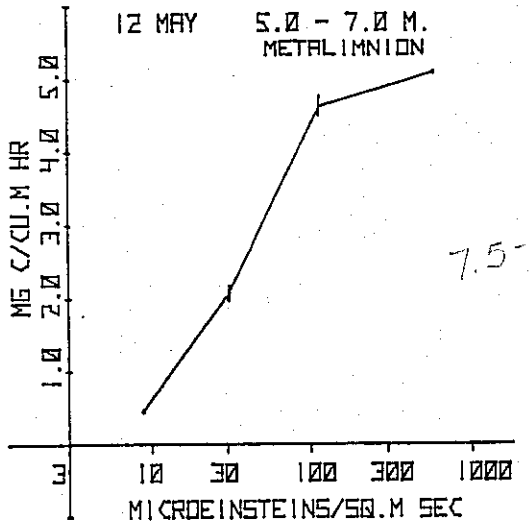

1 SEP 2.5 - 4.0 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

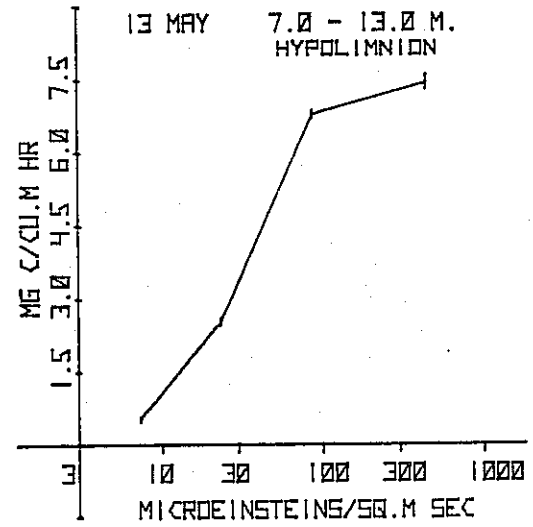

28 SEP 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

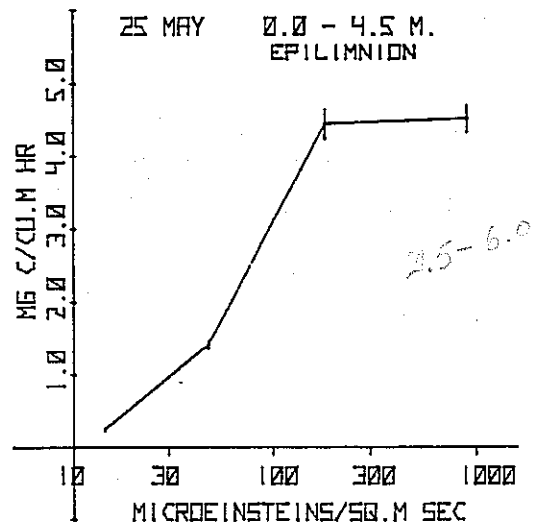
LAKE 223

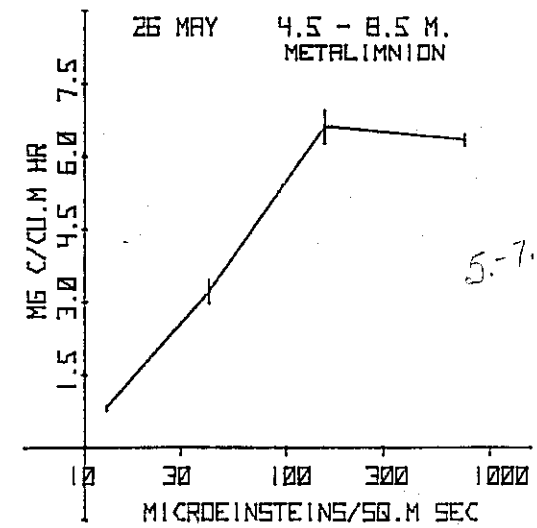

22 APR 0.0 - 12.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 MAY 0.0 - 5.0 M.
EPILIMNION
3.5-3.8
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

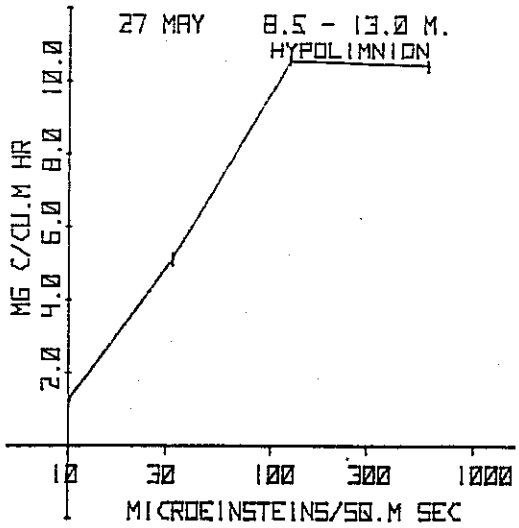

12 MAY 5.0 - 7.0 M.
METALIMNION
7.5-7.8
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


13 MAY 7.0 - 13.0 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

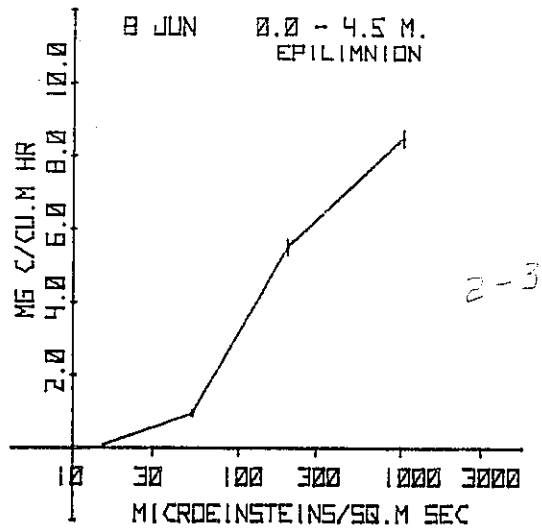

25 MAY 0.0 - 4.5 M.
EPILIMNION
2.5-6.0
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


26 MAY 4.5 - 8.5 M.
METALIMNION
5.-7.5
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

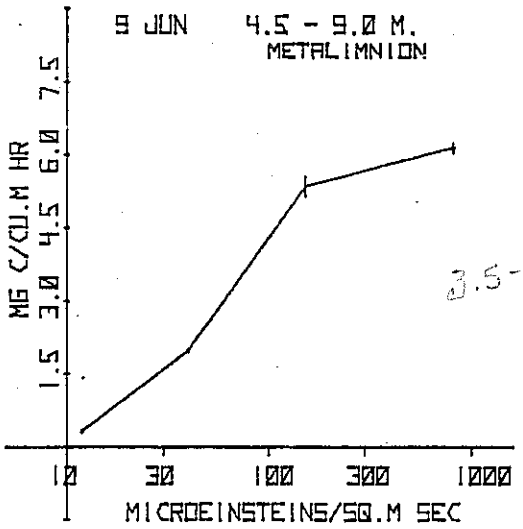
LAKE 223



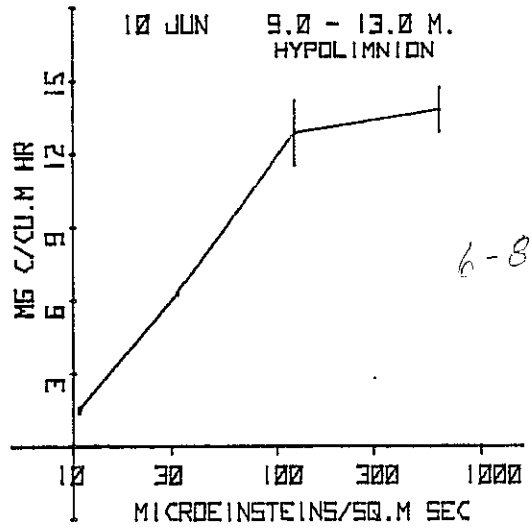
7.5-10



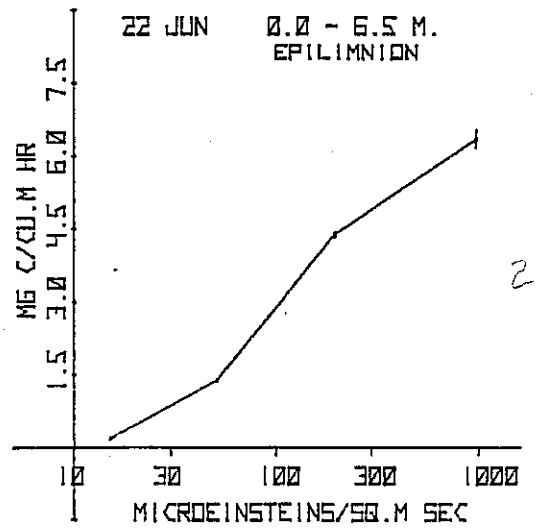
2-3



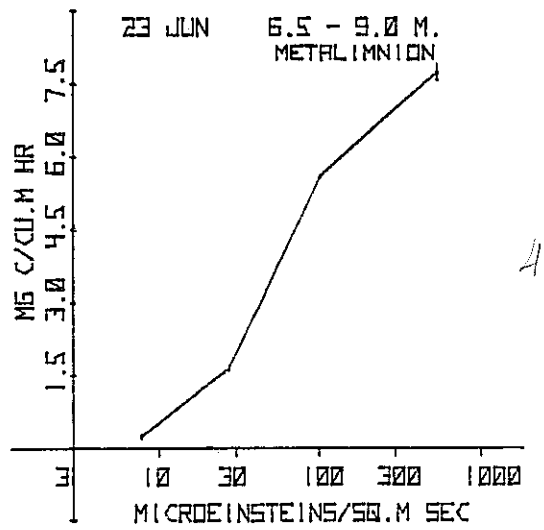
3.5-4.5



6-8

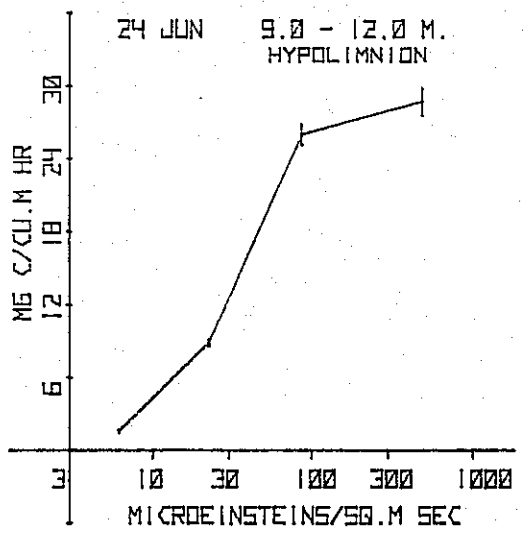


2

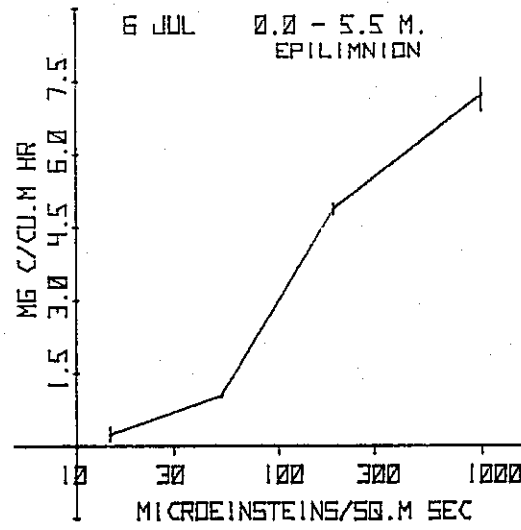


4.5

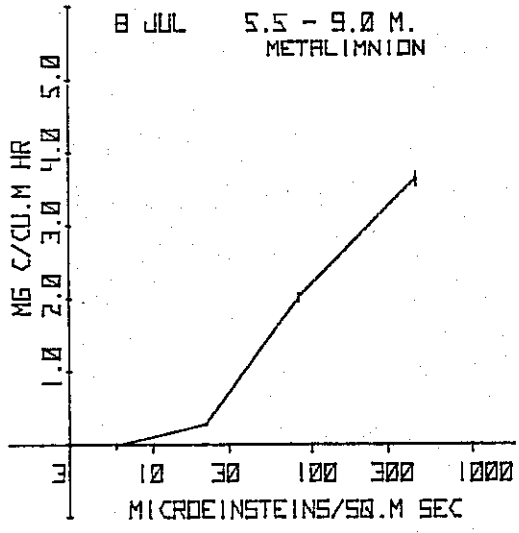
LAKE 223



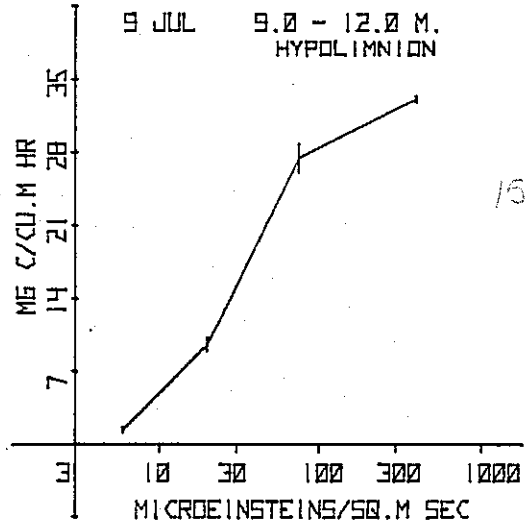
22



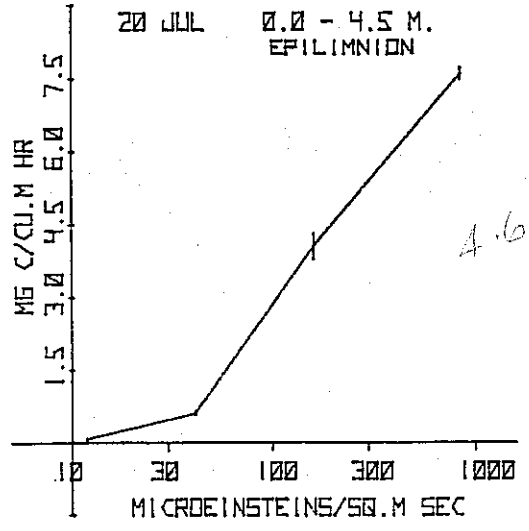
4



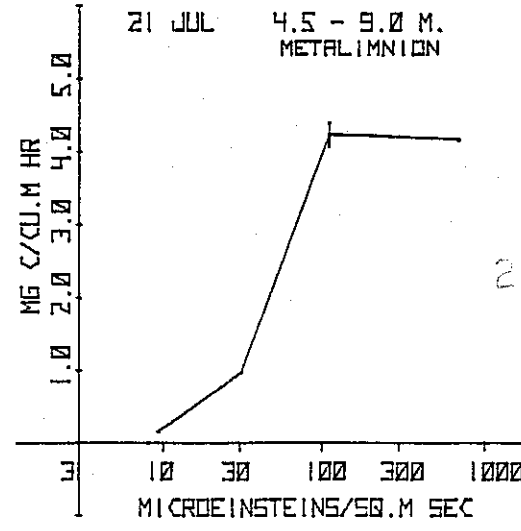
15



15

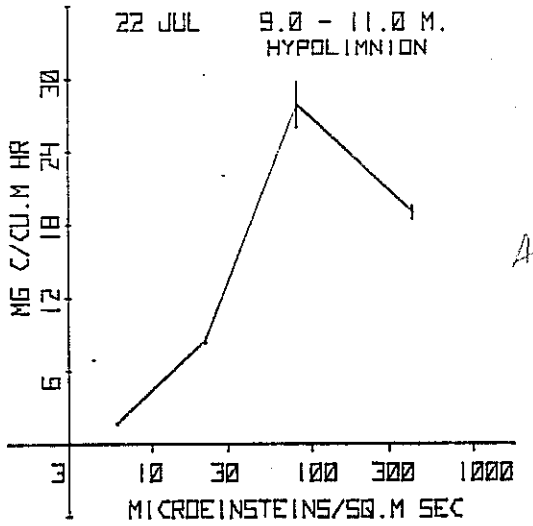


4.6

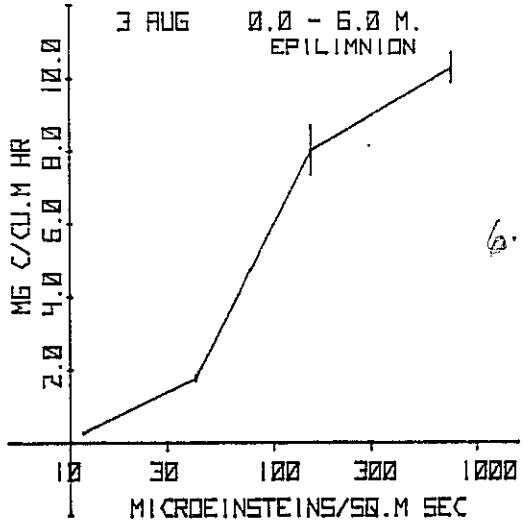


22

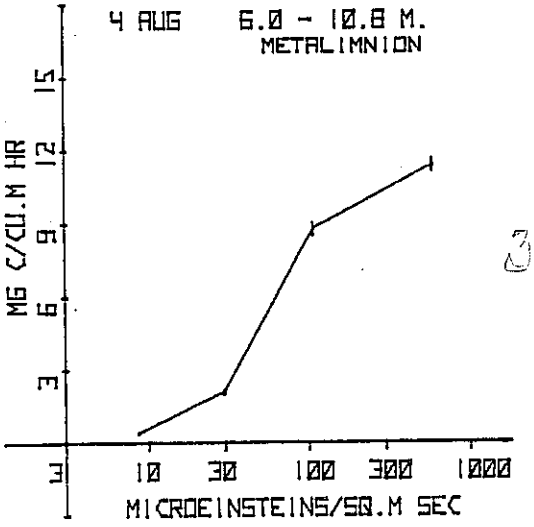
LAKE 223



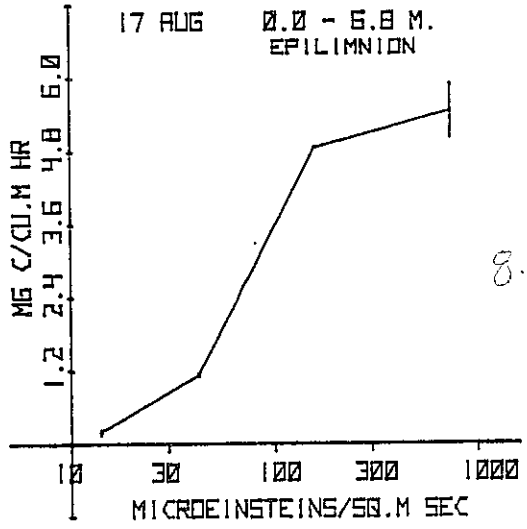
45



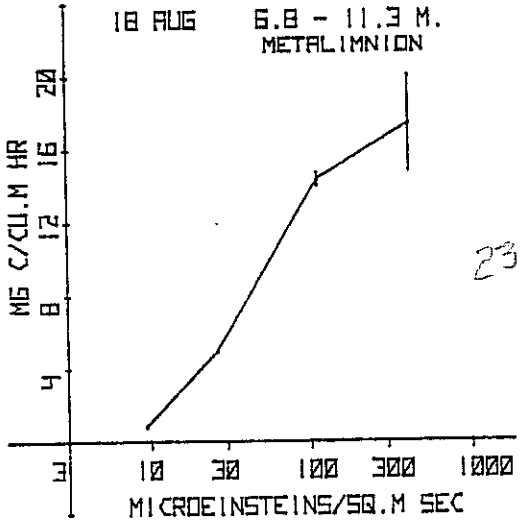
6.5



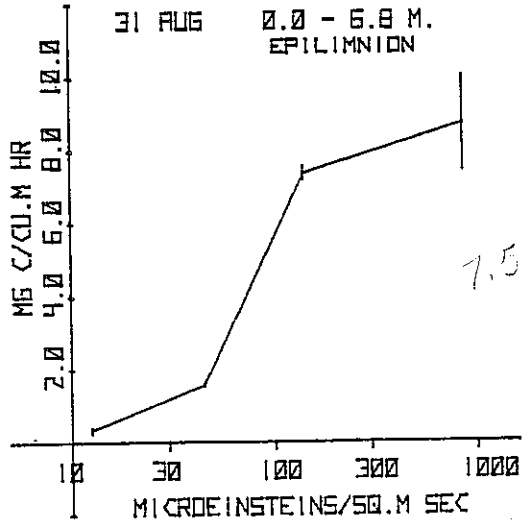
30



8.5

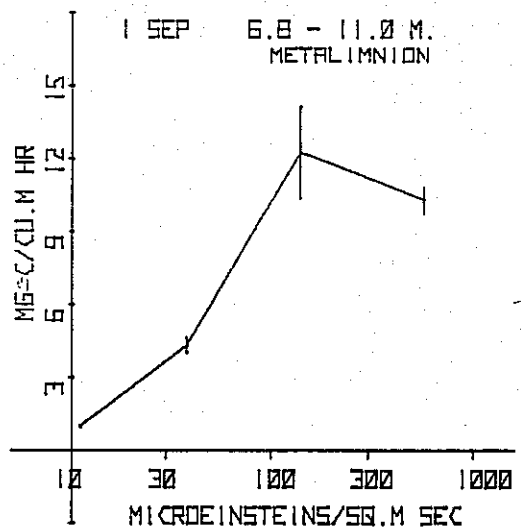


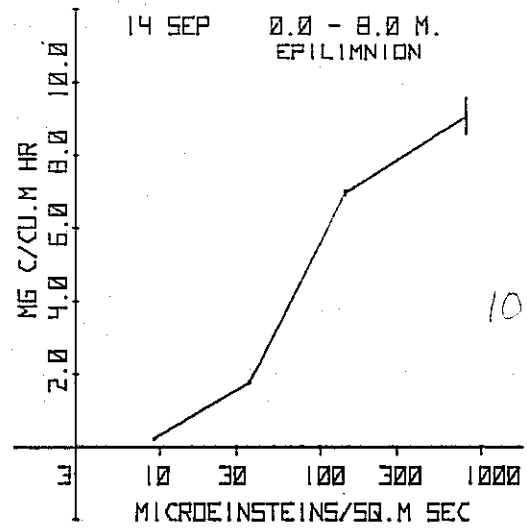
23

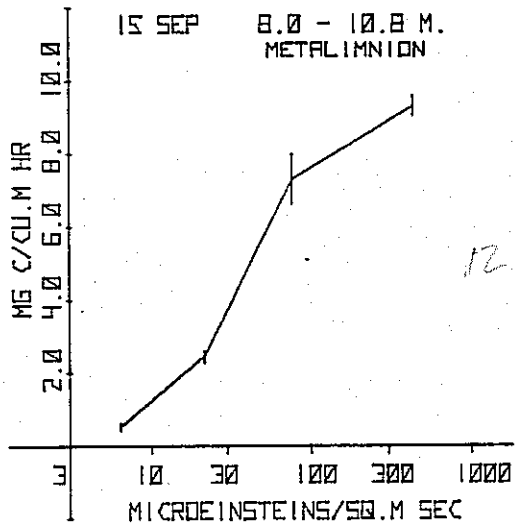


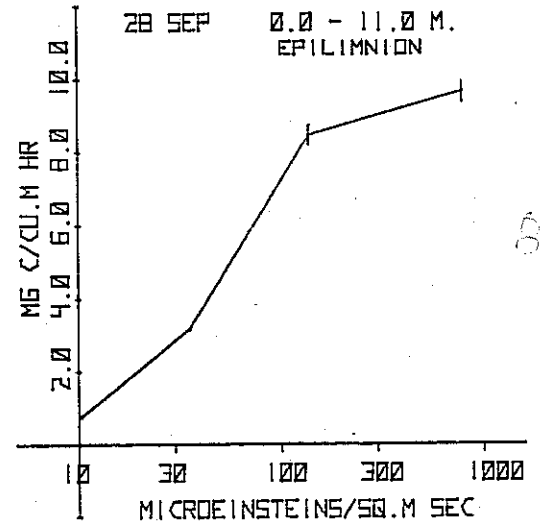
7.5

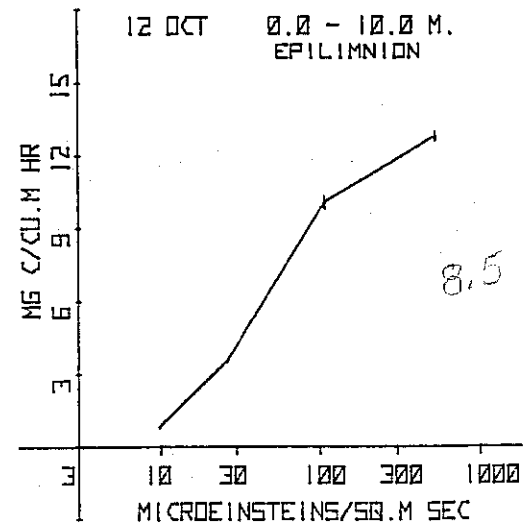
LAKE 223

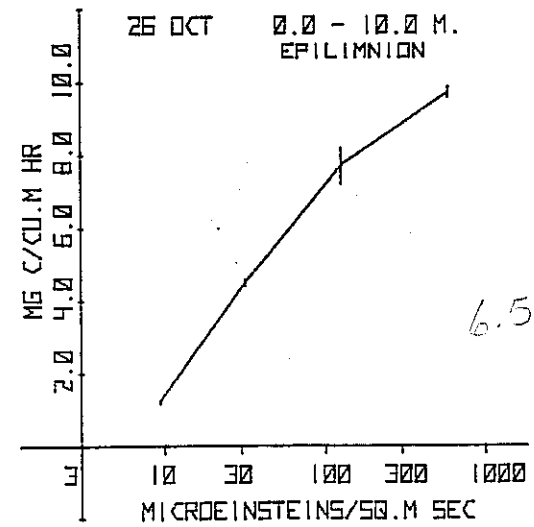

1 SEP 6.8 - 11.0 M.
METALIMNION
MG=C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
7½


14 SEP 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
10

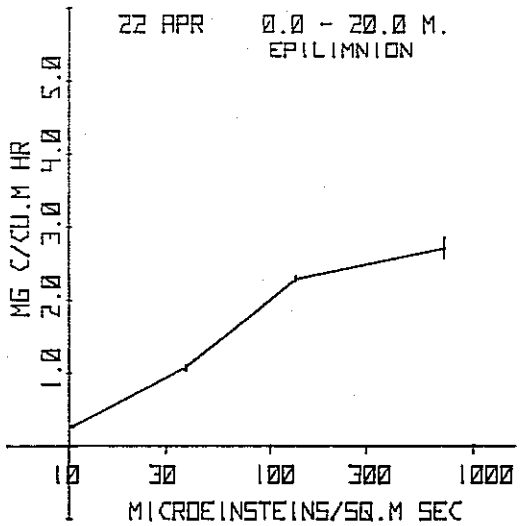

15 SEP 8.0 - 10.8 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
12

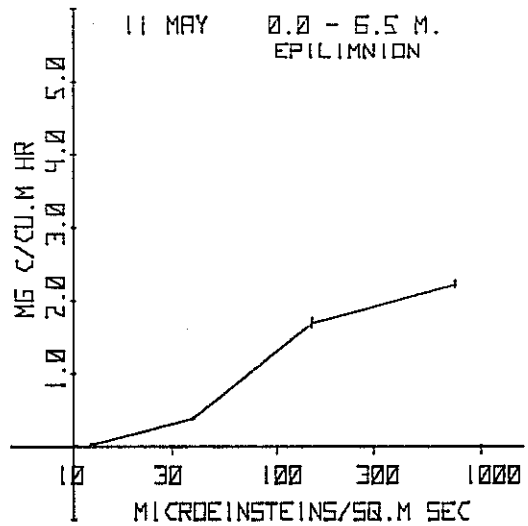

28 SEP 0.0 - 11.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
8

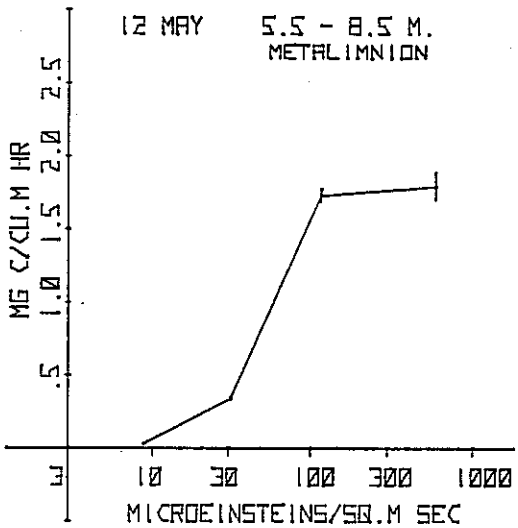

12 OCT 0.0 - 10.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
8.5

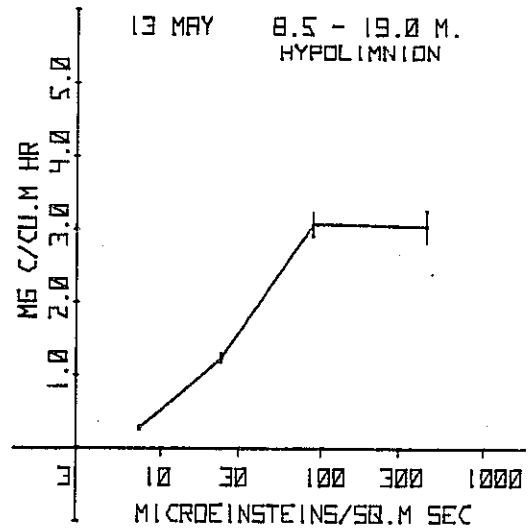

26 OCT 0.0 - 10.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC
6.5

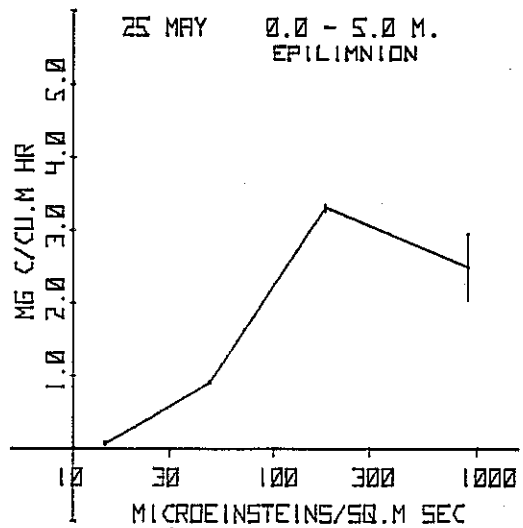
LAKE 224

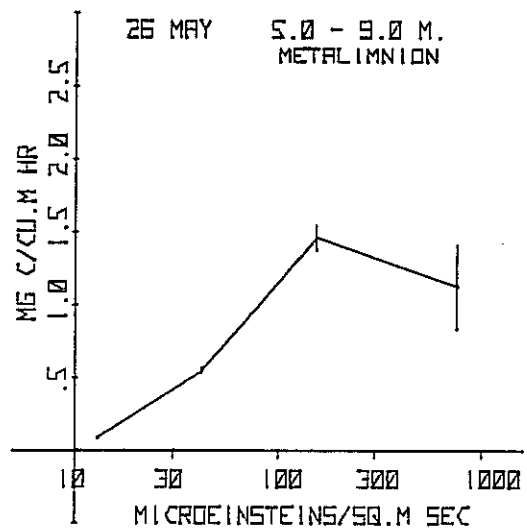

22 APR 0.0 - 20.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 MAY 0.0 - 6.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

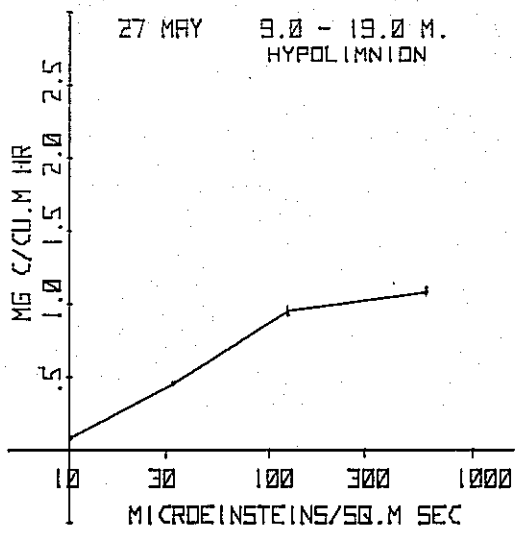

12 MAY 5.5 - 8.5 M.
METALIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

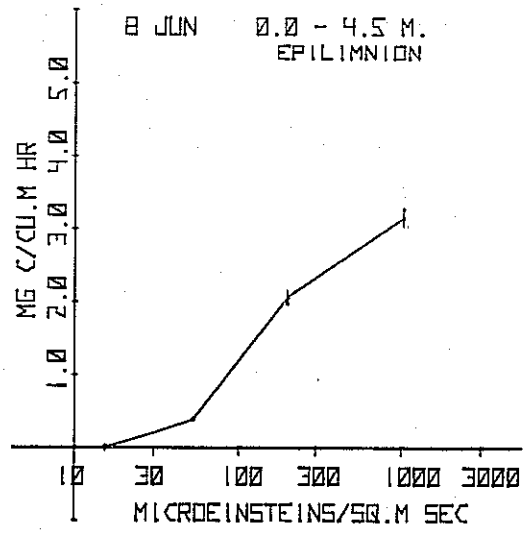

13 MAY 8.5 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

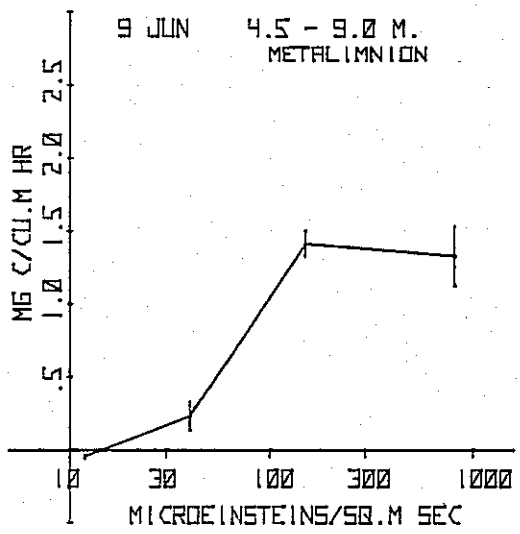

25 MAY 0.0 - 5.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

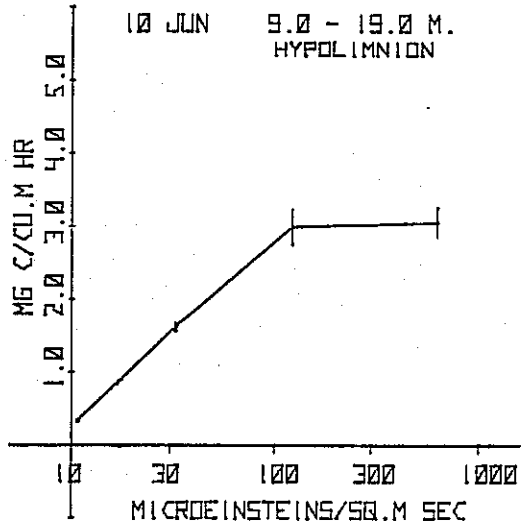

26 MAY 5.0 - 9.0 M.
METALIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

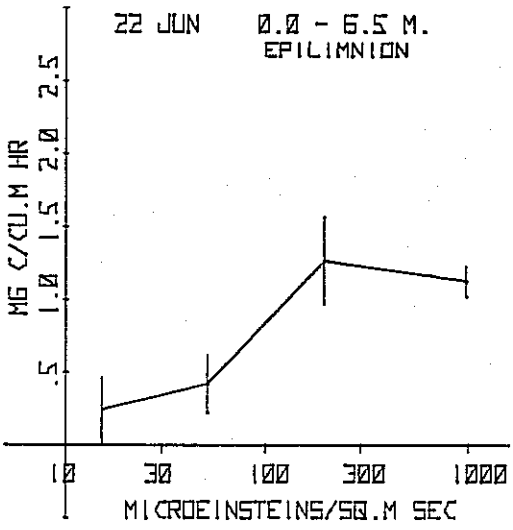
LAKE 224

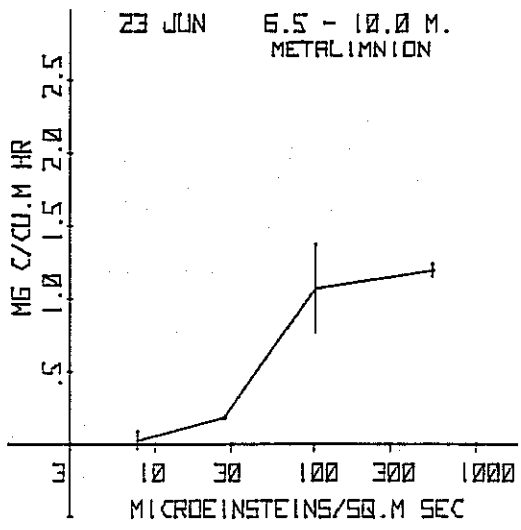

27 MAY 9.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


8 JUN 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

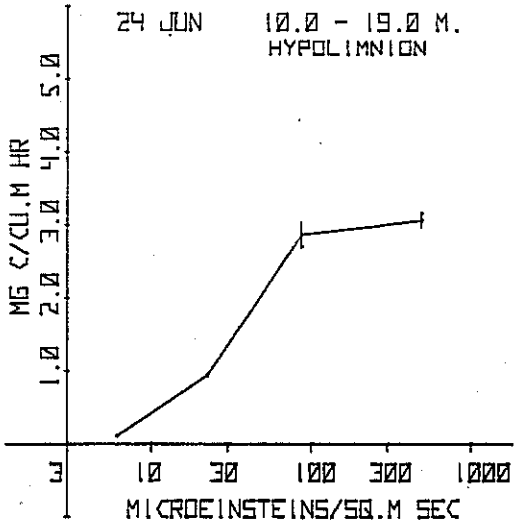

9 JUN 4.5 - 9.0 M.
METALIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

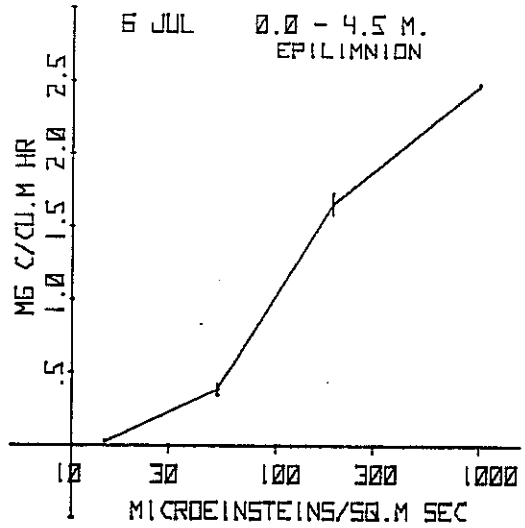

10 JUN 9.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

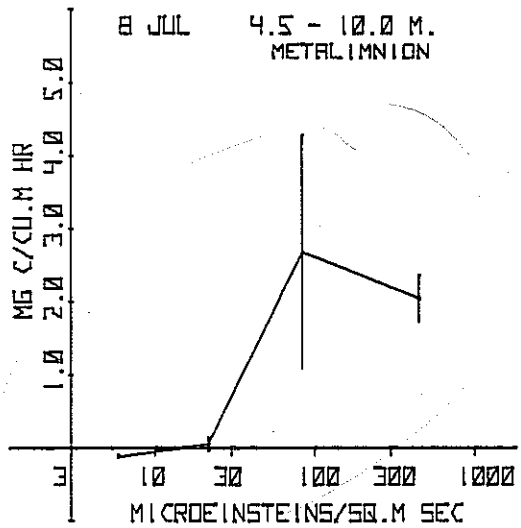

22 JUN 0.0 - 6.5 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

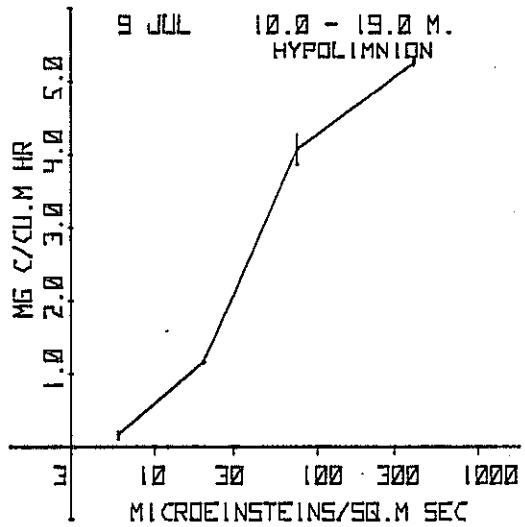

23 JUN 6.5 - 10.0 M.
METALIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

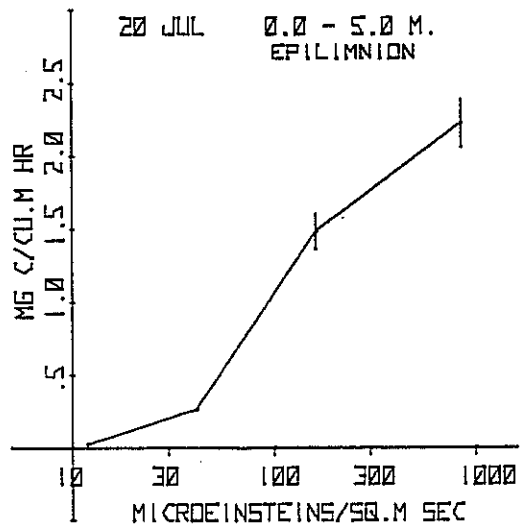
LAKE 224

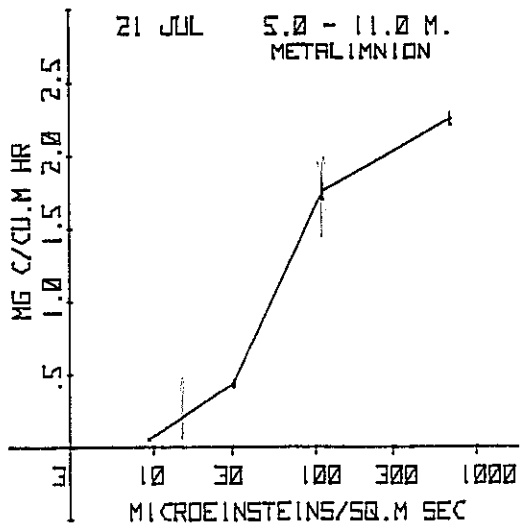

24 JUN 10.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


6 JUL 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

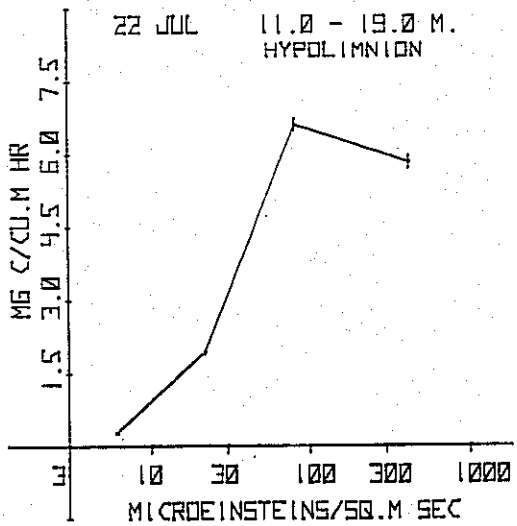

8 JUL 4.5 - 10.0 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

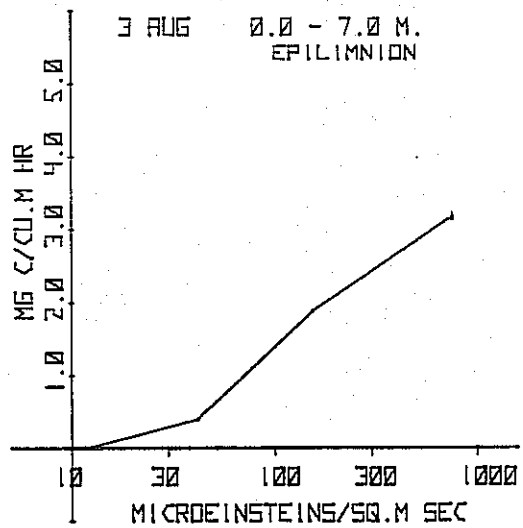

9 JUL 10.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

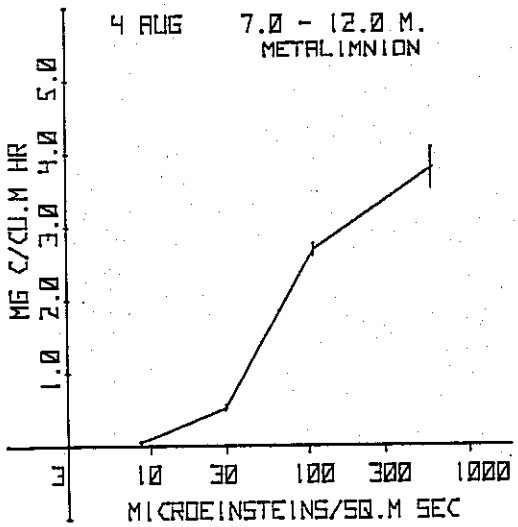

20 JUL 0.0 - 5.0 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

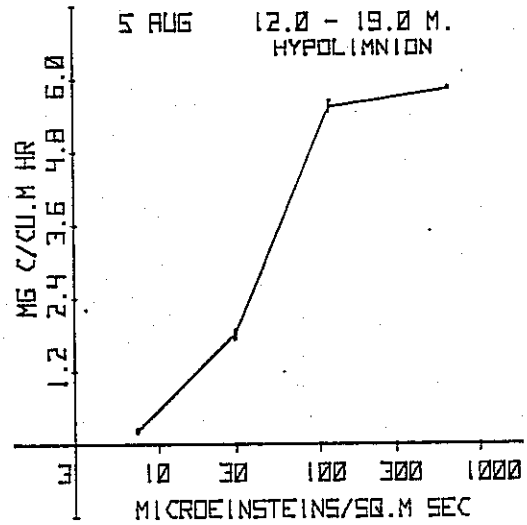

21 JUL 5.0 - 11.0 M.
METALIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

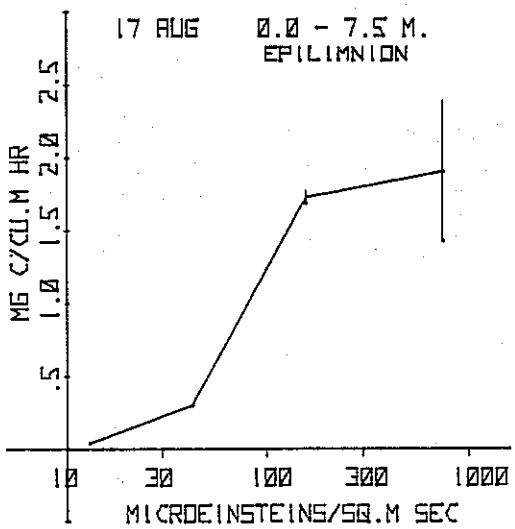
LAKE 224

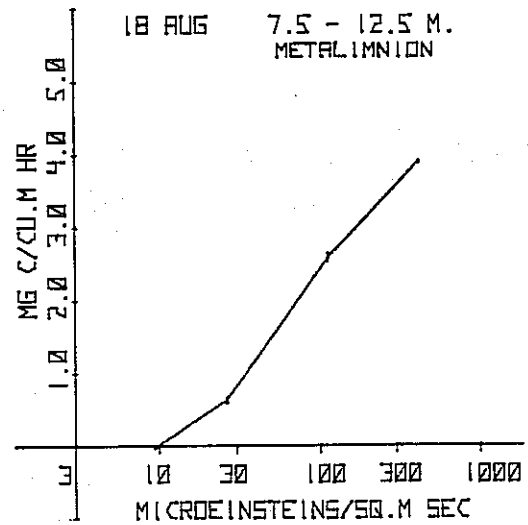

22 JUL 11.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


3 AUG 0.0 - 7.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

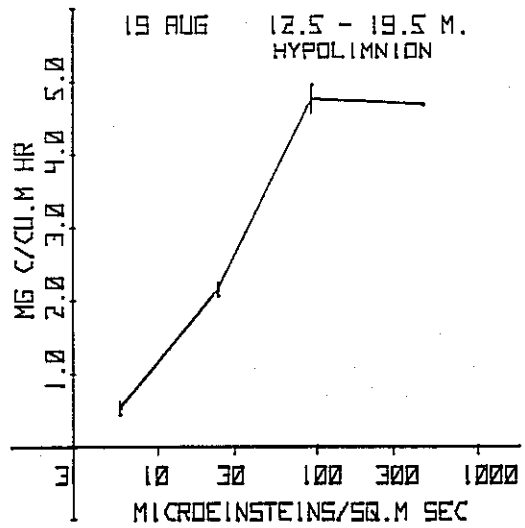

4 AUG 7.0 - 12.0 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

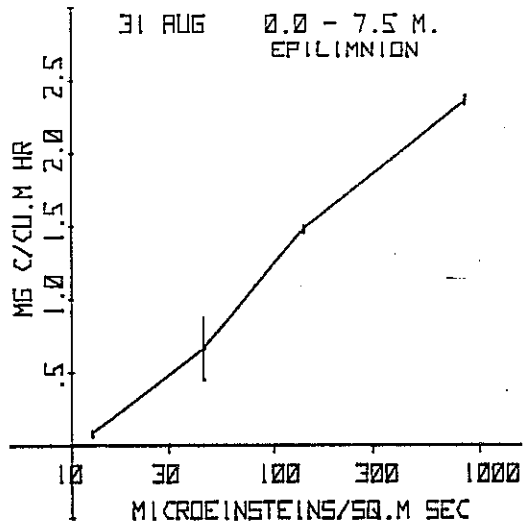

5 AUG 12.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

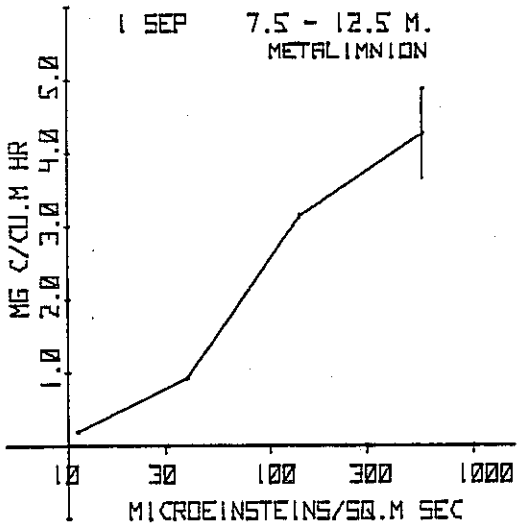

17 AUG 0.0 - 7.5 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

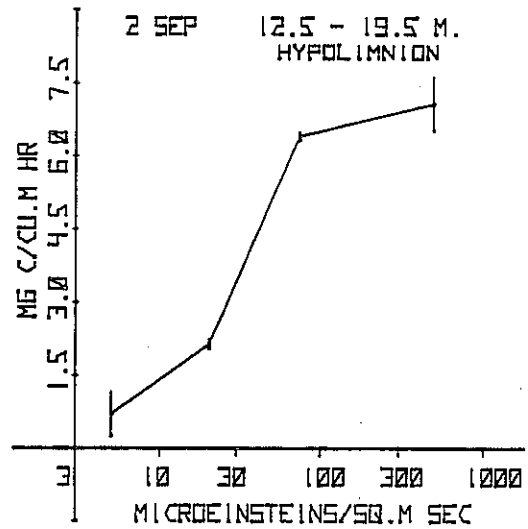

18 AUG 7.5 - 12.5 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

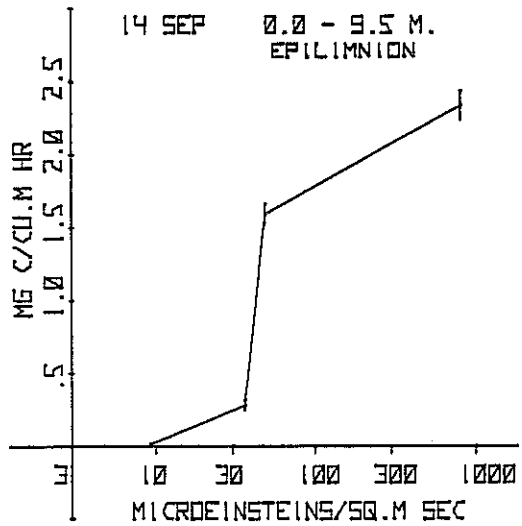
LAKE 224

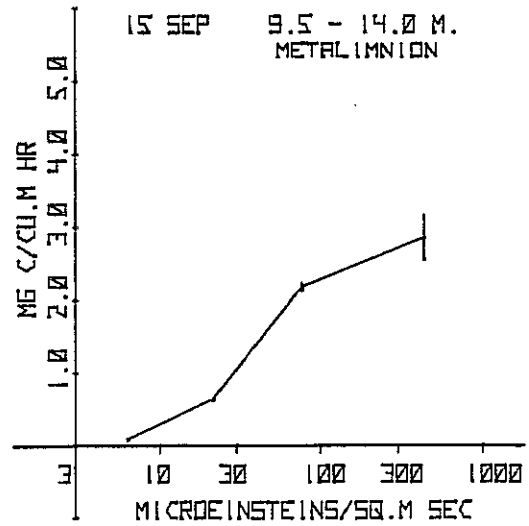

19 AUG 12.5 - 19.5 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


31 AUG 0.0 - 7.5 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

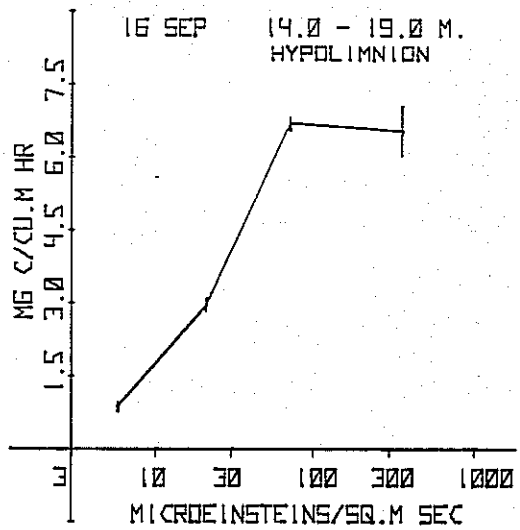

1 SEP 7.5 - 12.5 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

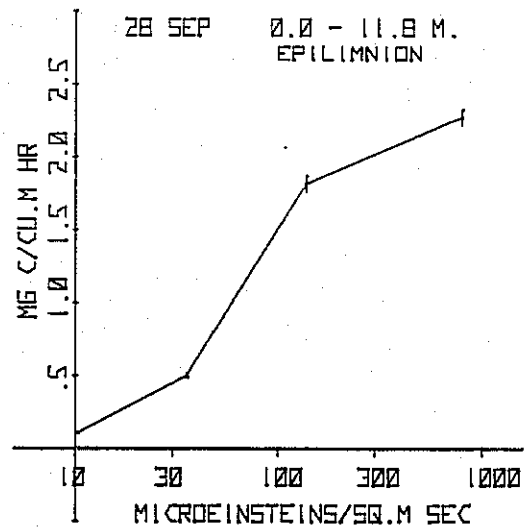

2 SEP 12.5 - 19.5 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

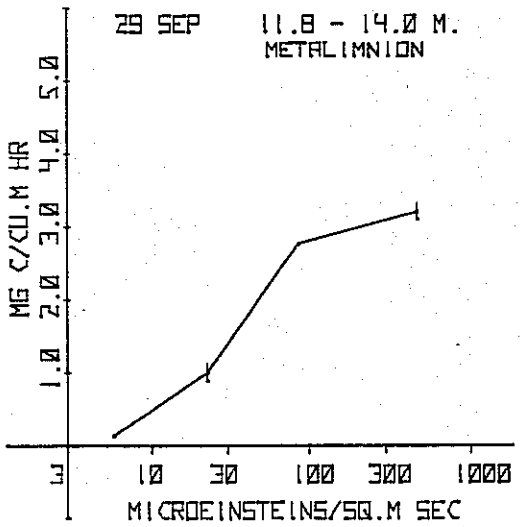

14 SEP 0.0 - 9.5 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

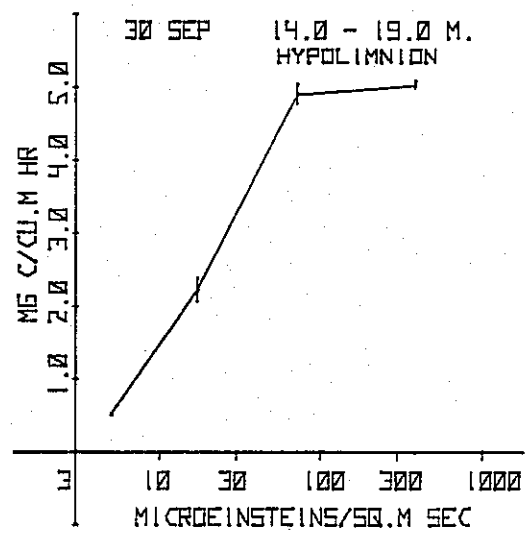

15 SEP 9.5 - 14.0 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

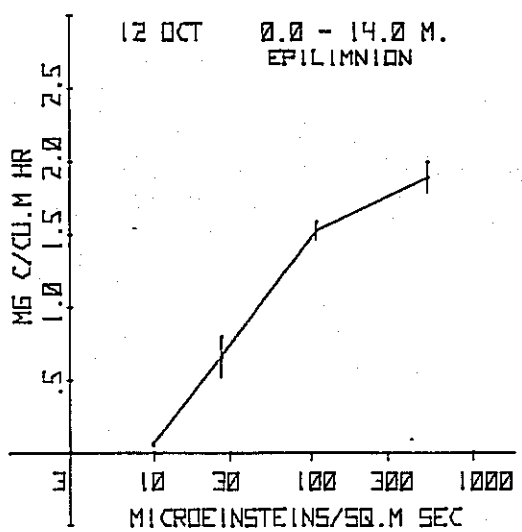
LAKE 224

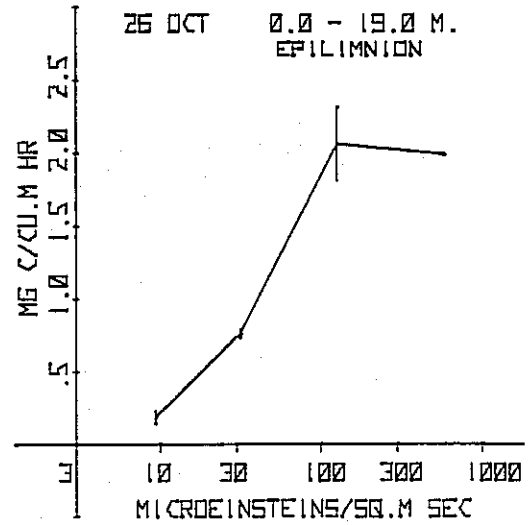

16 SEP 14.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


28 SEP 0.0 - 11.8 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

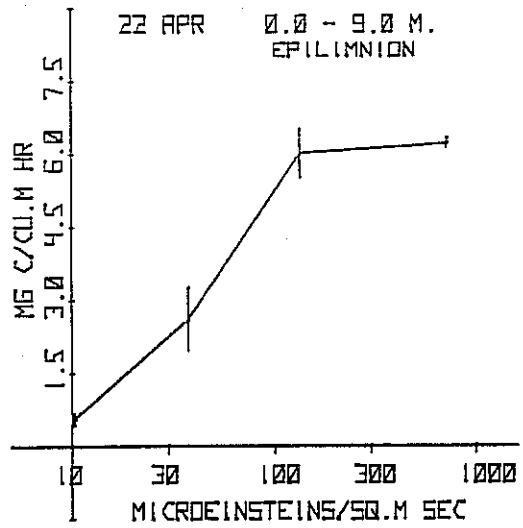

29 SEP 11.8 - 14.0 M.
METALIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

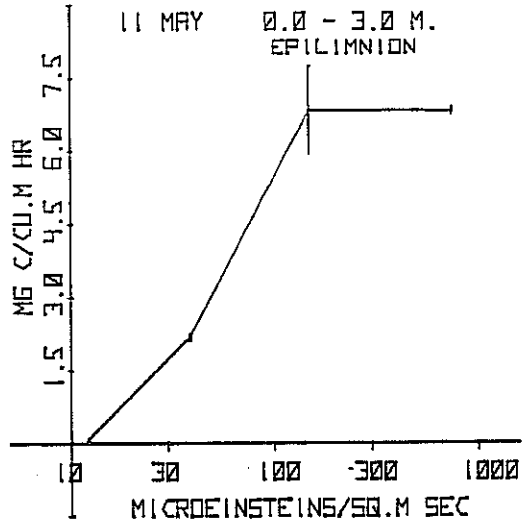

30 SEP 14.0 - 19.0 M.
HYPOLIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

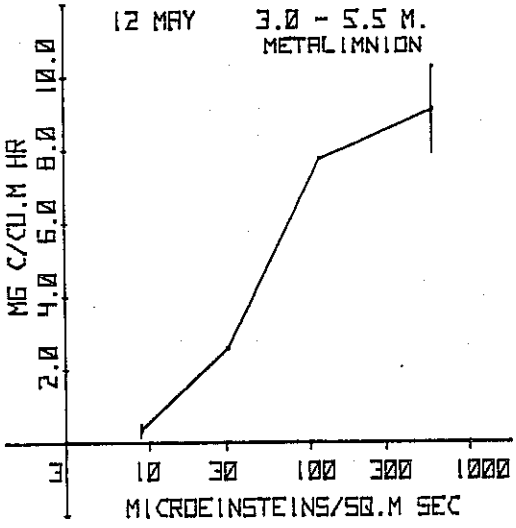

12 OCT 0.0 - 14.0 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

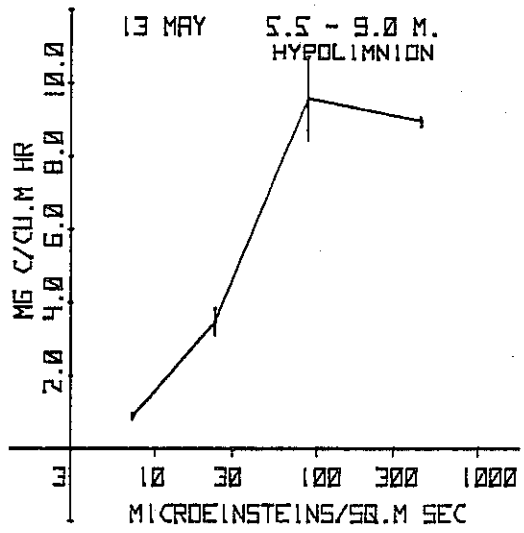

26 OCT 0.0 - 19.0 M.
EPILIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

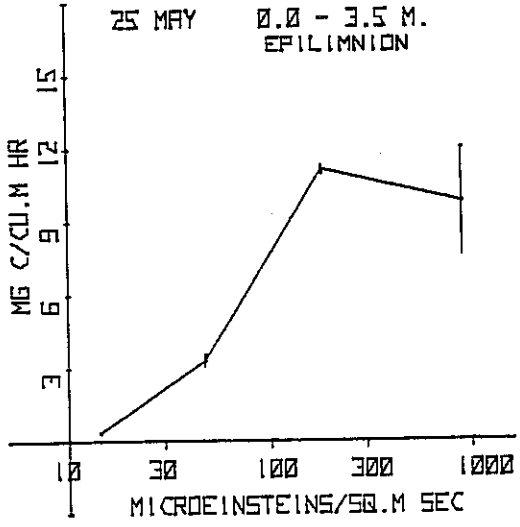
LAKE 226NE

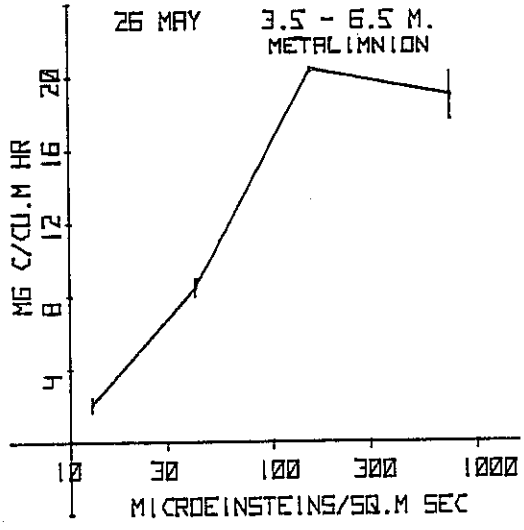

22 APR 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 MAY 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

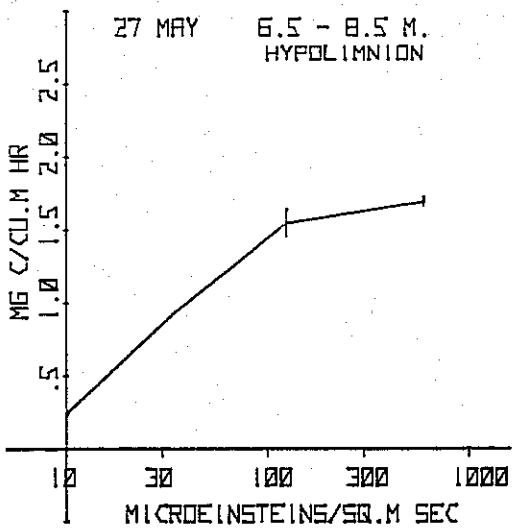

12 MAY 3.0 - 5.5 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

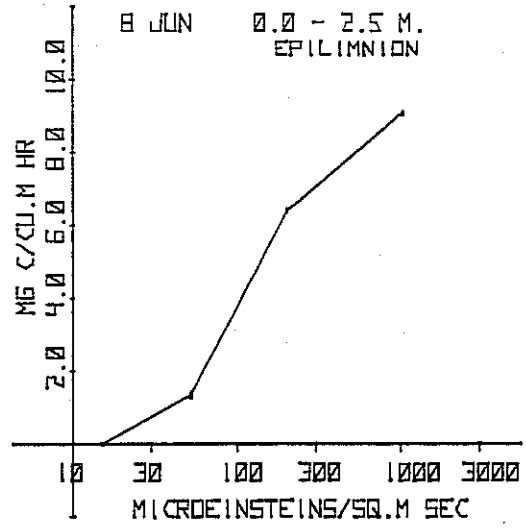

13 MAY 5.5 - 9.0 M.
HYPOLIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

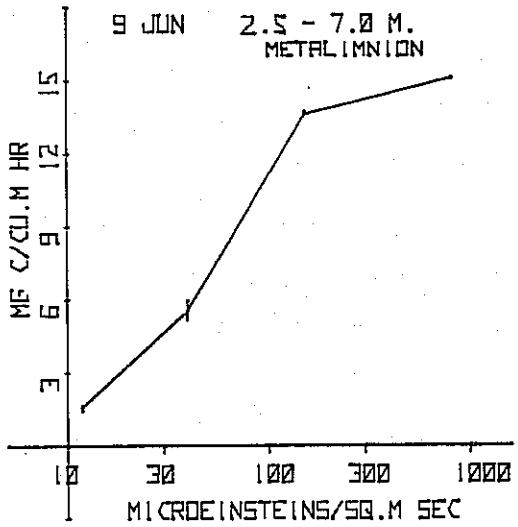

25 MAY 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

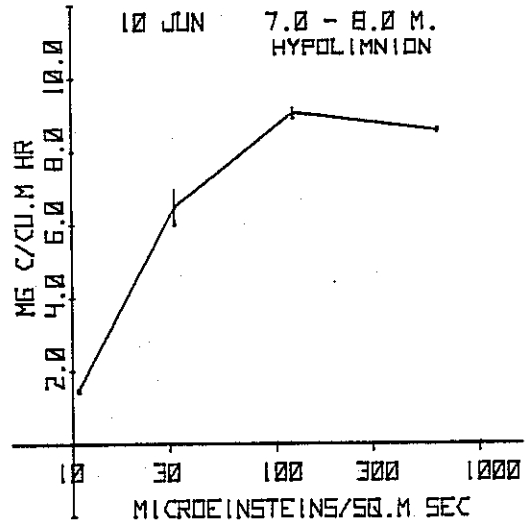

26 MAY 3.5 - 6.5 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

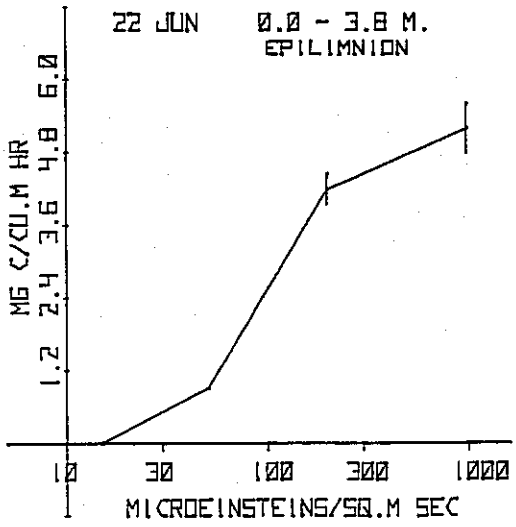
LAKE 226NE

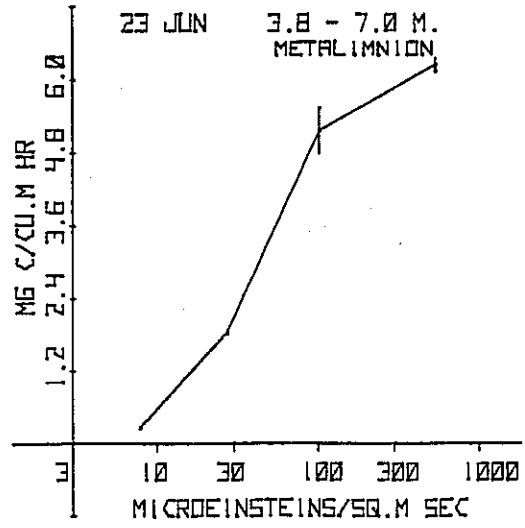

27 MAY 6.5 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


8 JUN 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

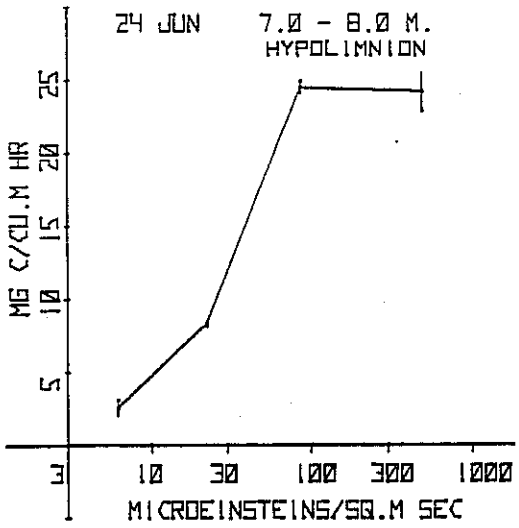

9 JUN 2.5 - 7.0 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

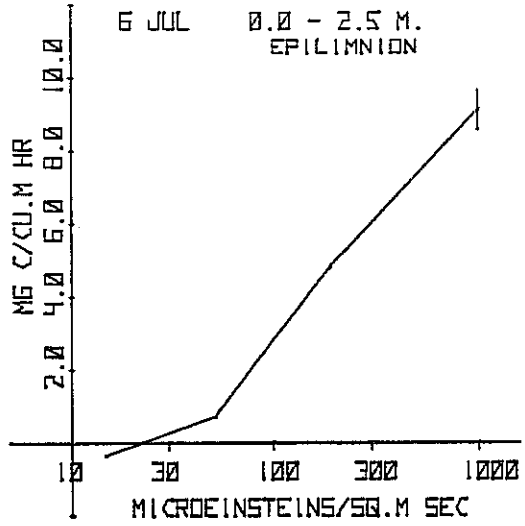

10 JUN 7.0 - 8.0 M.
HYPOLIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

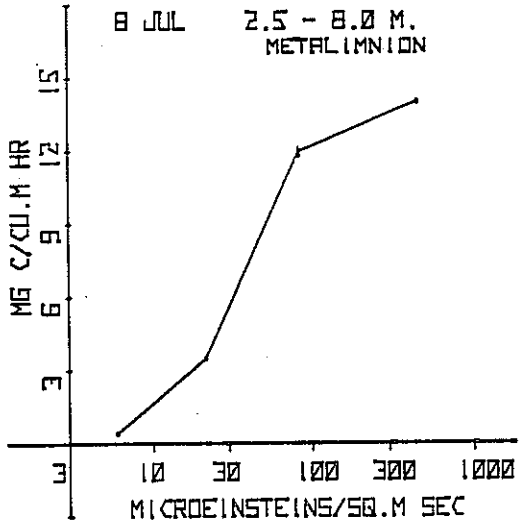

22 JUN 0.0 - 3.8 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

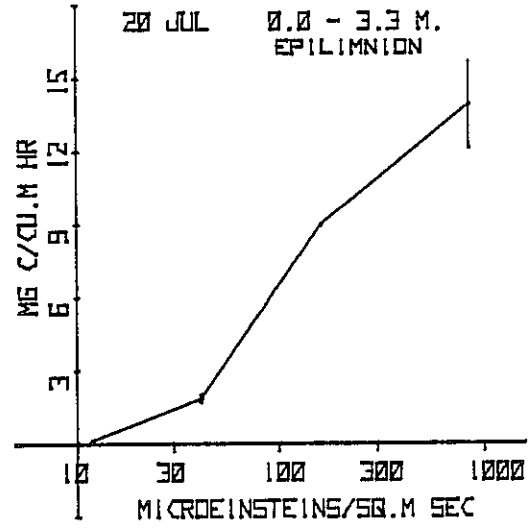

23 JUN 3.8 - 7.0 M.
METALIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

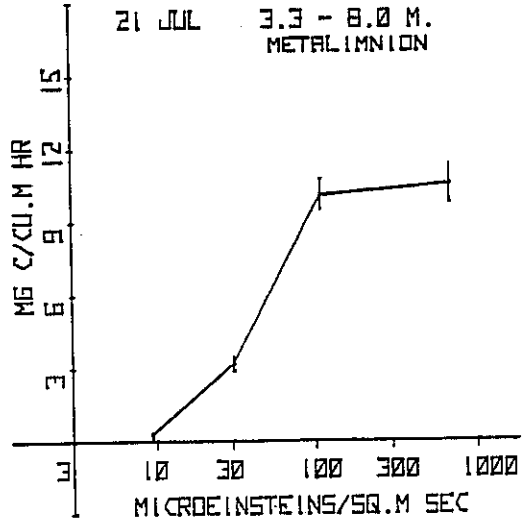
LAKE 226NE

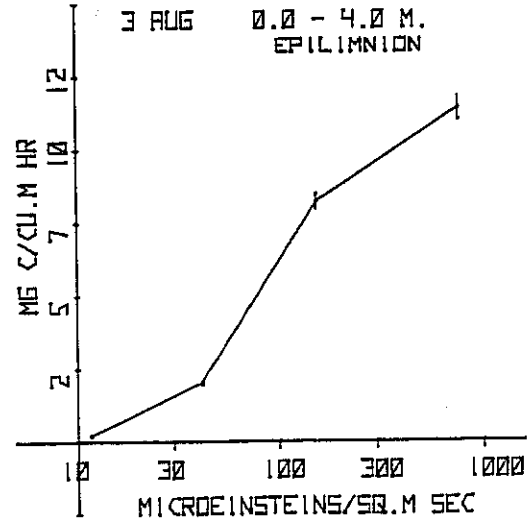

24 JUN 7.0 - 8.0 M.
HYPOLIMNION
MG C/CU.M HR
5
10
15
20
25
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


6 JUL 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

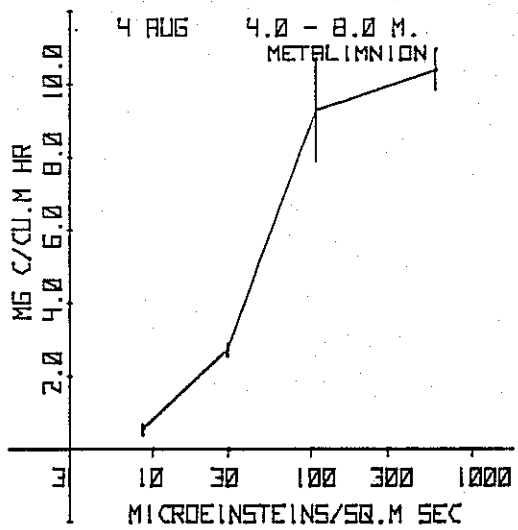

8 JUL 2.5 - 8.0 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

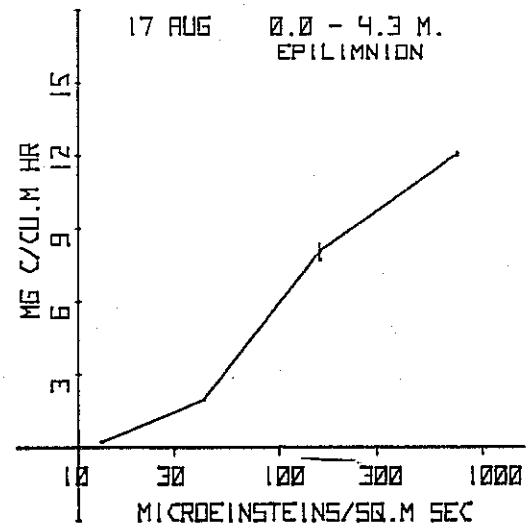

20 JUL 0.0 - 3.3 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

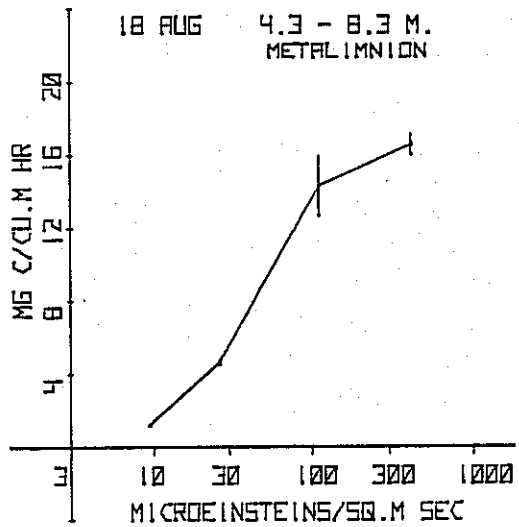

21 JUL 3.3 - 8.0 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

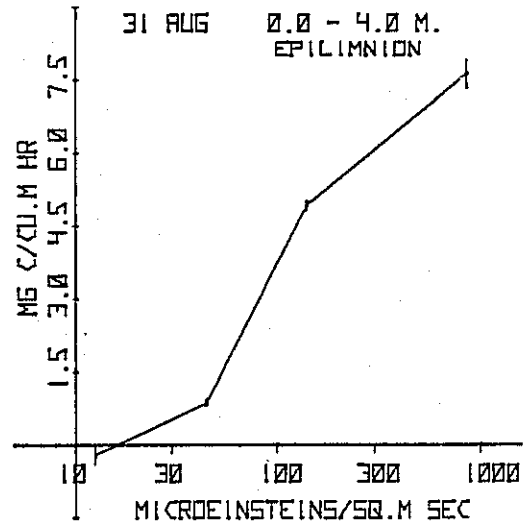

3 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2
5
7
10
12
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

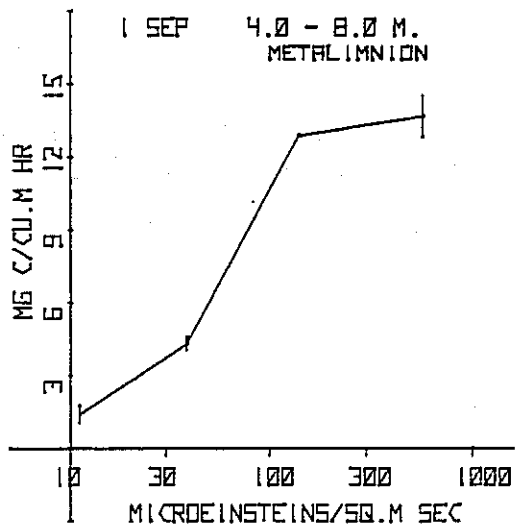
LAKE 226NE

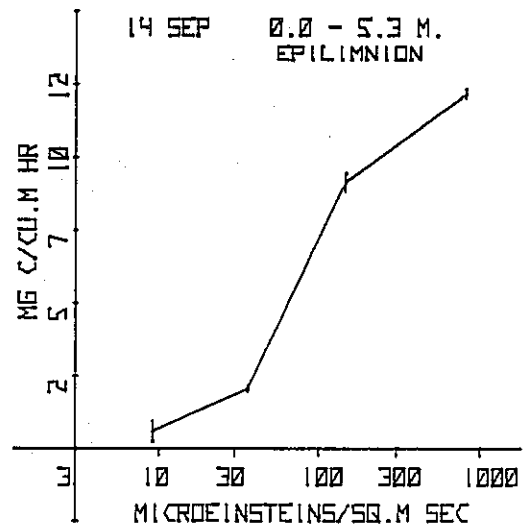

4 AUG 4.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


17 AUG 0.0 - 4.3 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

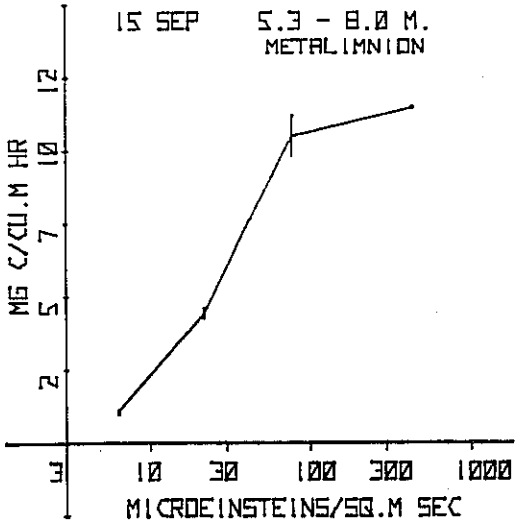

18 AUG 4.3 - 8.3 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

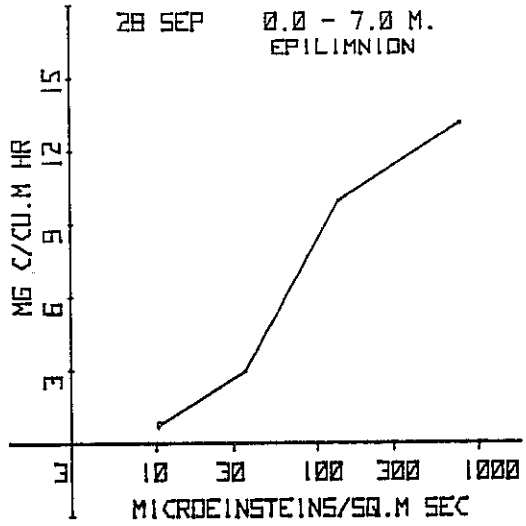

31 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

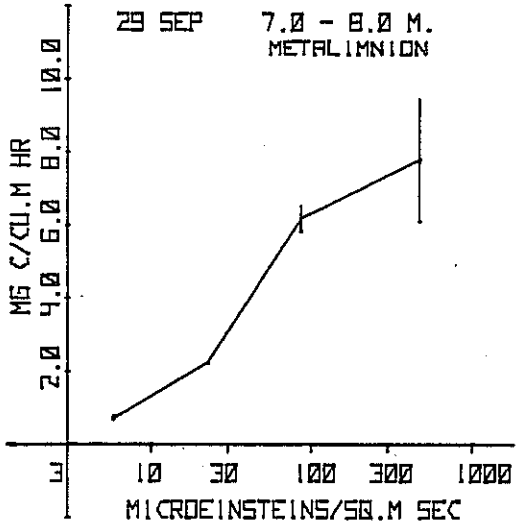

1 SEP 4.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

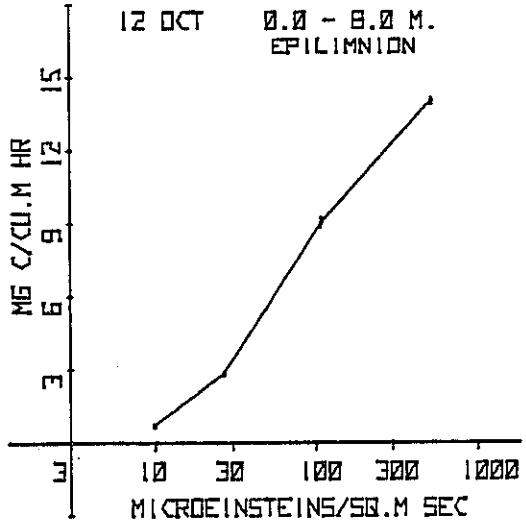

14 SEP 0.0 - 5.3 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

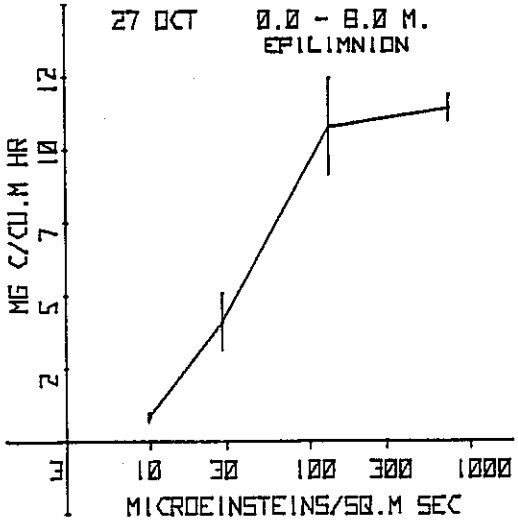
LAKE 226NE


15 SEP 5.3 - 8.0 M.
METALIMNION
MG C/CU.M HR
3
2
5
7
10
12
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

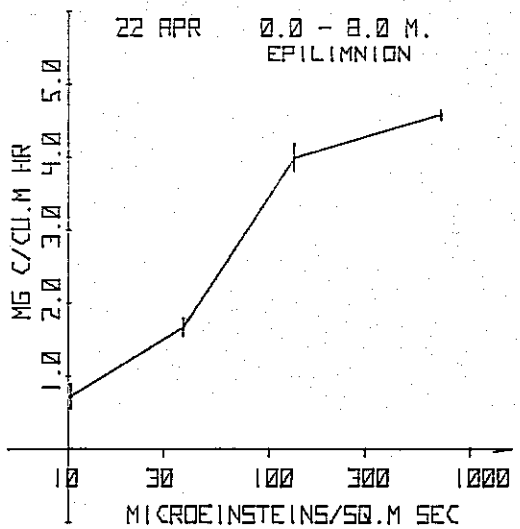

28 SEP 0.0 - 7.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

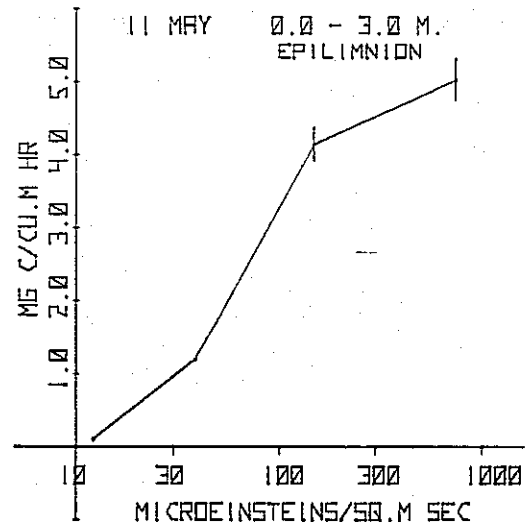

29 SEP 7.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

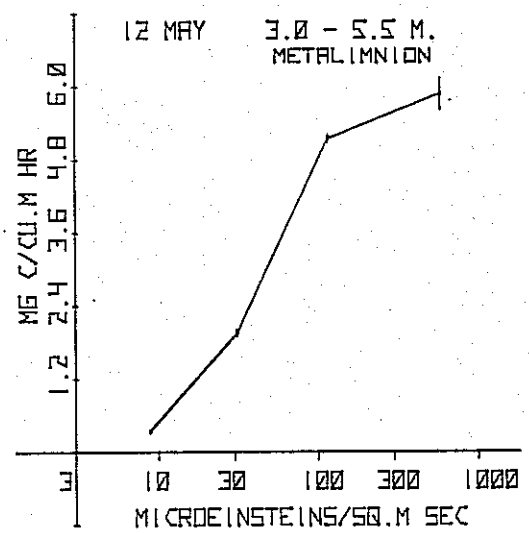

12 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

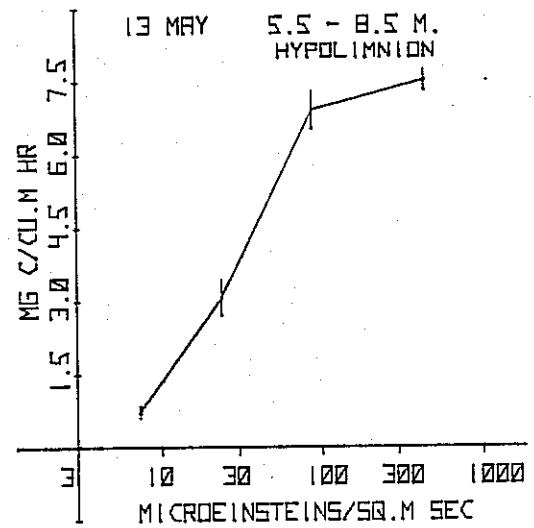

27 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
2
5
7
10
12
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

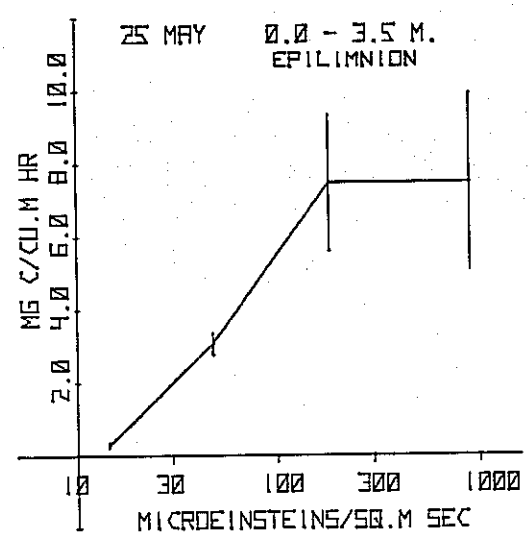
LAKE 2265W

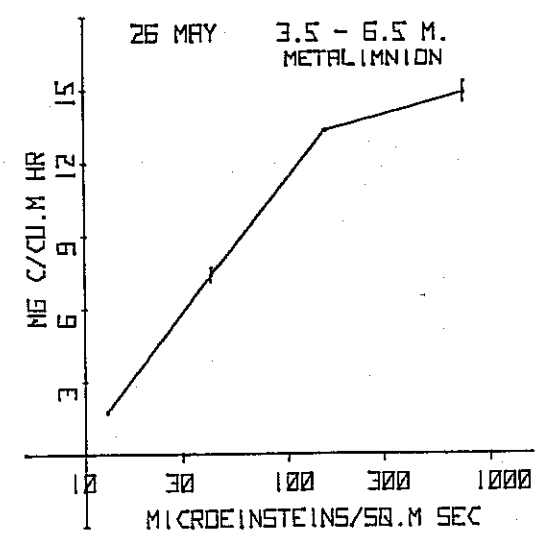

22 APR 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 MAY 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

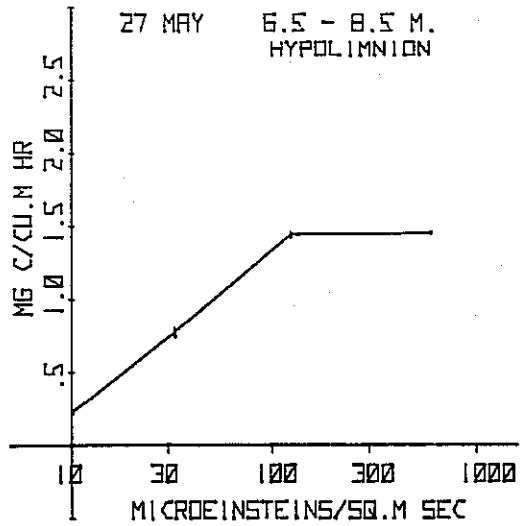

12 MAY 3.0 - 5.5 M.
METALIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

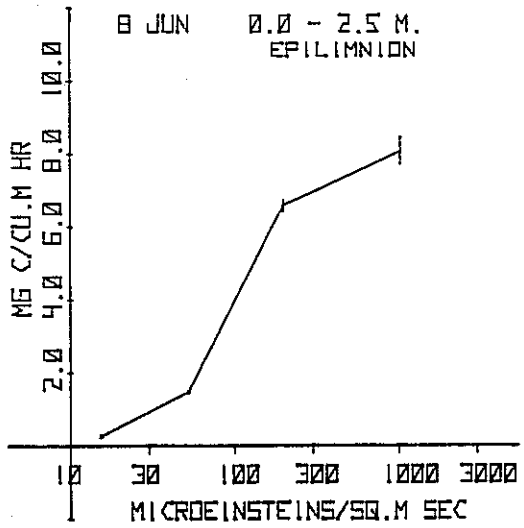

13 MAY 5.5 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

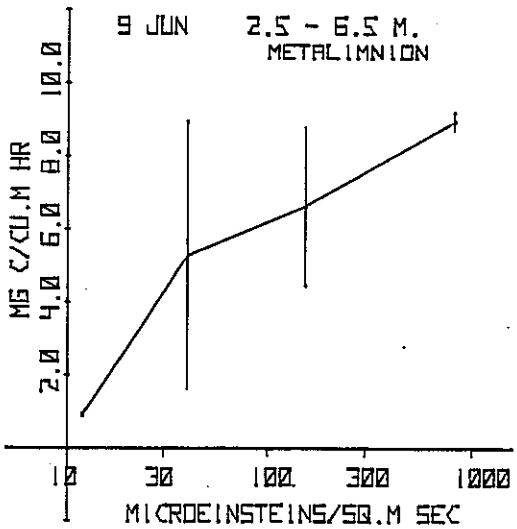

25 MAY 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

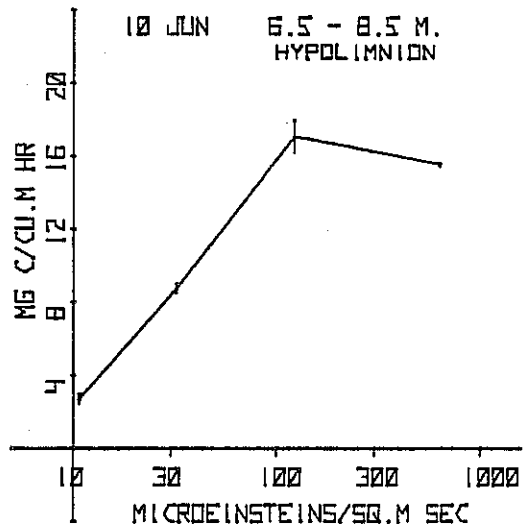

26 MAY 3.5 - 6.5 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

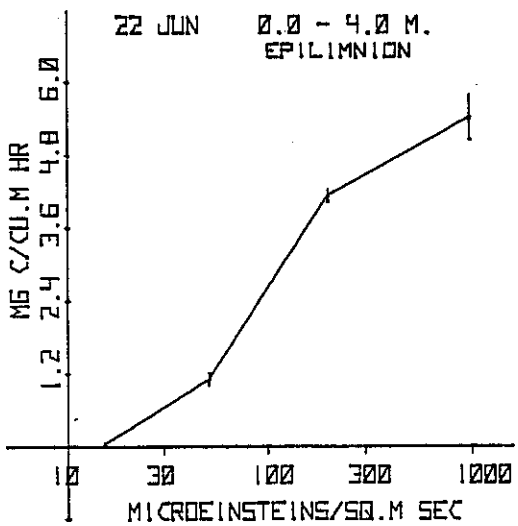
LAKE 2265W

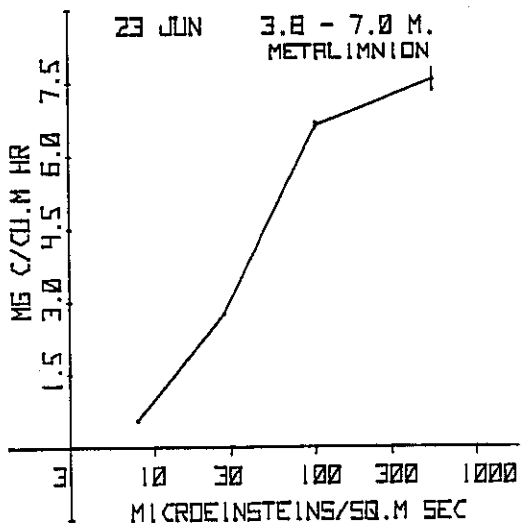

27 MAY 6.5 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
.5
1.0
1.5
2.0
2.5
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


8 JUN 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
3000
MICROEINSTEINS/SQ.M SEC

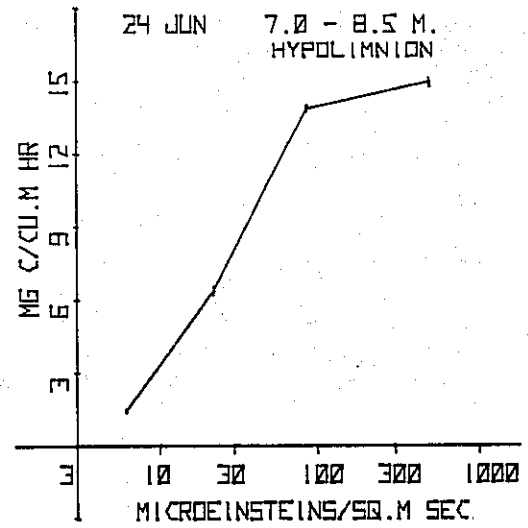

9 JUN 2.5 - 6.5 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

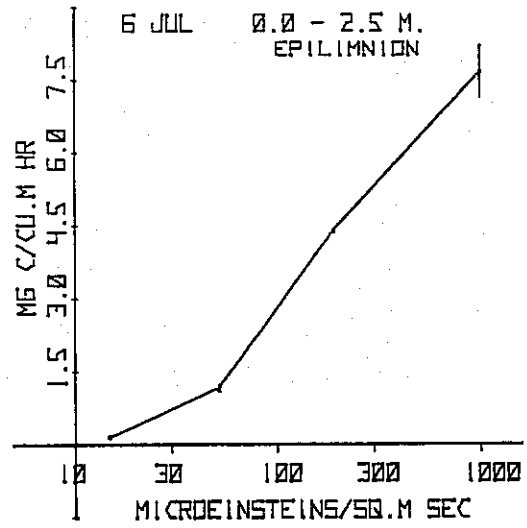

10 JUN 6.5 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

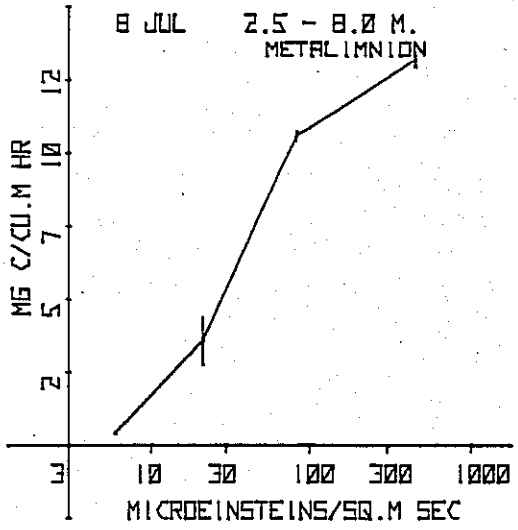

22 JUN 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
1.2
2.4
3.6
4.8
6.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

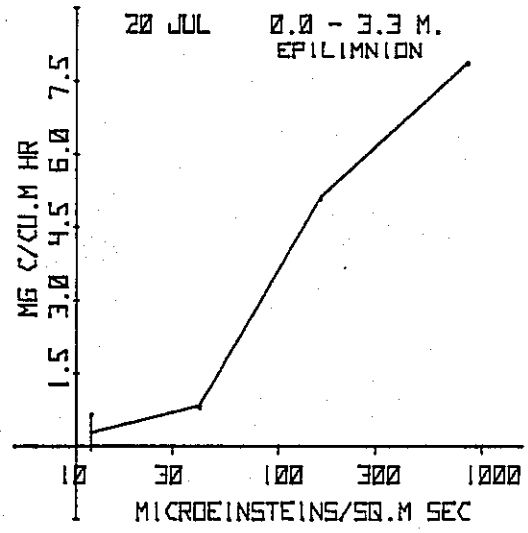

23 JUN 3.8 - 7.0 M.
METALIMNION
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

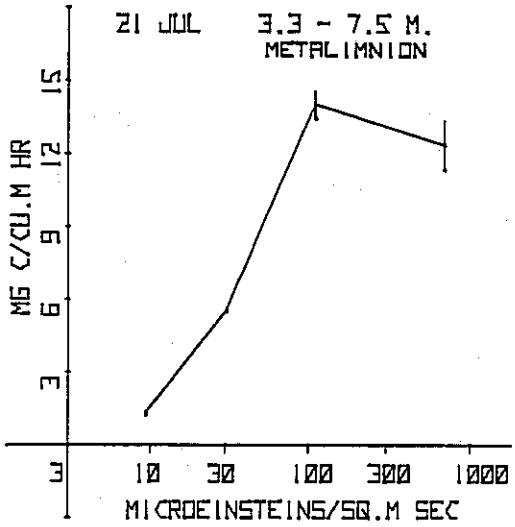
LAKE 2265W

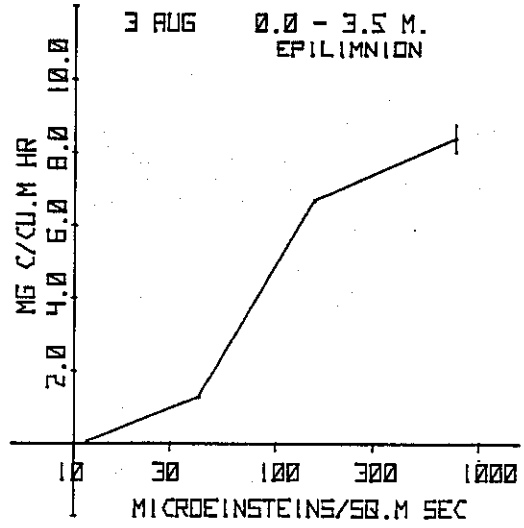

24 JUN 7.0 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


6 JUL 0.0 - 2.5 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

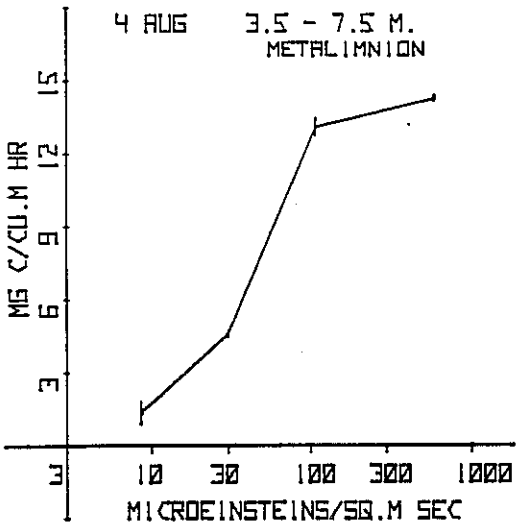

8 JUL 2.5 - 8.0 M.
METALIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

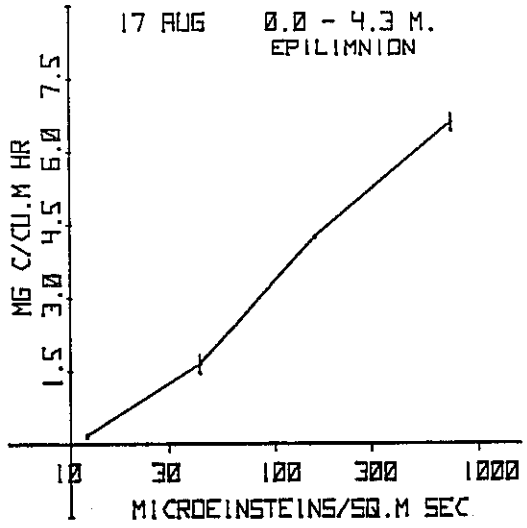

20 JUL 0.0 - 3.3 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

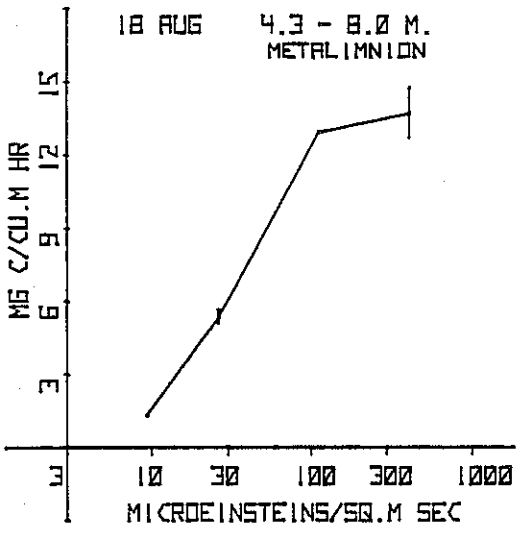

21 JUL 3.3 - 7.5 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

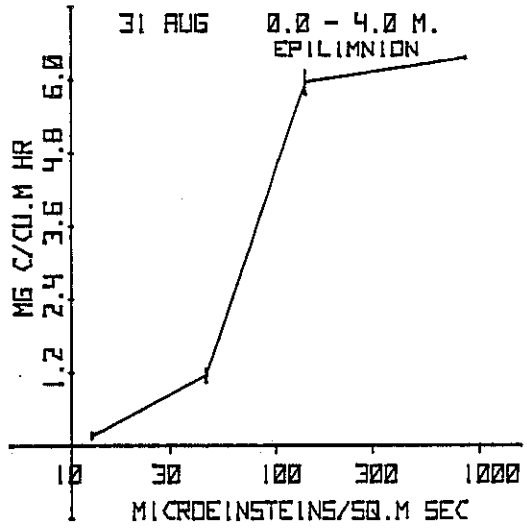

3 AUG 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

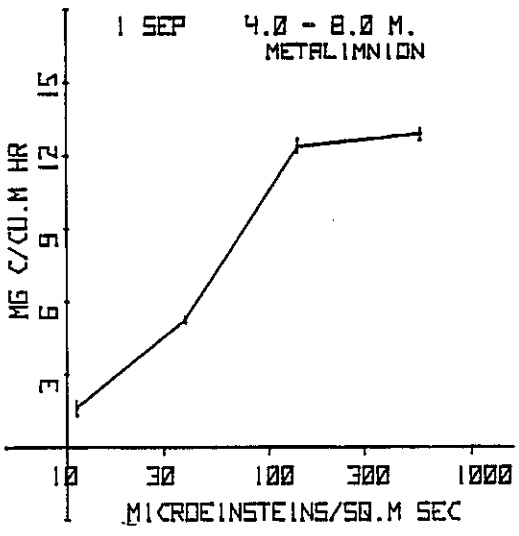
LAKE 2265W

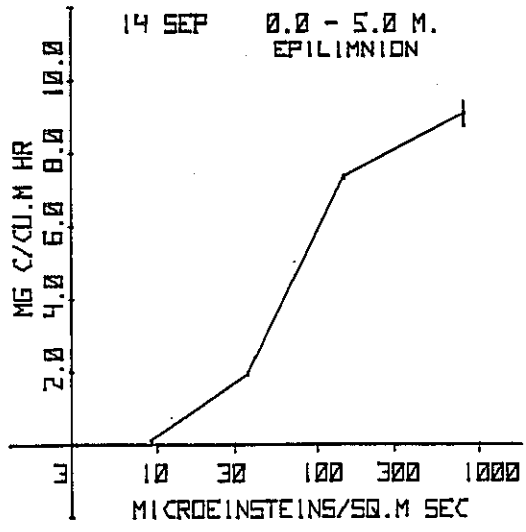

4 AUG 3.5 - 7.5 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


17 AUG 0.0 - 4.3 M.
EPILIMNION
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

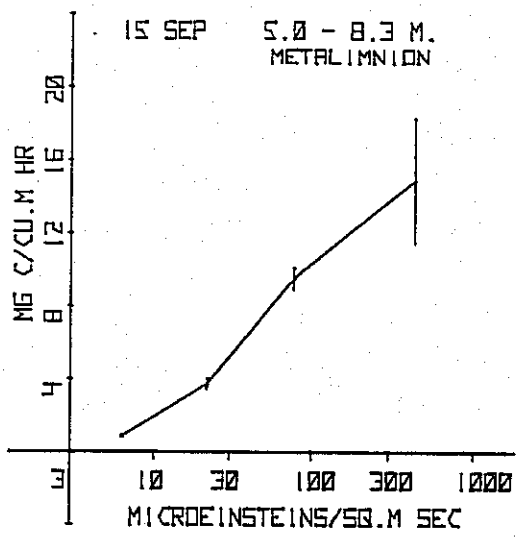

18 AUG 4.3 - 8.0 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

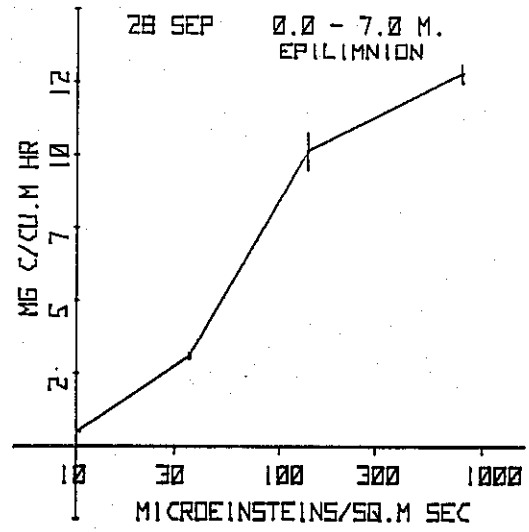

31 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
1.2
2.4
3.6
4.8
6.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

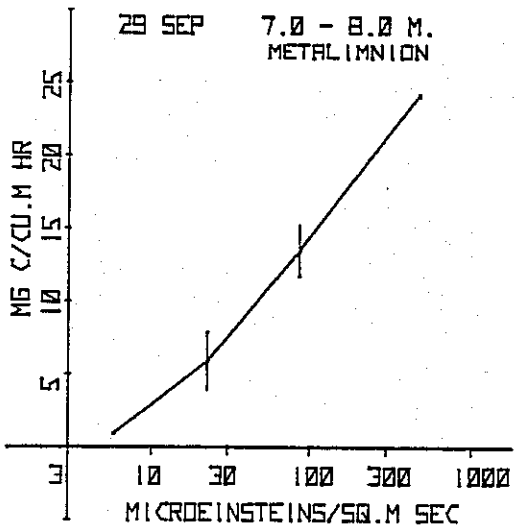

1 SEP 4.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

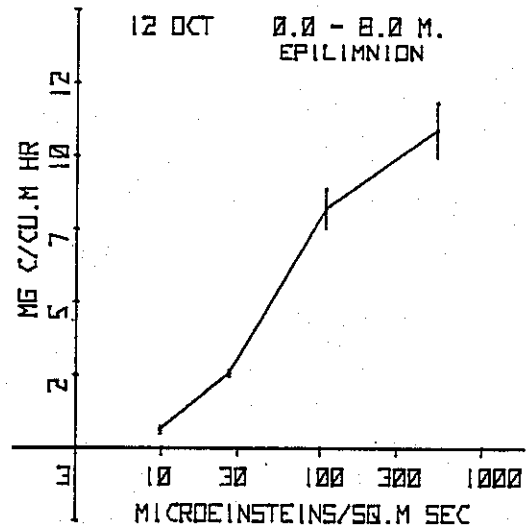

14 SEP 0.0 - 5.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

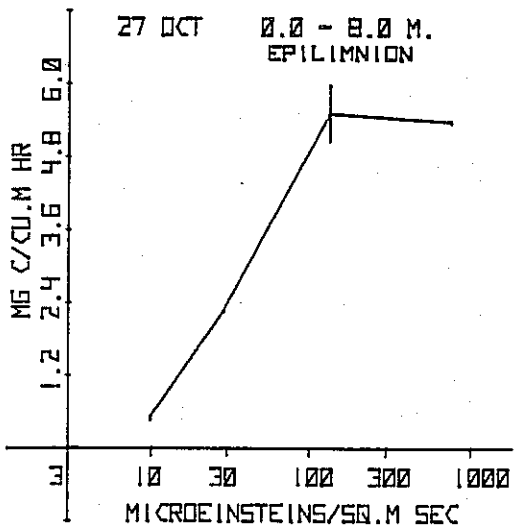
LAKE 2265W


15 SEP 5.0 - 8.3 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

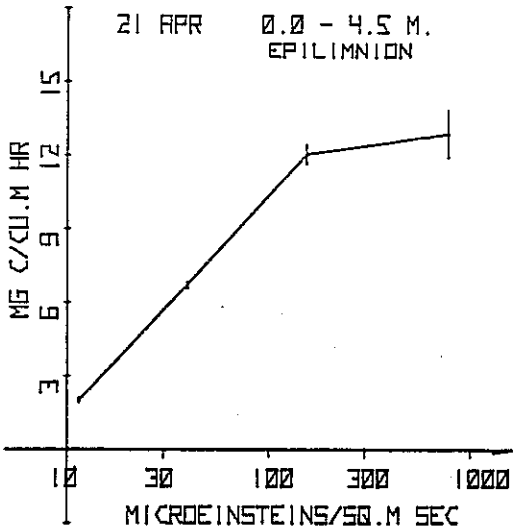

28 SEP 0.0 - 7.0 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

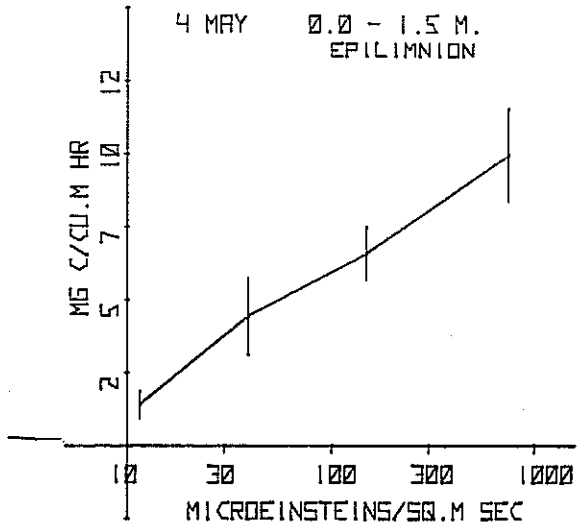

29 SEP 7.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
5 10 15 20 25
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

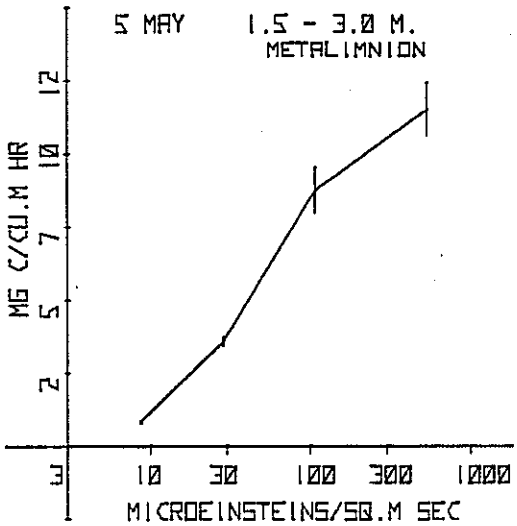

12 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

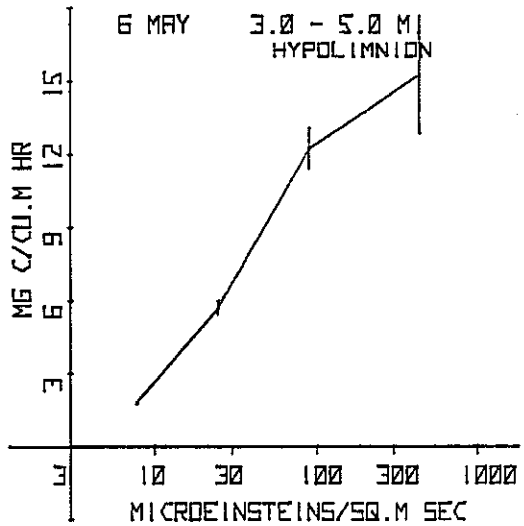

27 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

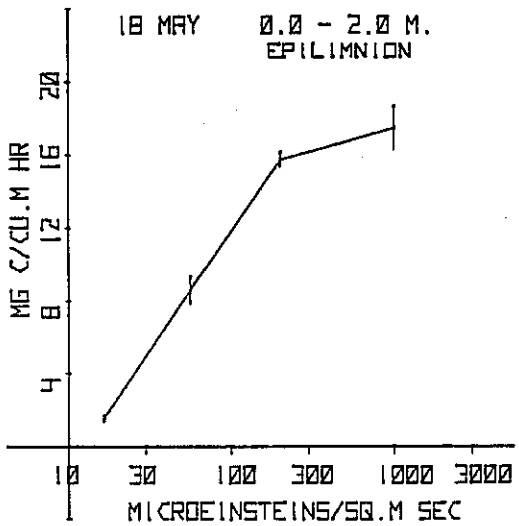
LAKE 227

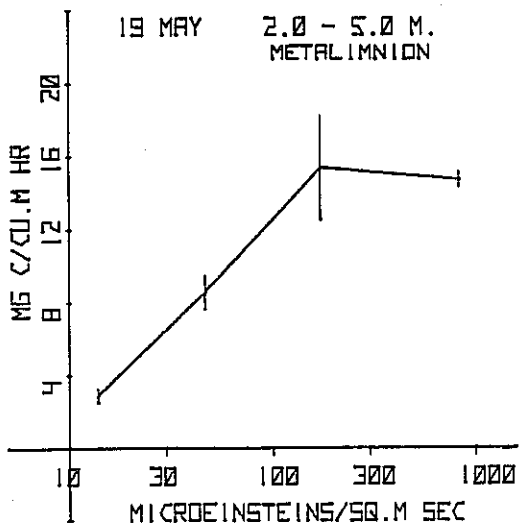

21 APR 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


4 MAY 0.0 - 1.5 M.
EPILIMNION
MG C/CU.M HR
2
5
7
10
12
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

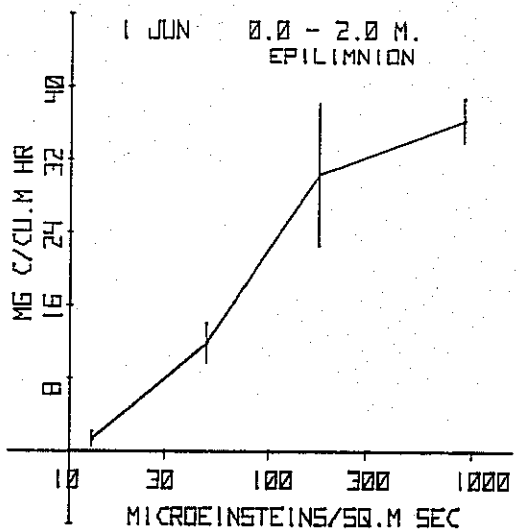

5 MAY 1.5 - 3.0 M.
METALIMNION
MG C/CU.M HR
2
5
7
10
12
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

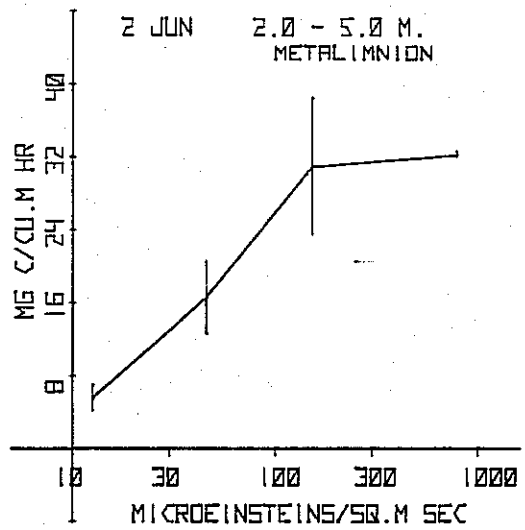

6 MAY 3.0 - 5.0 M
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

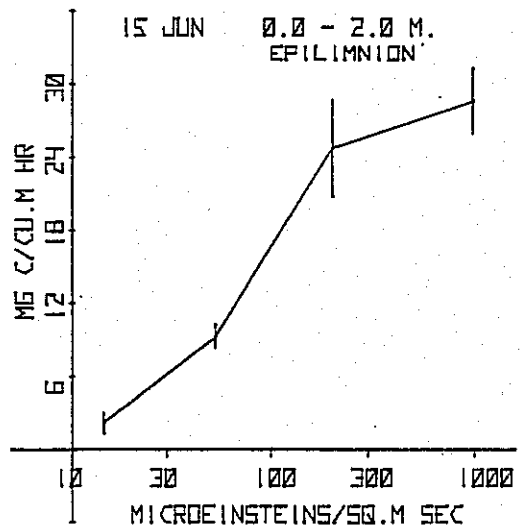

18 MAY 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
3000
MICROEINSTEINS/SQ.M SEC

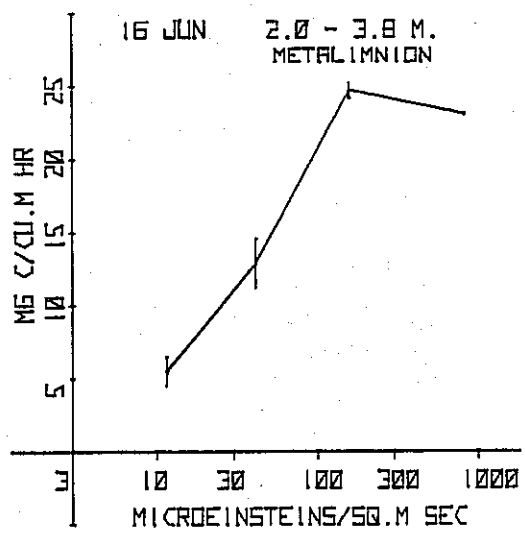

19 MAY 2.0 - 5.0 M.
METALIMNION
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

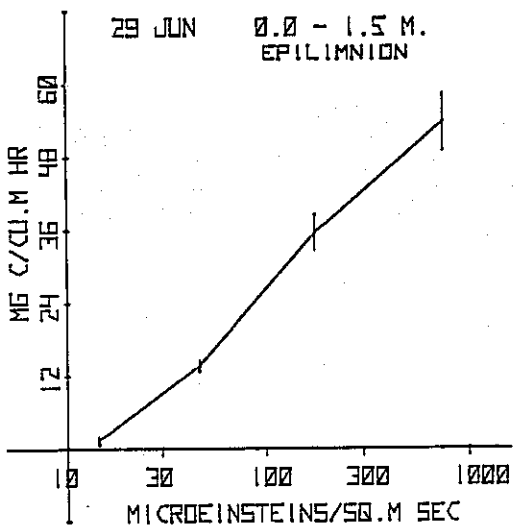
LAKE 227

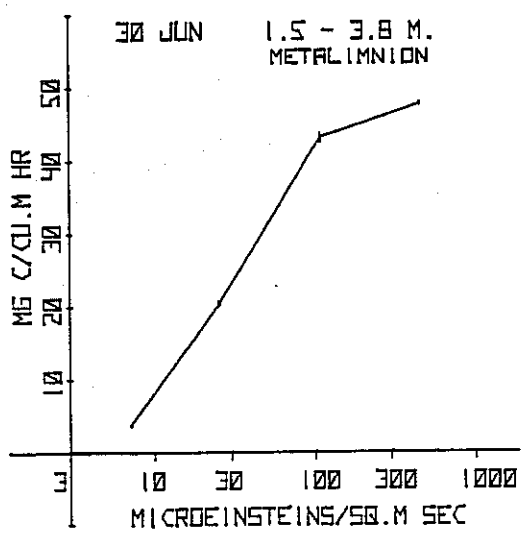

1 JUN 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
8
16
24
32
40
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


2 JUN 2.0 - 5.0 M.
METALIMNION
MG C/CU.M HR
8
16
24
32
40
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

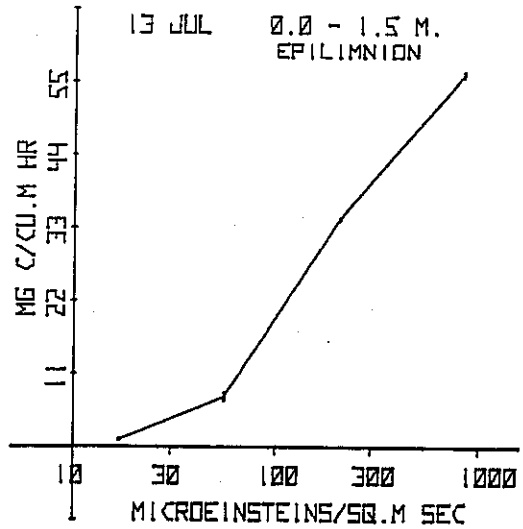

15 JUN 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
6
12
18
24
30
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

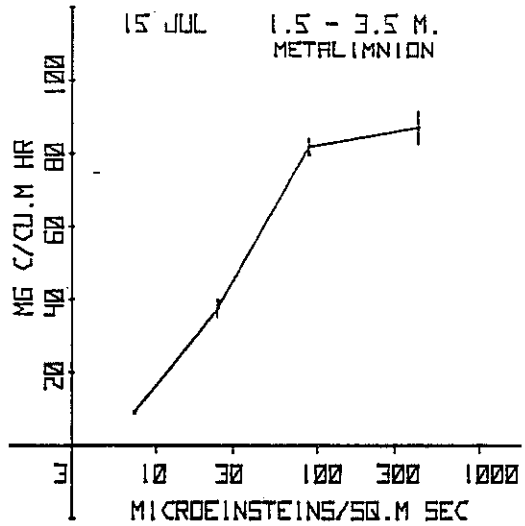

16 JUN 2.0 - 3.8 M.
METALIMNION
MG C/CU.M HR
5
10
15
20
25
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

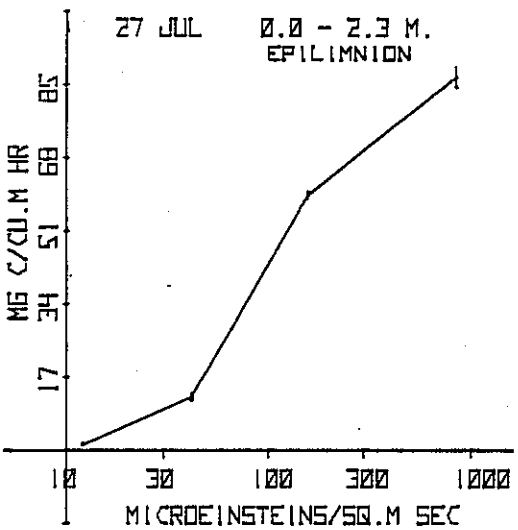

29 JUN 0.0 - 1.5 M.
EPILIMNION
MG C/CU.M HR
12
24
36
48
60
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

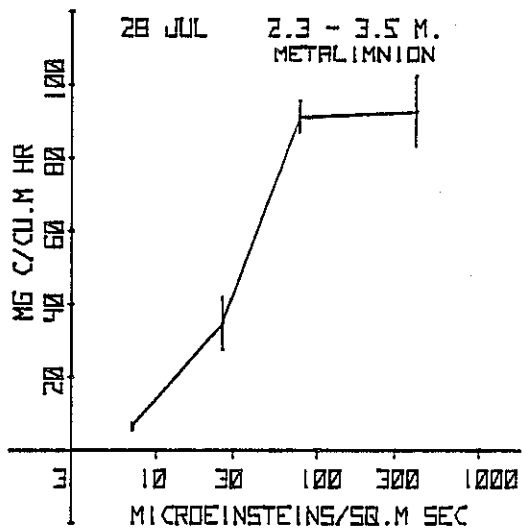

30 JUN 1.5 - 3.8 M.
METALIMNION
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

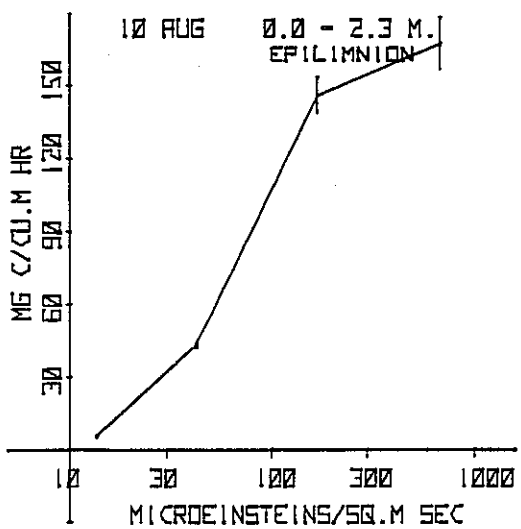
LAKE 227

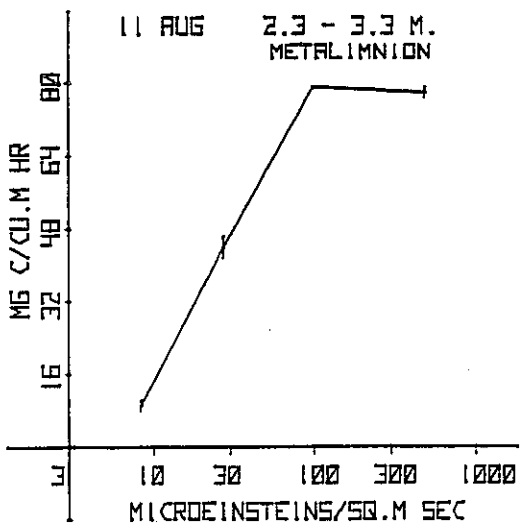

13 JUL 0.0 - 1.5 M.
EPILIMNION
MG C/CU.M HR
11
22
33
44
55
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


15 JUL 1.5 - 3.5 M.
METALIMNION
MG C/CU.M HR
20
40
60
80
100
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

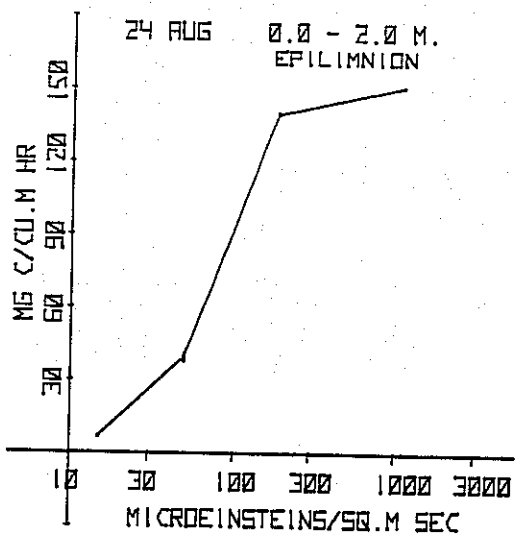

27 JUL 0.0 - 2.3 M.
EPILIMNION
MG C/CU.M HR
17
34
51
68
85
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

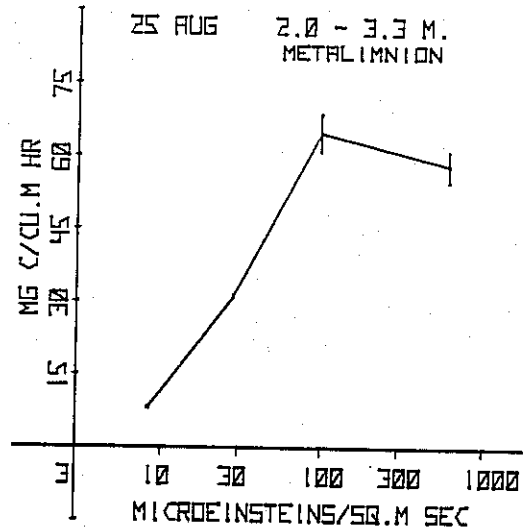

28 JUL 2.3 - 3.5 M.
METALIMNION
MG C/CU.M HR
20
40
60
80
100
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

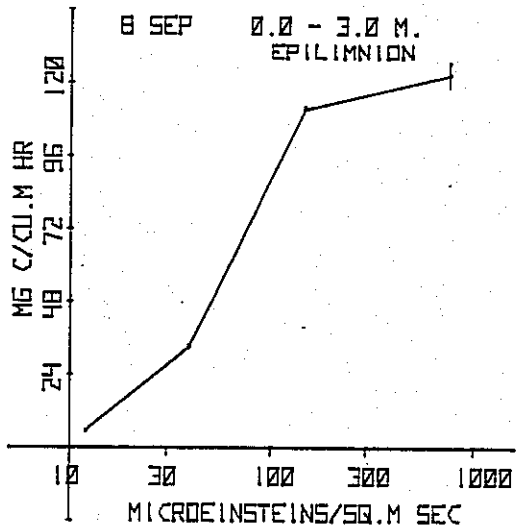

10 AUG 0.0 - 2.3 M.
EPILIMNION
MG C/CU.M HR
30
60
90
120
150
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

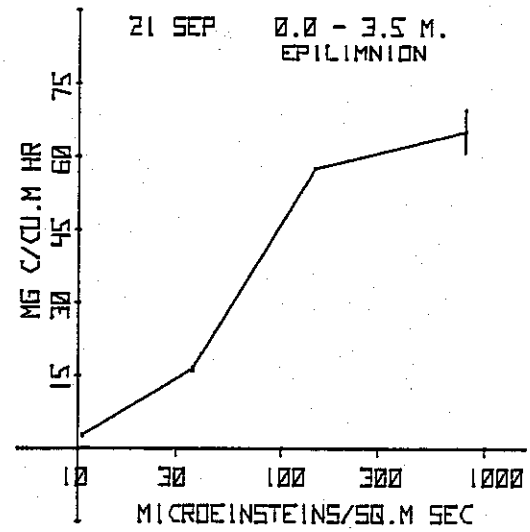

11 AUG 2.3 - 3.3 M.
METALIMNION
MG C/CU.M HR
16
32
48
64
80
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

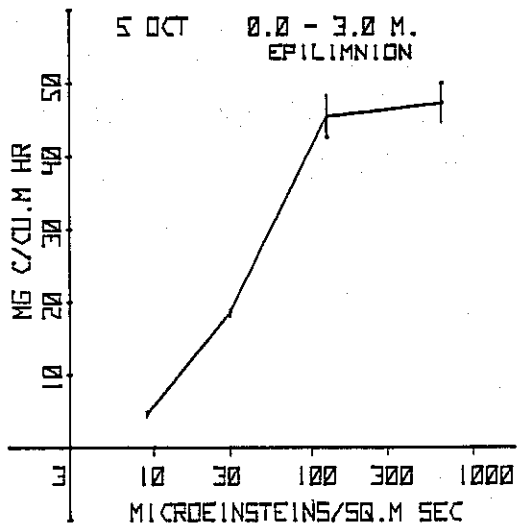
LAKE 227

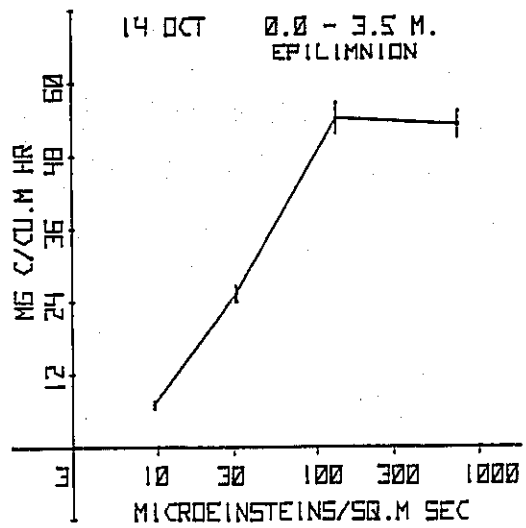

24 AUG 0.0 - 2.0 M.
EPILIMNION
MG C/CU.M HR
30 60 90 120 150
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC


25 AUG 2.0 - 3.3 M.
METALIMNION
MG C/CU.M HR
15 30 45 60 75
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

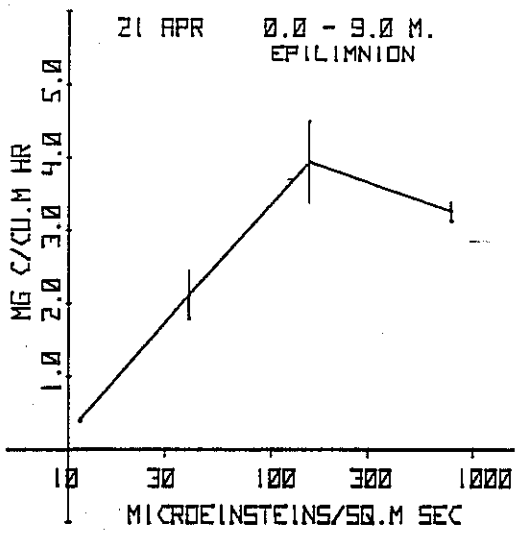

8 SEP 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
24 48 72 96 120
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

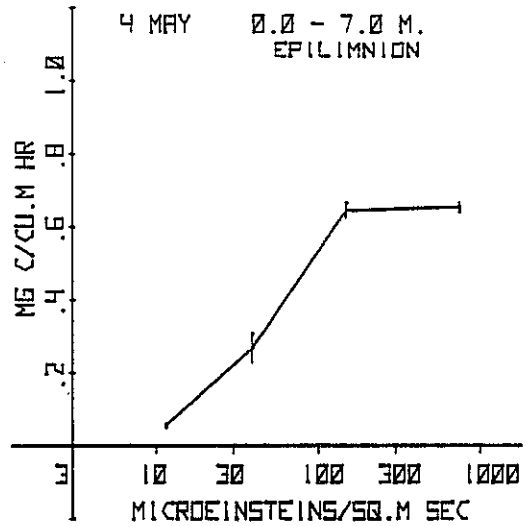

21 SEP 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
15 30 45 60 75
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

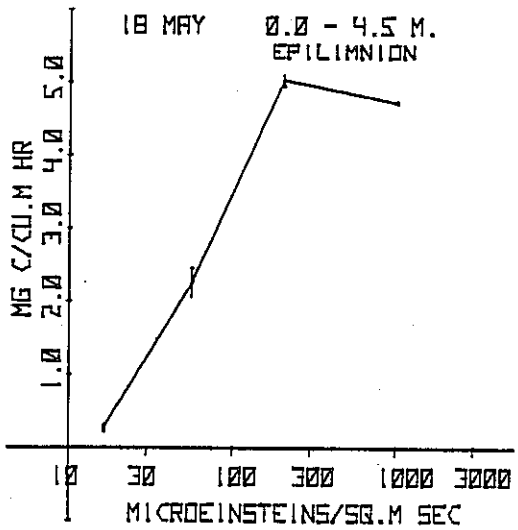

5 OCT 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
10 20 30 40 50
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

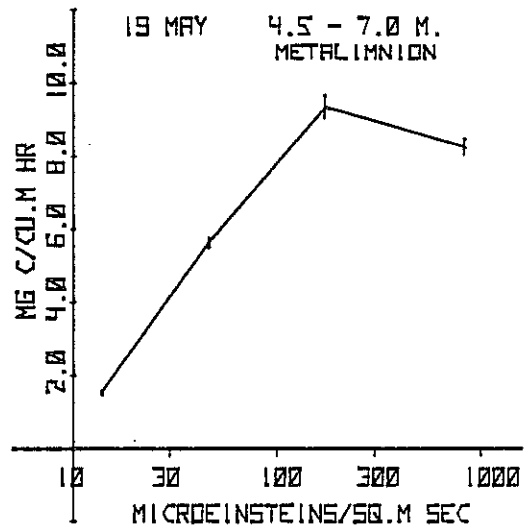

14 OCT 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
12 24 36 48 60
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

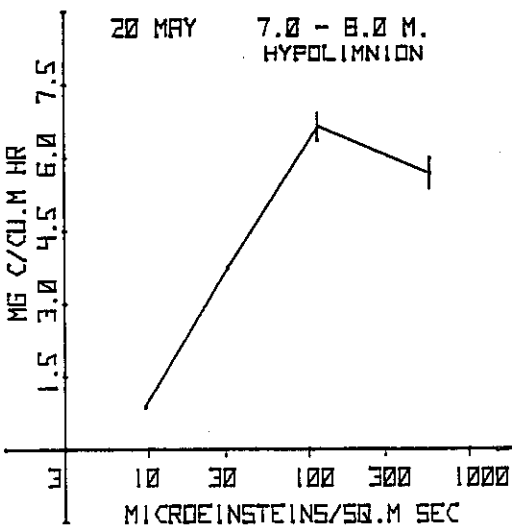
LAKE 239

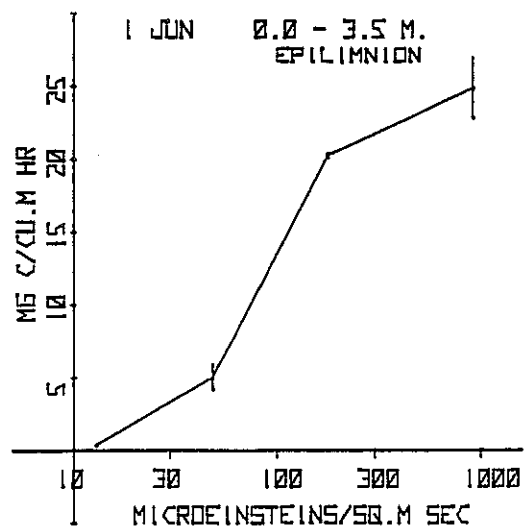

21 APR 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 MAY 0.0 - 7.0 M.
EPILIMNION
MG C/CU.M HR
.2 .4 .6 .8 1.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

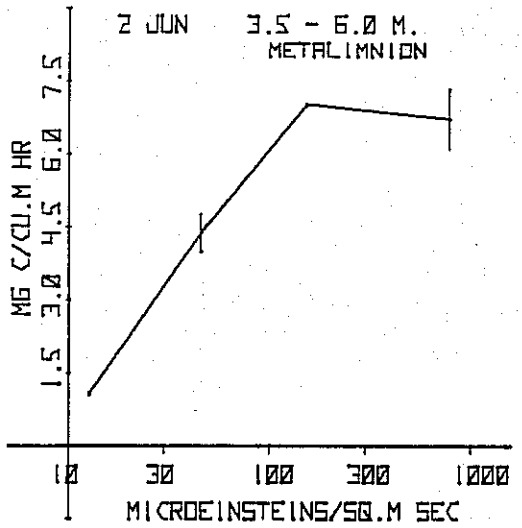

18 MAY 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

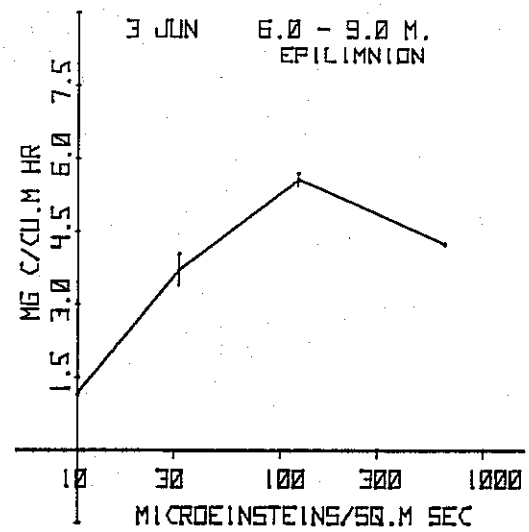

19 MAY 4.5 - 7.0 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

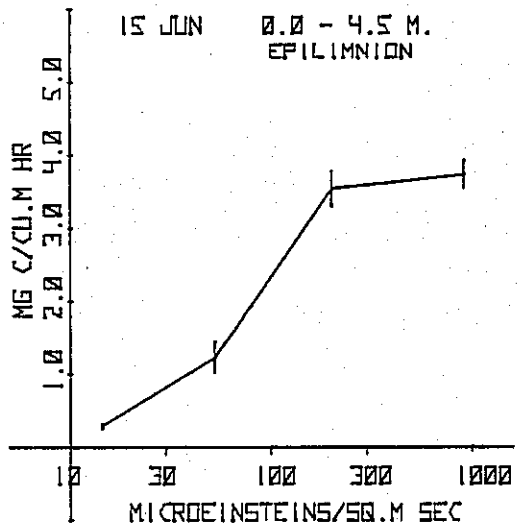

20 MAY 7.0 - 8.0 M.
HYPOLIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

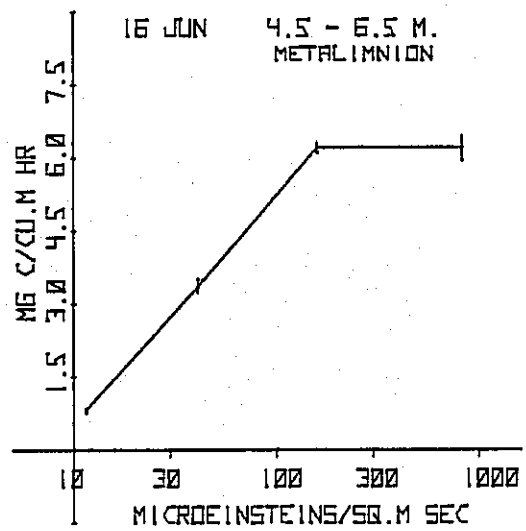

1 JUN 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
5 10 15 20 25
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

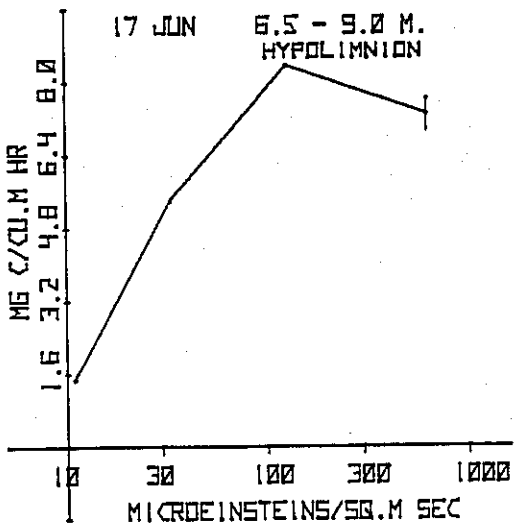
LAKE 239

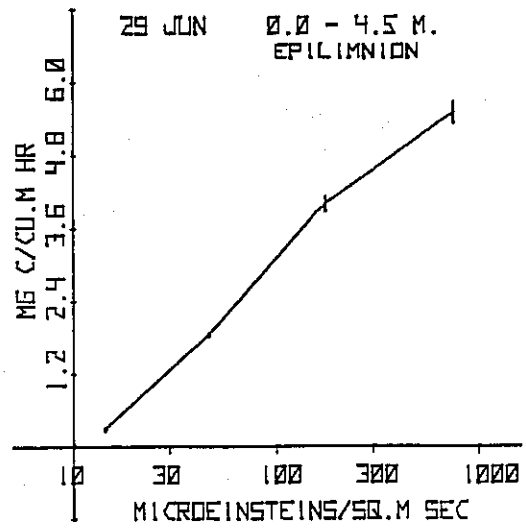

2 JUN 3.5 - 6.0 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


3 JUN 6.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

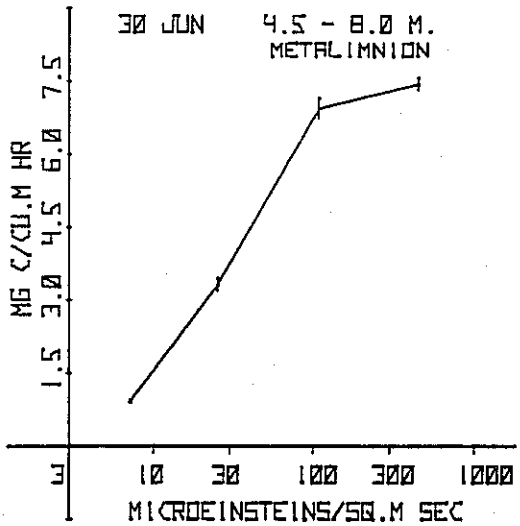

15 JUN 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

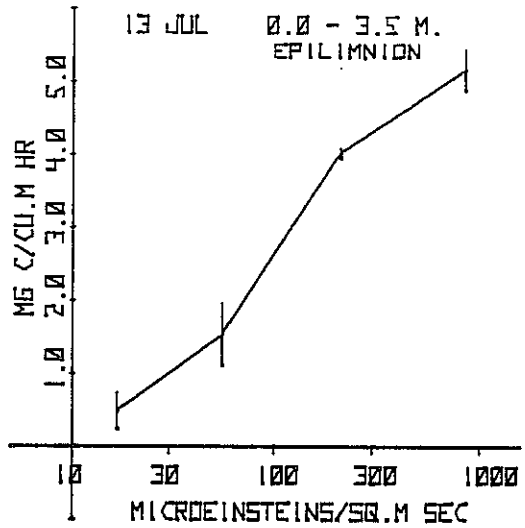

16 JUN 4.5 - 6.5 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

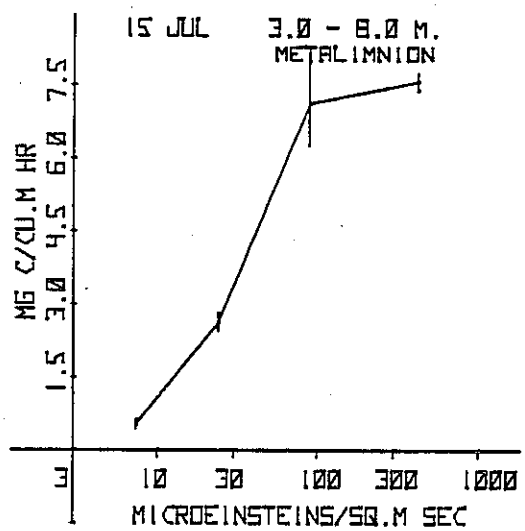

17 JUN 6.5 - 9.0 M.
HYPOLIMNION
MG C/CU.M HR
1.6 3.2 4.8 6.4 8.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

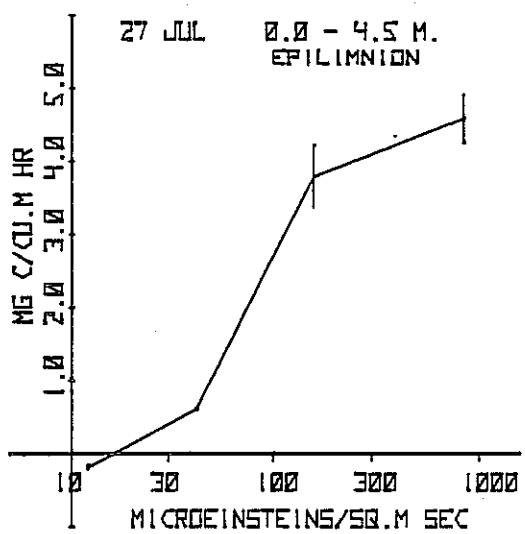

29 JUN 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

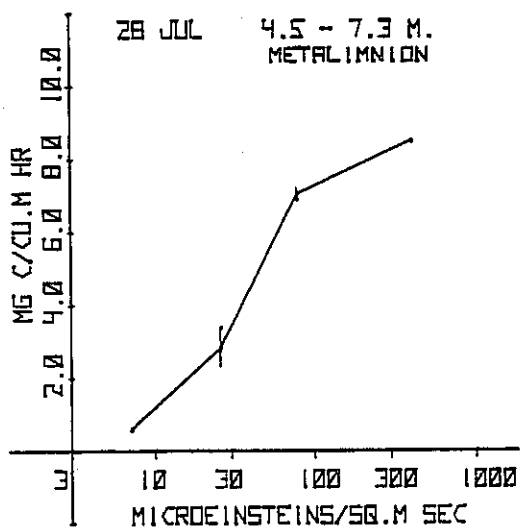
LAKE 239

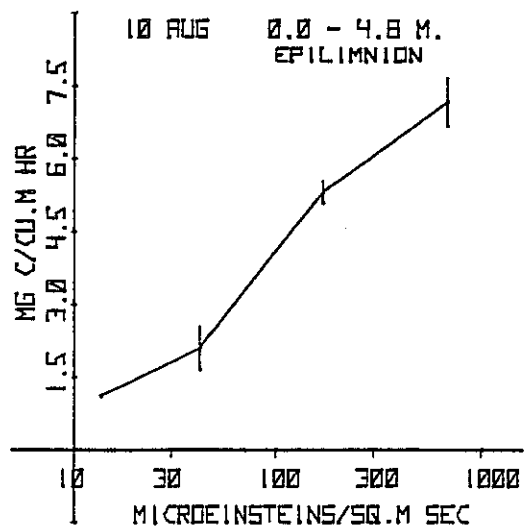

30 JUN 4.5 - 8.0 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


13 JUL 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

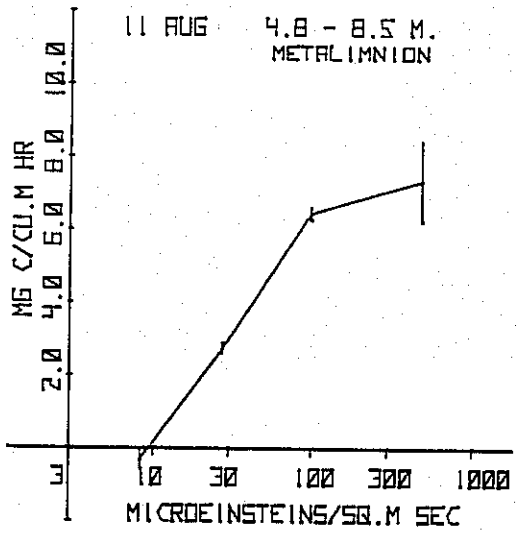

15 JUL 3.0 - 8.0 M.
METALIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

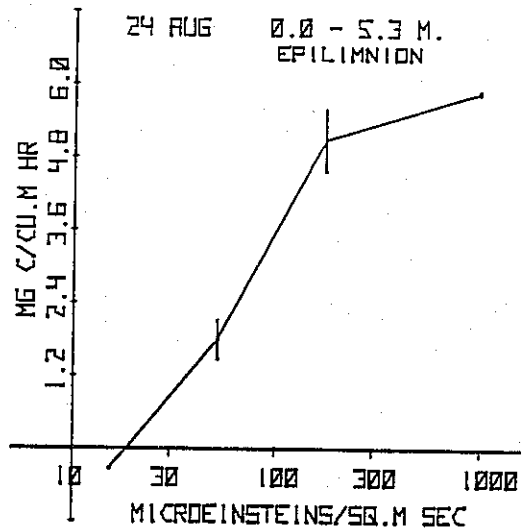

27 JUL 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

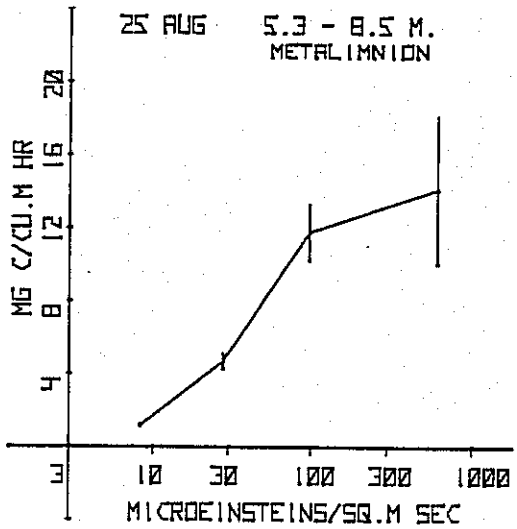

28 JUL 4.5 - 7.3 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

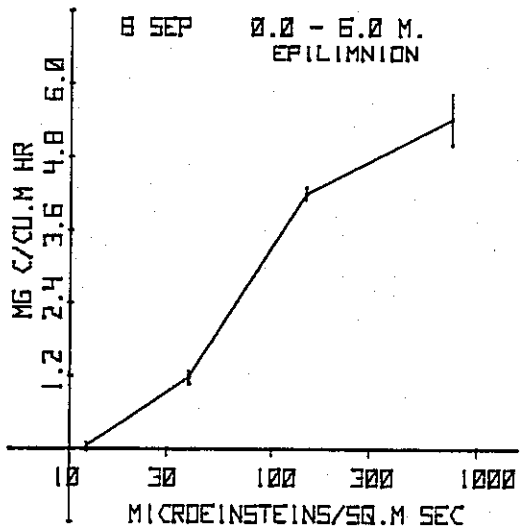

10 AUG 0.0 - 4.8 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

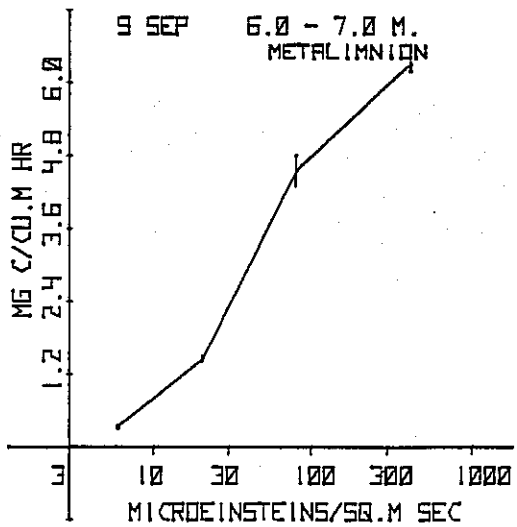
LAKE 239

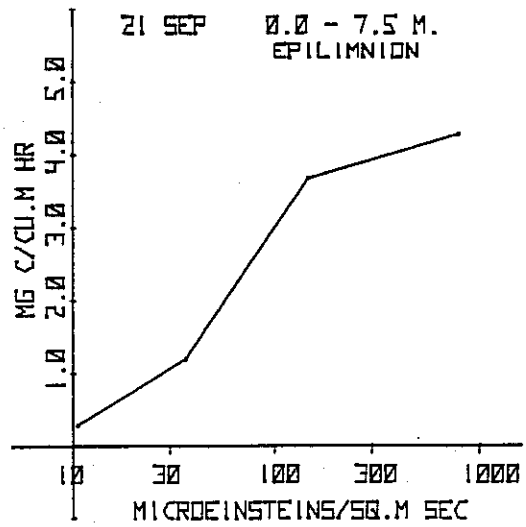

11 AUG 4.8 - 8.5 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


24 AUG 0.0 - 5.3 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

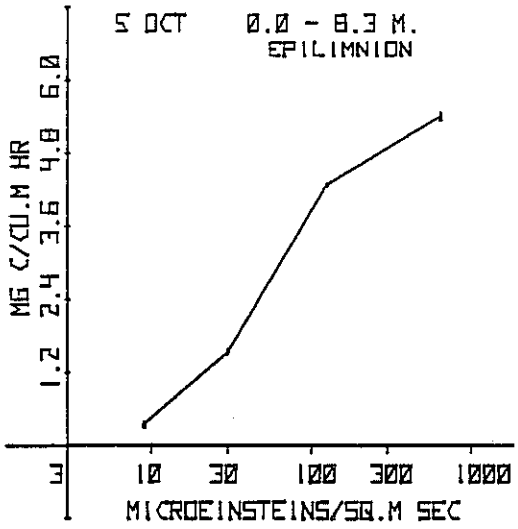

25 AUG 5.3 - 8.5 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

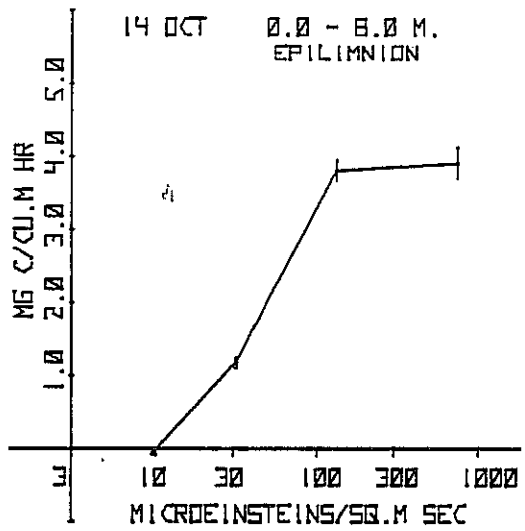

8 SEP 0.0 - 6.0 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

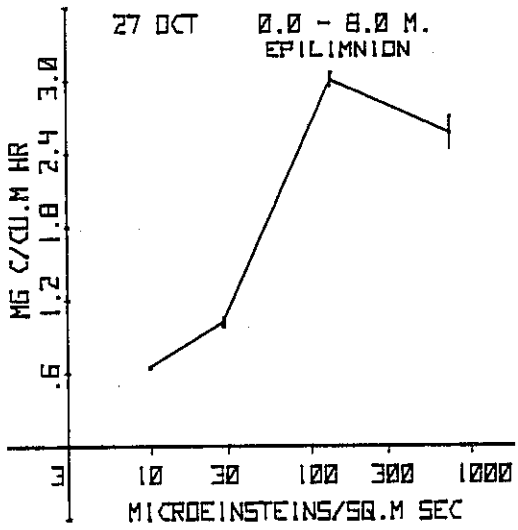

9 SEP 6.0 - 7.0 M.
METALIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


21 SEP 0.0 - 7.5 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

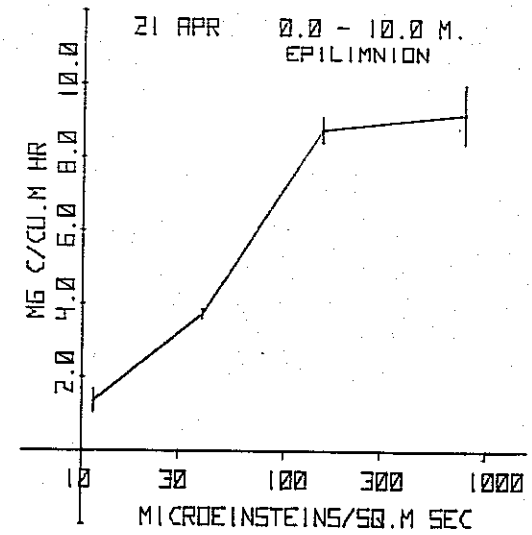
LAKE 239

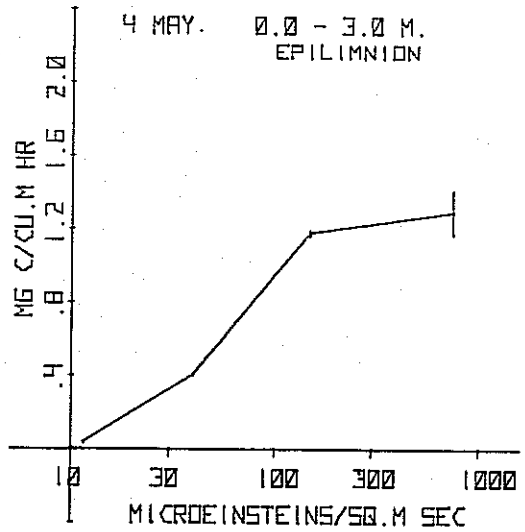

5 OCT 0.0 - 8.3 M.
EPILIMNION
MG C/CU.M HR
1.2 2.4 3.6 4.0 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

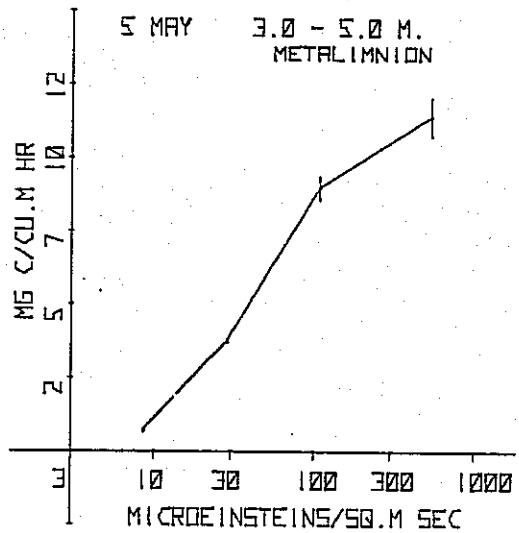

14 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

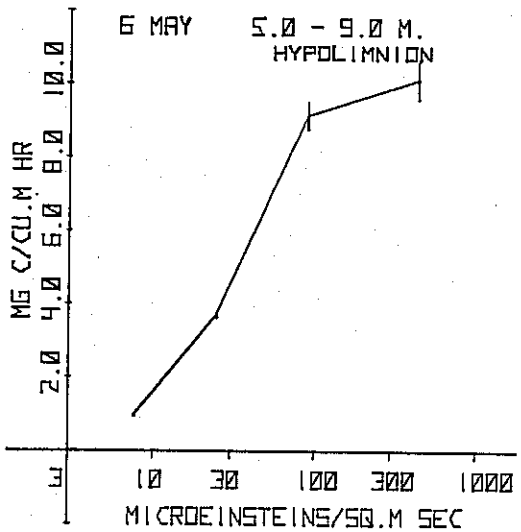

27 OCT 0.0 - 8.0 M.
EPILIMNION
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

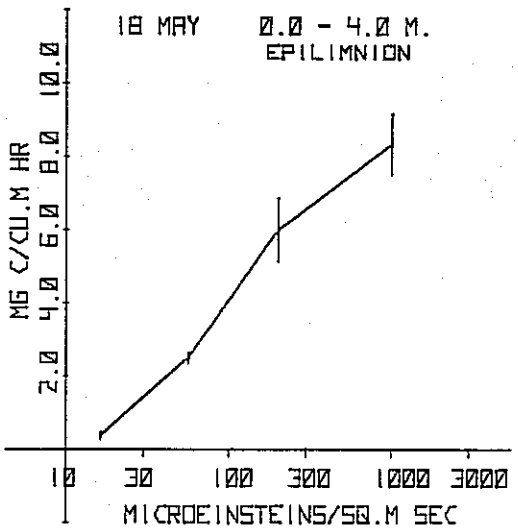
LAKE 302N

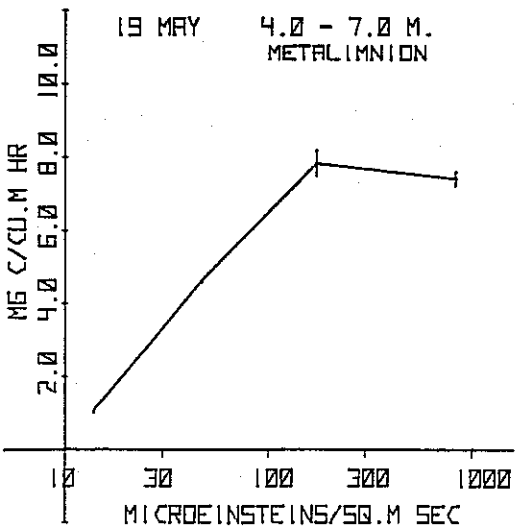

21 APR 0.0 - 10.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 MAY. 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
.4 .8 1.2 1.6 2.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

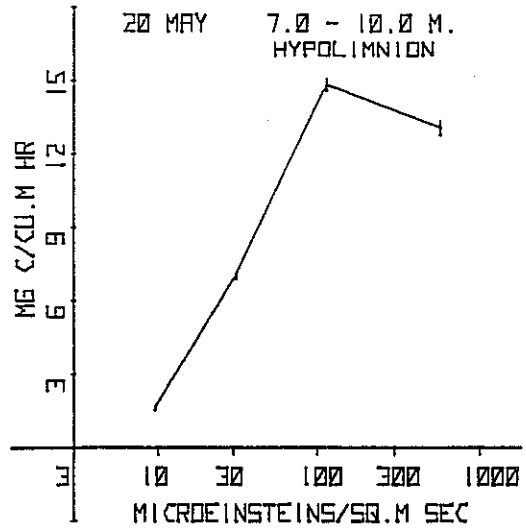

5 MAY 3.0 - 5.0 M.
METALIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

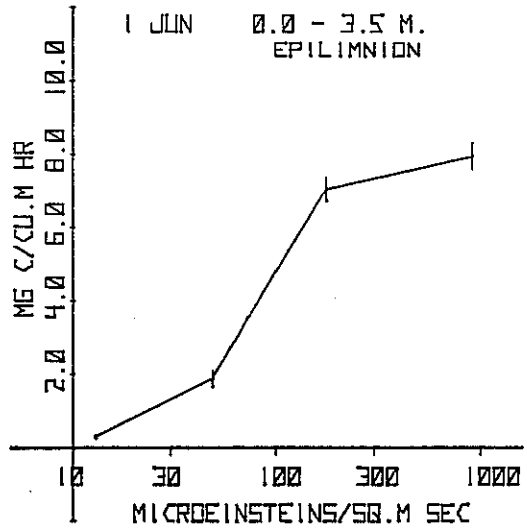

6 MAY 5.0 - 9.0 M.
HYPOLIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

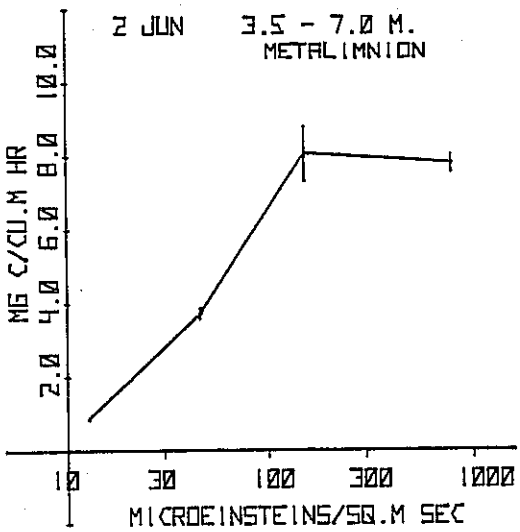

18 MAY 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

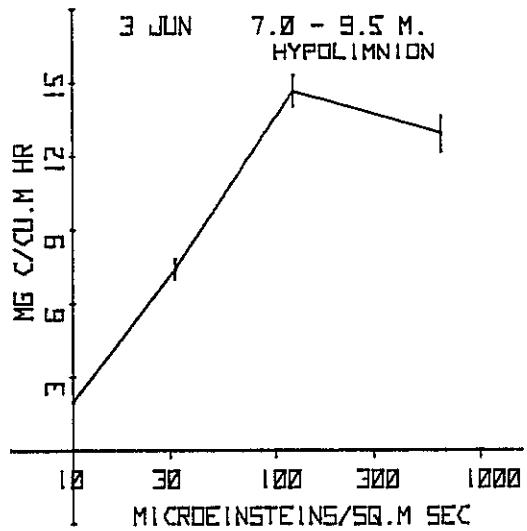

19 MAY 4.0 - 7.0 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

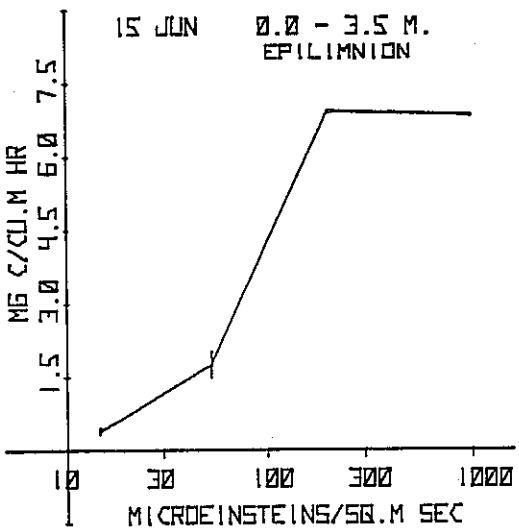
LAKE 302N

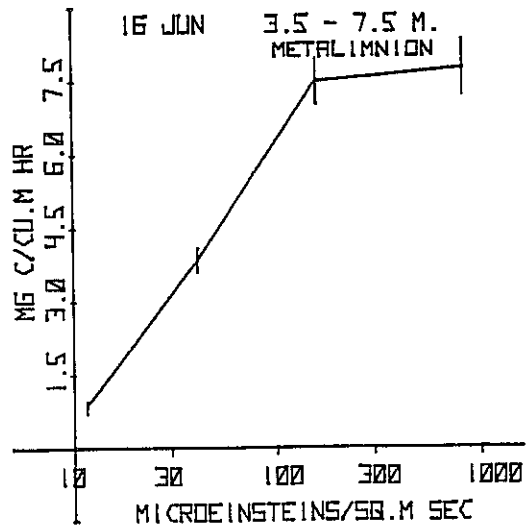

20 MAY 7.0 - 10.0 M.
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


1 JUN 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

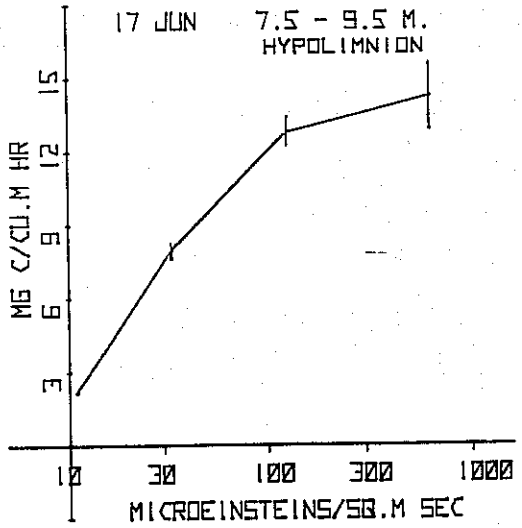

2 JUN 3.5 - 7.0 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

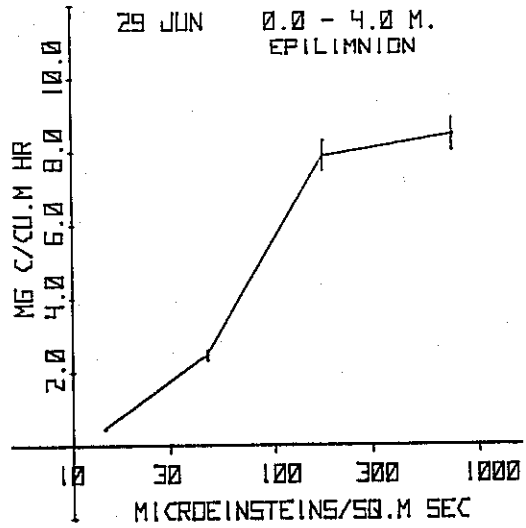

3 JUN 7.0 - 9.5 M.
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

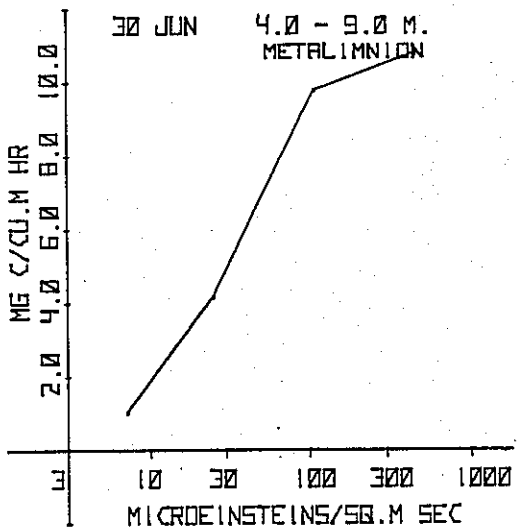

15 JUN 0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

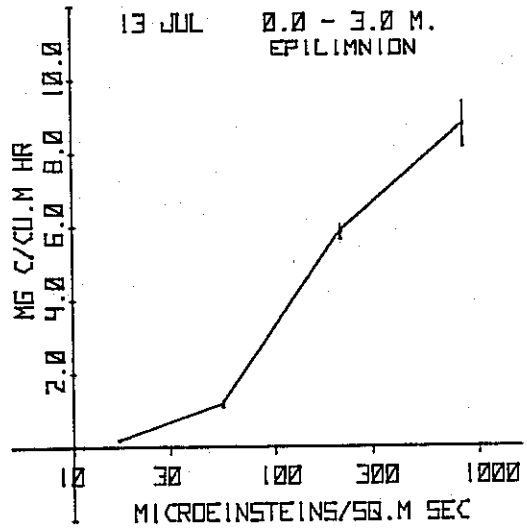

16 JUN 3.5 - 7.5 M.
METALIMNION
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

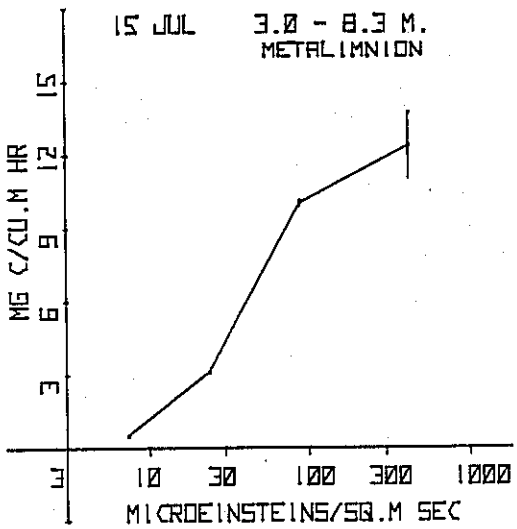
LAKE 302N

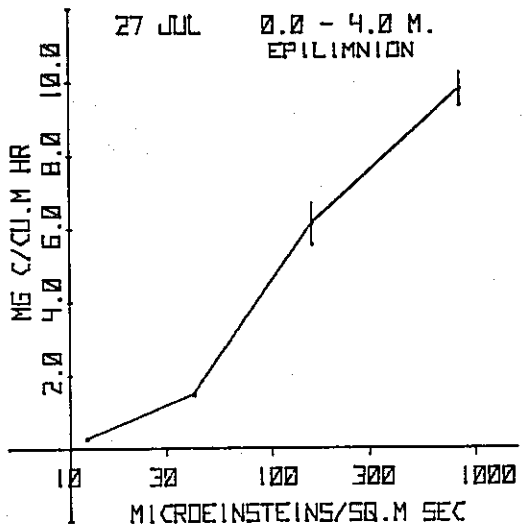

17 JUN 7.5 - 9.5 M.
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


29 JUN 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

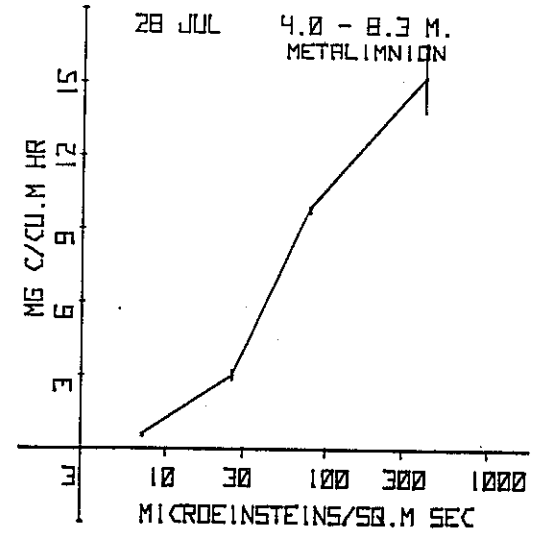

30 JUN 4.0 - 9.0 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

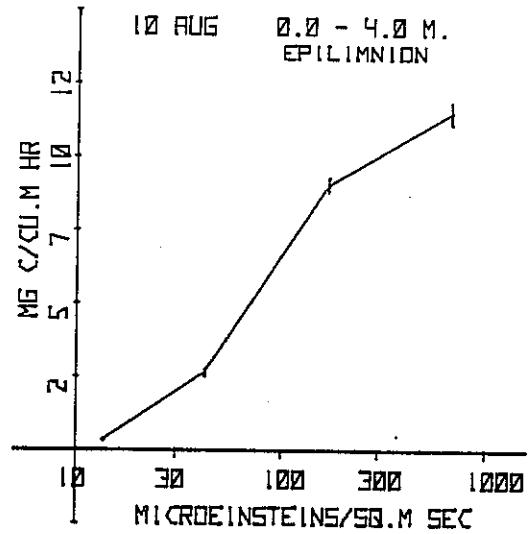

13 JUL 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

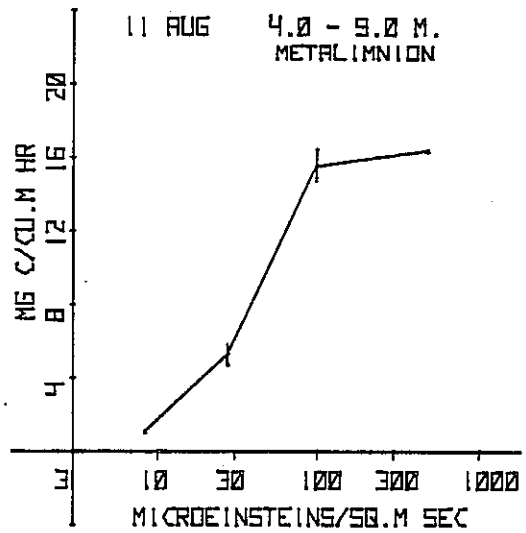

15 JUL 3.0 - 8.3 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

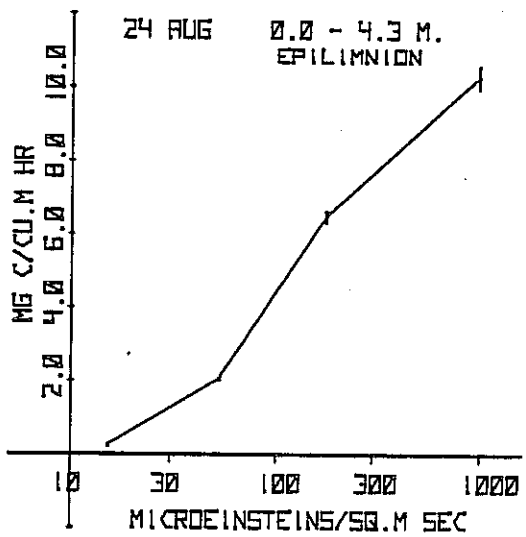

27 JUL 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

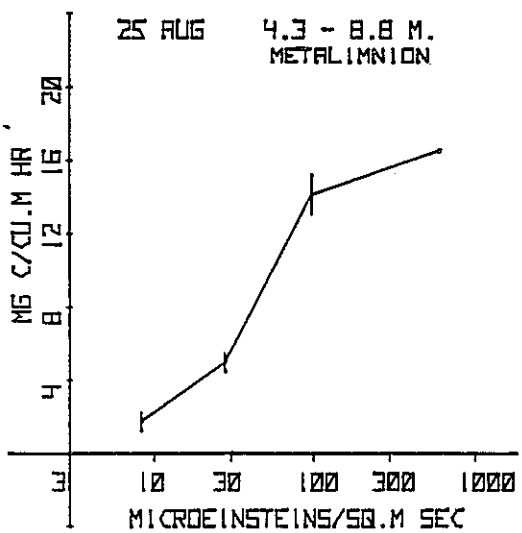
LAKE 302N

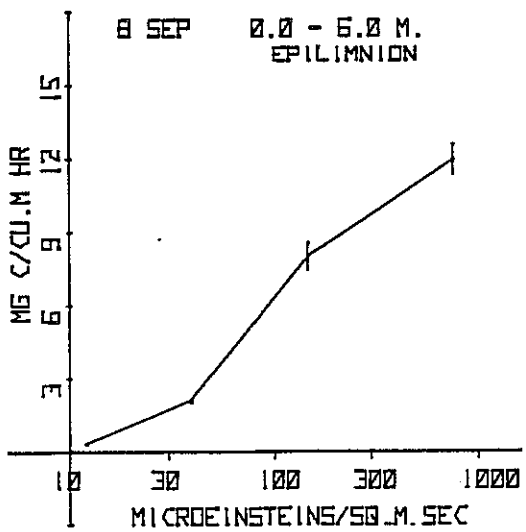

28 JUL 4.0 - 8.3 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


10 AUG 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

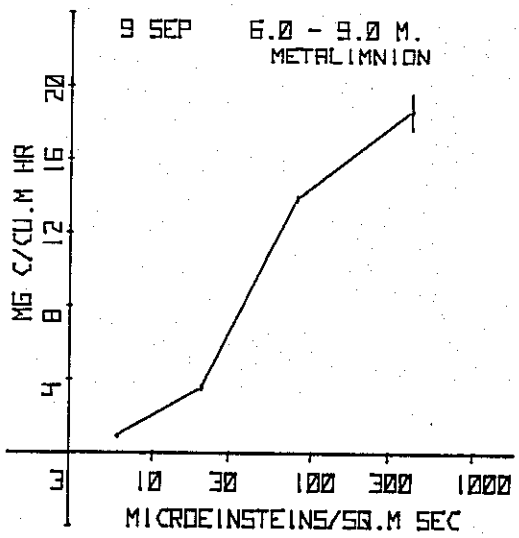

11 AUG 4.0 - 9.0 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

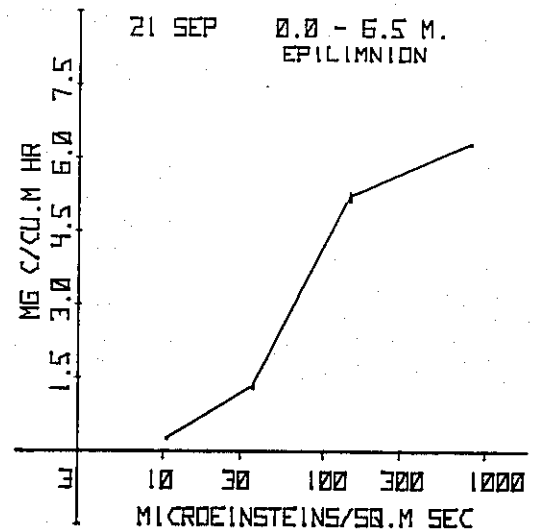

24 AUG 0.0 - 4.3 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

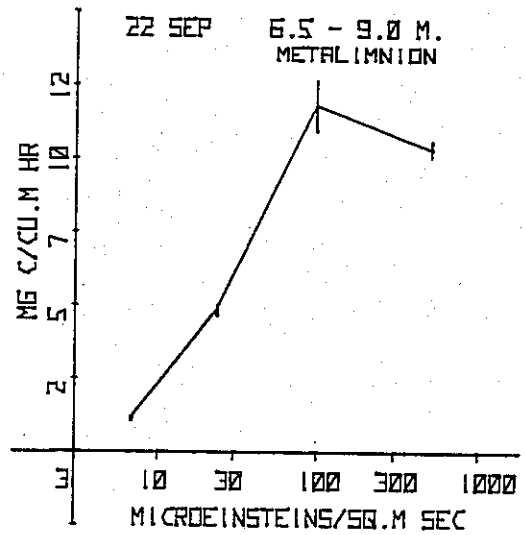

25 AUG 4.3 - 8.8 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

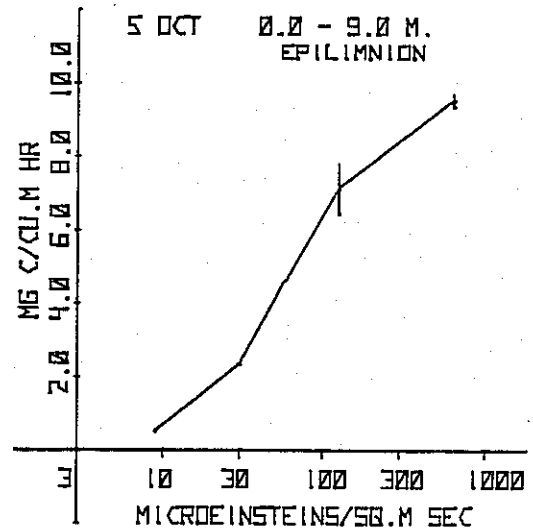

8 SEP 0.0 - 6.0 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

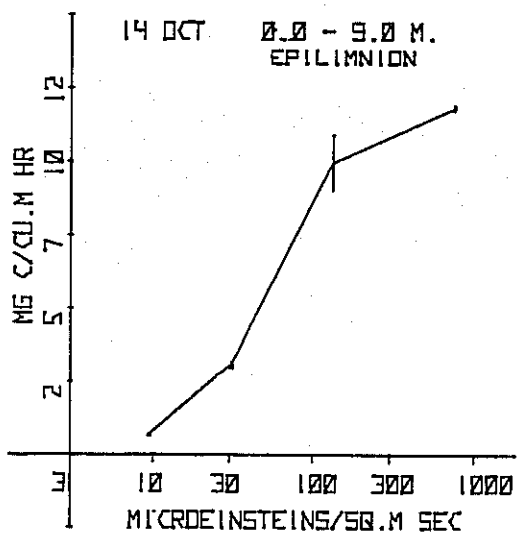
LAKE 302N

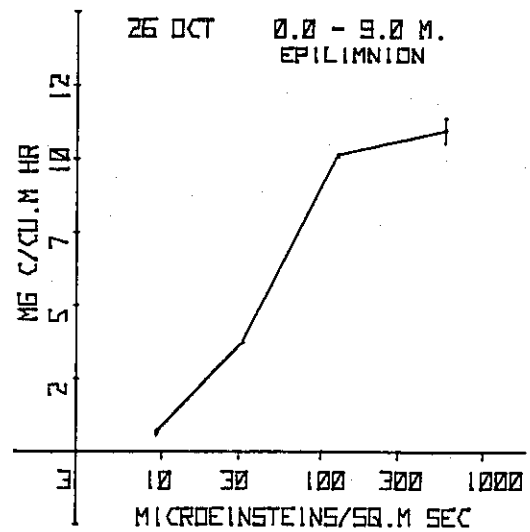

9 SEP 6.0 - 9.0 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


21 SEP 0.0 - 6.5 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

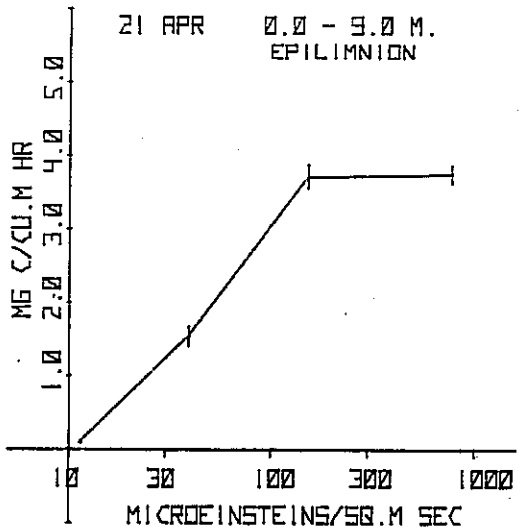

22 SEP 6.5 - 9.0 M.
METALIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

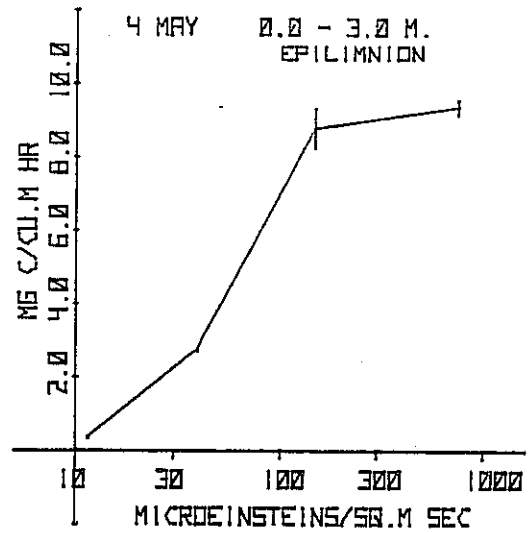

5 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

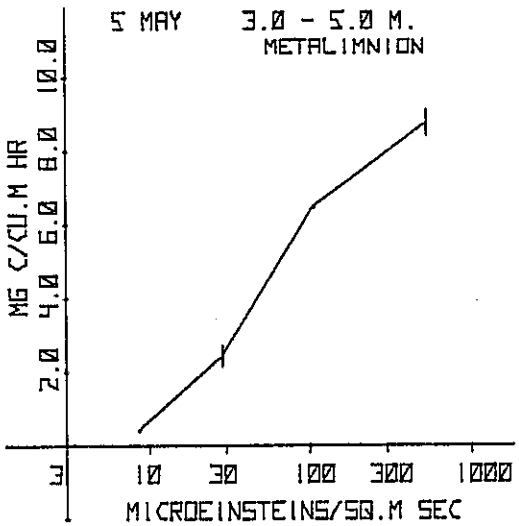

14 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

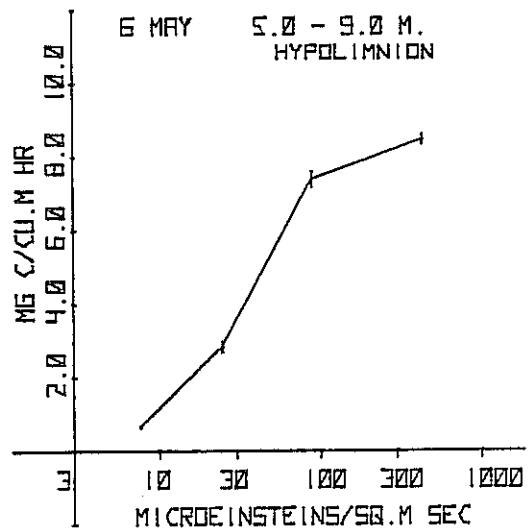

26 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
2 5 7 10 12
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

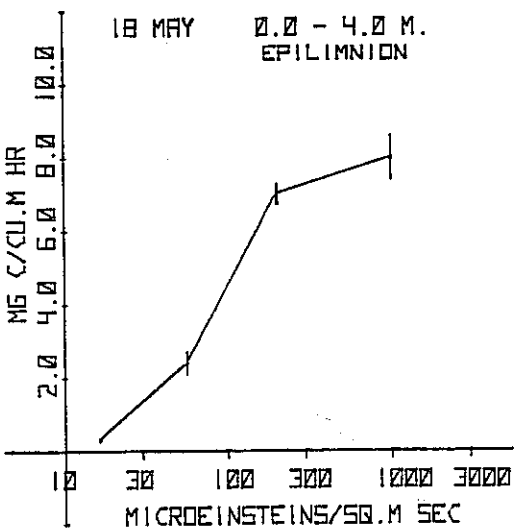
LAKE 3025

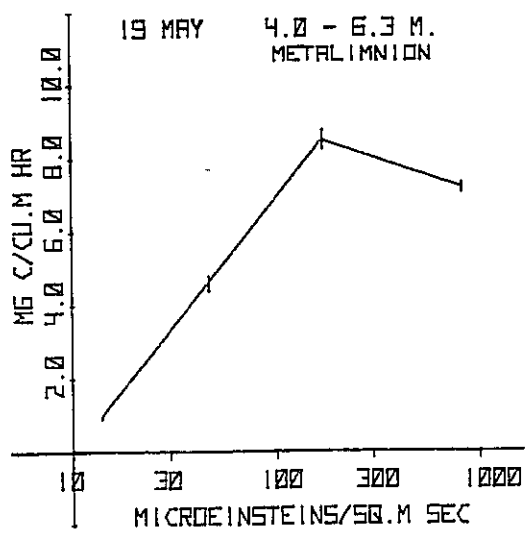

21 APR 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 MAY 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

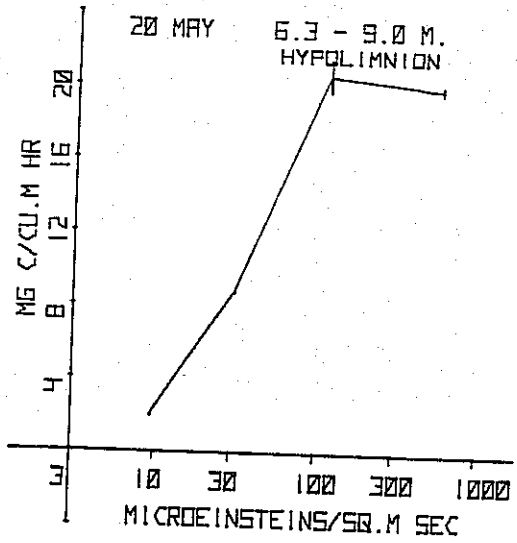

5 MAY 3.0 - 5.0 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

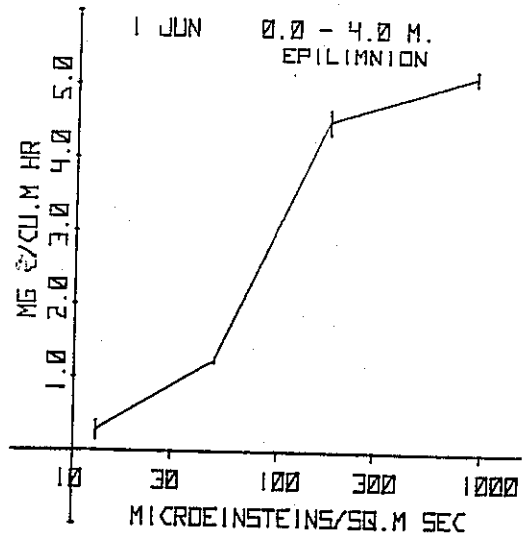

6 MAY 5.0 - 9.0 M.
HYPOLIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

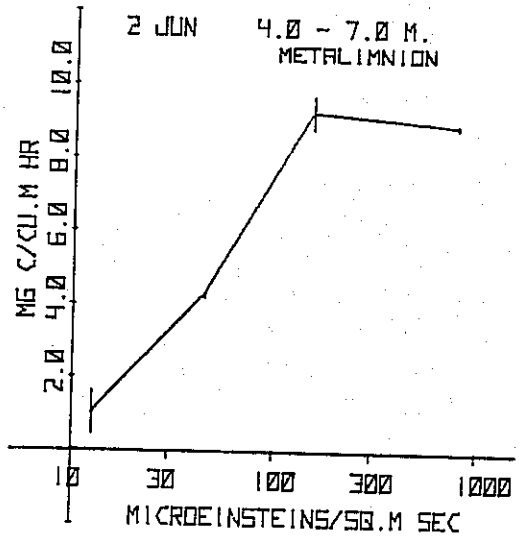

18 MAY 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

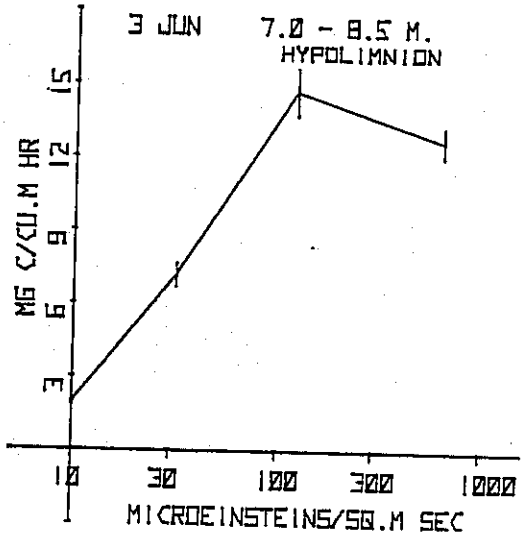

19 MAY 4.0 - 6.3 M.
METALIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

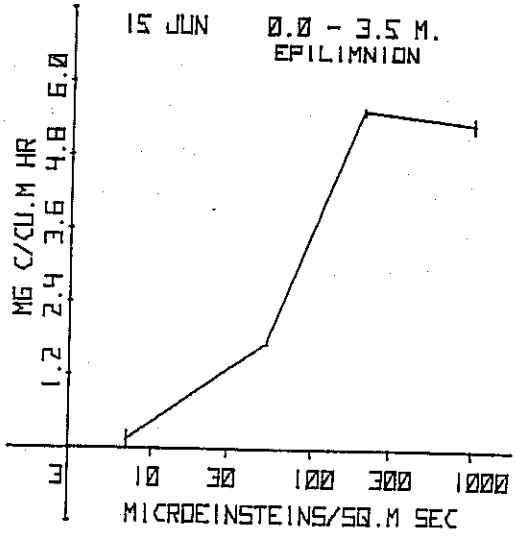
LAKE 3025

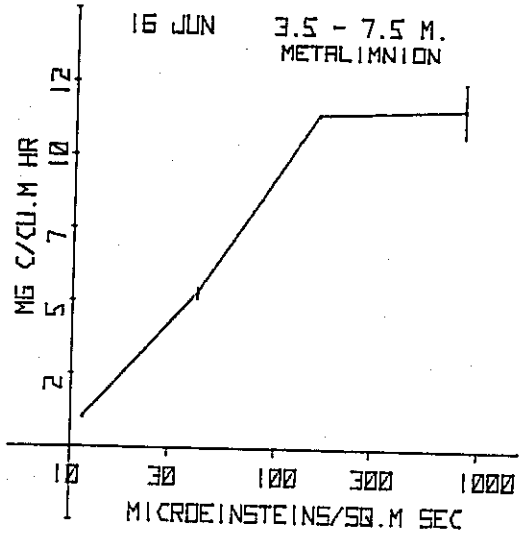

20 MAY
6.3 - 9.0 M.
HYPOLIMNION
MG C/CU.M HR
0
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


1 JUN
0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
1.0
2.0
3.0
4.0
5.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

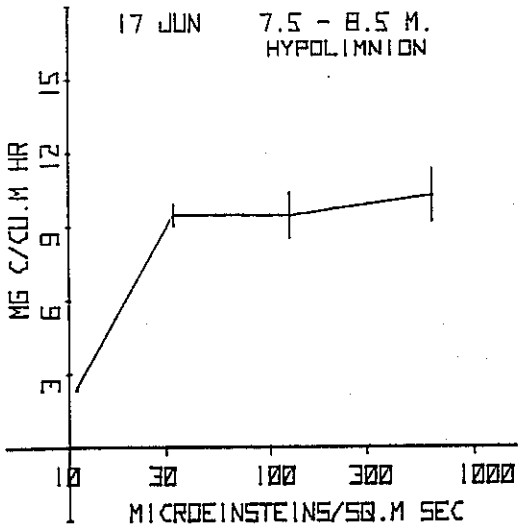

2 JUN
4.0 - 7.0 M.
METALIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

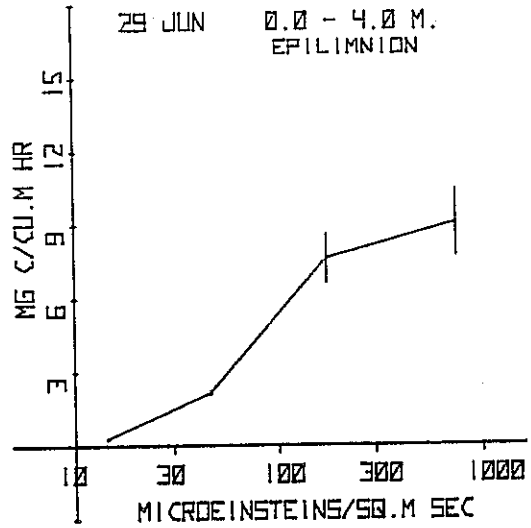

3 JUN
7.0 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

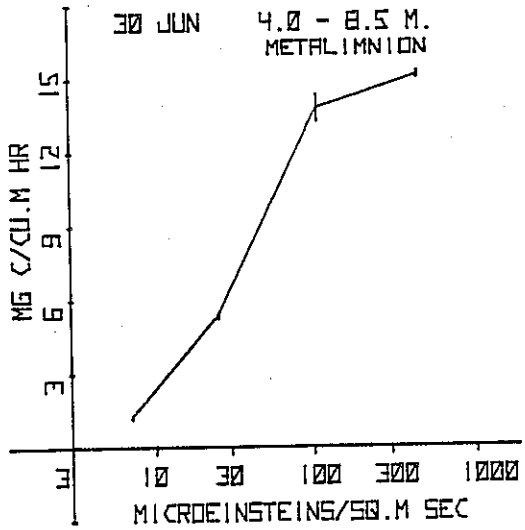

15 JUN
0.0 - 3.5 M.
EPILIMNION
MG C/CU.M HR
0
1.2
2.4
3.6
4.8
6.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

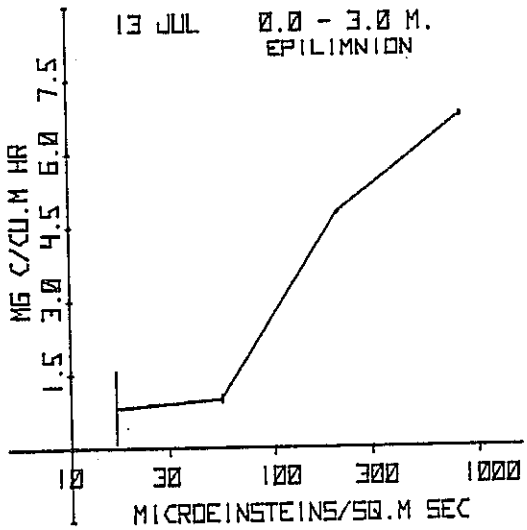

16 JUN
3.5 - 7.5 M.
METALIMNION
MG C/CU.M HR
2
5
7
10
12
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

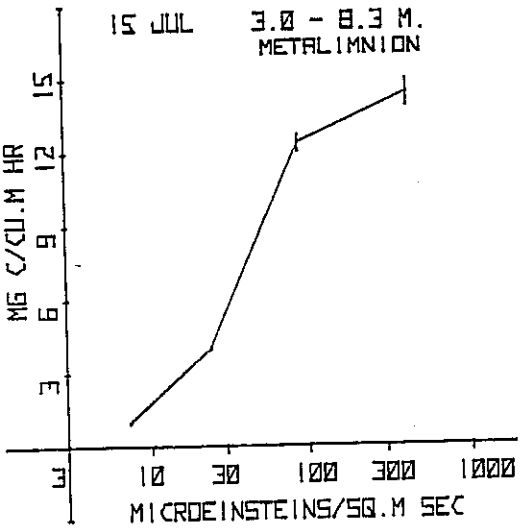
LAKE 3025

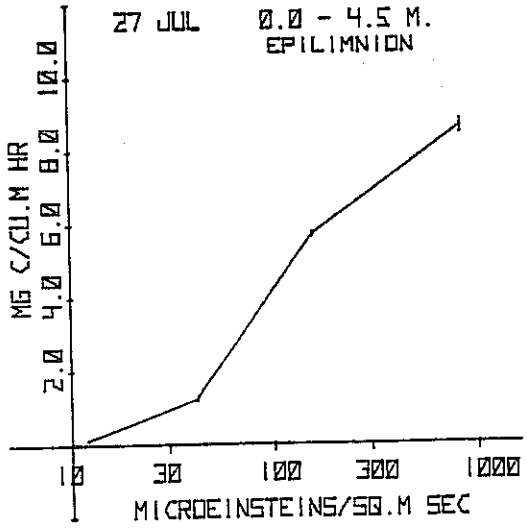

17 JUN 7.5 - 8.5 M.
HYPOLIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


29 JUN 0.0 - 4.0 M.
EPILIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

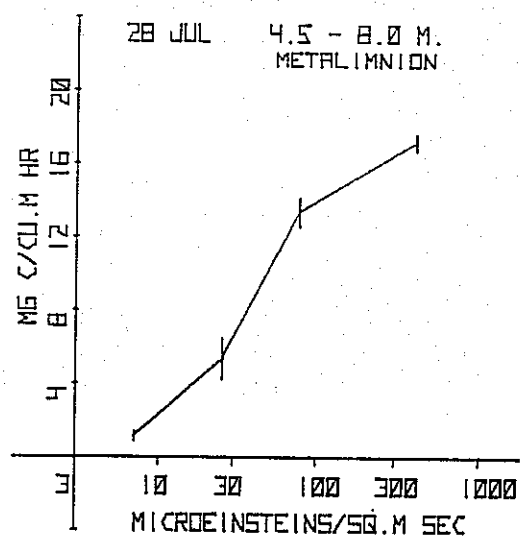

30 JUN 4.0 - 8.5 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

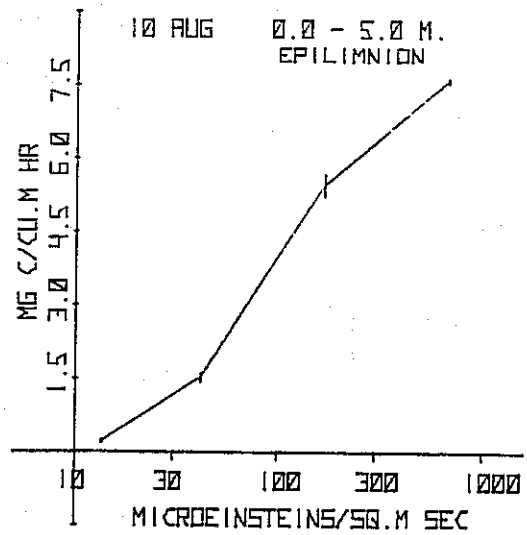

13 JUL 0.0 - 3.0 M.
EPILIMNION
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

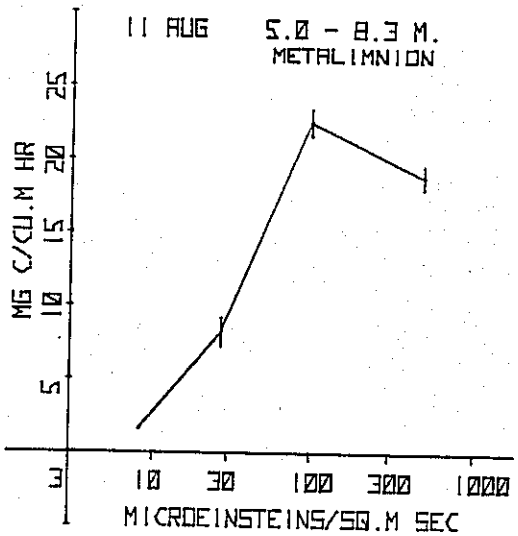

15 JUL 3.0 - 8.3 M.
METALIMNION
MG C/CU.M HR
3
6
9
12
15
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

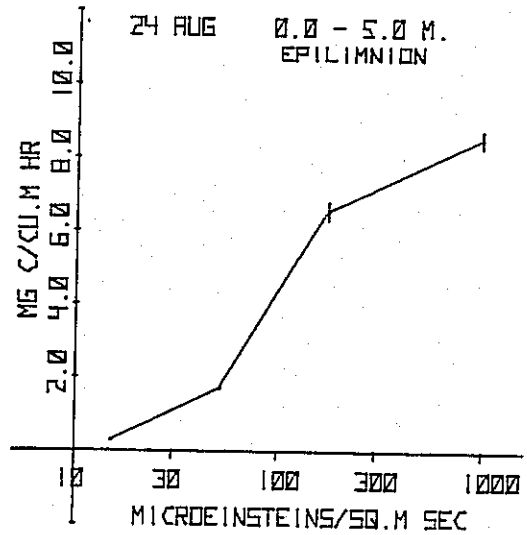

27 JUL 0.0 - 4.5 M.
EPILIMNION
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

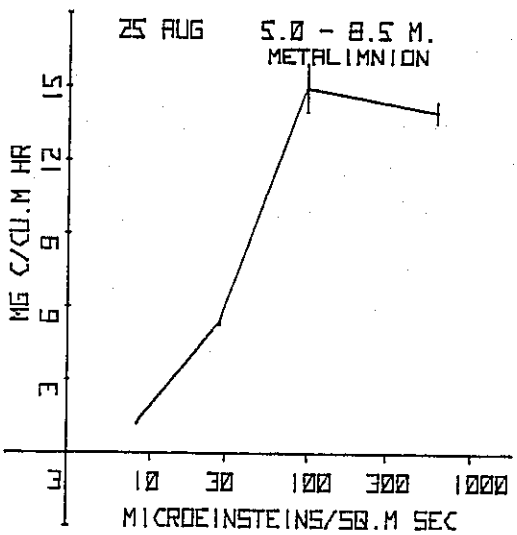
LAKE 3025

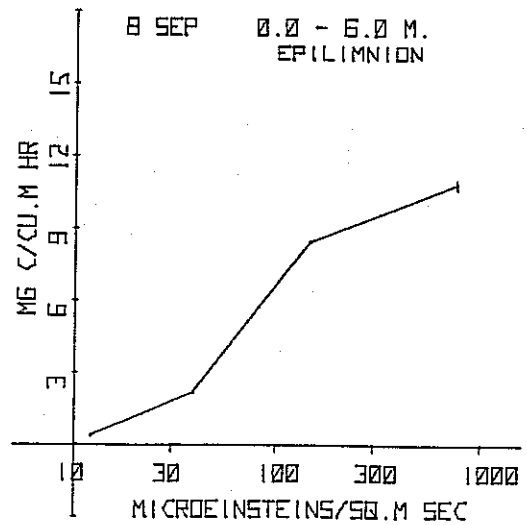

28 JUL 4.5 - 8.0 M.
METALIMNION
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


10 AUG 0.0 - 5.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

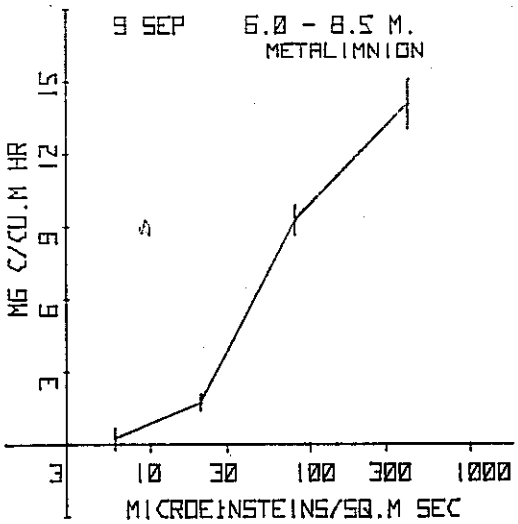

11 AUG 5.0 - 8.3 M.
METALIMNION
MG C/CU.M HR
5 10 15 20 25
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

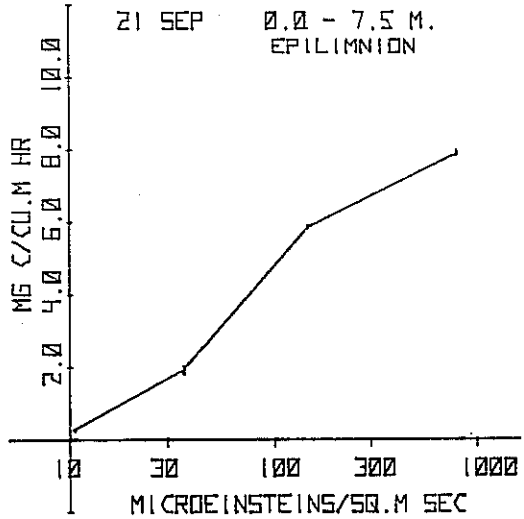

24 AUG 0.0 - 5.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

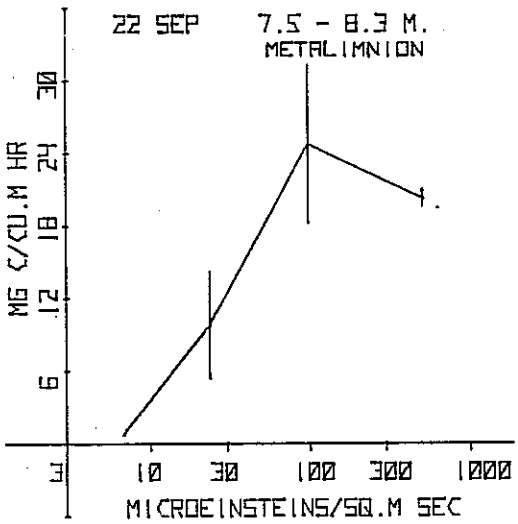

25 AUG 5.0 - 8.5 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

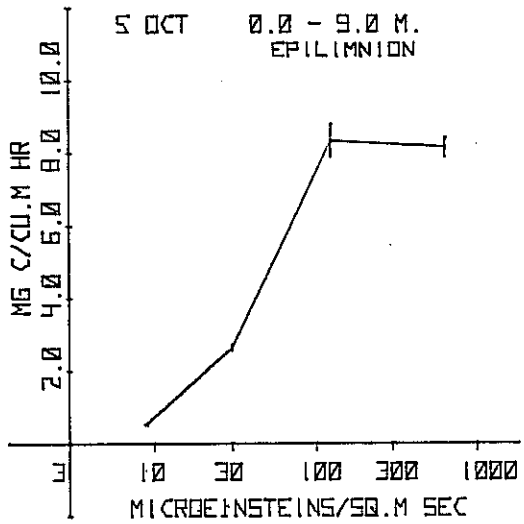

8 SEP 0.0 - 6.0 M.
EPILIMNION
MG C/CU.M HR
3 6 9 12 15
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

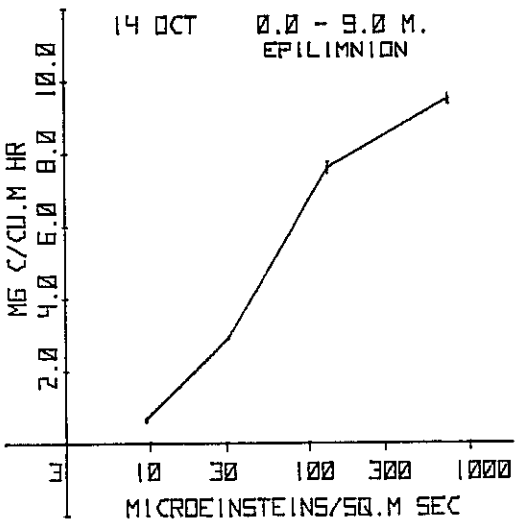
LAKE 3025

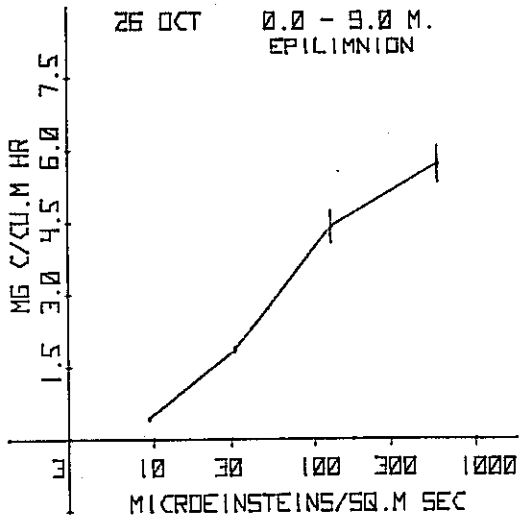

9 SEP 6.0 - 8.5 M.
METALIMNION
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

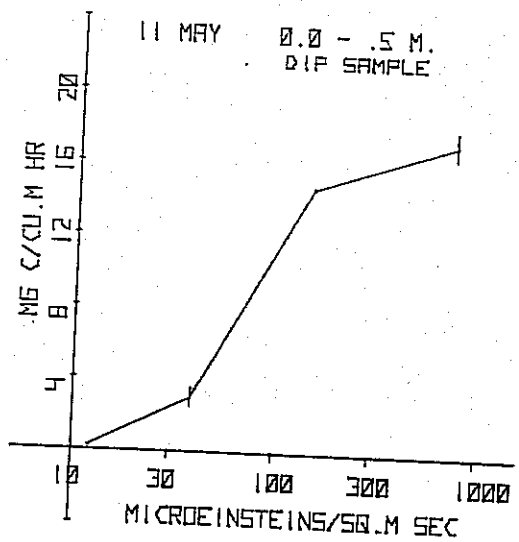

21 SEP 0.0 - 7.5 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

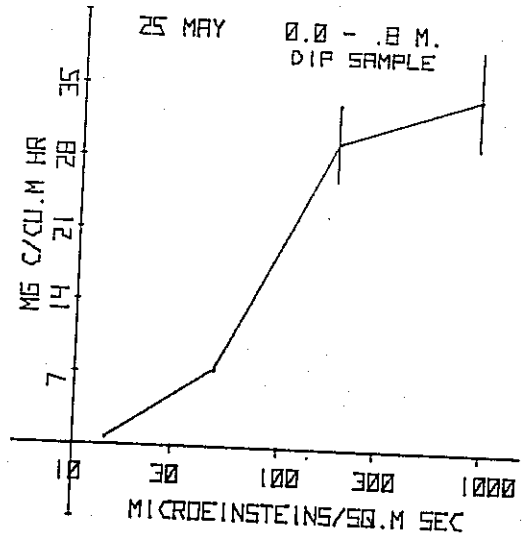

22 SEP 7.5 - 8.3 M.
METALIMNION
MG C/CU.M HR
6 12 18 24 30
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

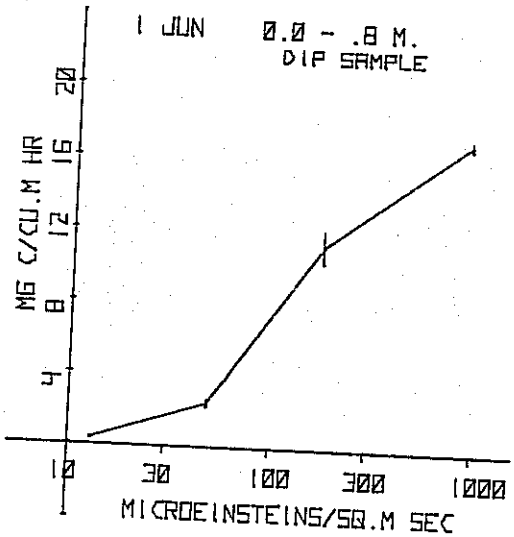

5 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

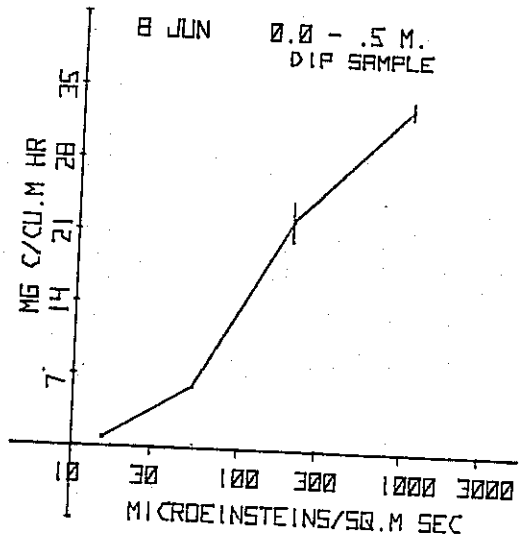

14 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

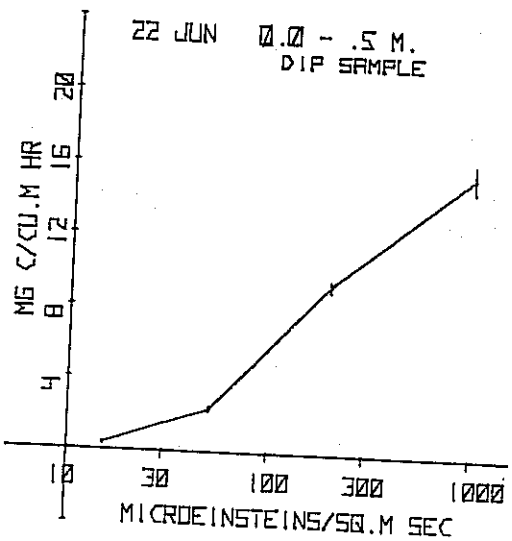

26 OCT 0.0 - 9.0 M.
EPILIMNION
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

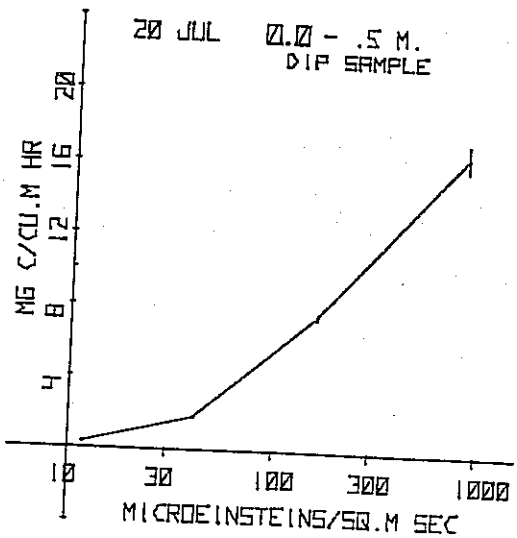

11 MAY 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


25 MAY 0.0 - .8 M.
DIP SAMPLE
MG C/CU.M HR
7
14
21
28
35
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

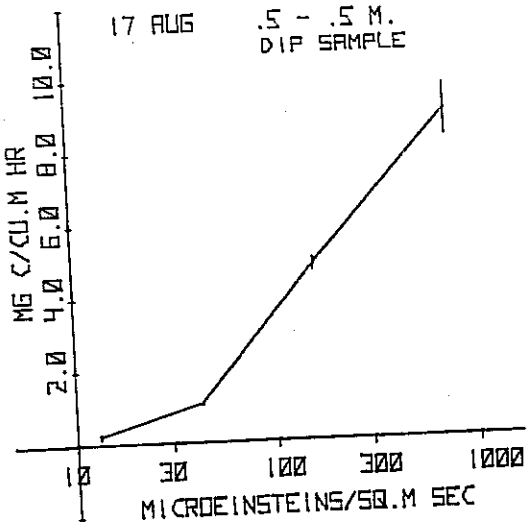

1 JUN 0.0 - .8 M.
DIP SAMPLE
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

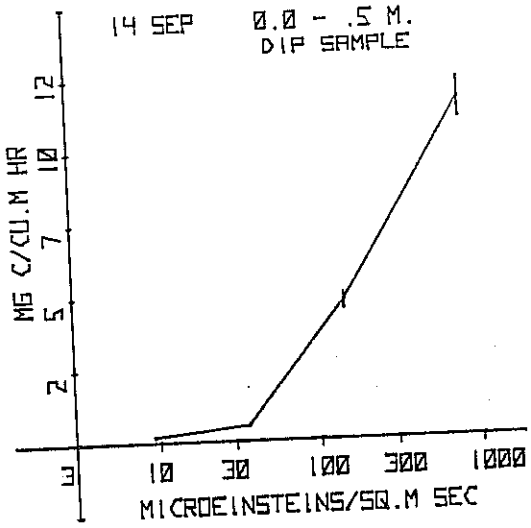

8 JUN 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
7
14
21
28
35
10
30
100
300
1000
3000
MICROEINSTEINS/SQ.M SEC

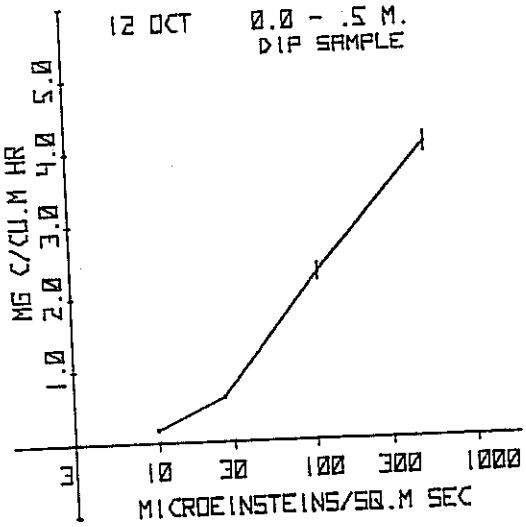

22 JUN 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


20 JUL 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
4
8
12
16
20
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

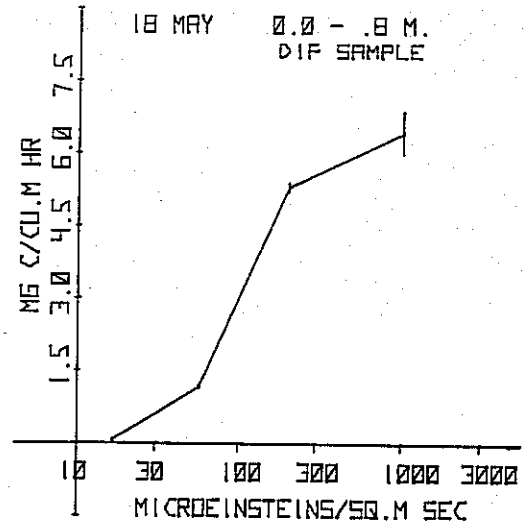
LAKE 661

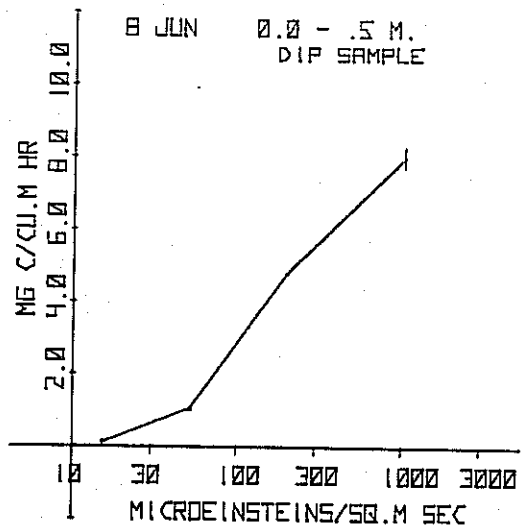

17 AUG .5 - .5 M.
DIP SAMPLE
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

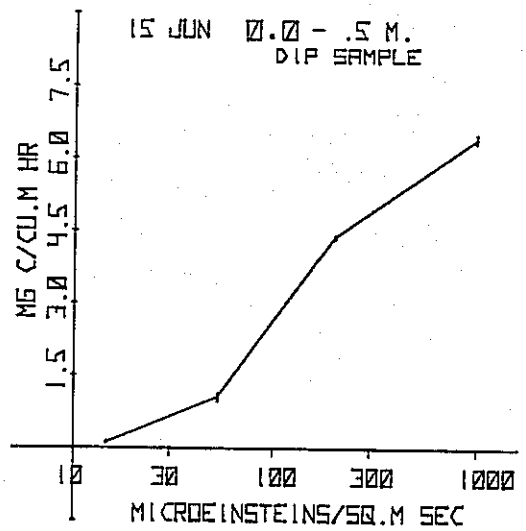

14 SEP 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
2 5 7 10 12
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

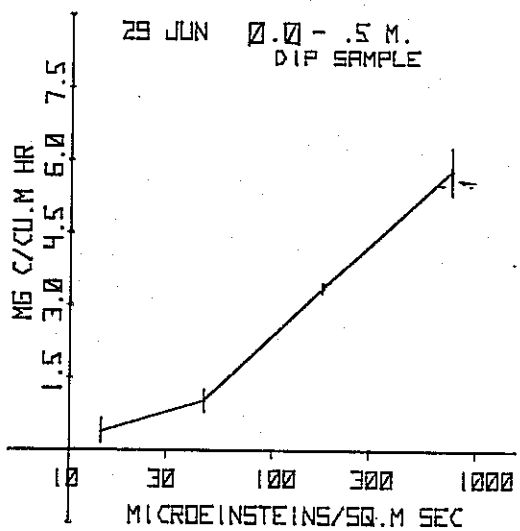

12 OCT 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

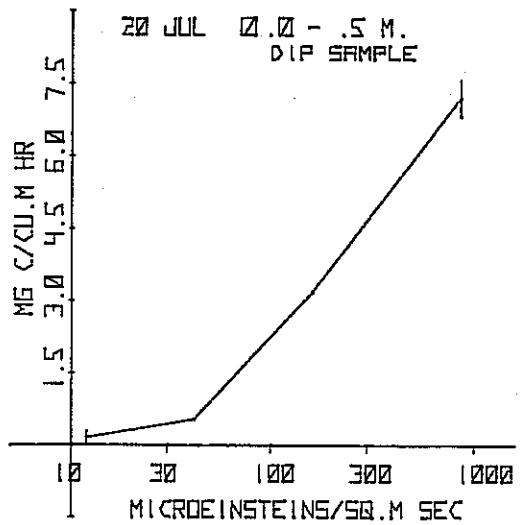
LAKE 979

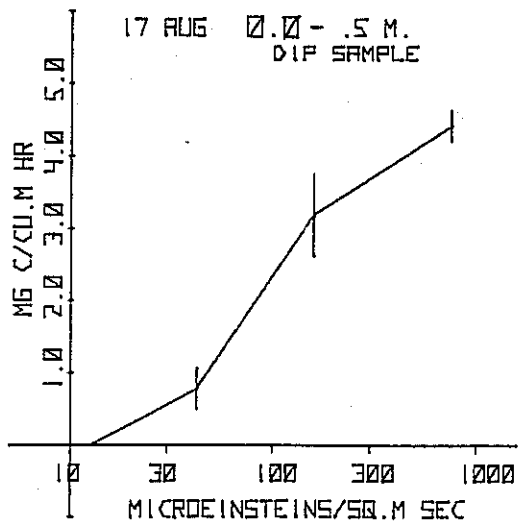

18 MAY 0.0 - .8 M.
DIP SAMPLE
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC


8 JUN 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000 3000
MICROEINSTEINS/SQ.M SEC

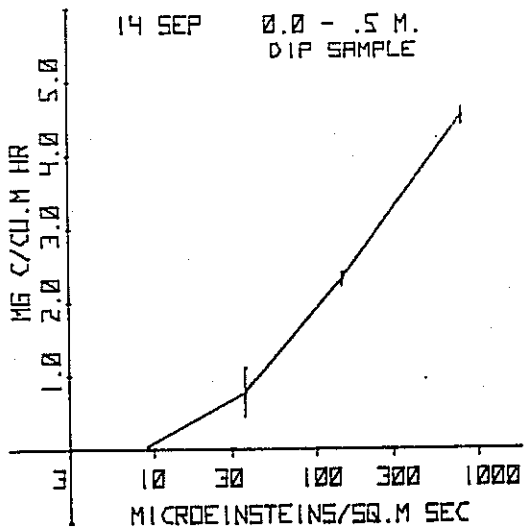

15 JUN 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

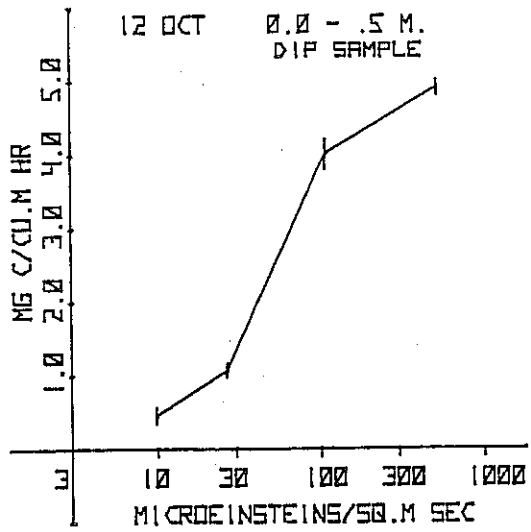

29 JUN 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


20 JUL 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


17 AUG 0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 979


14 SEP
0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


12 OCT
0.0 - .5 M.
DIP SAMPLE
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC