Phytoplankton Primary Production, Chlorophyll and Suspended Carbon in the Experimental Lakes Area -1978 Data

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August 1979

Fisheries & Marine Service Data Report No. 137

Fisheries and Environment Canada
Fisheries and Marine Service

Pêches et Environnement Canada
Service des pêches et de la mer

Fisheries and Marine Service

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Fisheries and Marine Service

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PHYTOPLANKTON PRIMARY PRODUCTION, CHLOROPHYLL AND SUSPENDED CARBON IN THE EXPERIMENTAL LAKES AREA - 1978 DATA

by

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This is the 18th Data Report

from the Western Region, Winnipeg

Cat. no. Fs 97-13/137 ISSN 0701-7634

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ABSTRACT

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.

Incubator measurements of phytoplankton photosynthesis made during 1978 are summarized. Samples were taken from sixteen lake basins in the Experimental Lakes Area. Measurements of chlorophyll and suspended carbon from the same samples are also listed. A brief review of the methodology is provided and the data is presented in tables and graphs.

Key words: primary production; photosynthesis; phytoplankton; experimental data; incubation; biomass; chlorophylls; suspended matter.

RESUME

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.

Les mesures de la photosynthèse du phytoplancton, prises en incubateur au cours de l'année 1978, sont exposées. Des échantillons ont été prélevés dans les bassins de seize lacs de la Région des Lacs Expériméntaux. On donne également les mesures de chlorophylle et de carbone en suspension prises à partir des mêmes échantillons. On présente une brève étude des méthodes employées, et les résultats sont présentées sous forme de tableaux et de graphiques.

Mots-clés: production primaire; photosynthèse; phytoplancton; résultats expérimentales; incubation; biomasse; chlorophylle; matières en suspension.

INTRODUCTION

The routine measurement of photosynthetic carbon uptake by phytoplankton was continued at the Experimental Lakes Area (ELA) in northwestern Ontario during 1978. Previous publications in this series (Shearer and Fee 1974; Shearer 1976; DeClercq and Shearer 1976; DeClercq et al. 1977; DeClercq and Shearer 1978) have detailed the evolution of the methodology employed and have listed the data from earlier years.

This report updates the methodology and provides a tabulation of data obtained during 1978. Values of irradiance and carbon uptake are presented along with related physical, chemical and biological parameters. Plots of photosynthetic uptake versus incubator irradiance are provided.

FIELD PROCEDURES

The sixteen lake basins surveyed in 1978 were numbers 114, 127, 129, 130, 132, 223, 226 NE, 226 SW, 227, 239, 302 N, 302 S, 382, 382 Bay, 383 and 384. All are small headwater or near-headwater basins lying within the Precambrian Shield. (See Brunskill and Schindler 1971, for background).

Lakes 226 NE, 226 SW, 227 and 302 N were being artificially fertilized using various addition schemes (Schindler and Fee 1974; Schindler 1975). Lake 223 was undergoing artificial acidification (Schindler et al. 1978). The Lake 382 Bay was separated from the main Lake 382 basin in May 1978 by means of a reinforced polyvinyl chloride curtain. A forest fire burned a small portion of the watersheds of both Lake 382 and 382 Bay during June 1978.

Each basin was normally sampled on a 3-week cycle with epilimnion, metalimnion and hypolimnion samples, where applicable, being processed on consecutive days. Concurrent light extinction profiles were taken (Shearer and DeClercq 1979) and these were utilized to determine the depths of euphotic zones.

In Lake 226, particularly the northeast basin, more frequent sampling was carried out during June and July. This coincided with a whole-lake carbon-14 spike and simultaneous measurements of carbon uptake were made using *in situ* incubations, whole-lake carbon fluxes and the light incubator technique. The results of this study will be published at some future date.

Sampling equipment and handling procedures were unchanged from 1977. The integrating sampler (Shearer 1978) was used to obtain samples from desired depth ranges. Samples were taken before noon and returned in insulated boxes to the laboratory for processing.

LABORATORY PROCEDURES

No changes of any consequence were made in the laboratory procedures during 1978. Aliquots of each sample were retained for algal cell counts and species identification. Other aliquots were used for determination of dissolved inorganic carbon (DIC), chlorophyll and suspended carbon concentrations.

The bulk of each sample was spiked with inorganic carbon-14 to a concentration between 100,000 and 150,000 D.P.M. mL^{-1} and incubated at various light intensities in the light incubator (Fee 1973; Shearer 1976a). Post-incubation processing employed the acidification and bubbling technique described by Schindler et al. 1972. Liquid scintillation counting utilized a dioxane-based fluor (Schindler 1966).

DATA PROCESSING

Appendix 1 of this report is a tabulated record of the physical, chemical and biological data collected in this study.

Appendix 2 contains plots of production versus irradiance for the incubator experiments.

ACKNOWLEDGMENTS

J. Prokopowich, M. Stainton, M. Capel and their assistants carried out the analyses of dissolved inorganic carbon, chlorophyll, and suspended carbon for this study.

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APPENDIX 1

Data relevant to each phytoplankton incubator experiment are listed chronologically according to lake basin.

Depths or depth ranges are in meters. Times listed are Central Daylight and represent the times of sample collection.

Temperatures, in degrees Celsius, are those at which the samples were incubated.

Dissolved inorganic carbon (DIC) values, in micromoles liter^{-1}, are pre-incubation concentrations.

The units for both suspended carbon and chlorophyll concentrations are micrograms liter^{-1}.

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

P1 through P4 are the rates of uptake of inorganic carbon at the four incubator irradiances, in units of milligrams carbon meter^{-3} hour^{-1}. The two values listed for each irradiance represent replicate bottles.

The coefficient of variation (C.V.) for these replicates is given in the next-to-last column.

Explanation of Notes (last column)

Note 1: $NaHCO_3$ was added to the sample prior to incubation.

Note 2: Missing value (indicated by -10.00).

Note 3: Sample was taken from under ice.

Note 4: P values very erratic.

LAKE 114

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
9 MAY	0.0- 3.0	0845	8.0	122	730	4.9	9	.20	30	1.08	111	2.98	497	3.23		
								.20		1.09		2.76		3.01	2.99	
22 MAY	0.0- 2.5	1110	15.0	50	980	4.3	3	.10	14	.78	60	4.43	421	5.83		
								.11		.76		4.49		6.28	4.26	
23 MAY	2.5- 4.0	1005	11.0	97	1400	6.9	5	.27	20	1.93	78	6.60	392	7.22		
								.30		1.85		6.53		7.13	2.71	
12 JUN	0.0- 4.0	1100	16.0	30	1260	3.8	7	.13	23	1.31	105	5.65	538	7.12		
								.11		1.32		6.16		9.30	9.34	
10 JUL	0.0- 4.0	1140	21.0	83	1890	7.0	8	.34	31	3.25	121	15.07	629	20.85		
								.31		3.17		14.46		19.33	4.11	1
31 JUL	0.0- 4.0	1135	20.0	42	2370	13.4	12	1.12	42	7.00	163	24.60	687	28.87		
								1.15		7.05		23.46		28.82	1.47	
21 AUG	0.0- 4.0	1120	20.0	46	3700	18.8	10	1.32	34	7.81	141	22.43	645	26.28		
								1.38		7.94		25.05		26.37	3.11	
11 SEP	0.0- 3.5	1130	19.0	70	4840	29.5	9	3.26	33	16.61	131	45.33	566	52.99		
								2.94		15.74		49.30		53.92	4.53	
27 SEP	0.0- 4.0	1110	12.5	60	3910	31.8	8	1.56	26	9.43	103	24.39	462	27.73		
								1.64		8.51		27.24		26.69	5.29	
17 OCT	0.0- 4.0	1035	8.5	65	2280	17.1	7	.92	23	5.66	90	13.58	408	14.44		
								.92		4.76		12.92		13.09	5.83	

LAKE 127

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
10 MAY	0.0- 2.0	0920	9.0	114	470	4.3	9	.15	32	.84	119	2.87	544	3.25		
								.14		.81		3.08		3.02	4.17	
29 MAY	0.0- 2.0	0835	20.0	47	2300	4.9	5	.12	20	1.26	84	7.35	422	11.33		
								.09		1.19		8.06		11.35	6.40	
26 JUN	0.0- 3.0	0835	20.5	53	1430	4.9	10	.34	37	2.21	135	8.71	613	10.48		
								.32		2.56		8.54		10.16	4.23	
17 JUL	0.0- 2.0	0835	22.0	56	720	2.1	9	.25	37	1.31	127	4.40	619	6.26		
								.20		1.45		4.38		5.46	7.52	
7 AUG	0.0- 2.3	0840	21.0	65	1260	3.1	10	.20	39	1.46	149	6.21	658	8.93		
								.26		1.49		6.02		9.85	7.64	
28 AUG	0.0- 2.5	0840	18.5	67	800	7.4	10	.26	37	2.04	141	6.24	642	8.46		
								.23		2.03		6.85		7.57	5.83	
18 SEP	0.0- 4.0	0845	14.0	66	730	2.8	10	.29	33	2.44	126	3.88	543	3.75		
								.29		1.24		3.77		3.66	12.64	
16 OCT	0.0- 3.0	0855	8.5	51	700	4.1	6	.13	22	3.21	81	6.60	393	3.86		
								.16		1.10		3.46		3.73	33.33	

LAKE 129

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
10 MAY	0.0- 1.5	1040	9.0	136	700	3.9	9	.31	32	1.54	119	4.19	544	4.25		
								.33		1.31		4.07		4.45	5.52	
29 MAY	0.0- 1.5	0950	20.0	80	2440	4.7	5	.18	20	1.71	84	8.36	422	14.09		
								.16		1.58		8.44		13.64	4.21	
26 JUN	0.0- 1.5	0945	20.5	76	1090	4.0	10	.46	37	2.71	135	8.66	613	11.44		
								.41		2.66		9.25		11.57	3.90	
17 JUL	0.0- 1.5	0945	22.0	71	980	3.6	9	.33	37	2.34	127	7.60	619	8.55		
								.31		2.19		7.96		9.00	4.14	
7 AUG	0.0- 1.5	0945	21.0	83	1000	3.4	10	.22	39	2.18	149	8.06	658	9.34		
								-10.00		2.45		7.91		9.45	3.52	2
28 AUG	0.0- 2.5	0945	18.5	104	1250	6.9	10	.95	37	4.50	141	11.79	642	12.28		
								.93		4.86		12.48		13.06	3.84	
18 SEP	0.0- 4.0	1000	14.0	126	990	7.9	10	1.21	33	5.00	126	10.01	543	10.34		
								1.21		4.74		10.56		10.09	2.45	
16 OCT	0.0- 3.5	1005	8.5	119	1060	9.5	6	.74	22	3.63	81	9.26	393	9.12		
								.67		3.63		10.76		16.88	14.99	

LAKE 130

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
10 MAY	0.0- 2.0	0955	9.0	159	550	3.5	9	.22	32	1.30	119	4.24	544	3.74		
								.16		1.18		3.60		3.73	9.84	
29 MAY	0.0- 1.5	0915	20.0	95	610	2.7	5	.03	20	.58	84	3.93	422	7.55		
								.04		.55		4.34		7.89	4.31	
26 JUN	0.0- 2.5	0910	20.5	98	890	2.5	10	.25	37	1.57	135	4.82	613	4.96		
								.23		1.44		4.79		6.92	8.88	
17 JUL	0.0- 2.0	0910	22.0	105	800	2.4	9	-.26	37	.73	127	2.99	619	4.28		
								-.25		.76		3.98		4.05	9.13	
7 AUG	0.0- 3.0	0910	21.0	101	870	2.9	10	.20	39	1.62	149	5.80	658	5.95		
								.25		1.50		5.55		6.86	8.65	
28 AUG	0.0- 3.5	0910	18.5	95	960	5.6	10	.45	37	2.57	141	6.12	642	7.02		
								.44		2.57		6.48		7.60	2.65	
18 SEP	0.0- 4.0	0920	14.0	100	960	4.6	10	.52	33	2.67	126	5.74	543	5.67		
								.58		2.75		5.85		5.75	2.80	
16 OCT	0.0- 3.5	0920	8.5	100	740	3.5	6	.17	22	1.15	81	3.18	393	2.73		
								.17		1.08		3.21		3.41	5.23	

LAKE 132

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
10 MAY	0.0- 2.0	0850	9.0	186	570	2.1	9	.17	32	.74	119	2.10	544	2.52		
								.12		.84		2.33		2.51	9.86	
29 MAY	0.0- 1.5	0805	20.0	85	730	2.7	5	.04	20	.62	84	3.40	422	6.99		
								.06		.58		3.46		6.25	11.55	
26 JUN	0.0- 2.5	0810	20.5	66	820	3.3	10	.25	37	1.24	135	4.64	613	5.15		
								.21		1.39		4.37		5.01	6.14	
17 JUL	0.0- 2.0	0805	22.0	68	840	3.4	9	.18	37	1.36	127	4.64	619	5.78		
								.22		1.32		5.34		5.43	7.07	
7 AUG	0.0- 3.5	0810	21.0	79	-10	3.8	10	.30	39	1.27	149	6.57	658	10.08		
								.25		1.29		7.82		10.60	7.12	2
28 AUG	0.0- 5.0	0810	18.5	97	2380	6.3	10	.37	37	2.75	141	9.15	642	10.72		
								.44		2.80		7.45		8.28	11.55	
18 SEP	0.0- 6.5	0815	14.0	93	920	6.7	10	.79	33	3.67	126	10.61	543	10.90		
								.83		3.57		10.79		9.89	3.50	
16 OCT	0.0- 8.0	0830	8.5	69	960	7.0	6	.45	22	2.54	81	7.16	393	6.87		
								.46		4.17		7.09		7.00	9.42	

LAKE 223

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
8 MAY	0.0-10.0	0945	7.0	150	590	4.5	5	.22	18	1.14	67	3.46	302	4.47		
								.22		1.15		3.49		4.02	2.09	
15 MAY	0.0- 6.0	1115	10.0	89	940	3.8	8	.19	30	1.15	121	3.11	565	3.39		
								.21		1.15		3.14		3.39	2.04	
16 MAY	2.5- 4.0	0905	9.0	83	570	2.9	6	.08	22	.67	84	2.28	365	2.63		
								.07		.65		2.52		2.99	5.14	
17 MAY	4.0-10.5	0840	6.5	139	740	7.9	3	.25	13	1.35	55	5.07	264	5.19		
								.23		1.41		4.75		5.43	3.97	
5 JUN	0.0- 3.0	0920	15.0	40	460	1.8	5	.05	21	.46	86	1.31	491	2.00		
								.06		.40		1.56		1.78	10.57	
6 JUN	3.0- 6.0	0850	10.0	64	-10	14.9	3	.11	15	.70	64	2.43	333	2.44		
								.11		.71		2.40		2.57	2.29	2
7 JUN	6.0-11.5	0800	6.0	203	1000	13.9	4	.58	14	2.56	52	4.66	245	4.29		
								.68		3.25		4.57		4.66	8.85	
3 JUL	0.0- 3.0	1025	23.0	23	570	3.2	8	.08	32	.90	131	3.79	648	4.74		
								.09		1.00		3.84		4.39	6.71	
4 JUL	3.0- 7.0	0900	14.0	41	900	14.8	5	.17	21	1.50	92	5.11	469	5.18		
								.18		1.54		4.97		4.60	4.63	
5 JUL	7.0-11.0	0820	7.0	280	1150	22.8	3	.47	15	2.76	63	7.17	338	6.60		
								.47		2.83		7.56		6.77	2.06	
24 JUL	0.0- 4.0	1115	21.0	24	420	1.6	7	.03	28	.34	119	2.06	553	2.37		
								.02		.31		1.88		2.57	13.45	
25 JUL	4.0- 8.5	0920	14.0	60	920	5.4	6	.25	19	1.67	80	4.83	441	4.87		
								.26		1.73		4.79		4.64	2.59	
26 JUL	8.5-10.5	0755	8.0	390	1780	23.0	4	3.20	14	6.54	61	17.20	301	15.73		
								1.50		6.39		16.36		16.66	15.12	
14 AUG	0.0- 5.0	0840	21.0	23	540	1.5	9	.06	29	.58	123	2.34	614	2.83		
								.06		.62		2.41		2.83	1.71	
15 AUG	5.0- 9.0	0900	14.0	100	970	6.0	5	.20	21	1.36	85	4.75	404	4.42		
								.18		1.32		3.96		3.95	7.14	
16 AUG	9.0-11.0	0810	8.5	390	1750	21.2	4	.48	16	3.21	67	6.10	327	5.67		
								.78		3.80		6.11		5.20	12.94	
4 SEP	0.0- 4.0	0945	19.0	26	530	2.3	10	.07	37	.80	138	2.78	613	2.92		
								.10		.76		2.88		3.60	10.08	
6 SEP	4.0- 8.5	0805	15.0	77	630	3.9	5	.08	20	.71	70	2.58	378	2.62		
								.11		.70		2.59		3.01	7.97	
5 SEP	8.5-10.5	0900	10.0	375	1240	14.0	3	.33	12	2.30	51	5.59	271	5.29		
								.41		2.43		5.52		5.28	4.73	
25 SEP	0.0- 8.8	0845	13.0	38	570	6.8	9	.17	30	.88	117	2.30	521	2.49		
								.15		.86		2.39		2.88	5.88	
26 SEP	8.8-11.3	0900	10.0	404	1550	24.6	5	1.15	16	4.08	56	7.01	259	6.43		
								1.17		4.21		7.66		6.83	3.39	
17 OCT	0.0-10.0	0940	8.5	60	520	3.5	7	.36	23	1.57	90	4.15	408	3.81		
								.35		1.59		3.89		3.85	1.84	

LAKE 226NE

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
8 MAY	0.0- 2.5	1135	7.0	220	590	3.5	5	.15	18	.98	68	3.41	306	5.08		
								.15		.89		3.55		4.94	3.06	
15 MAY	0.0- 2.0	0835	10.0	138	580	4.4	8	.23	30	1.57	121	5.02	565	5.38		
								.28		1.43		5.13		5.48	6.04	
16 MAY	2.0- 4.5	0820	9.0	256	980	7.9	6	.47	22	2.53	84	7.75	365	8.56		
								.46		2.60		7.65		8.02	2.26	
17 MAY	4.5- 8.0	0805	6.5	360	910	3.5	3	1.24	13	2.11	55	5.89	264	6.24		
								.44		2.15		5.88		6.01	17.90	
5 JUN	0.0- 2.5	0820	15.0	88	1000	7.1	5	.30	21	2.12	86	6.68	491	7.82		
								.33		1.72		6.52		7.36	7.12	
6 JUN	2.5- 5.5	0800	10.0	232	1450	16.7	3	1.17	15	7.09	64	20.19	333	22.95		
								1.05		7.09		23.59		21.59	5.63	
7 JUN	5.5- 7.0	0930	6.0	418	1260	17.2	4	1.40	14	5.85	52	9.85	245	9.30		
								1.67		5.01		11.28		9.20	8.46	
8 JUN	0.0- 2.0	0615	17.0	116	-10	-10.0	7	.36	26	2.62	93	9.00	452	12.94		
								.36		2.66		8.69		12.41	1.64	2
19 JUN	0.0- 3.0	0455	18.0	94	1350	9.9	5	.10	28	3.62	124	13.75	607	16.53		
								.07		3.78		14.28		14.45	8.99	
19 JUN	0.0- 3.0	1055	18.0	94	1350	10.6	7	.53	34	4.48	129	15.76	593	18.88		
								.62		4.16		14.54		20.87	7.31	
20 JUN	0.0- 3.0	0455	18.0	95	1420	11.6	6	.84	32	6.10	140	17.68	663	21.19		
								.93		5.93		18.47		22.60	4.26	
20 JUN	0.0- 3.0	1055	18.0	88	1370	11.3	9	1.22	38	5.97	135	13.20	643	15.51		
								.95		5.91		12.25		15.47	6.02	
21 JUN	0.0- 3.0	0455	17.0	90	1530	11.2	10	1.18	38	6.73	144	18.44	643	18.45		
								1.19		7.10		19.01		17.26	2.81	
21 JUN	0.0- 3.0	1055	17.0	86	1390	9.5	10	.96	38	6.08	143	13.26	645	18.07		
								.91		5.85		16.09		17.30	5.93	
22 JUN	0.0- 3.0	0455	18.0	85	1580	11.8	10	.76	38	5.27	144	17.92	644	19.34		
								.66		5.28		17.92		18.09	3.62	
22 JUN	0.0- 3.0	1055	18.0	81	1520	12.4	10	.88	37	6.38	139	17.81	620	19.27		
								.73		5.62		19.59		19.84	7.84	
23 JUN	0.0- 3.0	0510	18.5	85	2020	11.5	10	.85	37	6.22	135	18.59	610	27.97		
								.81		6.32		19.69		17.41	10.40	
23 JUN	0.0- 3.0	1055	19.0	80	2080	12.5	10	.89	38	7.26	141	23.98	628	22.39		
								.86		7.09		22.83		28.43	6.00	
3 JUL	0.0- 2.0	0830	23.0	38	2140	14.7	8	.57	32	4.99	131	22.81	648	30.68		
								.83		8.21		34.12		45.52	29.14	
4 JUL	2.0- 6.0	0805	14.0	177	1950	25.9	5	1.73	21	11.81	92	28.05	469	26.69		
								1.86		11.95		31.80		28.67	4.94	
12 JUL	0.0- 3.3	0455	21.0	35	2390	18.9	9	1.52	34	13.64	138	41.62	642	52.83		
								1.11		13.13		56.51		63.14	14.67	
12 JUL	0.0- 3.3	0455	21.0	118	2390	18.9	9	1.28	34	7.22	138	42.53	642	48.78		
								1.25		10.80		37.24		49.67	10.01	1
13 JUL	0.0- 3.3	0455	20.0	50	2280	17.5	8	1.76	25	15.60	147	46.20	678	65.09		
								2.46		18.49		63.22		41.51	22.19	
13 JUL	0.0- 3.3	0455	20.0	146	2280	17.5	8	2.06	25	12.59	147	49.27	678	50.01		
								1.89		17.11		45.49		57.31	10.71	1
14 JUL	0.0- 3.3	0455	20.0	34	2700	20.2	9	2.00	35	17.35	135	57.97	611	74.67		
								1.86		19.18		48.48		68.05	7.84	
14 JUL	0.0- 3.3	0455	20.0	122	2700	20.2	9	1.89	35	15.44	135	55.73	611	48.56		
								1.50		15.58		58.57		58.11	8.28	1

LAKE 226NE

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
24 JUL	0.0- 2.5	0830	21.0	32	2990	22.7	7	.64	28	7.16	119	50.01	553	61.94		
								.60		9.30		54.69		62.85	7.38	
25 JUL	2.5- 5.0	0820	14.0	174	2100	27.1	6	3.00	19	22.20	80	39.62	441	25.96		
								3.10		16.98		39.58		36.79	11.43	
27 JUL	0.0- 3.3	0530	20.0	42	-10	-10.0	10	.88	35	10.62	140	51.76	617	49.78		
								1.28		12.11		55.93		49.99	10.24	2
28 JUL	0.0- 3.3	0530	20.0	40	-10	-10.0	10	1.65	38	14.11	141	36.51	607	67.09		
								2.35		15.72		64.65		69.97	18.66	2
14 AUG	0.0- 2.5	0830	21.0	59	6660	34.9	9	4.77	29	25.27	123	96.02	614	95.74		
								5.43		27.70		95.48		93.74	4.38	
15 AUG	2.5- 5.0	0810	14.0	234	2050	28.3	5	2.62	21	10.64	85	30.50	404	28.92		
								1.96		11.00		32.21		20.21	12.95	
4 SEP	0.0- 2.8	0835	19.0	131	4590	47.6	10	11.29	37	40.89	138	75.07	613	76.32		
								10.96		44.21		78.12		81.43	3.75	
4 SEP	0.0- 2.8	0835	19.0	266	4590	47.6	10	9.81	37	40.22	138	76.08	613	77.68		
								10.02		39.14		80.49		75.42	2.38	1
13 SEP	.5- .5	0830	15.0	174	2410	33.1	9	5.68	30	20.68	123	41.53	539	41.89		
								9.34		18.03		40.45		40.54	12.07	
20 SEP	.5- .5	0740	13.5	155	1990	31.9	10	7.67	35	20.42	136	35.60	592	30.03		
								6.05		21.20		34.42		28.94	6.07	
25 SEP	0.0- 4.0	0845	13.0	144	2760	31.4	9	5.10	30	17.50	117	34.30	521	28.94		
								5.60		16.97		32.69		32.64	5.18	
17 OCT	0.0- 6.5	0840	8.5	226	1140	10.7	7	1.08	23	4.33	90	9.68	408	8.86		
								1.19		4.39		8.98		8.88	3.19	

LAKE 226 SW

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
8 MAY	0.0- 2.5	1110	7.0	206	570	3.6	5	.16	18	.92	70	3.63	310	4.83		
								.15		1.08		3.38		4.92	6.64	
15 MAY	0.0- 2.0	0805	10.0	147	580	3.2	8	.17	30	1.07	121	3.50	565	2.91		
								.18		1.19		3.54		3.58	7.54	
16 MAY	2.0- 4.0	0810	9.0	223	740	5.0	6	.29	22	1.43	84	4.31	365	4.92		
								.25		1.56		4.32		4.64	5.27	
17 MAY	4.0- 8.0	0755	6.5	340	790	7.9	3	.32	13	1.67	55	4.74	264	4.87		
								.29		1.64		4.56		4.96	3.17	
5 JUN	0.0- 2.5	0805	15.0	101	690	4.1	5	.02	21	1.13	86	3.08	491	4.96		
								.02		1.06		3.66		4.37	13.14	
6 JUN	2.5- 5.5	0750	10.0	200	950	9.2	3	.37	15	2.44	64	6.58	333	7.26		
								.35		2.53		6.93		6.55	4.40	
7 JUN	5.5- 8.0	0830	6.0	478	1420	28.0	4	1.96	14	5.40	52	7.49	245	5.66		
								1.96		6.03		7.47		5.48	2.63	
3 JUL	0.0- 2.0	0820	23.0	125	730	6.1	8	.25	32	1.91	131	7.17	648	9.48		
								.26		2.09		7.77		8.94	5.07	
4 JUL	2.0- 6.0	0800	14.0	176	880	9.8	5	.40	21	3.33	92	8.77	469	9.27		
								.38		3.42		8.67		8.82	2.38	
5 JUL	6.0- 8.0	0830	7.0	490	2110	55.0	3	3.14	15	13.64	63	27.71	338	26.85		
								2.99		15.04		29.04		28.29	4.34	
24 JUL	0.0- 3.0	0815	21.0	131	930	7.8	7	.46	28	2.68	119	8.59	553	9.37		
								.39		2.57		8.81		9.43	4.00	
25 JUL	3.0- 7.0	0810	14.0	218	1540	23.1	6	2.40	19	14.58	80	28.69	441	26.52		
								2.45		13.25		28.05		30.48	4.85	
27 JUL	0.0- 3.3	0500	20.0	119	-10	-10.0	10	.53	35	2.95	140	8.19	617	8.69		
								.54		3.03		8.69		9.05	2.72	2
28 JUL	0.0- 3.3	0500	20.0	111	-10	-10.0	10	.46	38	2.26	141	6.03	607	7.14		
								.75		2.32		6.44		7.41	10.61	2
14 AUG	0.0- 3.5	0800	21.0	138	1140	11.7	9	.58	29	4.01	123	9.82	614	10.52		
								.57		3.33		9.57		10.86	4.49	
15 AUG	3.5- 8.0	0800	14.0	318	1620	35.7	5	1.97	21	11.66	85	17.74	404	15.84		
								2.39		10.13		18.44		16.48	7.33	
4 SEP	0.0- 3.5	0810	19.0	143	1220	11.6	10	.55	37	2.82	138	7.26	613	7.19		
								.53		2.58		7.27		7.31	2.80	
6 SEP	3.5- 7.0	0835	15.0	262	1390	21.4	5	.93	20	5.27	70	13.43	378	12.84		
								.90		5.19		12.90		12.99	1.75	
25 SEP	0.0- 5.5	0820	13.0	141	1310	13.8	9	.79	30	2.65	117	6.16	521	5.83		
								.82		2.30		6.08		6.48	5.18	
26 SEP	5.5- 7.5	0805	10.0	320	1570	35.2	5	1.42	16	4.41	56	9.35	259	9.96		
								1.52		4.17		9.84		9.65	3.69	
17 OCT	0.0- 6.0	0830	8.5	228	1020	15.6	7	1.72	23	5.32	90	11.06	408	10.53		
								1.87		5.52		11.03		11.90	4.37	

LAKE 227

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
9 MAY	0.0- 2.0	0830	8.0	269	960	10.8	9	1.44 1.54	30	5.65 5.57	111	13.96 13.41	497	14.27 15.05	3.08	
22 MAY	0.0- 1.0	1020	15.0	130	1000	5.9	3	.19 .18	14	1.30 1.22	60	4.85 4.65	421	6.21 5.69	4.69	
23 MAY	1.0- 4.0	0815	11.0	288	2020	28.6	5	1.91 1.97	20	10.60 9.65	78	32.92 31.17	392	29.19 33.65	5.71	
12 JUN	0.0- 2.0	1000	16.0	123	1520	4.2	7	.49 .47	23	3.23 3.21	105	11.63 12.29	538	14.43 13.67	2.74	
13 JUN	2.0- 4.3	0905	10.0	280	3060	64.4	5	7.21 6.88	25	24.95 24.28	79	48.81 46.85	349	44.01 42.28	2.74	
10 JUL	0.0- 2.0	1040	21.0	156	1700	12.7	8	1.19 1.18	31	8.04 8.13	121	29.17 31.35	629	40.98 38.20	2.96	
11 JUL	2.0- 4.3	0810	13.0	282	690	39.0	6	3.30 3.24	23	11.34 10.88	90	24.43 22.30	398	24.19 21.97	4.36	
31 JUL	0.0- 2.0	1015	20.0	137	1780	19.6	12	2.05 2.26	42	13.74 14.56	163	45.66 44.82	687	47.66 48.50	3.36	
1 AUG	2.0- 4.5	0800	13.0	292	3390	87.5	6	8.07 7.11	24	19.47 23.31	94	41.47 41.84	446	44.40 41.62	6.70	
21 AUG	0.0- 2.0	0830	20.0	49	3430	33.5	10	4.20 4.59	34	28.39 25.49	141	81.39 77.90	645	88.84 90.16	4.53	
22 AUG	2.0- 4.0	0815	14.0	240	3840	79.2	6	4.71 4.24	21	17.00 17.41	82	48.09 43.49	383	49.50 48.59	4.38	
11 SEP	0.0- 2.0	1020	19.0	49	3950	42.0	9	6.01 6.06	33	33.12 36.77	131	105.48 104.35	566	116.29 117.70	2.40	
12 SEP	2.0- 3.3	0810	13.0	200	3580	70.2	6	-56.9 186.93	22	141.17 .85	81	-18.02 135.20	382	247.77 18.28	130.86	4
14 SEP	2.0- 3.3	1145	14.5	171	-10	-10.0	5	3.18 3.25	16	15.68 15.30	57	58.13 56.75	259	88.90 77.51	3.65	2
27 SEP	0.0- 3.0	1000	12.5	137	3710	45.8	8	6.89 6.08	26	42.79 25.99	103	66.97 63.22	462	64.66 65.51	12.08	
18 OCT	0.0- 3.0	0955	8.0	298	4280	48.1	6	7.63 7.99	20	27.81 26.96	83	51.83 52.18	361	51.86 51.10	1.76	
25 OCT	0.0- 3.5	0905	7.0	382	2000	52.2	6	10.05 9.84	25	30.93 31.42	88	42.27 46.92	408	46.17 47.65	3.05	

LAKE 239

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
2 MAY	0.0- 1.0	0900	4.0	175	480	2.1	6	.12 .29	21	.59 .77	74	1.93 2.67	337	2.73 2.55	26.52	3
2 MAY	1.0- 2.0	0900	4.0	223	262	1.5	6	.20 .16	21	.61 .64	74	1.52 1.46	337	1.62 1.44	6.85	3
2 MAY	2.0- 4.0	0900	4.0	230	0	1.3	6	.14 .12	21	.81 .58	74	1.22 1.46	337	1.31 1.48	13.59	3
9 MAY	0.0- 3.5	0950	8.0	194	370	2.4	9	.24 .21	30	1.02 .94	111	2.43 2.30	497	2.56 2.78	5.95	
22 MAY	0.0- 2.5	0910	15.0	118	410	3.4	3	.05 .06	14	.53 .53	60	3.02 2.85	421	3.49 3.98	6.00	
23 MAY	2.5- 5.0	0910	11.0	256	650	7.9	5	.33 .32	20	2.01 2.06	78	6.06 6.18	392	7.77 6.94	3.62	
24 MAY	5.0- 8.0	0830	7.0	186	390	4.3	3	.19 .17	12	.90 .90	49	2.52 2.23	265	2.56 2.45	5.16	
12 JUN	0.0- 3.5	0835	16.0	114	690	8.5	7	.26 .26	23	1.61 1.85	105	5.06 4.76	538	4.29 4.99	6.74	
13 JUN	3.5- 6.0	0835	10.0	163	860	12.9	5	.96 .97	25	3.16 3.44	79	5.82 5.79	349	4.70 5.18	3.47	
10 JUL	0.0- 3.5	0835	21.0	126	540	2.6	8	.13 .13	31	1.19 1.26	121	3.78 3.65	629	4.46 4.49	2.18	
11 JUL	3.5- 7.0	0840	13.0	210	2610	7.4	6	.57 .54	23	2.32 2.26	90	3.87 3.83	398	4.34 4.09	2.44	
31 JUL	0.0- 4.5	0830	20.0	139	500	3.1	12	.34 .43	42	1.88 1.55	163	3.53 3.58	687	4.23 3.79	9.71	
1 AUG	4.5- 7.0	0820	13.0	262	900	14.4	6	.49 .36	24	2.06 1.94	94	3.94 3.82	446	3.60 3.62	6.82	
21 AUG	0.0- 5.0	0835	20.0	139	590	4.6	10	.41 .37	34	1.79 1.85	141	4.37 4.46	645	4.00 4.58	5.24	
22 AUG	5.0- 7.0	0830	14.0	179	560	6.6	6	.46 .46	21	1.20 1.10	82	2.11 2.16	383	1.95 1.97	2.33	
11 SEP	0.0- 5.0	0850	19.0	133	530	6.1	9	.43 .41	33	1.86 1.73	131	4.41 4.37	566	4.13 4.67	4.54	
12 SEP	5.0- 9.0	0930	13.0	274	630	7.1	6	.40 .43	22	1.28 1.52	81	2.04 2.21	382	1.86 2.05	7.47	
27 SEP	0.0- 7.5	0835	12.5	139	590	7.6	8	.38 .65	26	1.67 1.73	103	3.83 3.92	462	3.65 3.85	11.36	
18 OCT	0.0- 7.5	0835	8.0	155	360	5.8	6	.55 .53	20	1.84 1.99	83	5.29 4.62	361	4.99 4.62	5.64	

LAKE 302N

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
8 MAY	0.0- 4.0	0830	7.0	158	730	4.4	6	.38 .54	23	1.45 1.71	83	5.09 4.31	358	5.56 5.70	12.43	
29 MAY	0.0- 1.5	1110	20.0	43	720	3.2	5	.08 .08	20	1.00 1.01	84	5.21 5.15	422	8.37 9.00	2.10	
30 MAY	1.5- 5.5	0835	12.5	104	1020	10.9	5	.91 .91	19	4.68 4.35	71	12.77 11.92	372	14.21 14.20	2.61	
31 MAY	5.5- 8.0	0930	6.5	307	1120	13.8	3	1.99 1.93	15	8.47 8.27	55	16.99 18.99	278	15.67 15.50	3.11	
26 JUN	0.0- 2.0	1105	20.5	44	930	4.0	10	.22 .27	37	1.74 1.80	135	4.94 3.93	613	5.12 5.71	10.57	
27 JUN	2.0- 6.0	0750	14.0	112	1110	12.1	6	1.21 1.26	21	5.24 4.86	87	12.99 13.16	420	14.31 14.35	2.40	
28 JUN	6.0- 7.0	0920	7.5	315	2110	56.0	4	3.14 2.98	15	15.14 15.77	57	44.09 44.04	329	44.48 44.53	1.68	
17 JUL	0.0- 3.0	1015	22.0	47	610	2.7	9	.19 .18	37	1.17 1.39	127	4.16 4.41	619	5.36 5.39	4.72	
18 JUL	3.0- 7.5	0735	12.5	230	1680	33.2	5	2.53 2.35	21	10.80 10.70	91	22.80 20.78	476	16.77 16.20	3.70	
7 AUG	0.0- 4.0	1120	21.0	57	720	3.2	10	.18 .19	39	1.17 1.20	149	4.83 4.75	658	6.23 6.11	1.90	
8 AUG	4.0- 7.5	0815	13.5	240	1200	12.9	6	1.16 1.00	24	3.65 4.11	91	10.91 11.09	433	11.52 10.69	6.25	
28 AUG	0.0- 4.5	1130	18.5	54	1040	6.1	10	.39 .44	37	2.34 1.88	141	4.75 6.78	642	4.84 6.60	17.94	
29 AUG	4.5- 8.0	0750	13.0	294	1490	40.6	6	2.29 4.44	25	8.93 8.00	91	13.14 14.53	406	13.36 12.31	16.42	
18 SEP	0.0- 6.0	1115	14.0	73	700	6.1	10	3.99 .81	33	3.49 3.52	126	7.72 7.11	543	7.84 7.38	26.12	
19 SEP	6.0- 7.5	0755	12.0	240	2270	24.2	4	1.42 1.28	14	4.68 4.85	58	13.42 12.14	289	11.90 12.73	5.47	
5 OCT	0.0- 7.5	0820	12.0	59	910	5.8	8	.54 .65	26	2.79 2.64	103	5.52 5.42	444	5.80 5.65	4.89	
23 OCT	0.0- 6.0	1045	8.0	86	1180	20.5	6	1.72 1.76	22	7.84 7.66	87	20.96 21.29	389	25.00 24.58	1.37	

LAKE 302S

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
8 MAY	0.0- 4.0	0850	7.0	190	630	1.6	6	.09 .08	22	.59 .56	82	2.40 1.82	353	2.44 2.10	8.98	
29 MAY	0.0- 1.5	1125	20.0	67	470	1.3	5	.03 .02	20	.36 .34	84	2.23 2.35	422	4.17 4.01	7.01	
30 MAY	1.5- 5.5	0845	12.5	149	660	4.1	5	.26 .22	19	1.18 1.29	71	3.94 4.20	372	4.44 4.63	6.95	
31 MAY	5.5- 9.0	1015	6.5	332	690	7.9	3	1.25 1.17	15	3.68 4.01	55	9.22 9.26	278	8.99 8.40	4.01	
26 JUN	0.0- 2.0	1130	20.5	58	-10	3.3	10	.21 .23	37	1.41 1.37	135	3.53 3.69	613	3.97 4.57	5.51	2
27 JUN	2.0- 6.0	0800	14.0	122	980	6.8	6	.53 .52	21	2.72 2.70	87	8.40 8.51	420	9.68 9.08	1.83	
28 JUN	6.0- 8.5	1000	7.5	355	1670	23.9	4	.74 .77	15	4.44 4.41	57	11.29 11.60	329	12.19 10.85	3.38	
17 JUL	0.0- 4.0	1045	22.0	53	580	2.5	9	.17 .21	37	.98 1.03	127	3.01 3.06	619	3.77 3.52	6.50	
18 JUL	4.0- 8.3	0745	12.5	273	1960	28.8	5	1.55 1.26	21	7.52 6.52	91	17.72 17.32	476	16.41 14.95	8.12	
7 AUG	0.0- 4.5	1135	21.0	67	740	2.0	10	.09 .12	39	.65 .62	149	2.40 2.39	658	3.40 3.40	6.56	
8 AUG	4.5- 8.3	0850	13.5	318	1520	21.7	6	1.63 1.58	24	5.96 5.85	91	11.67 12.06	433	10.05 9.93	1.60	
28 AUG	0.0- 5.0	1135	18.5	82	610	3.4	10	.27 .25	37	1.34 1.37	141	3.80 4.29	642	4.08 4.36	4.93	
29 AUG	5.0- 8.5	0800	13.0	380	1540	32.0	6	1.31 1.11	25	4.72 3.96	91	7.04 7.07	406	5.70 5.59	6.30	
18 SEP	0.0- 7.0	1140	14.0	95	690	4.7	10	.62 .68	33	2.86 2.78	126	5.97 5.99	543	5.84 5.47	3.38	
19 SEP	7.0- 8.5	0805	12.0	455	1680	45.2	4	.82 1.13	14	3.68 3.29	58	7.97 8.24	289	6.28 6.75	9.53	
5 OCT	0.0- 8.5	0845	12.0	74	720	4.5	8	.32 .31	26	1.55 1.61	103	4.01 3.80	444	4.42 4.37	2.32	
23 OCT	0.0- 9.0	1105	8.0	80	790	6.1	6	.42 .44	22	2.02 1.96	87	5.02 4.63	389	4.62 4.93	3.84	

LAKE 382

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
9 MAY	0.0- 8.0	1005	8.0	201	440	2.4	9	.29	30	1.26	111	3.00	497	3.07		
								.29		1.23		3.10		3.07	1.08	
22 MAY	0.0- 3.0	0845	15.0	79	480	3.6	3	.05	14	.57	60	3.05	421	4.86		
								.05		.61		3.27		5.28	4.49	
23 MAY	3.0- 5.5	0850	11.0	140	920	5.2	5	.28	20	1.76	78	5.90	392	6.45		
								.29		1.98		6.22		6.36	3.87	
24 MAY	5.5- 8.0	0830	7.0	210	720	7.7	3	.26	12	1.57	49	4.67	265	4.78		
								.26		1.51		4.83		4.95	2.36	
12 JUN	.5- .5	0855	16.0	75	670	2.7	7	.18	23	1.15	105	4.60	538	3.91		
								.21		1.24		4.60		5.40	9.52	
13 JUN	4.0- 6.5	0830	10.0	167	650	4.9	5	.46	25	2.06	79	4.68	349	4.87		
								.44		2.03		5.05		4.97	2.88	
14 JUN	6.5- 8.5	0850	6.5	268	860	4.8	3	.27	15	1.06	48	1.78	256	2.00		
								.31		1.00		1.70		1.88	5.40	
10 JUL	0.0- 3.0	0905	21.0	104	670	2.4	8	.21	31	1.30	121	4.23	629	5.08		
								.20		1.24		4.03		4.89	3.43	1
11 JUL	3.0- 7.5	0850	13.0	202	880	10.0	6	.98	23	4.90	90	11.97	398	12.82		
								.98		4.84		11.18		11.50	3.34	
31 JUL	0.0- 4.0	0845	20.0	87	590	2.6	12	.47	42	1.67	163	5.26	687	5.50		
								.43		2.03		5.75		5.88	8.13	
1 AUG	4.0- 7.5	0835	13.0	236	500	5.3	6	.59	24	3.74	94	8.09	446	8.18		
								.91		4.17		8.29		8.78	11.18	
21 AUG	0.0- 5.0	0940	20.0	88	720	3.2	10	.26	34	1.32	141	4.12	645	4.38		
								.25		1.43		4.12		4.61	2.54	
22 AUG	5.0- 8.0	0900	14.0	264	750	4.9	6	.35	21	1.38	82	3.81	383	3.81		
								.19		1.33		3.56		3.98	13.14	
11 SEP	0.0- 5.0	0845	19.0	88	620	2.8	9	.35	33	1.68	131	3.96	566	4.57		
								.34		1.54		4.27		4.44	3.70	
12 SEP	5.0- 8.5	0850	13.0	268	790	7.3	6	.73	22	2.28	81	4.56	382	4.03		
								.61		2.28		4.45		3.79	4.70	
27 SEP	0.0- 8.5	0910	12.5	130	640	4.3	8	.35	26	1.34	103	2.89	462	3.03		
								.32		1.40		3.02		2.87	3.86	
18 OCT	0.0- 8.0	0850	8.0	110	630	3.4	6	.41	20	1.37	83	3.32	361	3.37		
								.38		1.53		3.24		3.25	4.18	

LAKE 382 Bay

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
9 MAY	0.0- 2.0	1020	8.0	152	510	3.0	9	.25 .27	30	1.51 1.45	111	4.24 3.74	497	4.17 3.97	5.01	
22 MAY	0.0- 2.0	0905	15.0	84	480	3.5	3	.07 .06	14	.63 .62	60	3.48 3.64	421	5.36 5.09	3.95	
23 MAY	2.0- 3.0	0900	11.0	104	580	4.2	5	.14 .12	20	1.05 .98	78	3.90 3.93	392	4.70 4.52	4.75	
12 JUN	.5- .5	0910	16.0	84	1240	3.1	7	.36 .18	23	1.43 1.38	105	5.53 5.98	538	6.54 6.39	14.24	
10 JUL	0.0- 2.5	0945	21.0	115	1100	3.8	8	.26 .31	31	2.08 2.06	121	7.45 7.64	629	9.47 9.53	3.30	1
31 JUL	0.0- 2.5	0920	20.0	95	950	5.7	12	.48 .40	42	2.63 2.75	163	9.10 8.75	687	9.22 9.89	5.86	
21 AUG	0.0- 2.5	1010	20.0	91	960	4.2	10	.21 .23	34	1.80 1.61	141	6.21 6.30	645	6.96 6.98	4.37	
11 SEP	0.0- 2.5	0925	19.0	101	930	4.4	9	.57 .54	33	3.02 2.89	131	8.91 8.89	566	9.92 9.83	2.11	
27 SEP	0.0- 2.5	0840	12.5	93	790	4.3	8	.28 .59	26	1.51 1.49	103	4.05 4.24	462	4.37 4.26	14.24	
18 OCT	0.0- 2.5	0905	8.0	89	760	3.6	6	.21 .22	20	1.16 1.12	83	3.18 2.92	361	3.11 2.86	4.78	

LAKE 383

DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
15 MAY	.3- .3	1015	10.0	85	550	2.6	8	.13	30	.80	121	2.86	565	3.37		
								.12		.86		2.83		3.23	2.95	
16 MAY	1.0- 3.5	1105	9.0	161	740	6.4	6	.27	22	1.97	84	6.62	365	7.61		
								.30		2.02		6.15		6.81	5.60	
17 MAY	3.5- 6.0	1000	6.5	314	940	3.2	3	.46	13	2.49	55	8.03	264	8.61		
								.42		2.45		7.44		8.56	3.33	
5 JUN	0.0- 1.5	1100	15.0	63	630	2.6	5	.04	21	.89	86	3.47	491	4.05		
								.01		.91		3.97		3.84	27.93	
6 JUN	1.5- 4.5	1025	10.0	120	860	9.7	3	.51	15	3.30	64	8.89	333	8.68		
								.49		3.27		8.92		8.40	1.56	
7 JUN	4.5- 6.0	0930	6.0	376	1240	16.5	4	1.31	14	4.99	52	8.87	245	8.63		
								1.34		4.85		8.96		8.05	2.36	
3 JUL	0.0- 2.0	1050	23.0	82	510	2.2	8	.13	32	1.02	131	4.39	648	6.42		
								.13		1.10		4.64		6.01	4.04	
4 JUL	2.0- 6.3	1025	14.0	232	910	12.2	5	.56	21	4.02	92	9.99	469	10.84		
								.59		3.75		11.71		10.06	6.33	
24 JUL	0.0- 2.3	1100	21.0	76	730	2.4	7	.21	28	1.25	119	4.69	553	5.53		
								.27		1.19		4.38		5.36	7.24	
25 JUL	2.3- 6.5	1040	14.0	306	920	10.7	6	.87	19	4.22	80	9.68	441	9.50		
								.88		3.96		9.63		9.59	1.64	
14 AUG	0.0- 3.0	1100	21.0	84	720	3.0	9	.20	29	1.21	123	5.76	614	4.87		
								.17		1.21		4.08		4.83	8.80	
15 AUG	3.0- 6.8	1040	14.0	298	1110	12.1	5	.55	21	3.61	85	7.10	404	7.51		
								.67		3.66		7.17		6.80	5.56	
4 SEP	0.0- 3.0	1100	19.0	85	670	2.9	10	.13	37	.96	138	3.16	613	3.09		
								.18		.88		-10.00		3.81	14.29	2
6 SEP	3.0- 6.5	0945	15.0	284	1100	15.1	5	.60	20	3.01	70	7.57	378	6.97		
								.70		3.30		7.17		8.80	9.53	
25 SEP	0.0- 6.0	1110	13.0	135	920	4.5	9	.40	30	1.55	117	7.41	521	3.33		
								.44		1.58		2.90		3.03	19.30	
23 OCT	0.0- 6.0	0925	8.0	132	520	3.9	6	.22	22	1.06	87	2.80	389	2.82		
								.24		1.07		2.85		2.76	2.51	

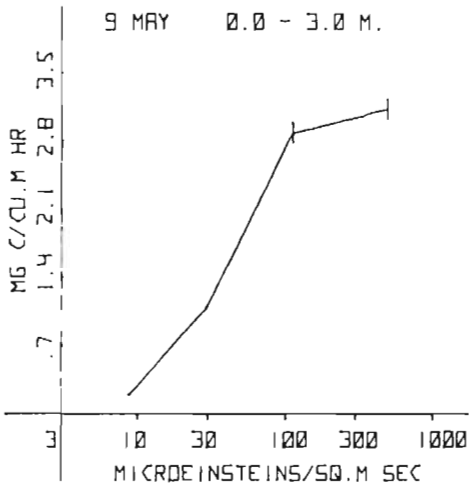
LAKE 384

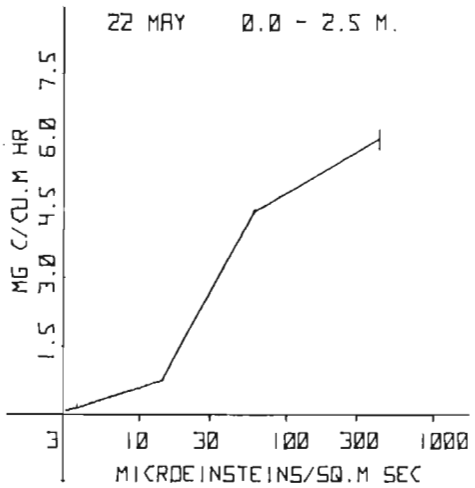
DATE	DEPTH	TIME	TEMP	DIC	SUSP-C	CHLOR	I4	P4	I3	P3	I2	P2	I1	P1	C.V.(%)	NOTE
15 MAY	0.0- 1.5	1105	10.0	79	820	3.1	8	.12	30	.92	121	3.20	565	3.43		
								.11		1.00		3.18		3.23	3.91	
5 JUN	0.0- 2.0	1010	15.0	47	1020	5.1	5	.18	21	2.17	86	7.31	491	7.86		
								.17		2.06		6.69		7.75	4.14	
3 JUL	0.0- 2.0	1000	23.0	60	580	2.2	8	.17	32	1.14	131	4.70	648	6.23		
								.17		1.16		4.50		6.41	1.78	
24 JUL	0.0- 3.0	1015	21.0	61	1160	3.9	7	.30	28	1.83	119	5.23	553	8.17		
								.30		1.42		6.20		7.22	9.71	
14 AUG	0.0- 3.0	1010	21.0	46	950	5.9	9	.46	29	2.83	123	10.58	614	13.58		
								.46		2.83		9.70		14.97	3.60	
4 SEP	.5- .5	1005	19.0	44	940	3.7	10	.35	37	1.92	138	3.09	613	8.13		
								.35		1.88		6.35		8.14	12.60	
25 SEP	0.0- 4.0	1020	13.0	50	1260	4.9	9	.38	30	1.81	117	5.54	521	5.77		
								.32		2.10		5.12		5.34	8.66	
23 OCT	0.0- 3.5	0840	8.0	51	1120	3.2	6	.21	22	1.09	87	3.38	389	3.30		
								.23		1.15		3.03		3.21	5.19	

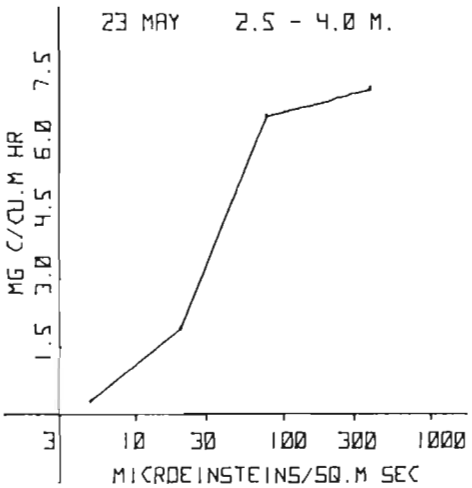
APPENDIX 2

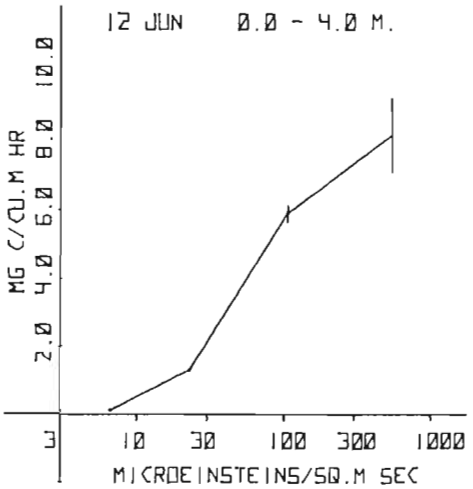
Plots of photosynthetic carbon uptake versus irradiance are arranged chronologically according to lake basin. Irradiance is plotted on a logarithmic scale, production on a linear scale. The vertical bars join the values obtained for the two replicates at each irradiance.

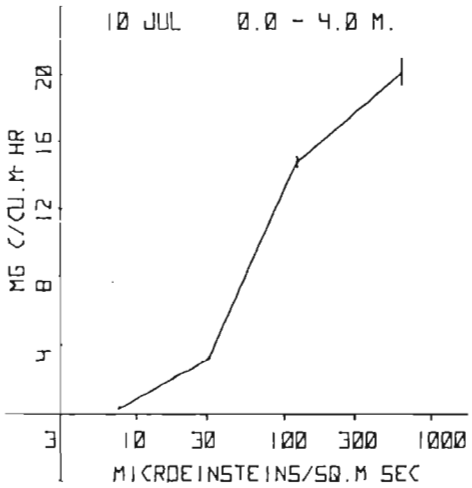
LAKE 114

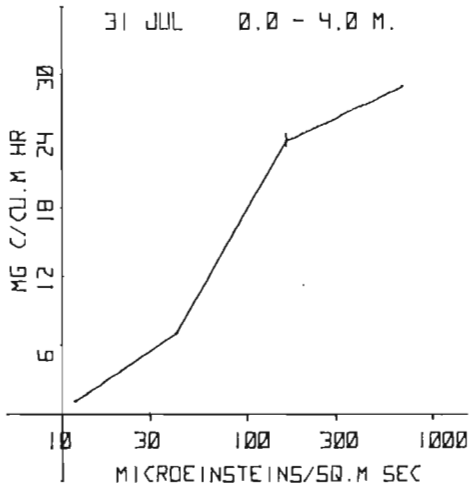

9 MAY 0.0 - 3.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


22 MAY 0.0 - 2.5 M.
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

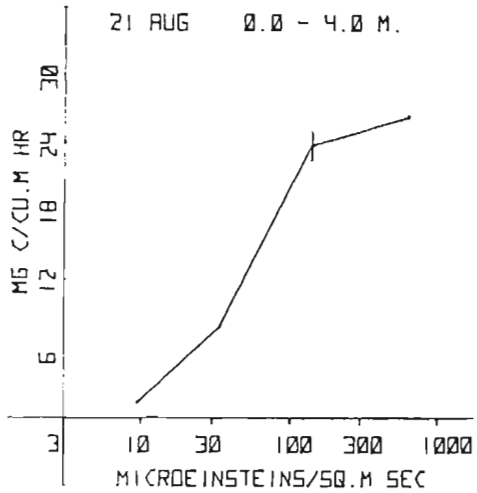

23 MAY 2.5 - 4.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

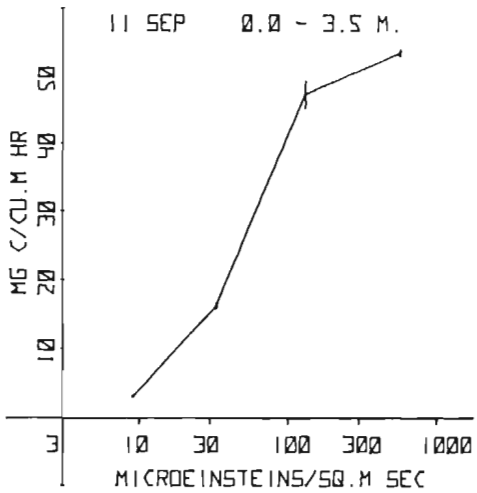

12 JUN 0.0 - 4.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

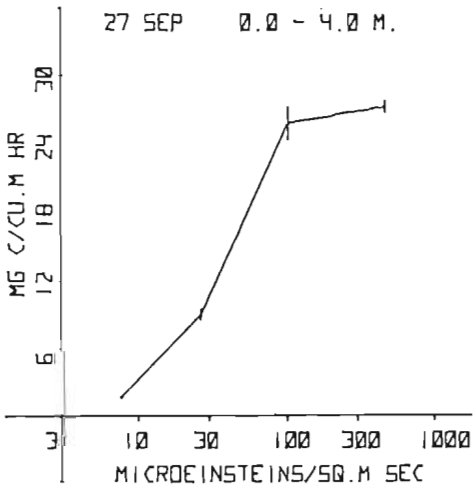

10 JUL 0.0 - 4.0 M.
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

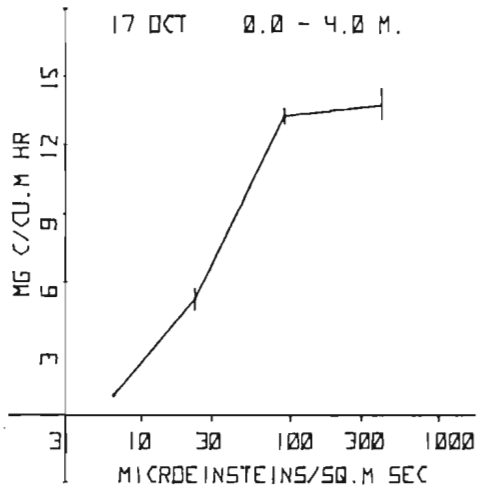

31 JUL 0.0 - 4.0 M.
MG C/CU.M HR
6 12 18 24 30
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 114

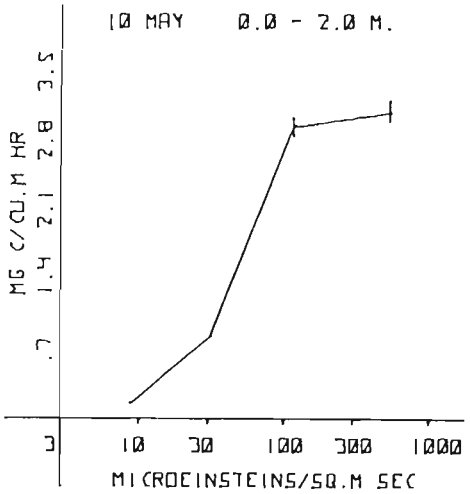

21 AUG 0.0 - 4.0 M.
MG C/CU.M HR
6
12
18
24
30
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

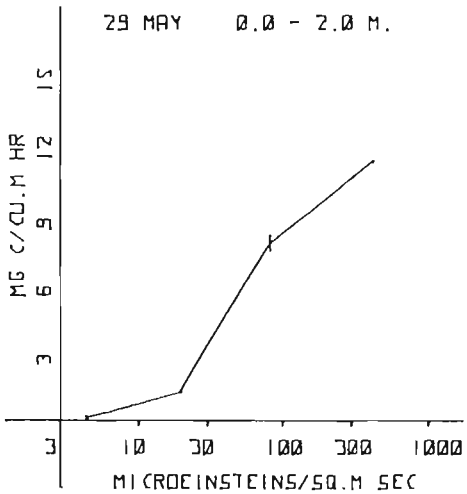

11 SEP 0.0 - 3.5 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

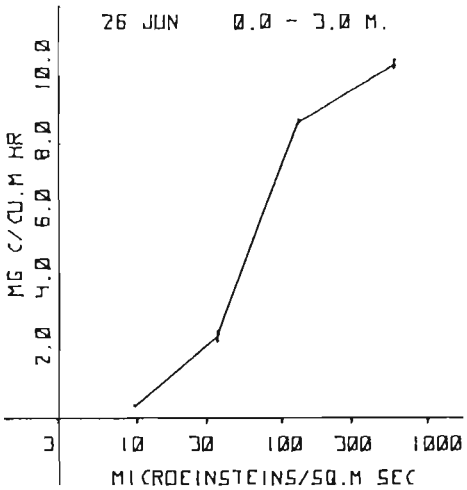

27 SEP 0.0 - 4.0 M.
MG C/CU.M HR
6
12
18
24
30
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

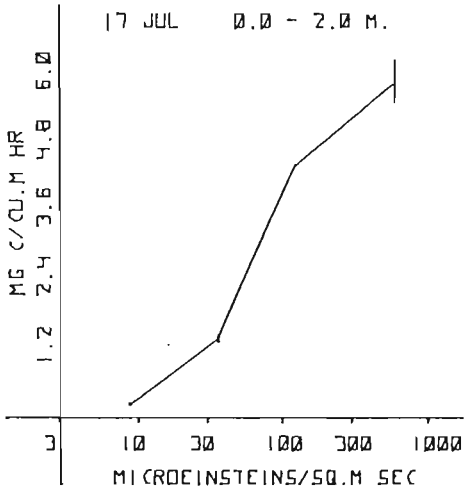

17 OCT 0.0 - 4.0 M.
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

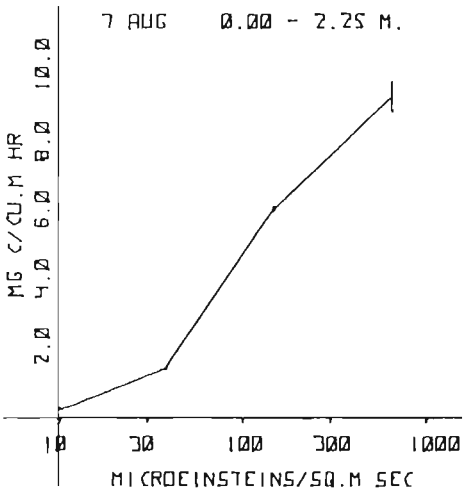
LAKE 127

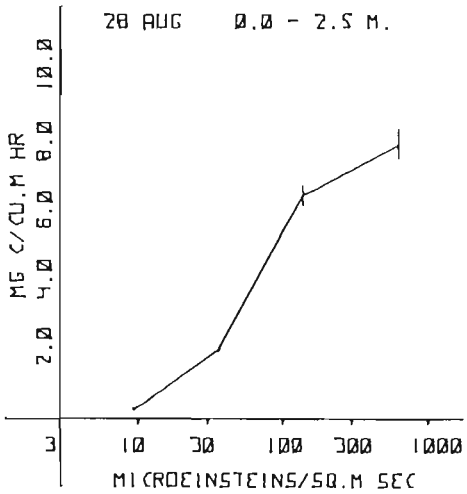

10 MAY 0.0 - 2.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


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

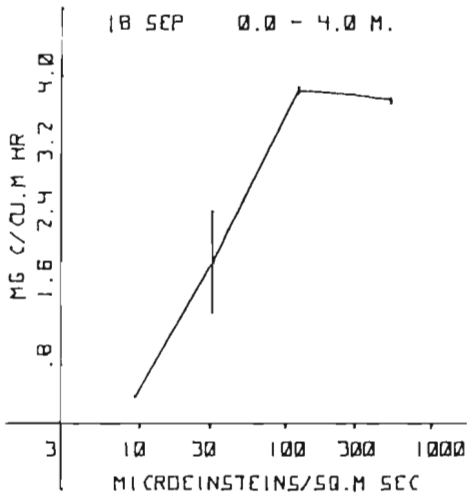

26 JUN 0.0 - 3.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

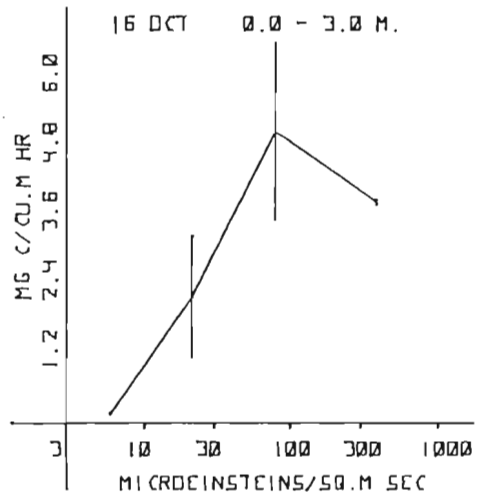

17 JUL 0.0 - 2.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


7 AUG 0.00 - 2.25 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

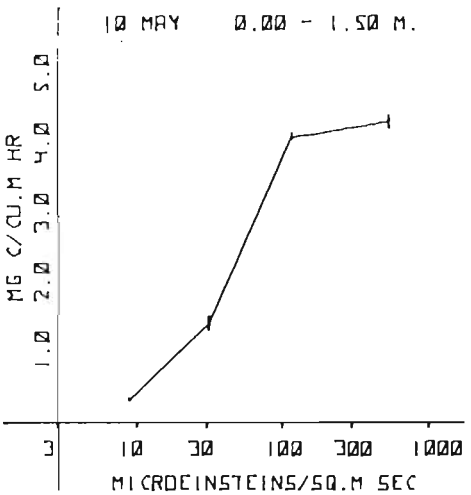

28 AUG 0.0 - 2.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

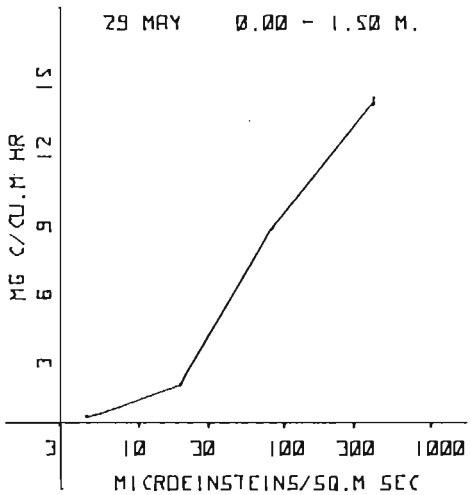
LAKE 127

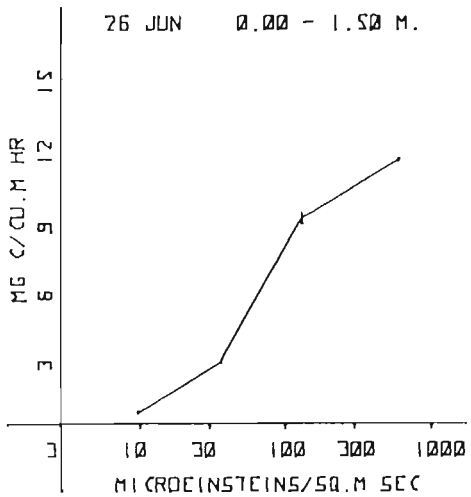

18 SEP 0.0 - 4.0 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

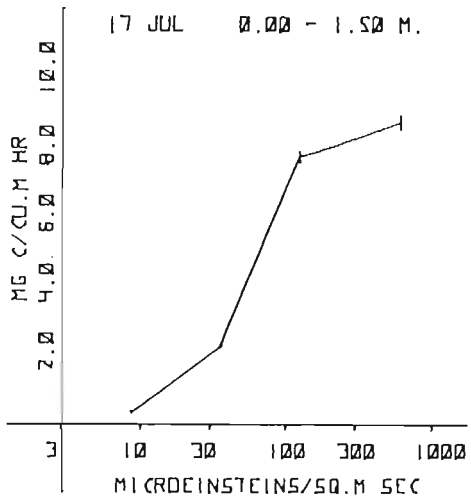

16 OCT 0.0 - 3.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

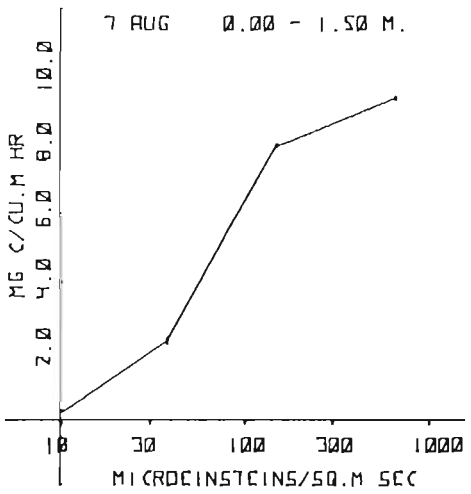
LAKE 129

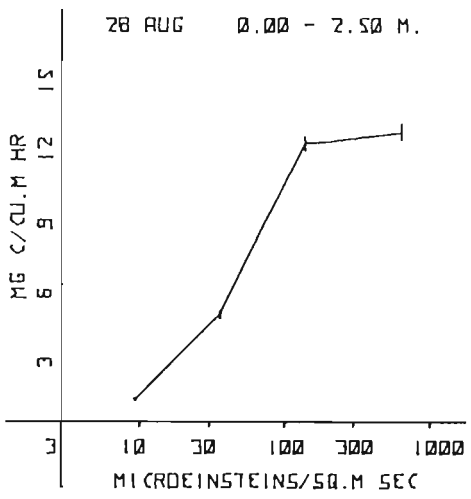

10 MAY 0.00 - 1.50 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


29 MAY 0.00 - 1.50 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

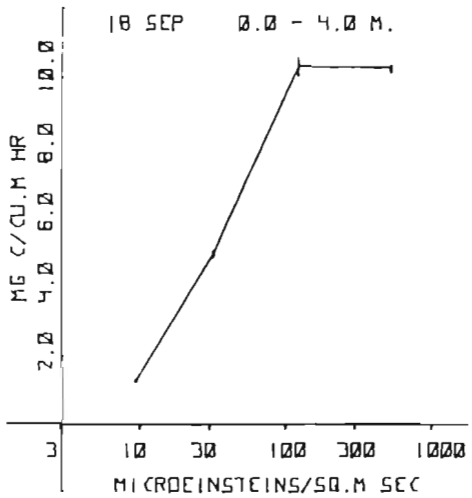

26 JUN 0.00 - 1.50 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

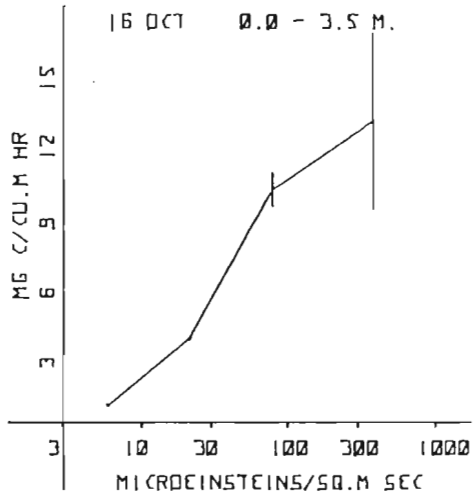

17 JUL 0.00 - 1.50 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


7 AUG 0.00 - 1.50 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

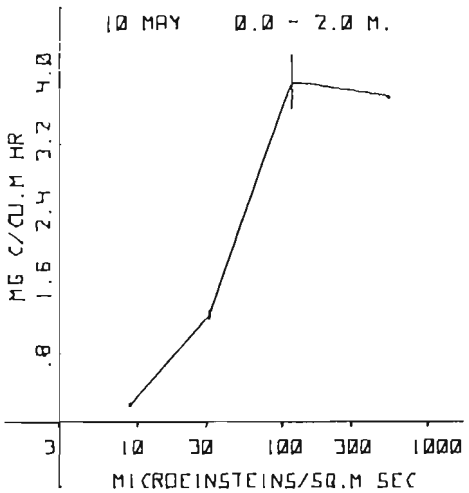

28 AUG 0.00 - 2.50 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

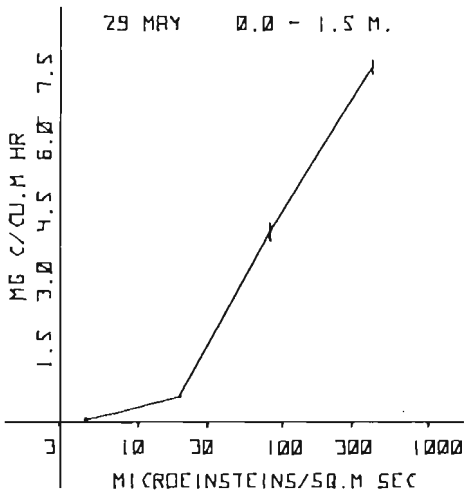
LAKE 129

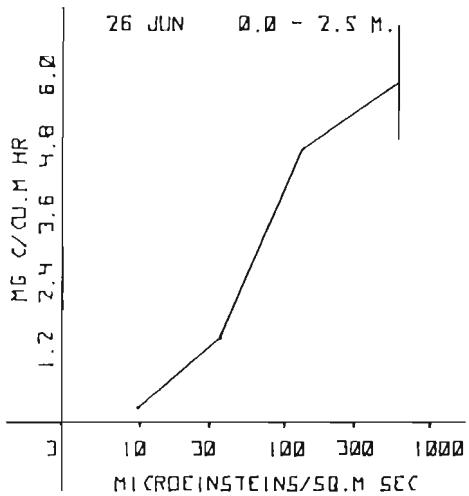

18 SEP 0.0 - 4.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

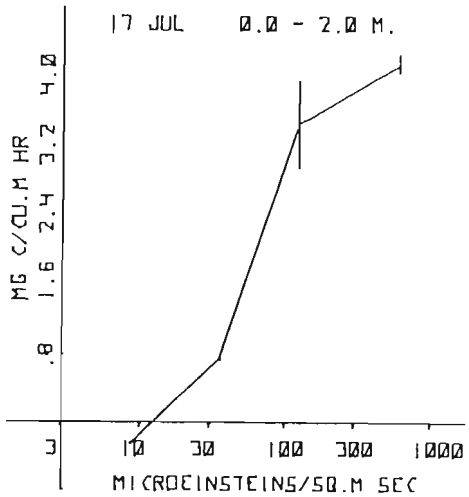

16 OCT 0.0 - 3.5 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

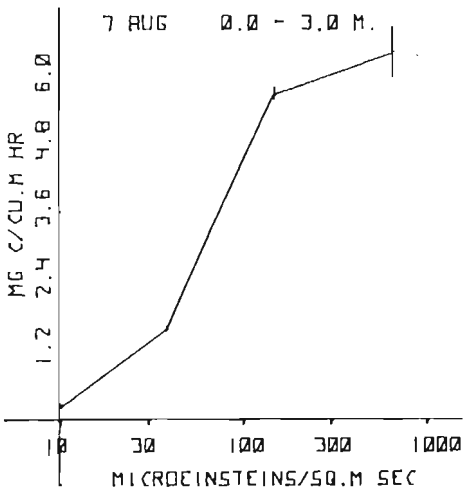
LAKE 130

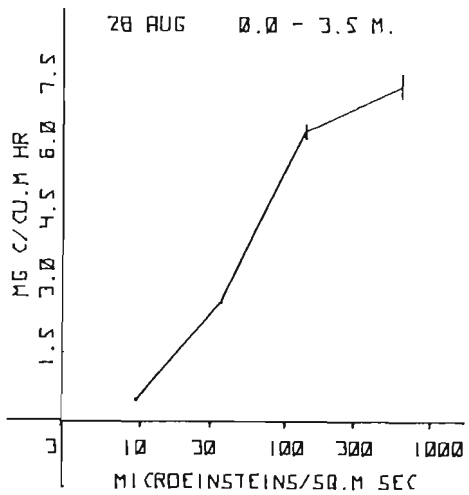

10 MAY 0.0 - 2.0 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


29 MAY 0.0 - 1.5 M.
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

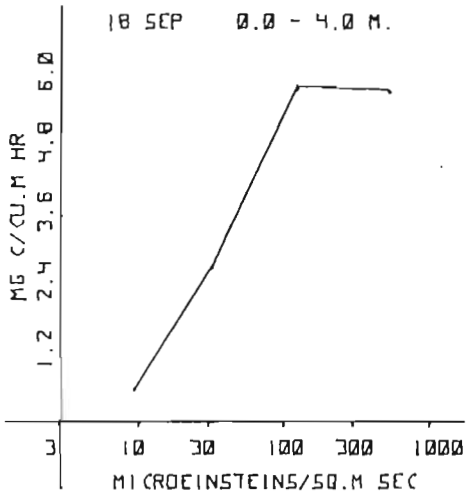

26 JUN 0.0 - 2.5 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

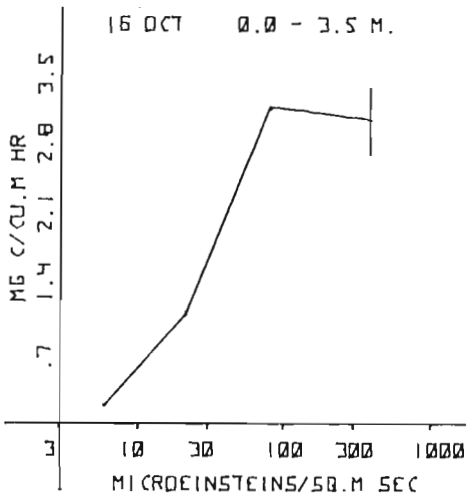

17 JUL 0.0 - 2.0 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


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

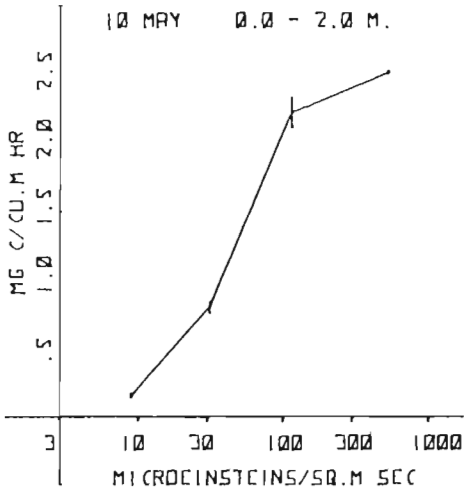

28 AUG 0.0 - 3.5 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

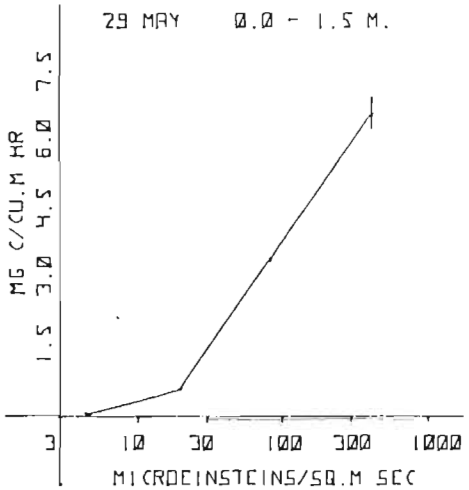
LAKE 130

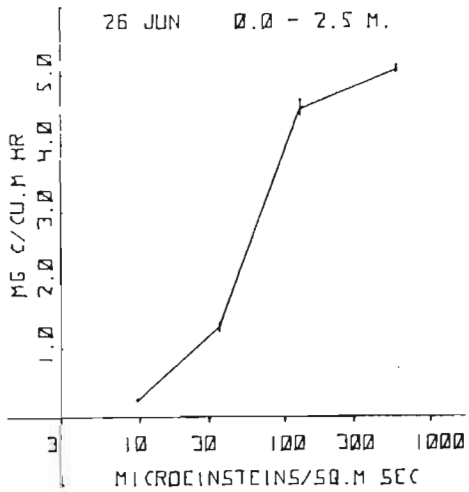

18 SEP 0.0 - 4.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

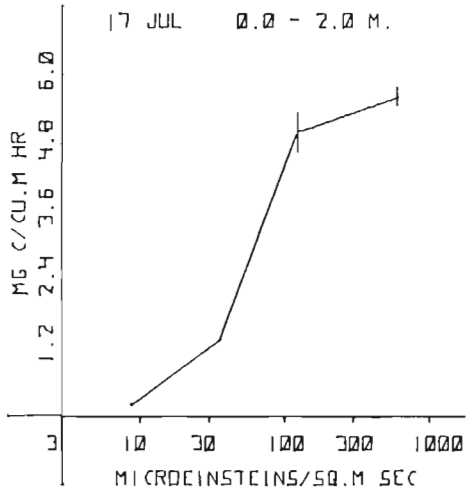

16 OCT 0.0 - 3.5 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

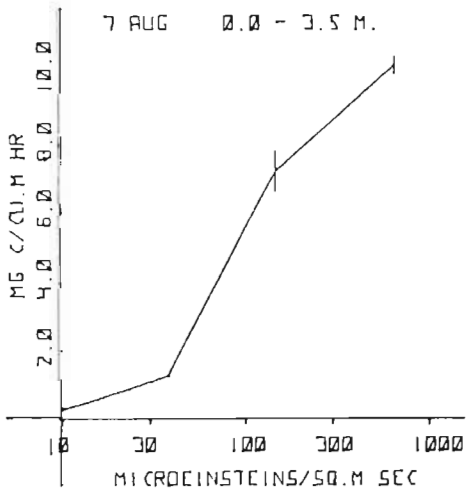
LAKE 132

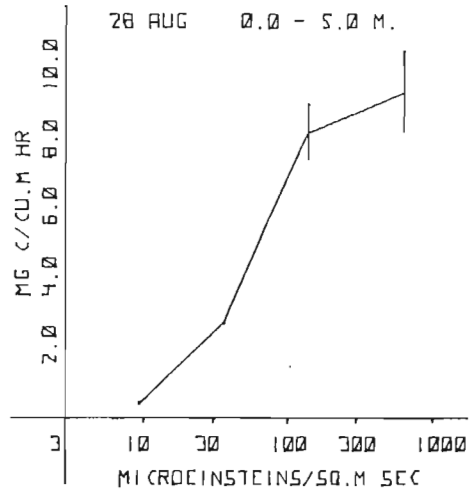

10 MAY 0.0 - 2.0 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


29 MAY 0.0 - 1.5 M.
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

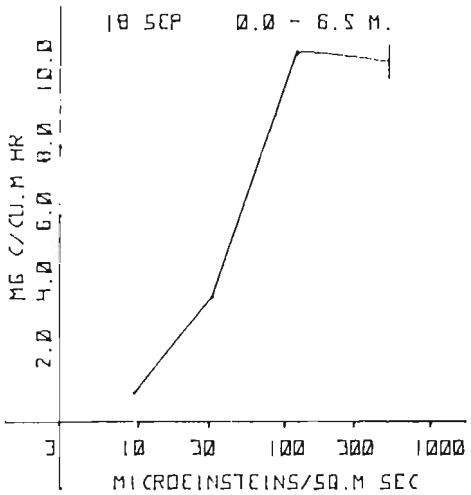

26 JUN 0.0 - 2.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

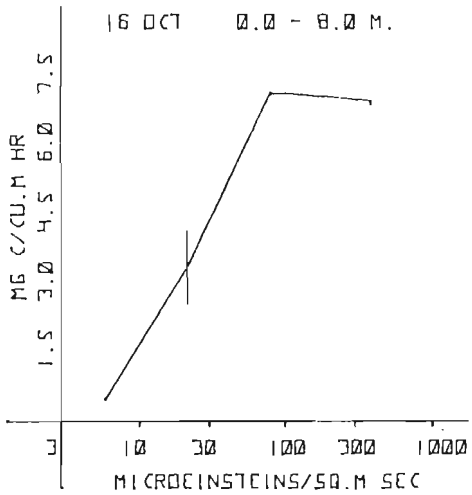

17 JUL 0.0 - 2.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


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

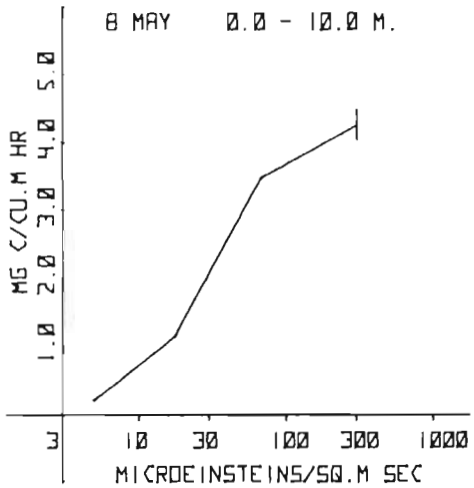

28 AUG 0.0 - 5.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

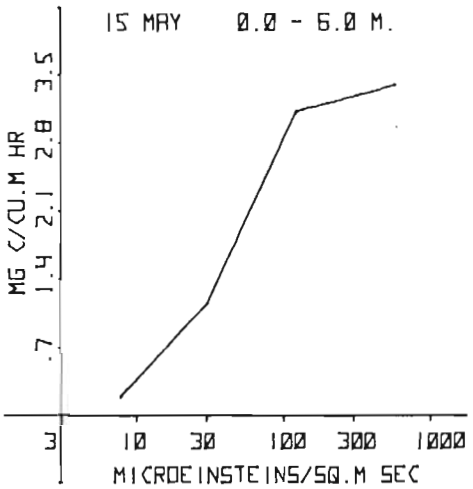
LAKE 132

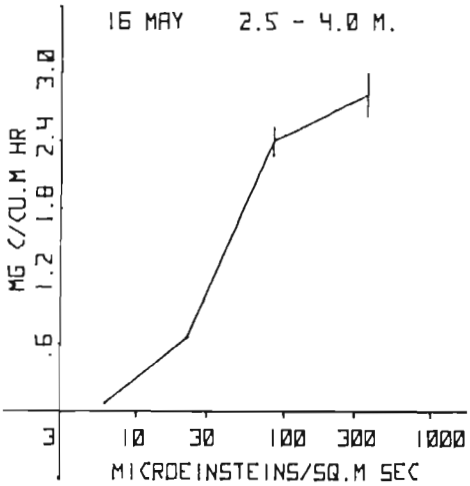

18 SEP 0.0 - 6.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

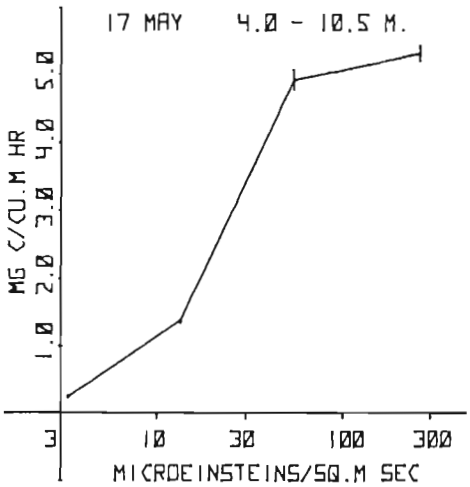

16 OCT 0.0 - 8.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

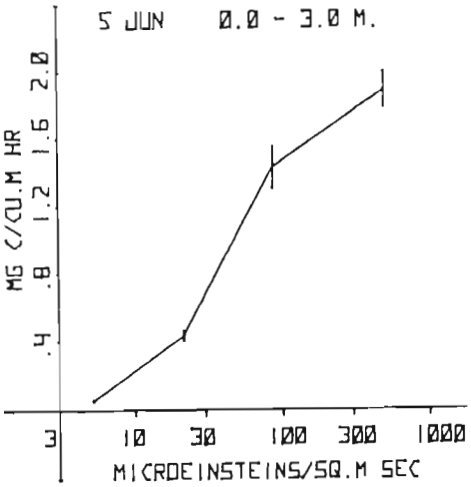
LAKE 223

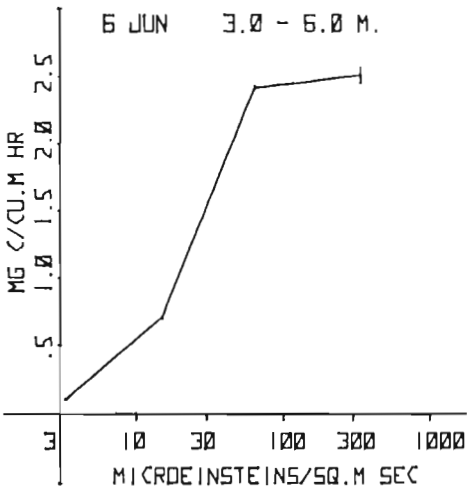

8 MAY 0.0 - 10.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


15 MAY 0.0 - 6.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

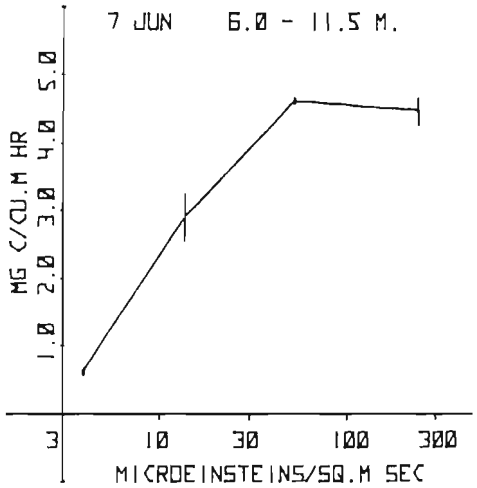

16 MAY 2.5 - 4.0 M.
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

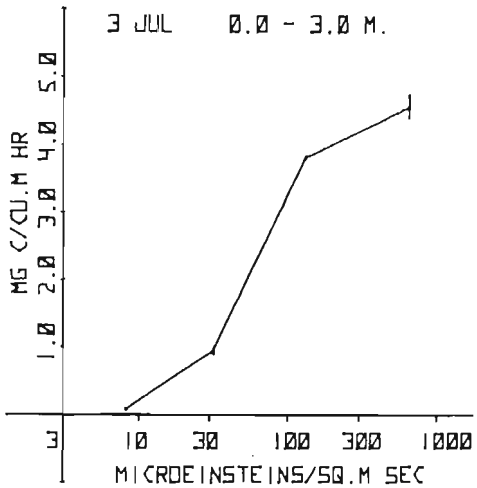

17 MAY 4.0 - 10.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

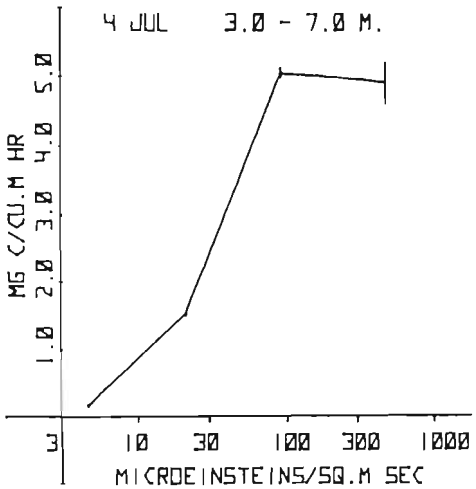

5 JUN 0.0 - 3.0 M.
MG C/CU.M HR
.4 .8 1.2 1.6 2.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

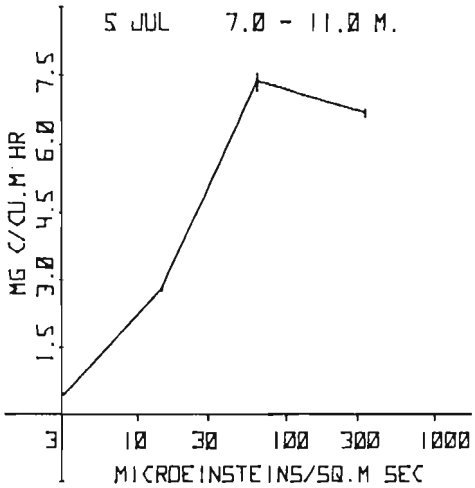

6 JUN 3.0 - 6.0 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

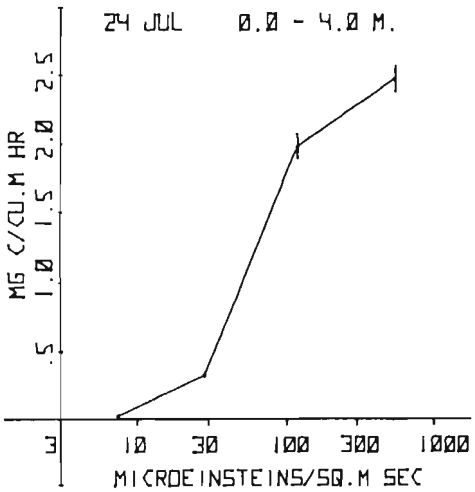
LAKE 223

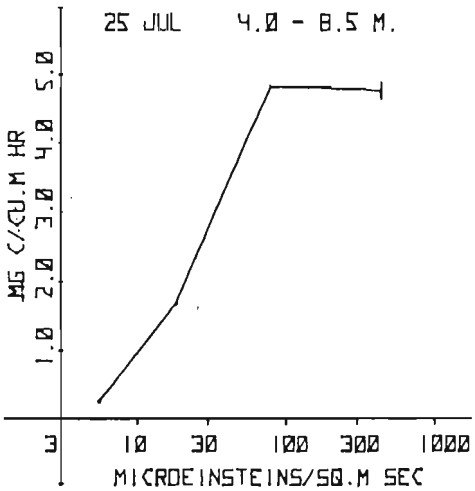

7 JUN 6.0 - 11.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


3 JUL 0.0 - 3.0 M.
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

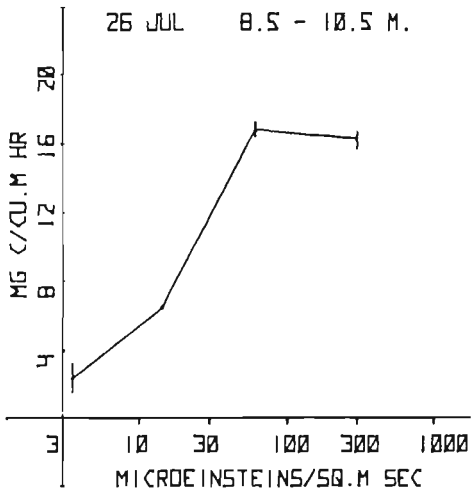

4 JUL 3.0 - 7.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

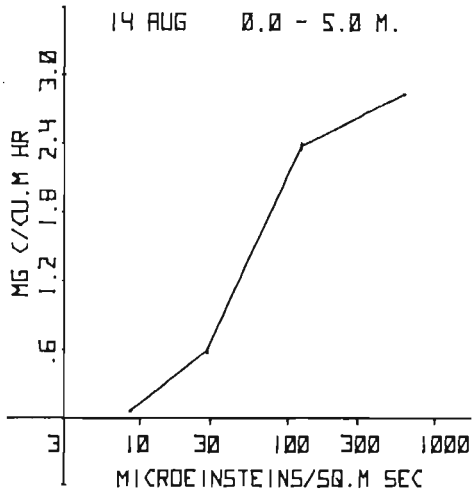

5 JUL 7.0 - 11.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

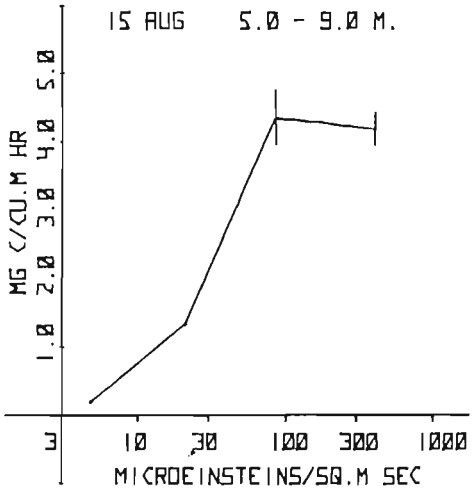

24 JUL 0.0 - 4.0 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


25 JUL 4.0 - 8.5 M.
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 223


26 JUL 8.5 - 10.5 M.
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


14 AUG 0.0 - 5.0 M.
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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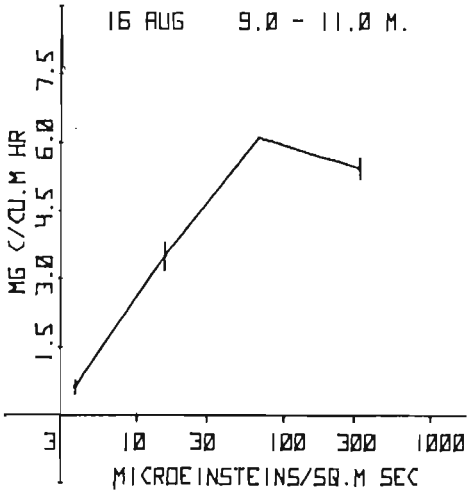
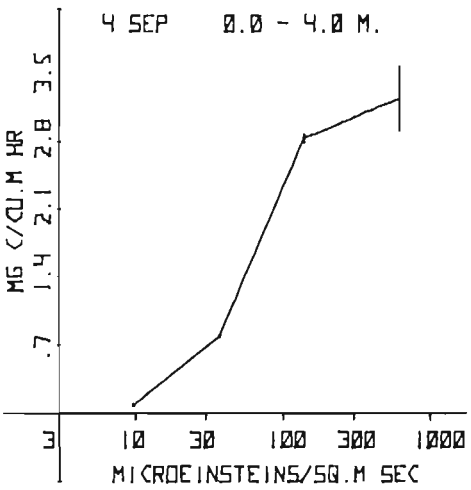
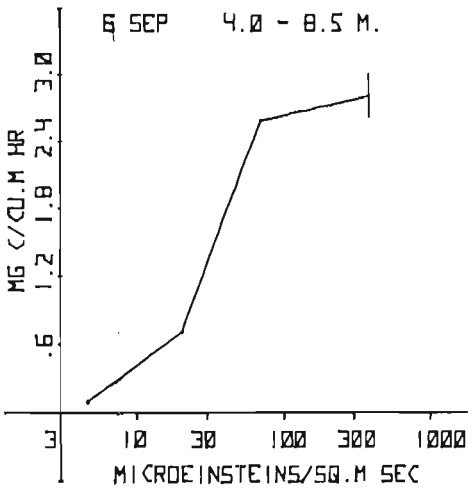
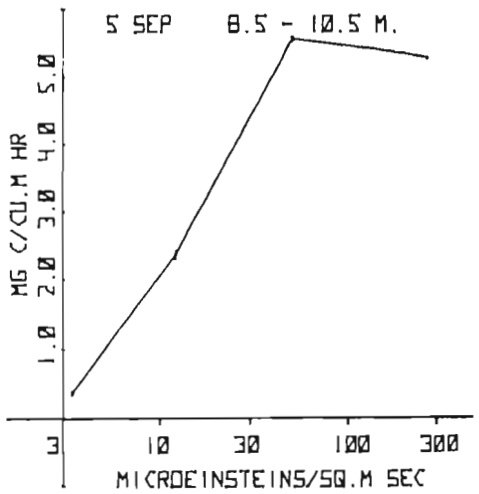
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

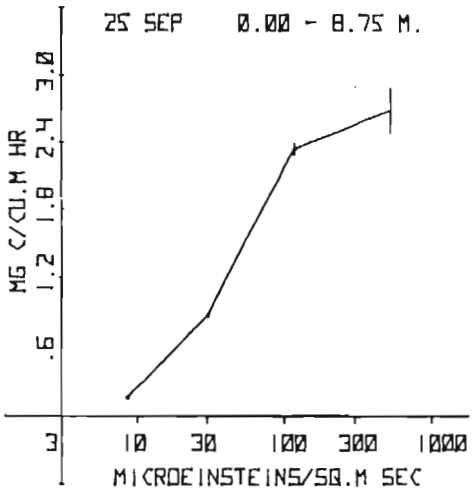

16 AUG 9.0 - 11.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 SEP 0.0 - 4.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


6 SEP 4.0 - 8.5 M.
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 223


5 SEP 8.5 - 10.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC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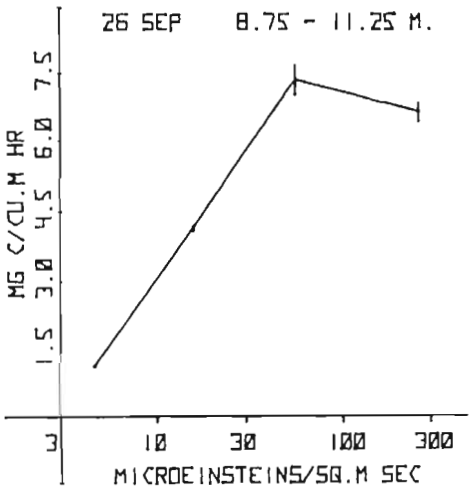
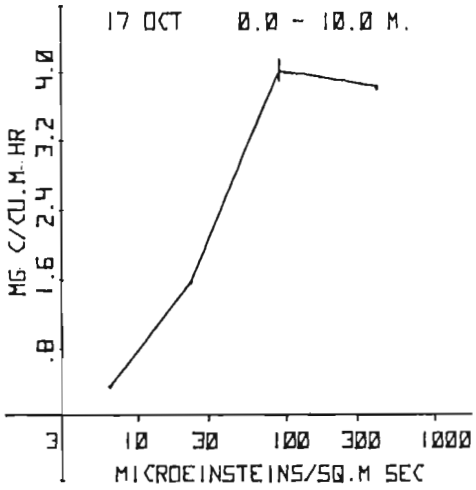
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


26 SEP 8.75 - 11.25 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


17 OCT 0.0 - 10.0 M.
MG C/CU.M.HR
.8 1.6 2.4 3.2 4.0
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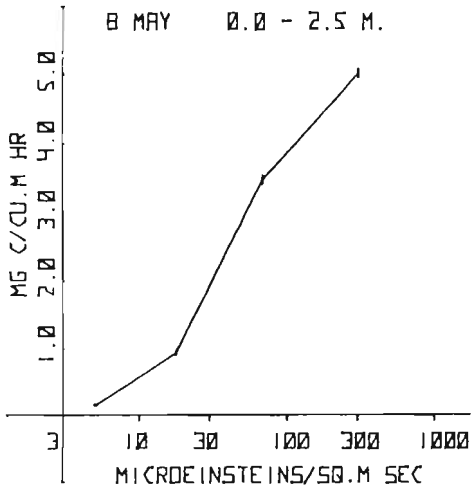
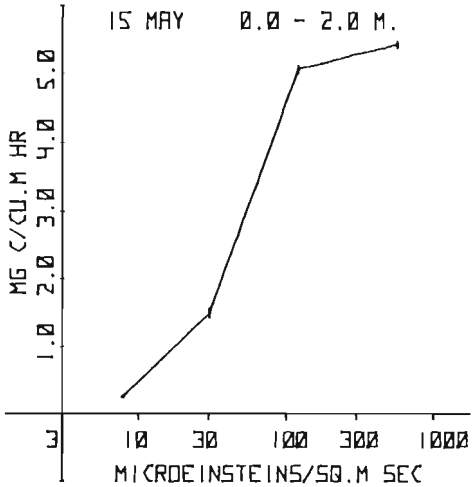
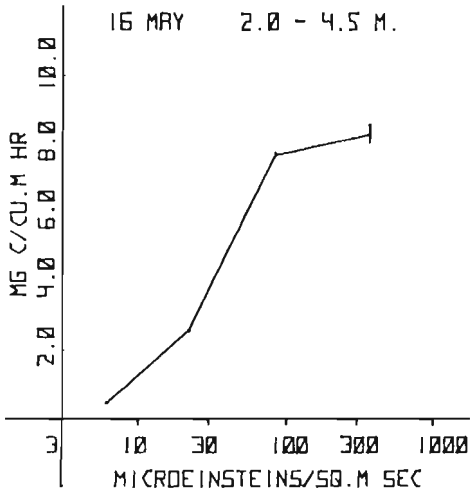
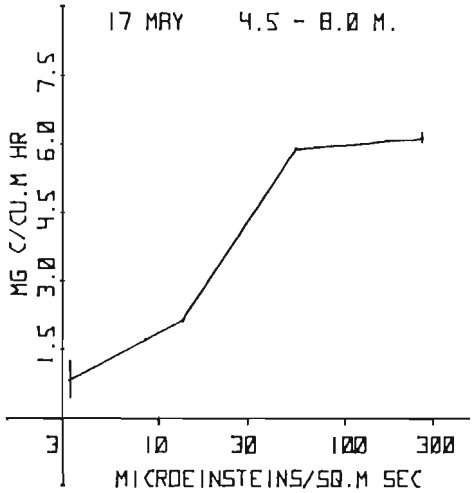
MICROEINSTEINS/SQ.M SEC

LAKE 226NE


8 MAY 0.0 - 2.5 M.
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


15 MAY 0.0 - 2.0 M.
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


16 MAY 2.0 - 4.5 M.
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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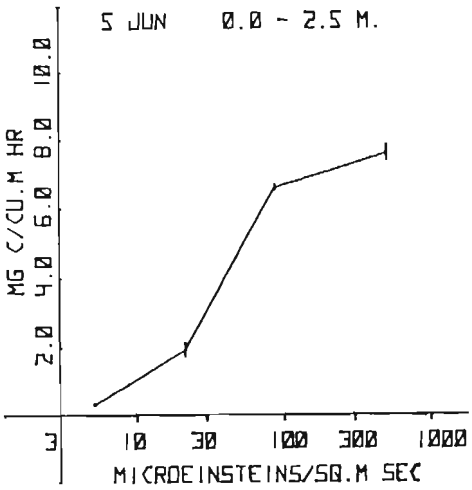
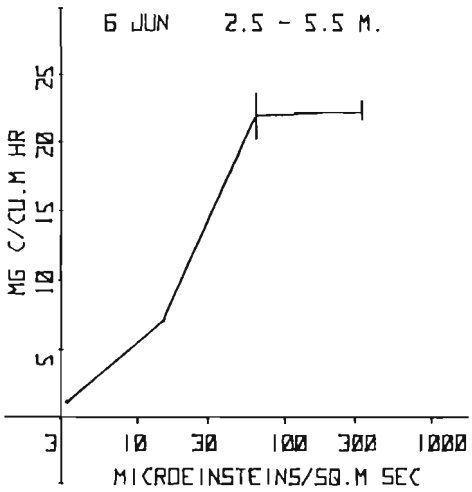
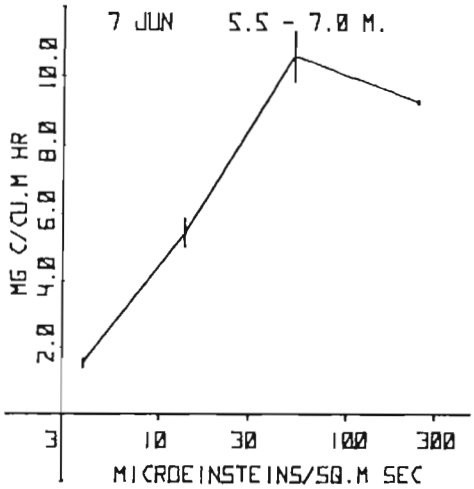
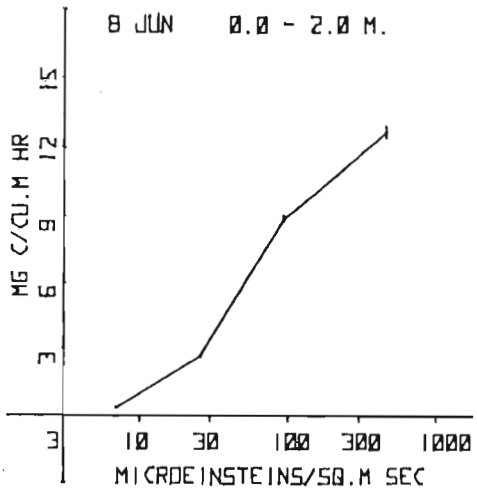
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


5 JUN 0.0 - 2.5 M.
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 JUN 2.5 - 5.5 M.
MG C/CU.M HR
5 10 15 20 25
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 226NE


7 JUN 5.5 - 7.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


8 JUN 0.0 - 2.0 M.
MG C/CU.M HR
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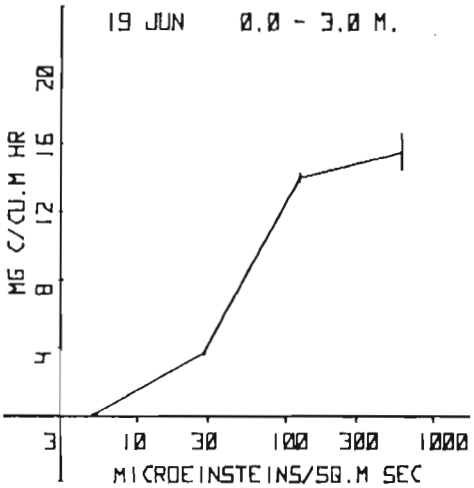
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
4 8 12 16 20
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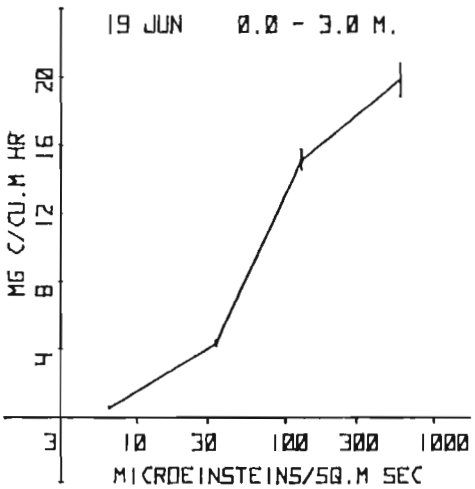
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
4 8 12 16 20
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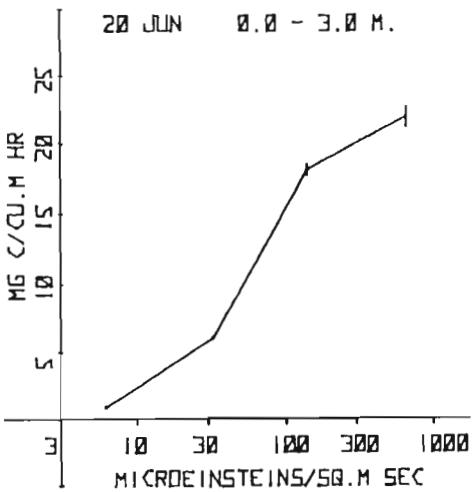
MICROEINSTEINS/SQ.M SEC


20 JUN 0.0 - 3.0 M.
MG C/CU.M HR
5 10 15 20 25
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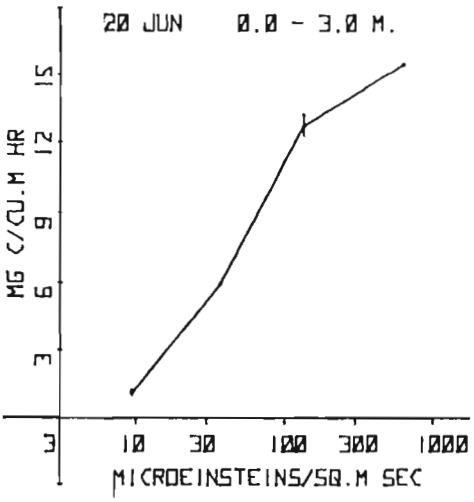
MICROEINSTEINS/SQ.M SEC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3 6 9 12 15
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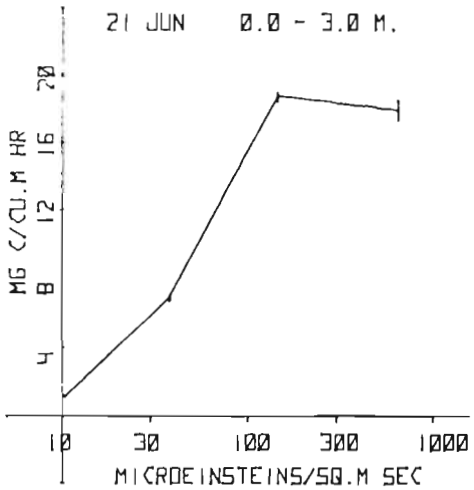
MICROEINSTEINS/SQ.M SEC

LAKE 226NE


21 JUN 0.0 - 3.0 M.
MG C/CU.M HR
4
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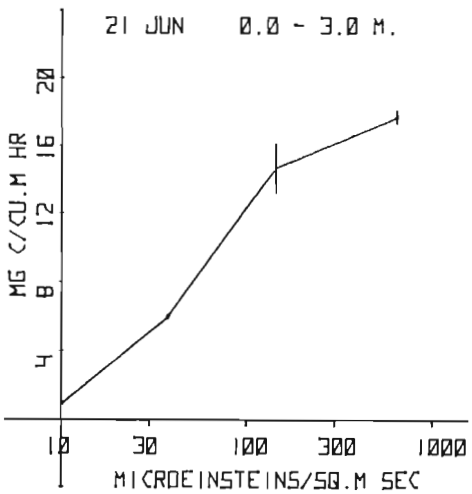
MICROEINSTEINS/SQ.M SEC


21 JUN 0.0 - 3.0 M.
MG C/CU.M HR
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20
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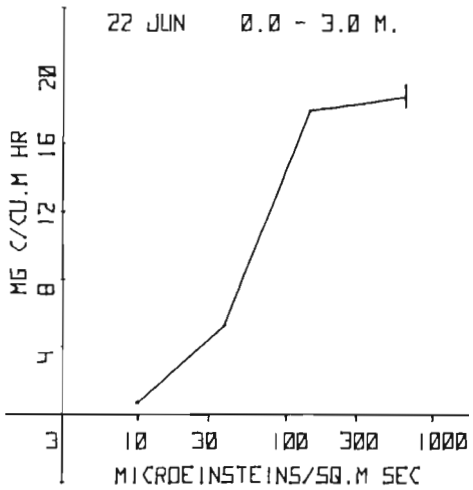
MICROEINSTEINS/SQ.M SEC


22 JUN 0.0 - 3.0 M.
MG C/CU.M HR
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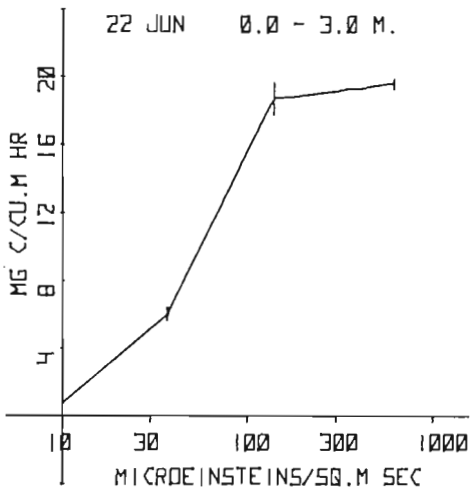
22 JUN 0.0 - 3.0 M.
MG C/CU.M HR
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20
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30
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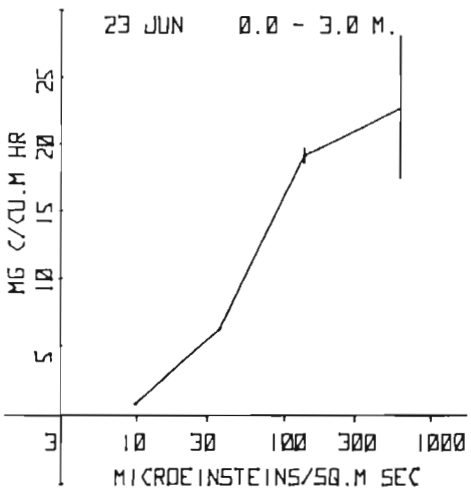
300
1000
MICROEINSTEINS/SQ.M SEC


23 JUN 0.0 - 3.0 M.
MG C/CU.M HR
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20
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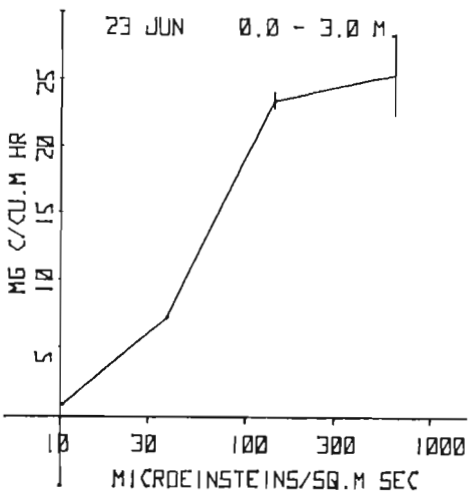
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


23 JUN 0.0 - 3.0 M.
MG C/CU.M HR
5
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30
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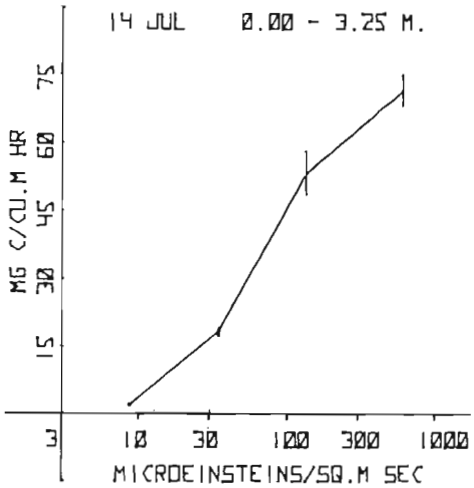
300
1000
MICROEINSTEINS/SQ.M SEC

LAKE 226NE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MG C/CU.M HR
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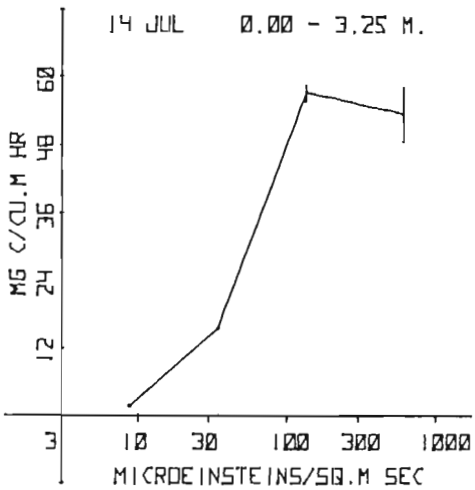
1000
MICRDEINSTEINS/SQ.M SEC


14 JUL 0.00 - 3.25 M.
MG C/CU.M HR
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3
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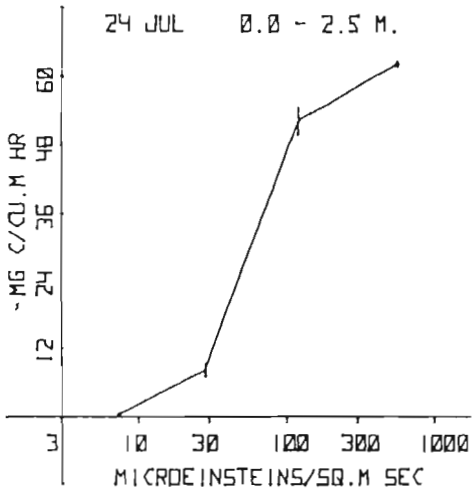
30
100
300
1000
MICRDEINSTEINS/SQ.M SEC


24 JUL 0.0 - 2.5 M.
MG C/CU.M HR
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24
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1000
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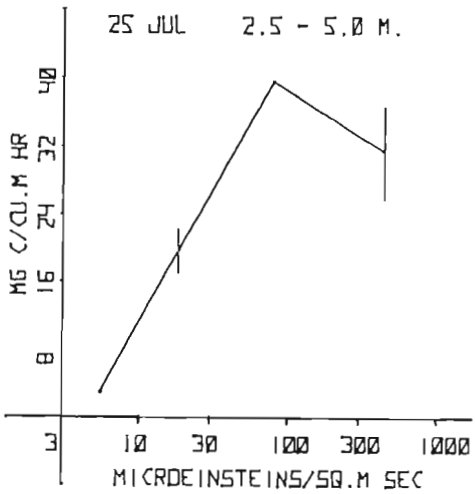
25 JUL 2.5 - 5.0 M.
MG C/CU.M HR
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16
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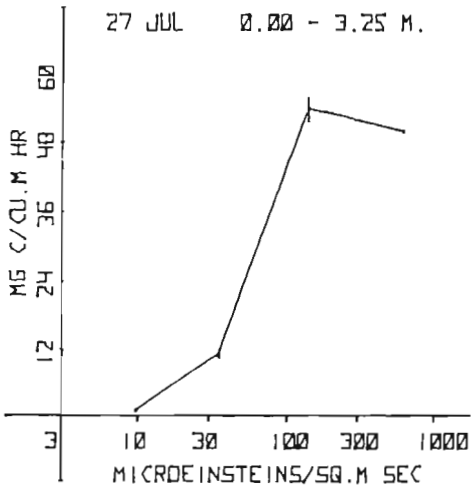
27 JUL 0.00 - 3.25 M.
MG C/CU.M HR
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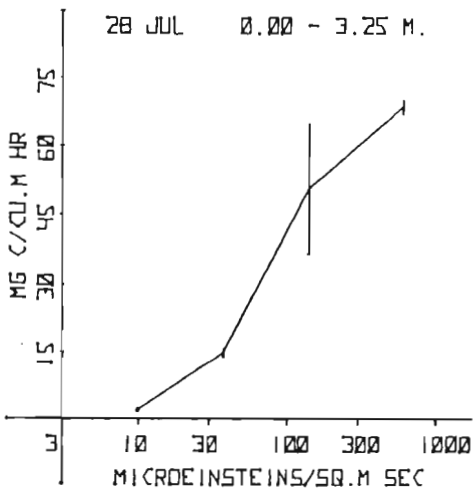
MICRDEINSTEINS/SQ.M SEC


28 JUL 0.00 - 3.25 M.
MG C/CU.M HR
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30
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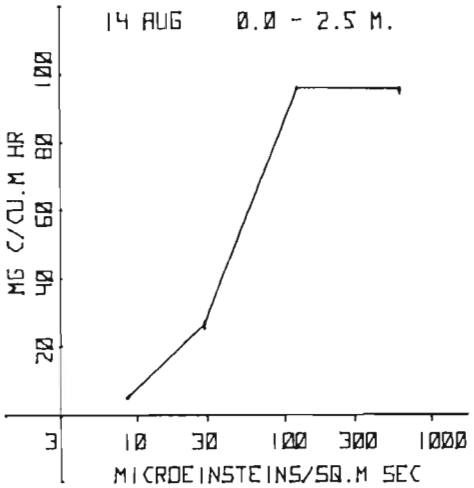
1000
MICRDEINSTEINS/SQ.M SEC

LAKE 226NE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MG C/CU.M HR
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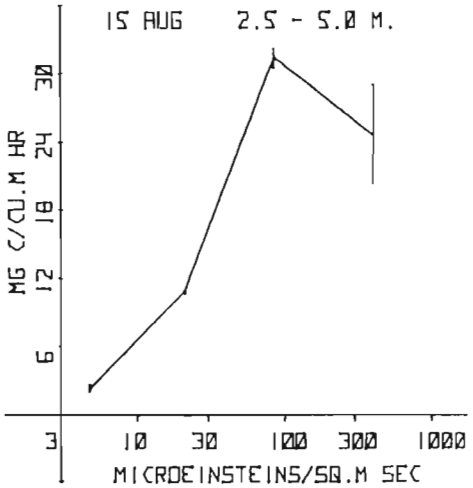
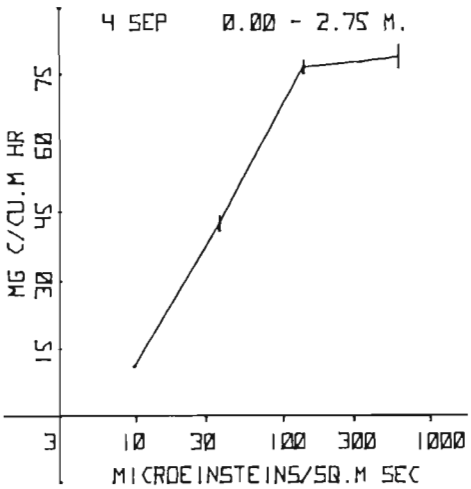
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


15 AUG 2.5 - 5.0 M.
MG C/CU.M HR
6 12 18 24 30
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
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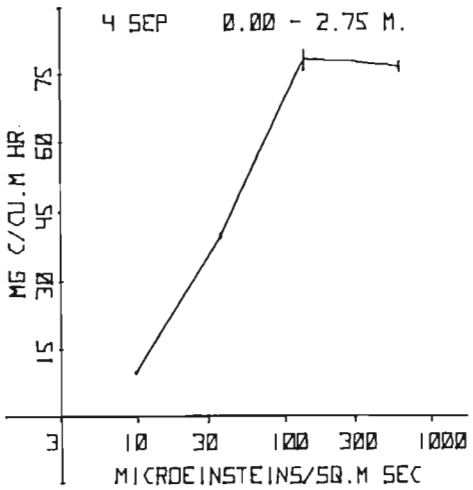
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
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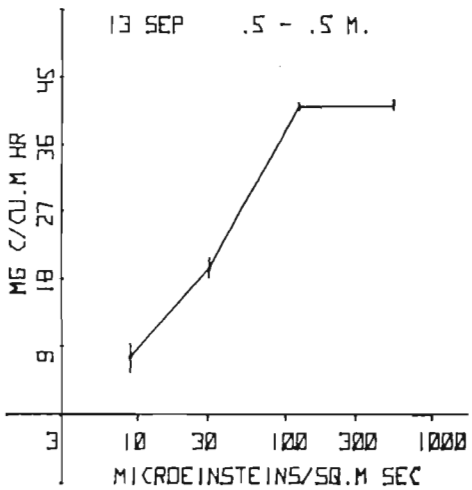
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
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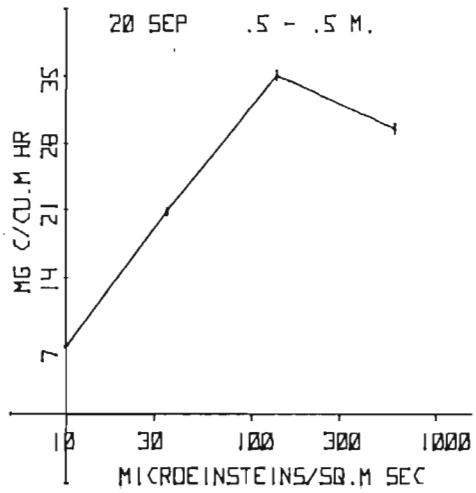
MICROEINSTEINS/SQ.M SEC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MG C/CU.M HR
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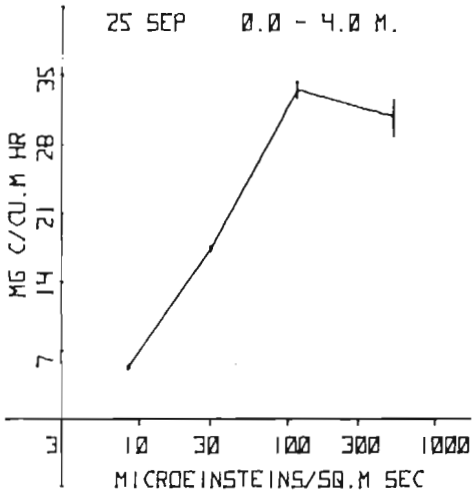
MICROEINSTEINS/SQ.M SEC

LAKE 226NE


25 SEP 0.0 - 4.0 M.
MG C/CU.M HR
7
14
21
28
35
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100
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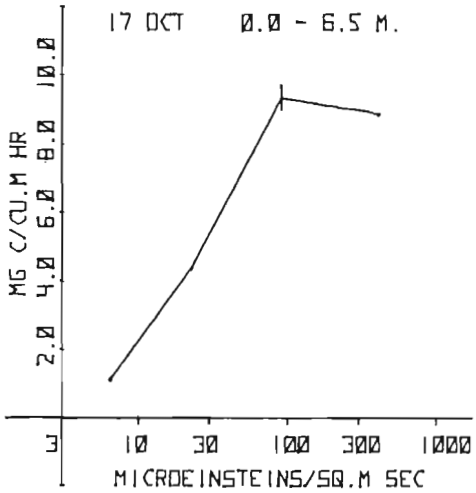
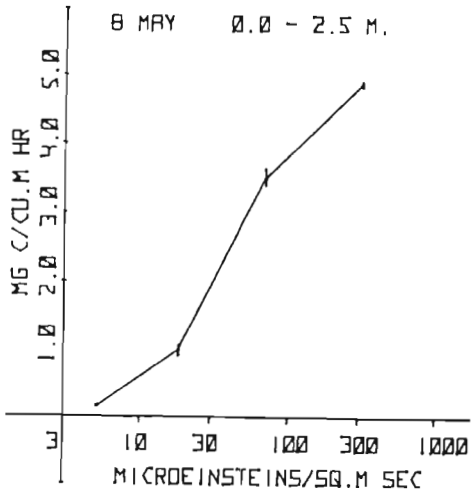
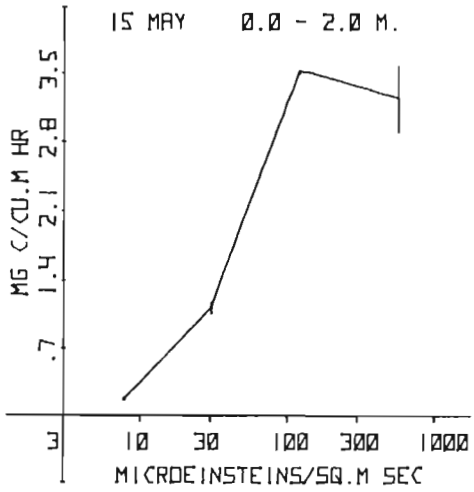
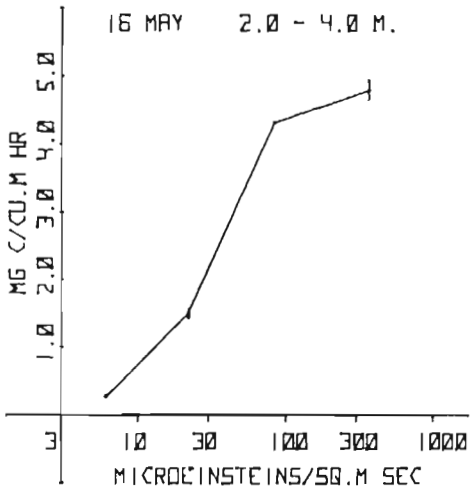
1000
MICROEINSTEINS/SQ.M SEC

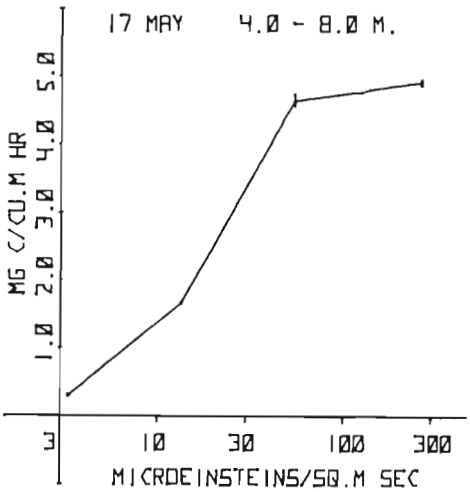

17 OCT 0.0 - 6.5 M.
MG C/CU.M HR
2.0
4.0
6.0
8.0
10.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

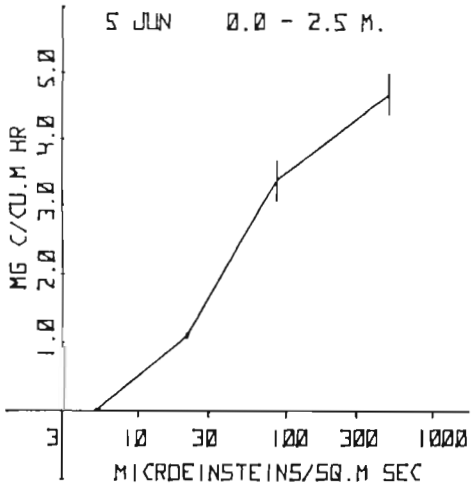
LAKE 226SW

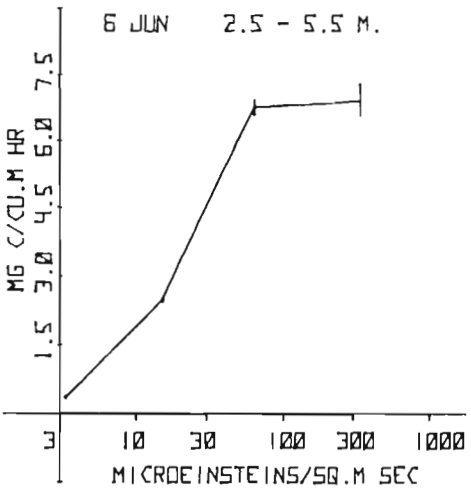

8 MAY 0.0 - 2.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


15 MAY 0.0 - 2.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

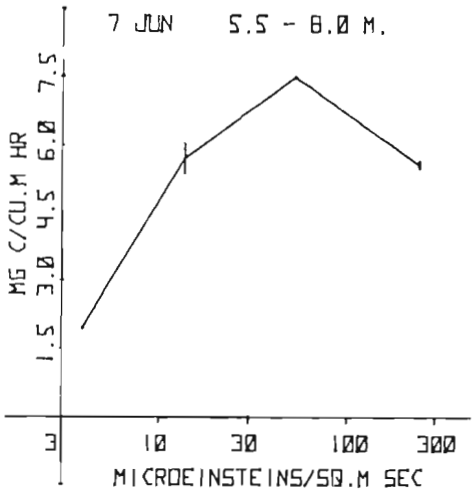

16 MAY 2.0 - 4.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

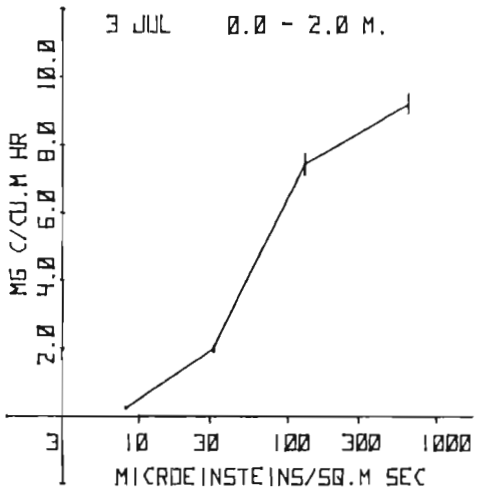

17 MAY 4.0 - 8.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

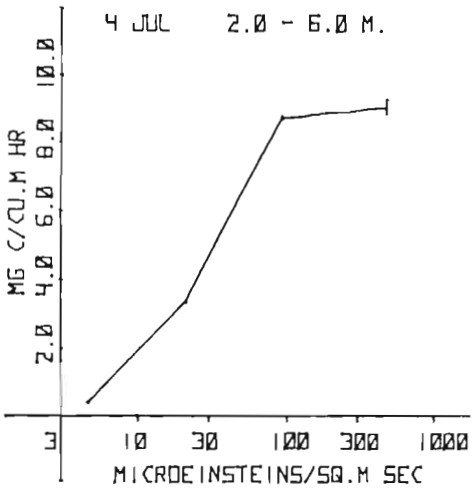

5 JUN 0.0 - 2.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

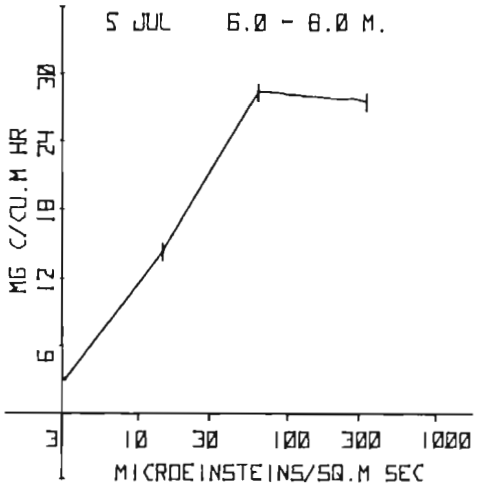

6 JUN 2.5 - 5.5 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

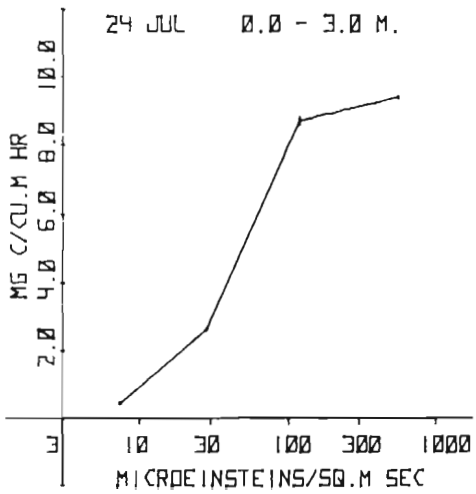
LAKE 226SW

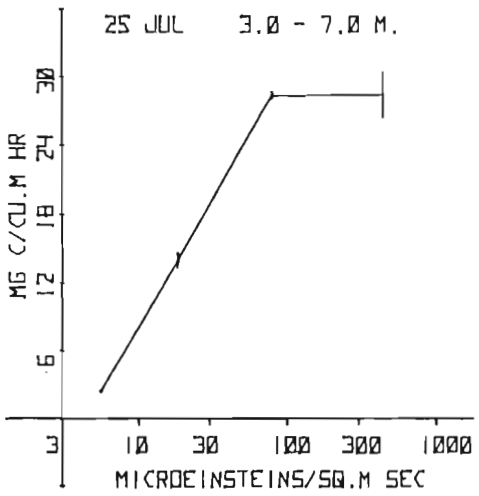

7 JUN 5.5 - 8.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


3 JUL 0.0 - 2.0 M.
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

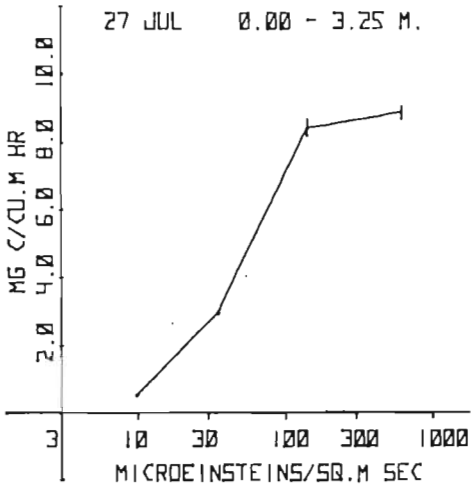

4 JUL 2.0 - 6.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

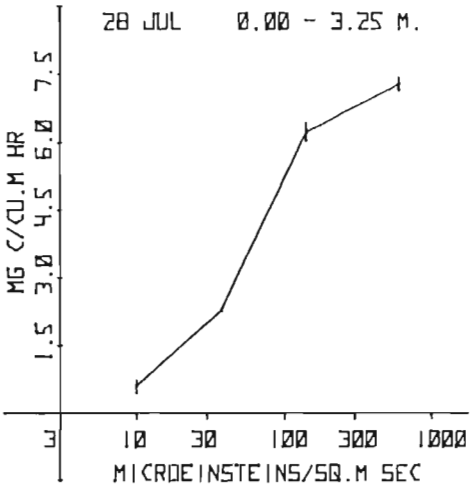

5 JUL 6.0 - 8.0 M.
MG C/CU.M HR
6 12 18 24 30
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

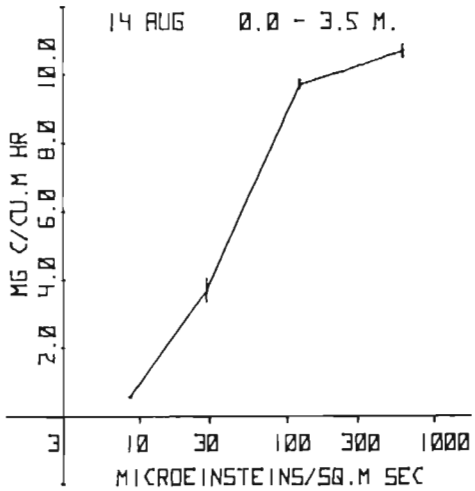

24 JUL 0.0 - 3.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

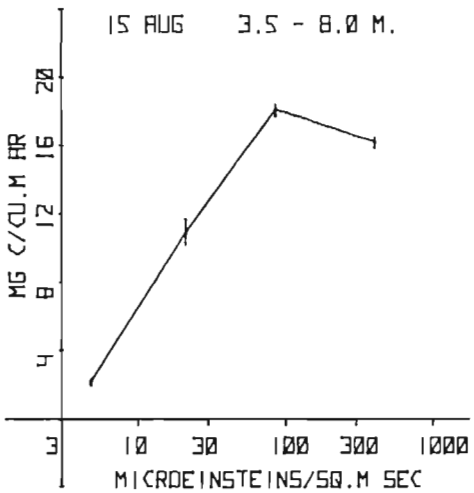

25 JUL 3.0 - 7.0 M.
MG C/CU.M HR
6 12 18 24 30
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

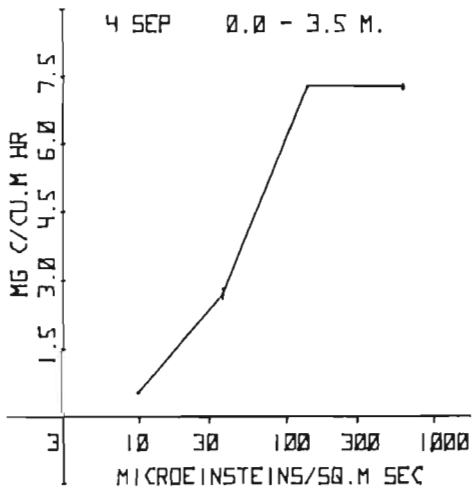
LAKE 226SW

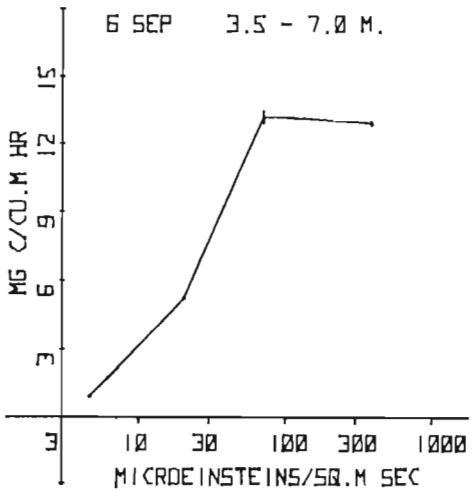

27 JUL 0.00 - 3.25 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


28 JUL 0.00 - 3.25 M.
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

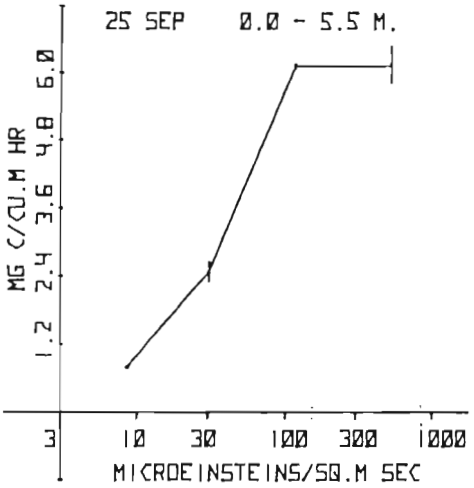

14 AUG 0.0 - 3.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

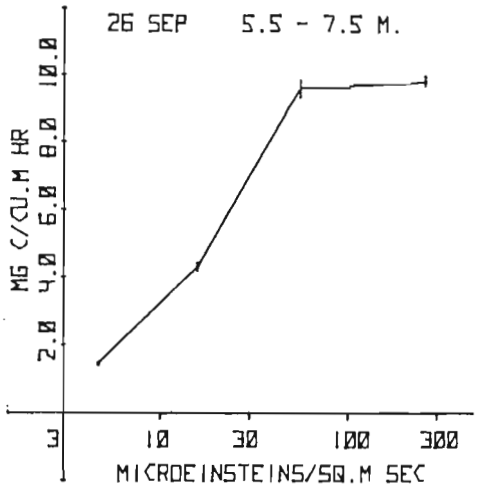

15 AUG 3.5 - 8.0 M.
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

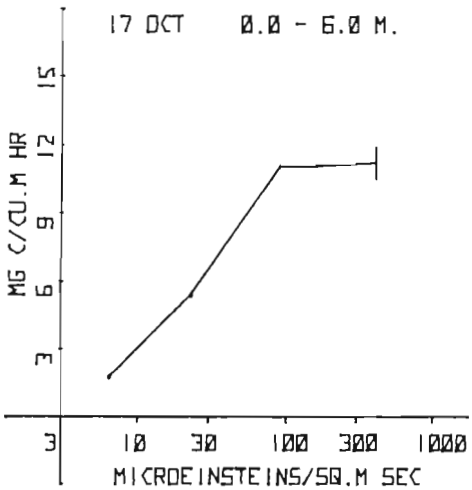

4 SEP 0.0 - 3.5 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


6 SEP 3.5 - 7.0 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

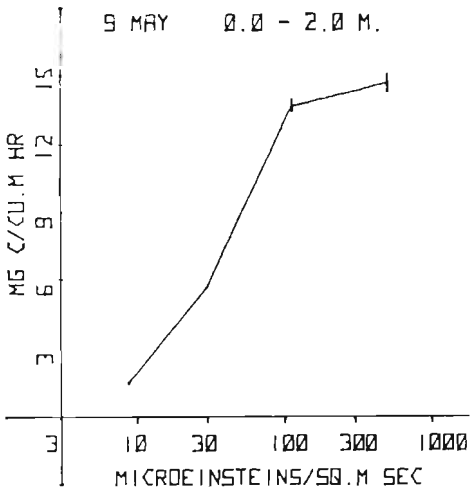
LAKE 226SW

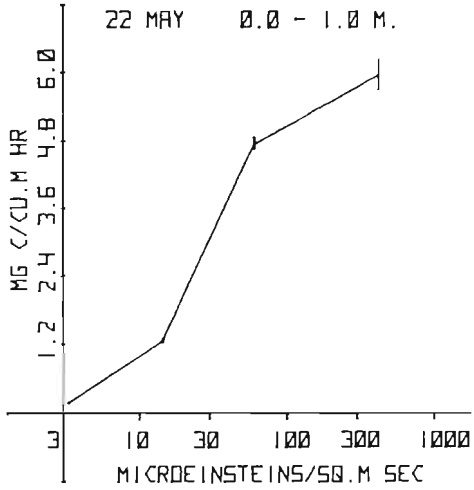

25 SEP 0.0 - 5.5 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

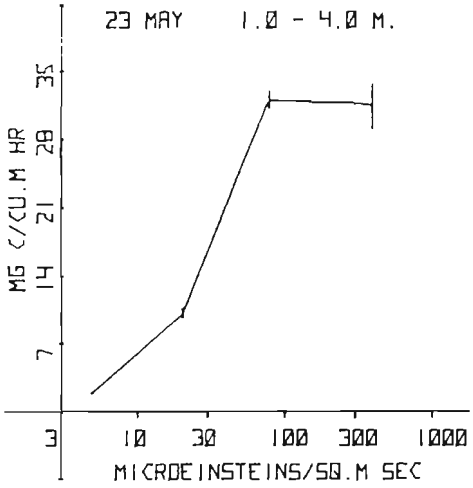

26 SEP 5.5 - 7.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

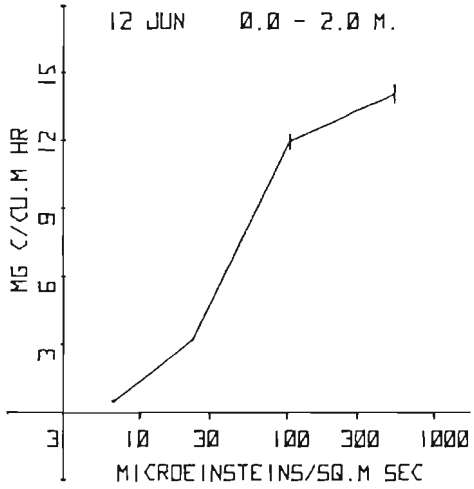

17 OCT 0.0 - 6.0 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

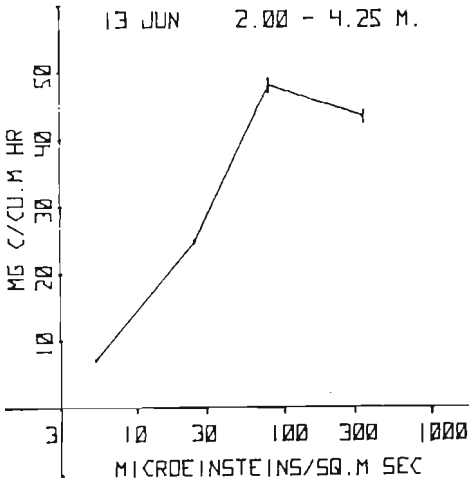
LAKE 227

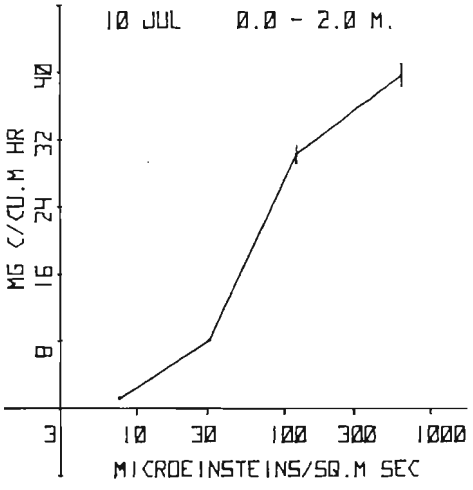

9 MAY 0.0 - 2.0 M.
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


22 MAY 0.0 - 1.0 M.
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

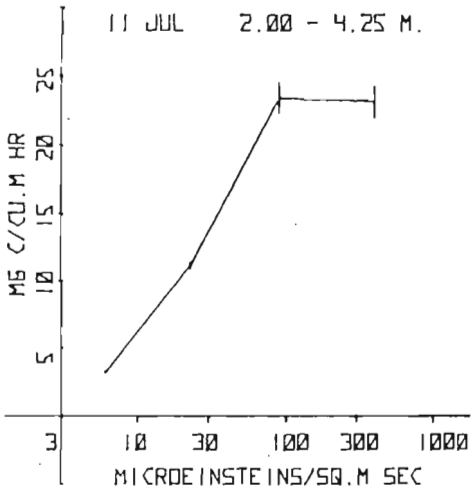

23 MAY 1.0 - 4.0 M.
MG C/CU.M HR
7
14
21
28
35
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

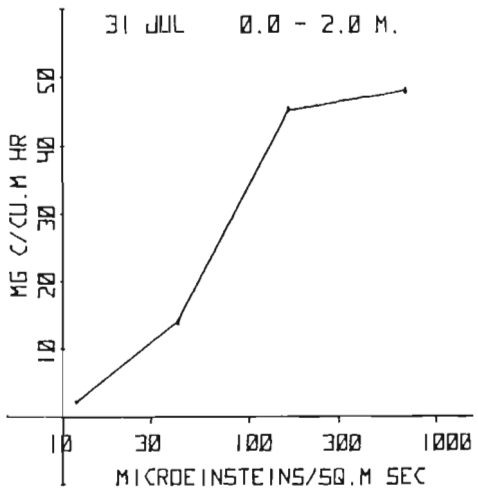

12 JUN 0.0 - 2.0 M.
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

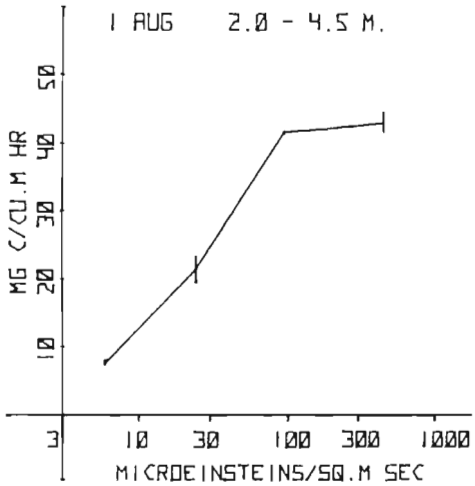

13 JUN 2.00 - 4.25 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

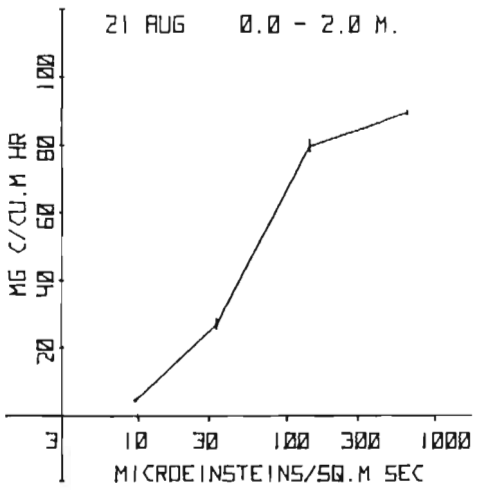

10 JUL 0.0 - 2.0 M.
MG C/CU.M HR
8
16
24
32
40
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

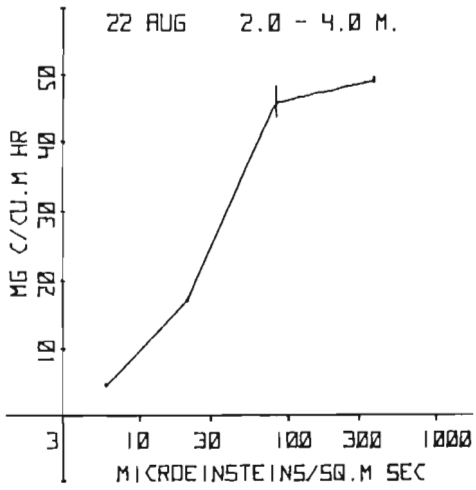
LAKE 227

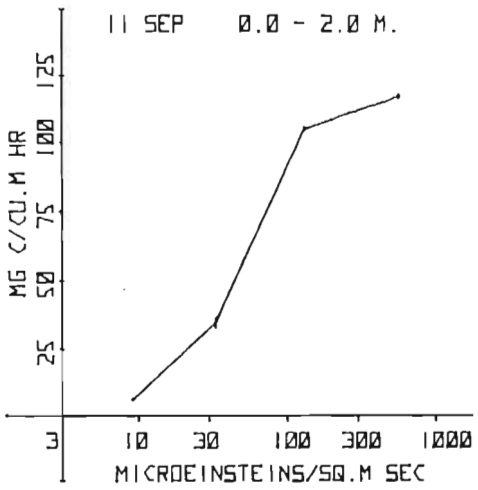

11 JUL 2.00 - 4.25 M.
MG C/CU.M HR
5
10
15
20
25
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


31 JUL 0.0 - 2.0 M.
MG C/CU.M HR
10
20
30
40
50
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


1 AUG 2.0 - 4.5 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


21 AUG 0.0 - 2.0 M.
MG C/CU.M HR
20
40
60
80
100
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


22 AUG 2.0 - 4.0 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


11 SEP 0.0 - 2.0 M.
MG C/CU.M HR
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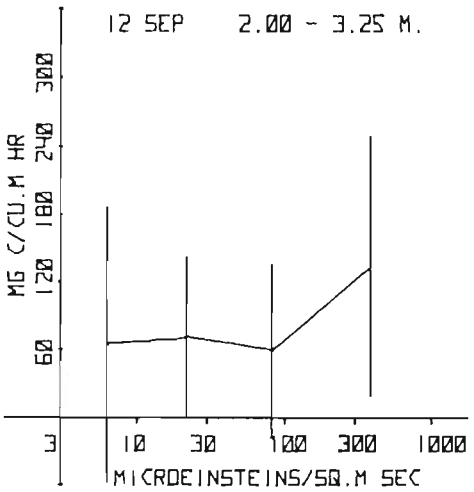
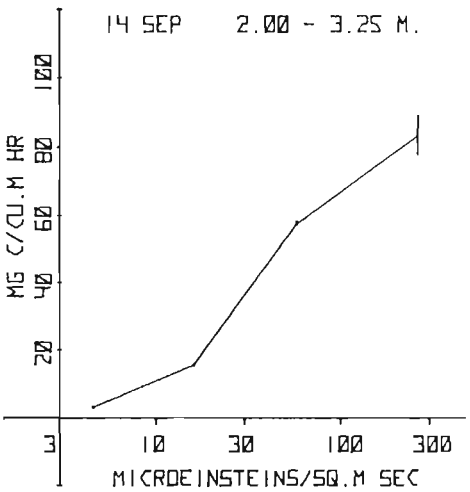
50
75
100
125
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

LAKE 227


12 SEP 2.00 - 3.25 M.
MG C/CU.M HR
60
120
180
240
300
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC


14 SEP 2.00 - 3.25 M.
MG C/CU.M HR
20
40
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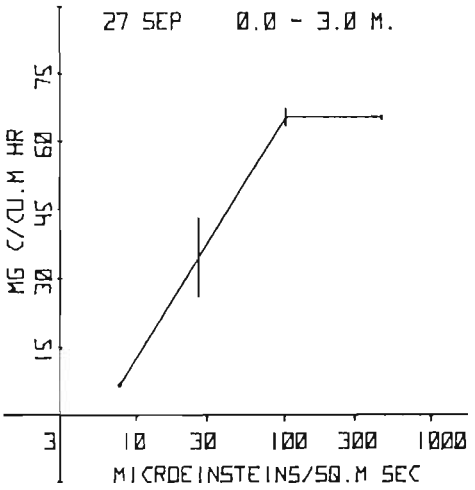
80
100
3
10
30
100
300
MICROEINSTEINS/SQ.M SEC


27 SEP 0.0 - 3.0 M.
MG C/CU.M HR
15
30
45
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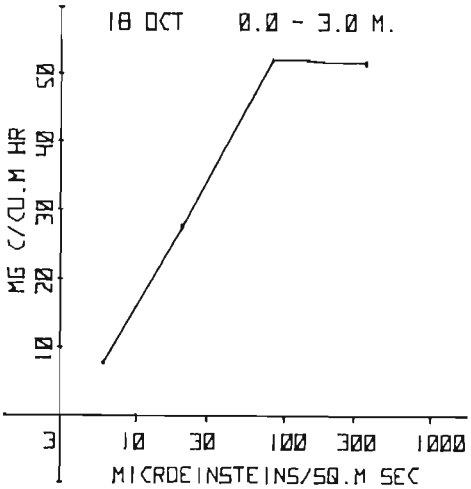
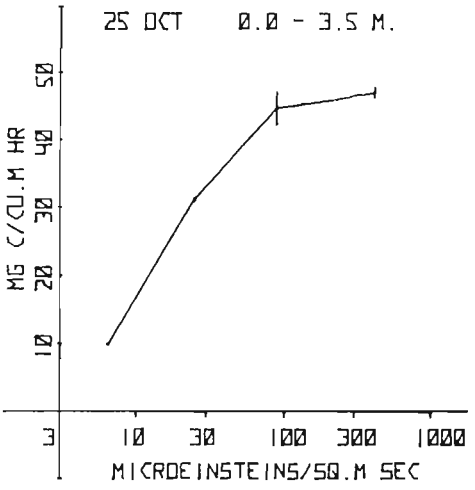
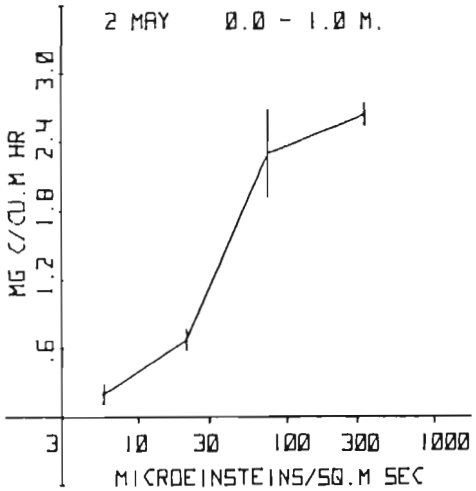
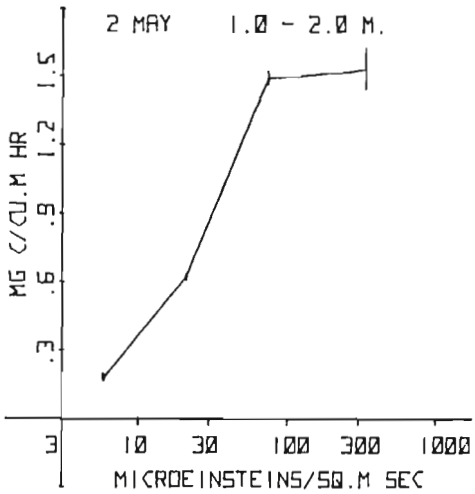
75
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

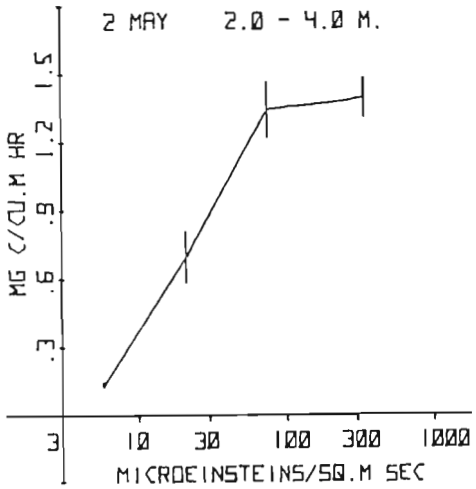

18 OCT 0.0 - 3.0 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

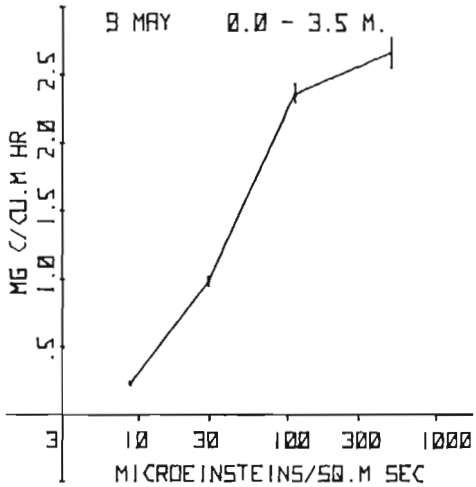

25 OCT 0.0 - 3.5 M.
MG C/CU.M HR
10
20
30
40
50
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

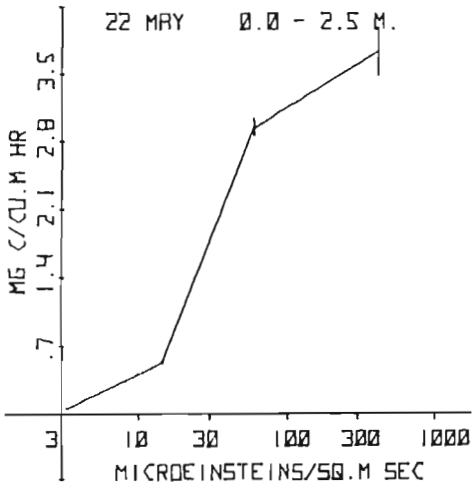
LAKE 239

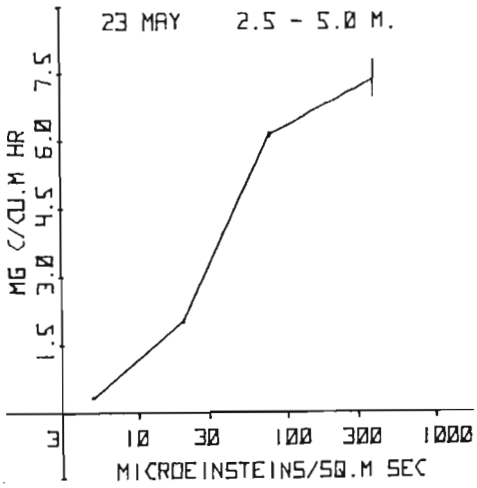

2 MAY 0.0 - 1.0 M.
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


2 MAY 1.0 - 2.0 M.
MG C/CU.M HR
.3 .6 .9 1.2 1.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

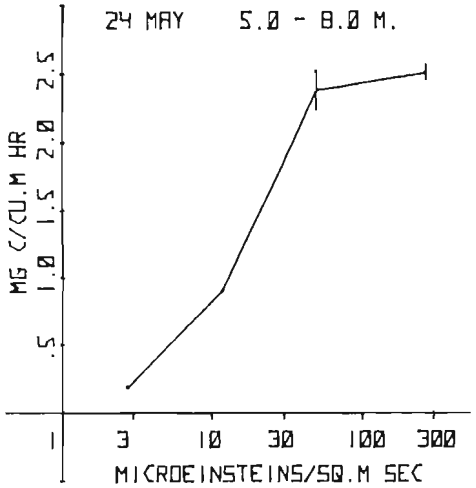

2 MAY 2.0 - 4.0 M.
MG C/CU.M HR
.3 .6 .9 1.2 1.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

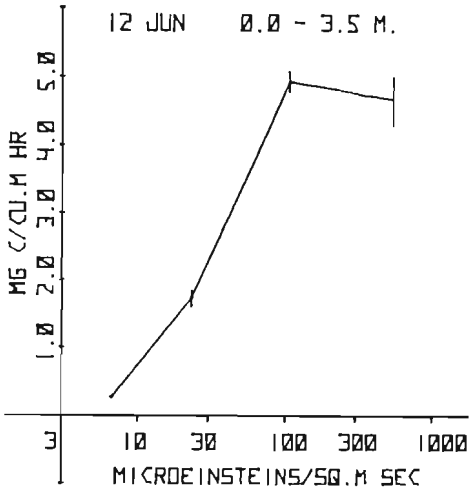

9 MAY 0.0 - 3.5 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

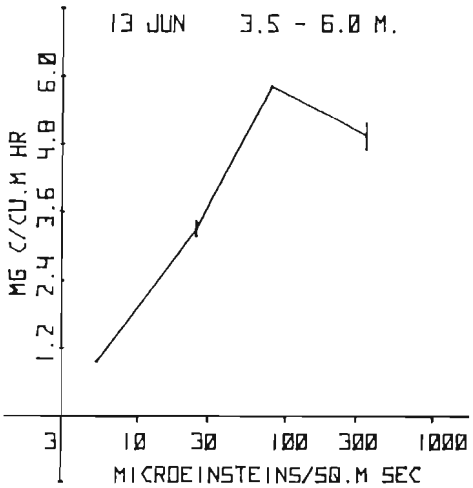

22 MAY 0.0 - 2.5 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

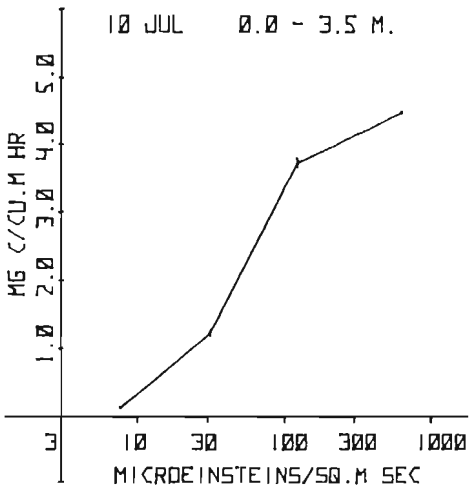

23 MAY 2.5 - 5.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

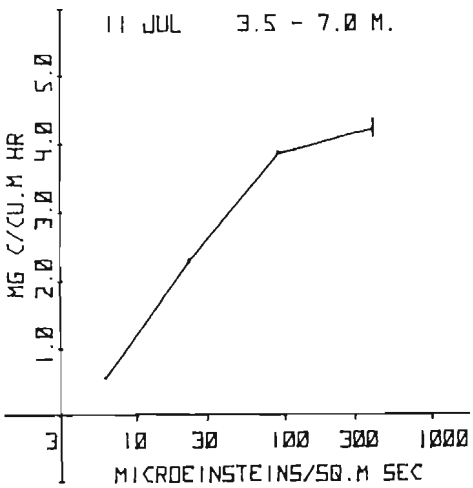
LAKE 239

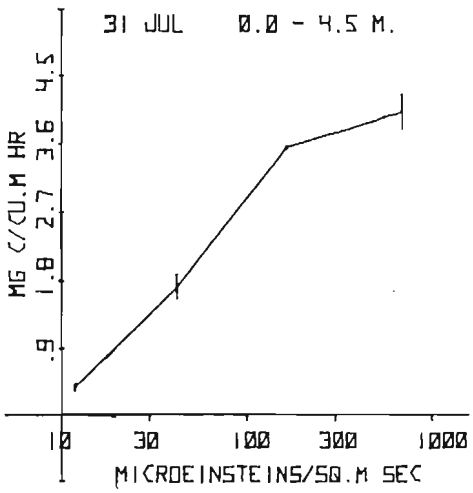

24 MAY 5.0 - 8.0 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
1 3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


12 JUN 0.0 - 3.5 M.
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

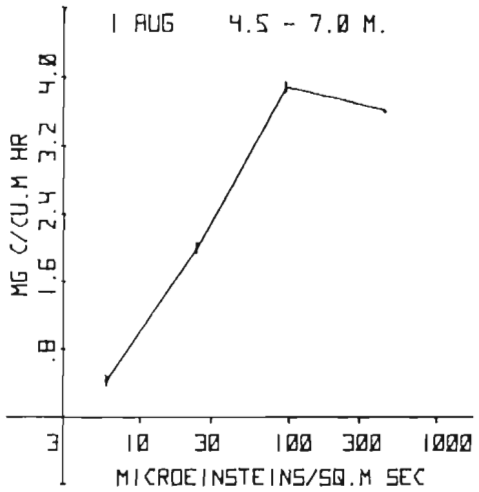

13 JUN 3.5 - 6.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

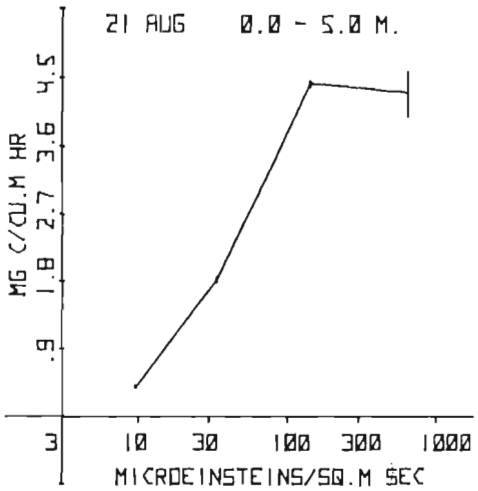

10 JUL 0.0 - 3.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

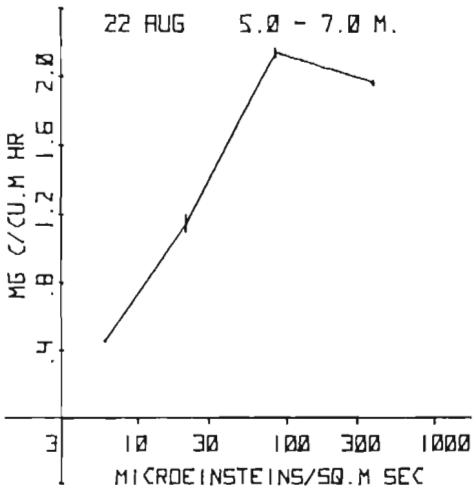

11 JUL 3.5 - 7.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

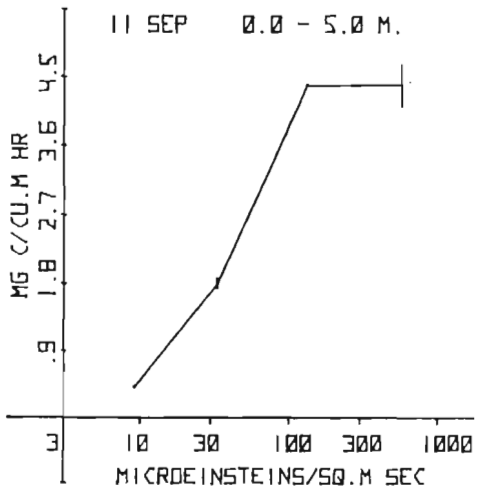

31 JUL 0.0 - 4.5 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

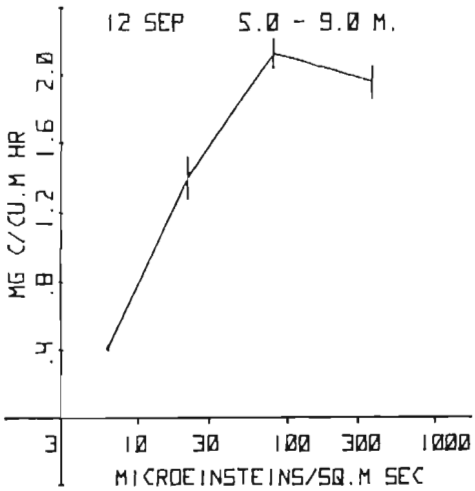
LAKE 239

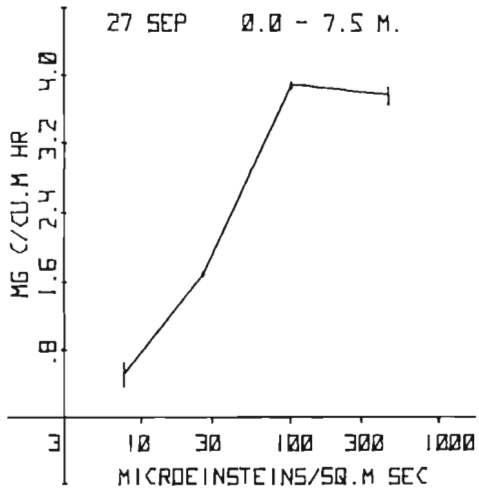

1 AUG 4.5 - 7.0 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


21 AUG 0.0 - 5.0 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

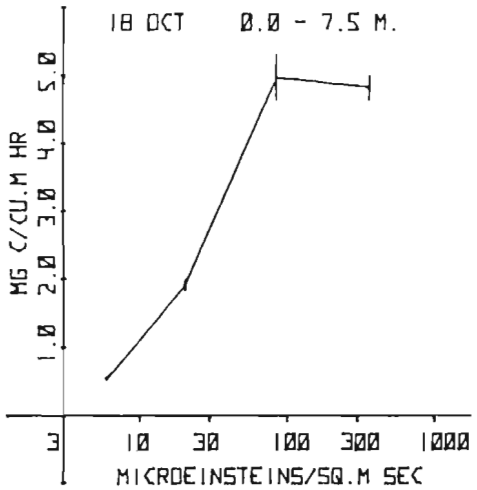

22 AUG 5.0 - 7.0 M.
MG C/CU.M HR
.4 .8 1.2 1.6 2.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


11 SEP 0.0 - 5.0 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

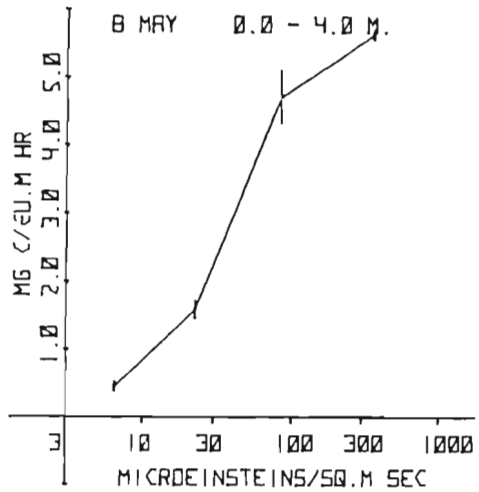

12 SEP 5.0 - 9.0 M.
MG C/CU.M HR
.4 .8 1.2 1.6 2.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

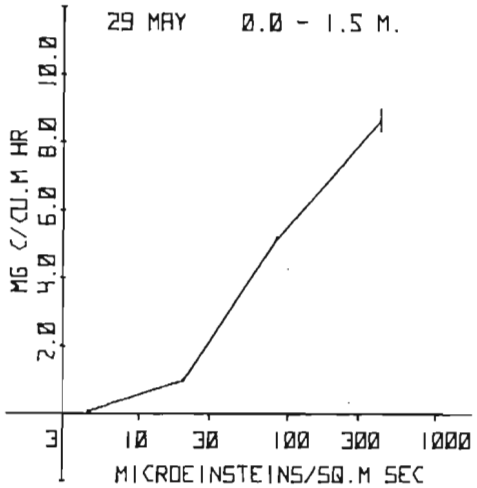

27 SEP 0.0 - 7.5 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

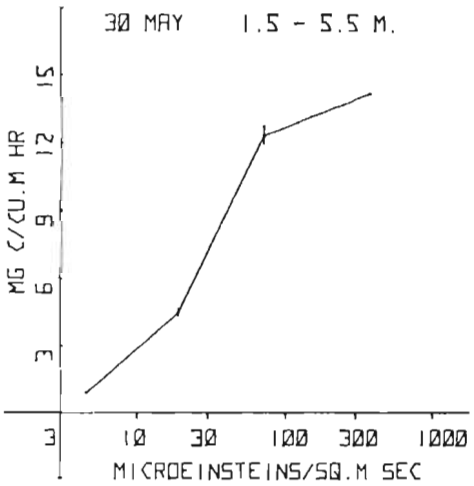
LAKE 239

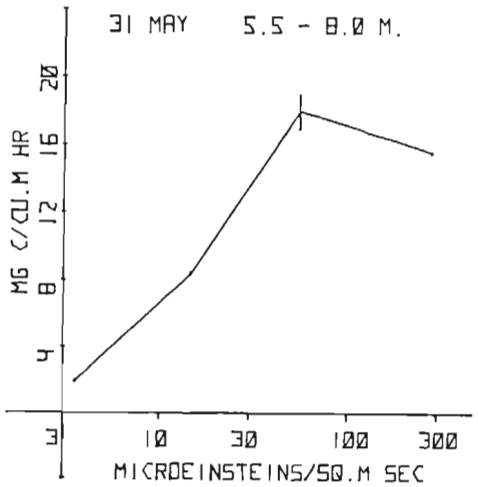

18 OCT 0.0 - 7.5 M.
MG C/CU.M HR
1.0
2.0
3.0
4.0
5.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

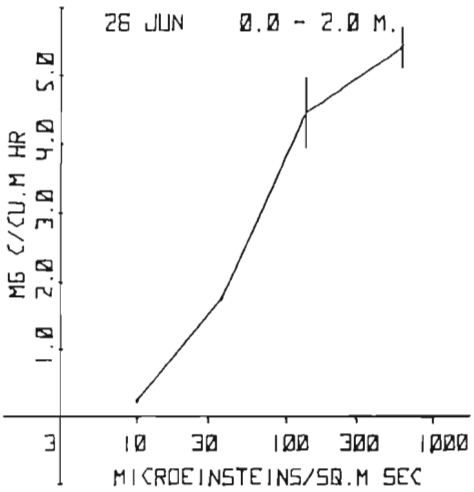
LAKE 302N

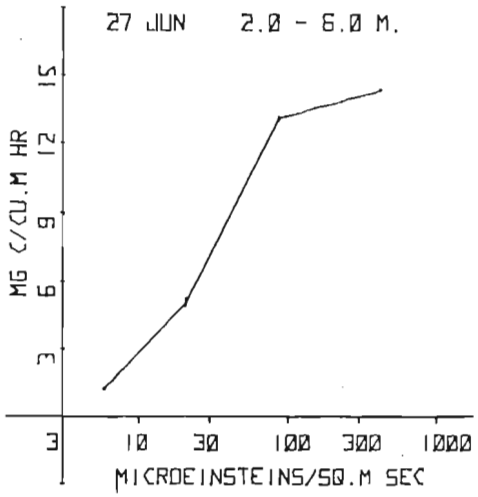

8 MAY 0.0 - 4.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


29 MAY 0.0 - 1.5 M.
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

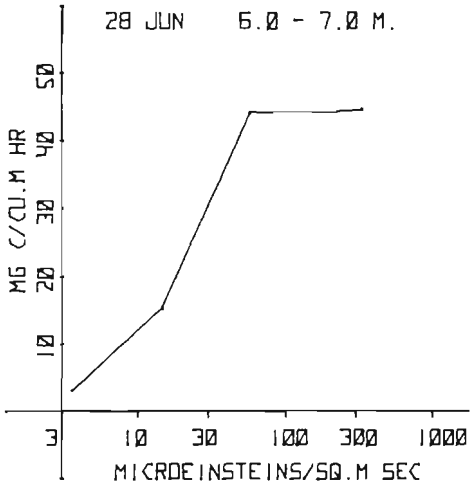

30 MAY 1.5 - 5.5 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

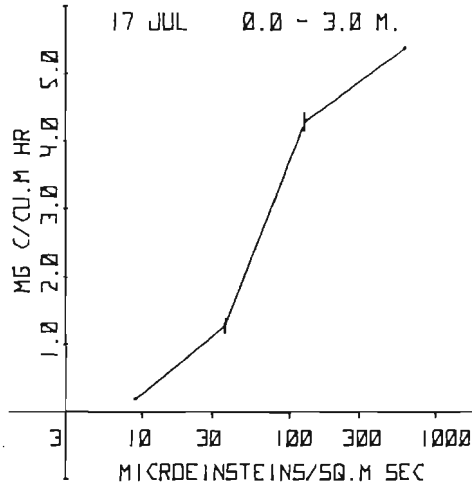

31 MAY 5.5 - 8.0 M.
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

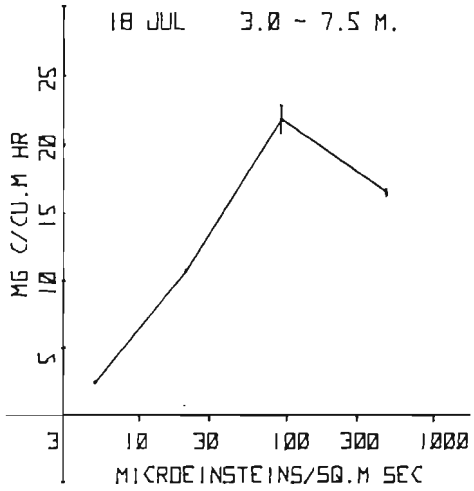

26 JUN 0.0 - 2.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

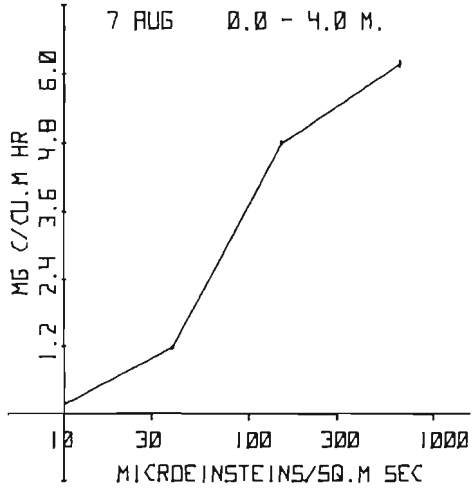

27 JUN 2.0 - 6.0 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

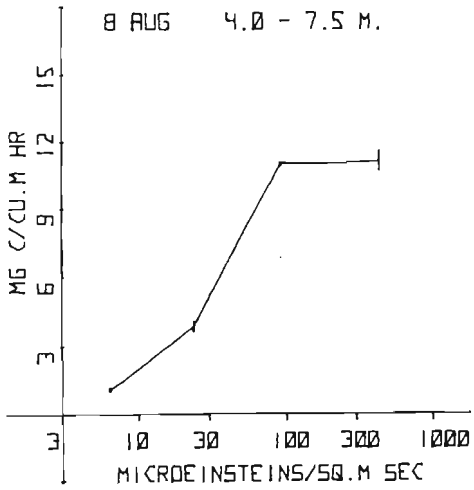
LAKE 302N

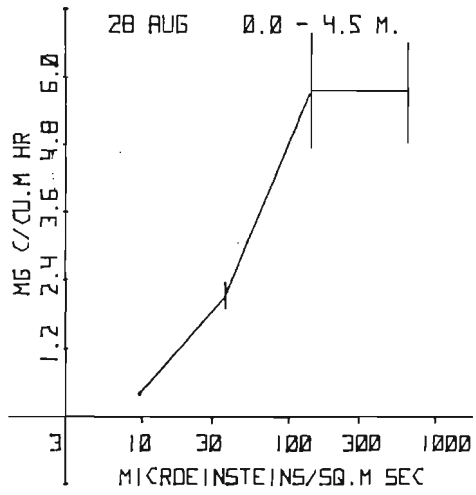

28 JUN 6.0 - 7.0 M.
MG C/CU.M HR
10 20 30 40 50
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


17 JUL 0.0 - 3.0 M.
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

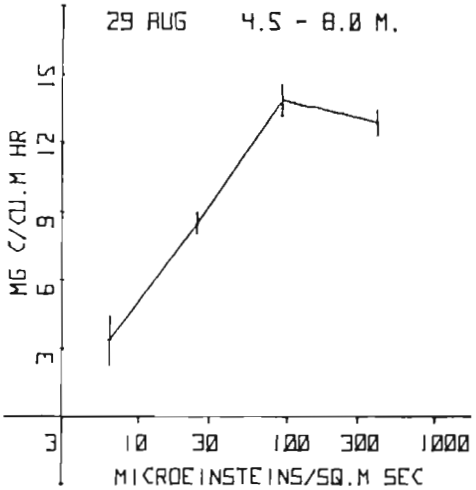

18 JUL 3.0 - 7.5 M.
MG C/CU.M HR
5 10 15 20 25
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

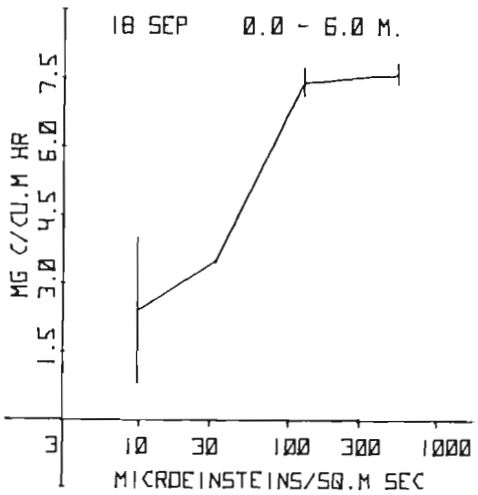

7 AUG 0.0 - 4.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

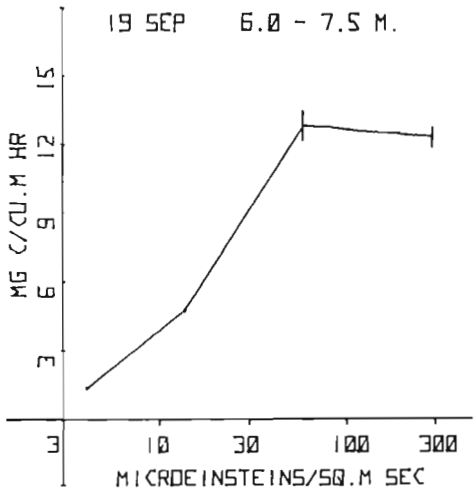

8 AUG 4.0 - 7.5 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

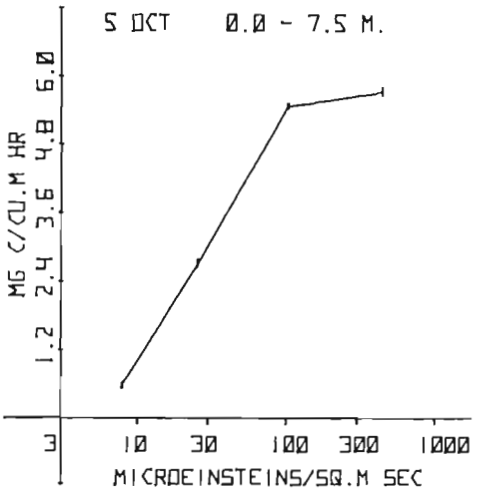

28 AUG 0.0 - 4.5 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

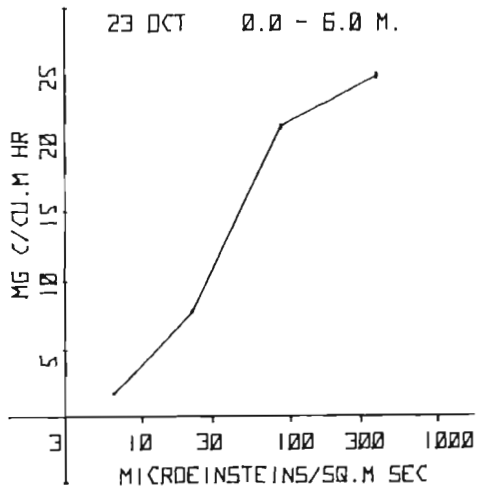
LAKE 302N


29 AUG 4.5 - 8.0 M.
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

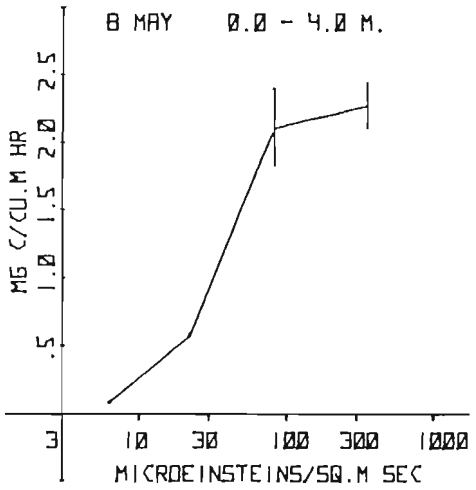

18 SEP 0.0 - 6.0 M.
MG C/CU.M HR
1.5
3.0
4.5
6.0
7.5
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

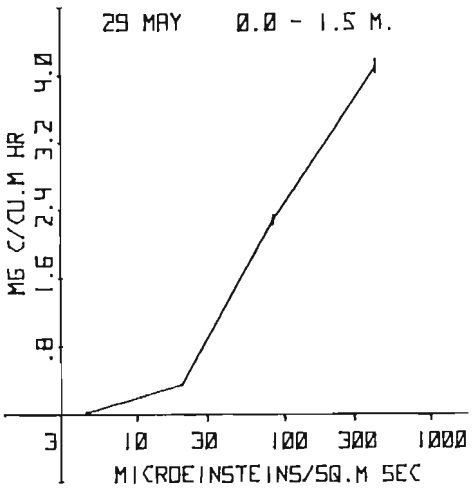

19 SEP 6.0 - 7.5 M.
MG C/CU.M HR
3
6
9
12
15
3
10
30
100
300
MICROEINSTEINS/SQ.M SEC

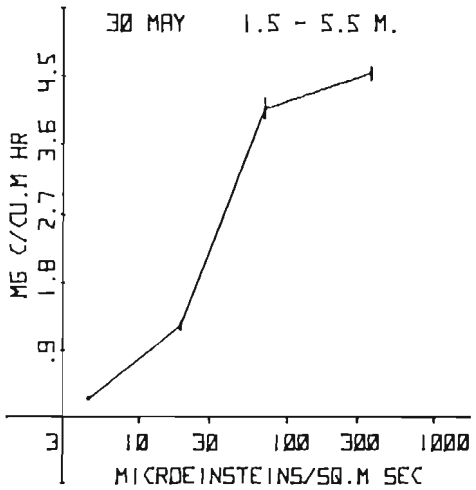

5 OCT 0.0 - 7.5 M.
MG C/CU.M HR
1.2
2.4
3.6
4.8
6.0
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

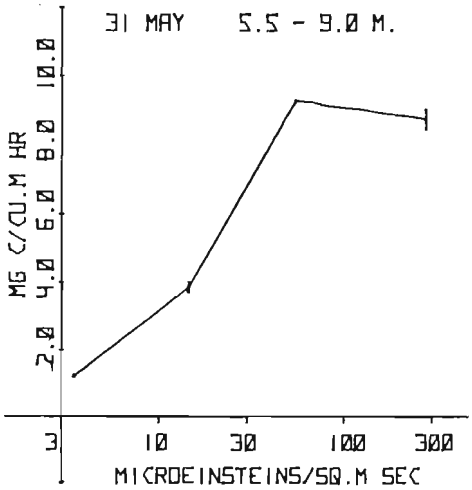

23 OCT 0.0 - 6.0 M.
MG C/CU.M HR
5
10
15
20
25
3
10
30
100
300
1000
MICROEINSTEINS/SQ.M SEC

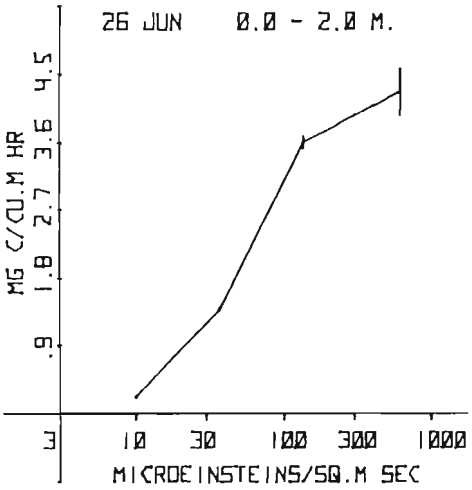
LAKE 302S

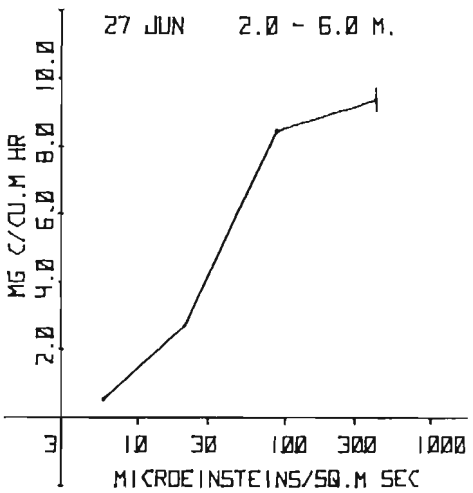

8 MAY 0.0 - 4.0 M.
MG C/CU.M HR
.5 1.0 1.5 2.0 2.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


29 MAY 0.0 - 1.5 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

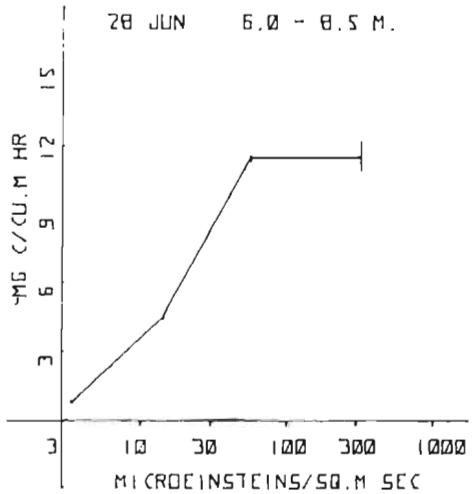

30 MAY 1.5 - 5.5 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

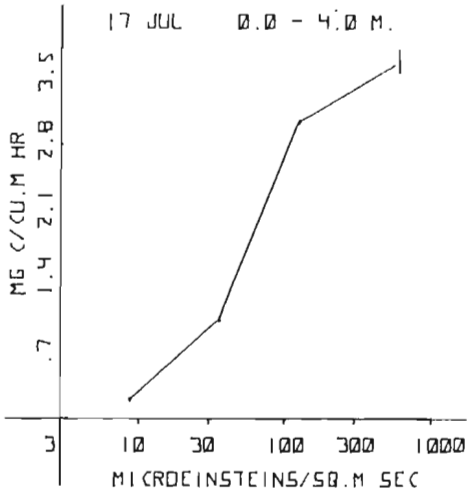

31 MAY 5.5 - 9.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

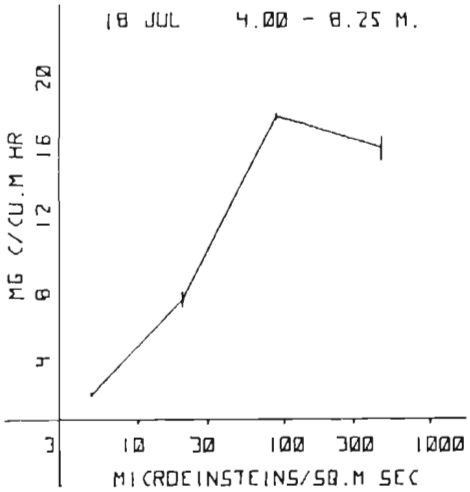

26 JUN 0.0 - 2.0 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

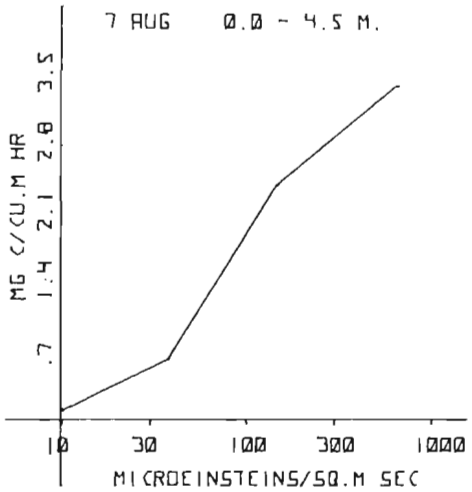

27 JUN 2.0 - 6.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

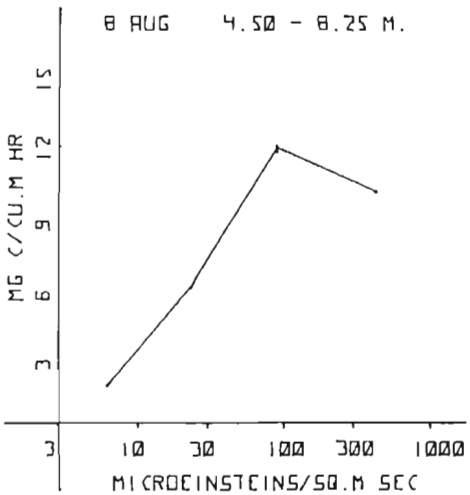
LAKE 302S

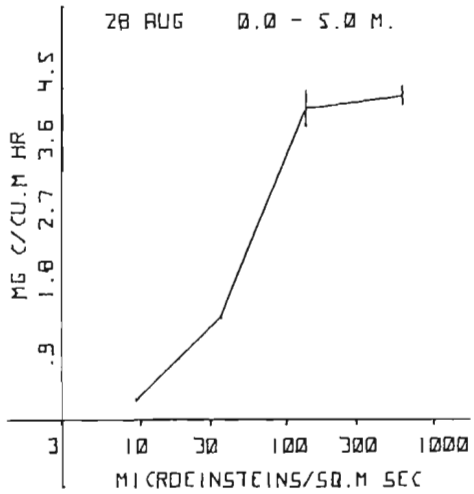

28 JUN 6.0 - 8.5 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


17 JUL 0.0 - 4.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

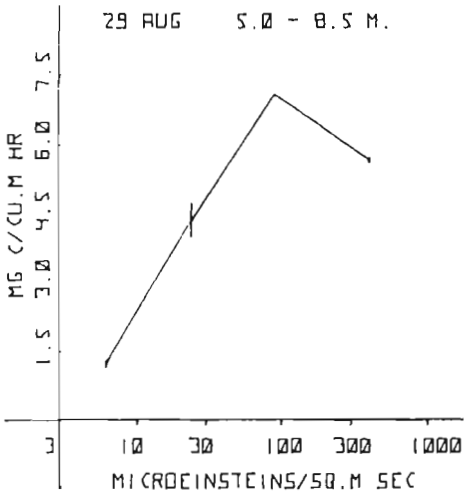

18 JUL 4.00 - 8.25 M.
MG C/CU.M HR
4 8 12 16 20
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

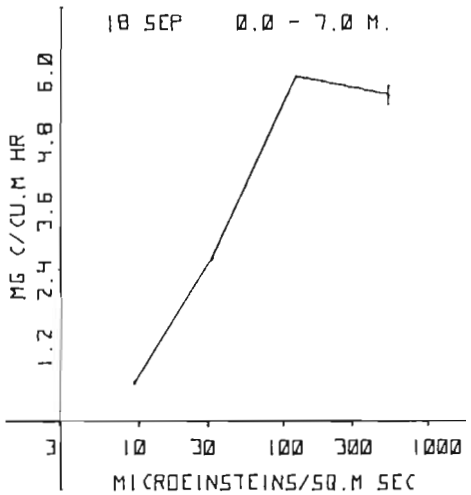

7 AUG 0.0 - 4.5 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

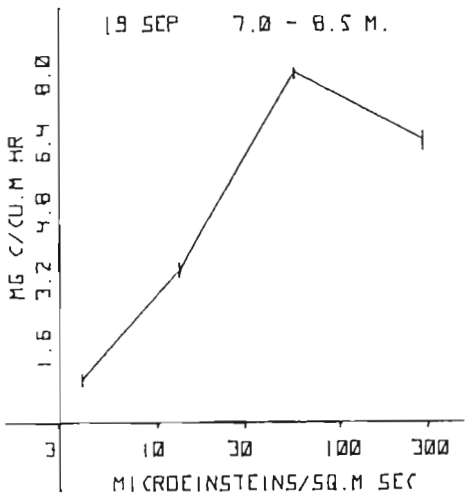

8 AUG 4.50 - 8.25 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

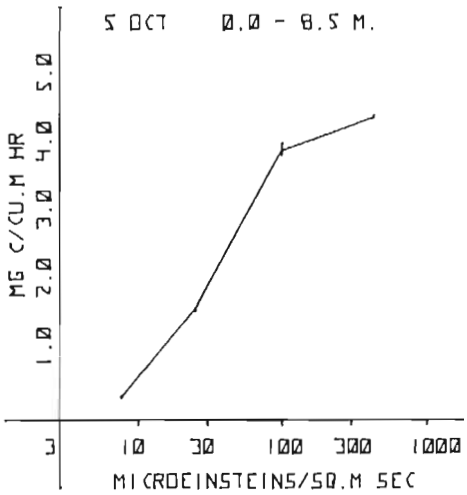

28 AUG 0.0 - 5.0 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

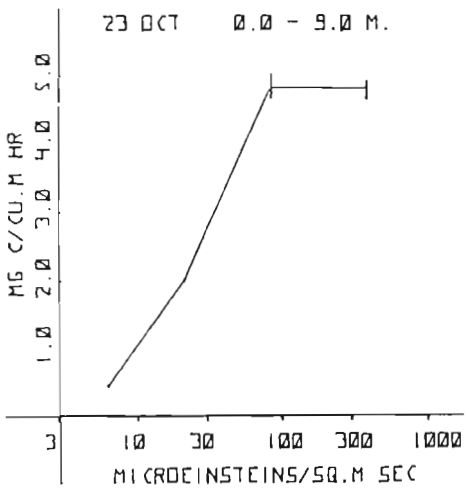
LAKE 302S


29 AUG 5.0 - 8.5 M.
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

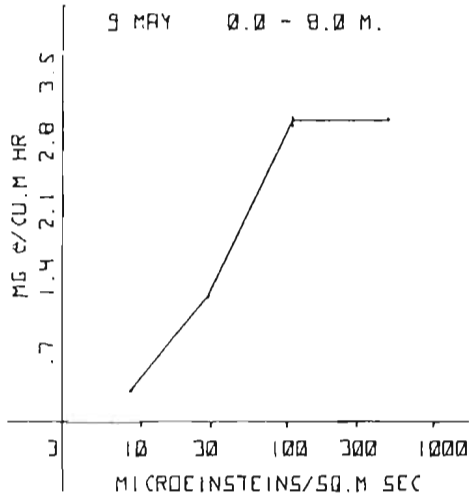

18 SEP 0.0 - 7.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

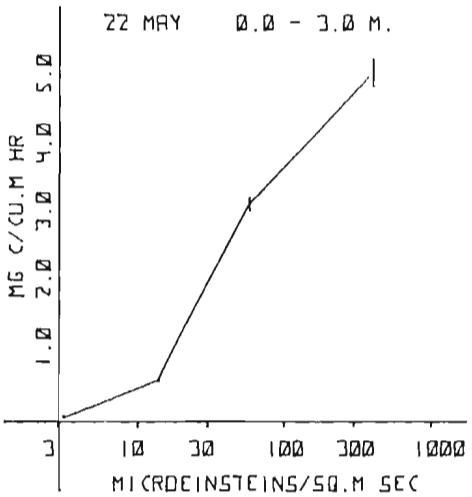

19 SEP 7.0 - 8.5 M.
MG C/CU.M HR
1.6 3.2 4.8 6.4 8.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

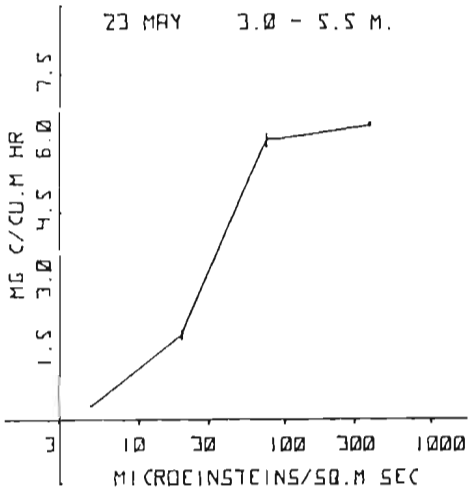

5 OCT 0.0 - 8.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

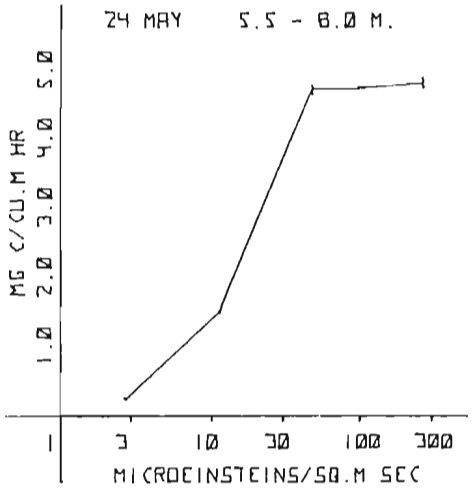

23 OCT 0.0 - 9.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

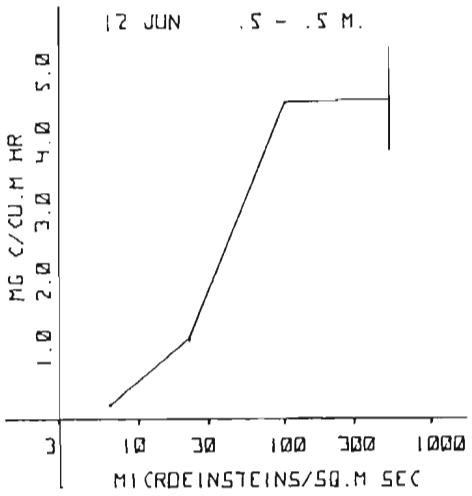
LAKE 382

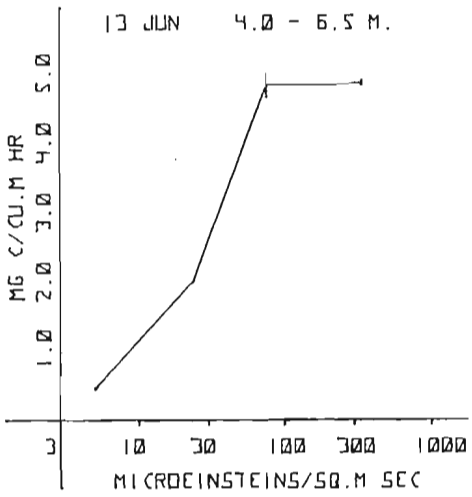

9 MAY 0.0 - 8.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


22 MAY 0.0 - 3.0 M.
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

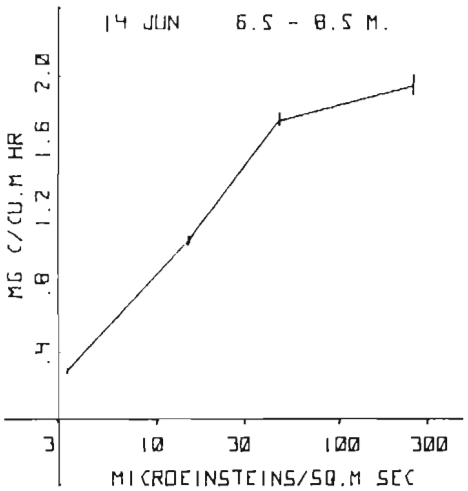

23 MAY 3.0 - 5.5 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

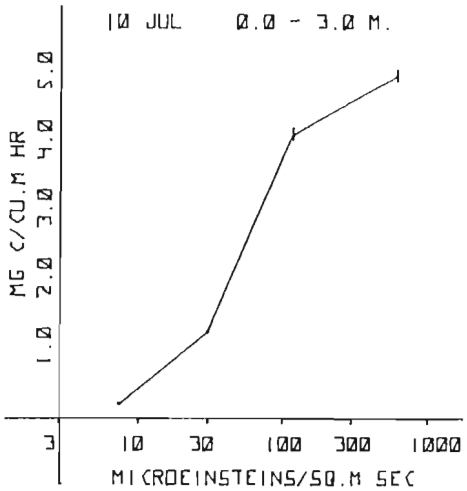

24 MAY 5.5 - 8.0 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
1 3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

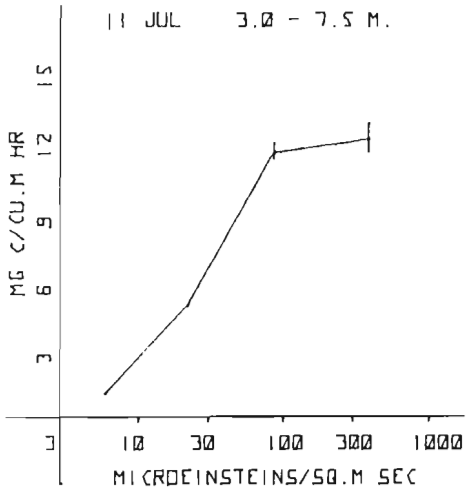

12 JUN .5 - .5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

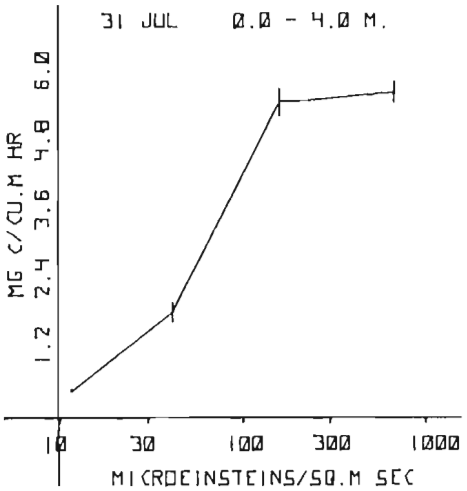

13 JUN 4.0 - 6.5 M.
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

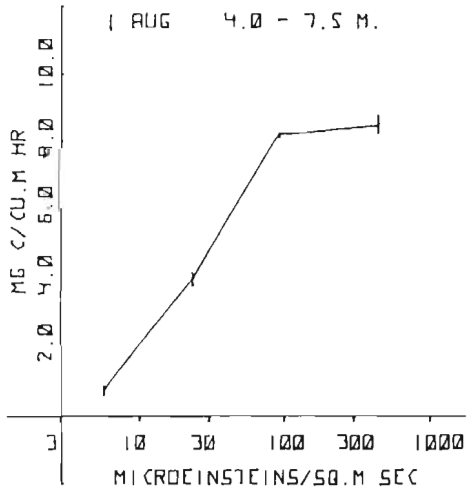
LAKE 382

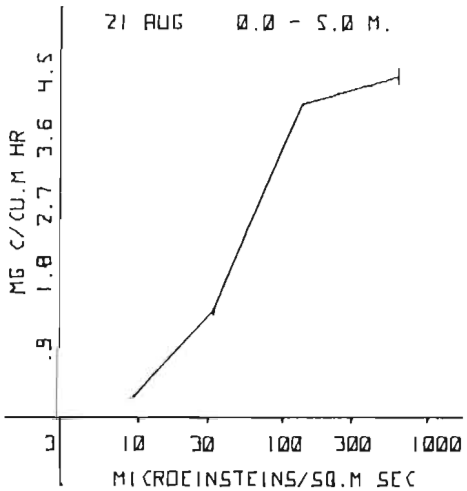

14 JUN 6.5 - 8.5 M.
MG C/CU.M HR
.4 .8 1.2 1.6 2.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC


10 JUL 0.0 - 3.0 M.
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

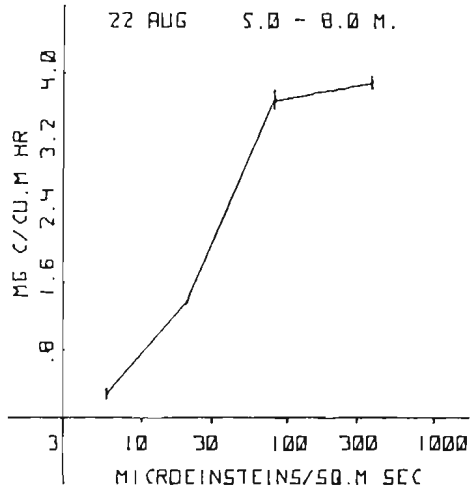

11 JUL 3.0 - 7.5 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


31 JUL 0.0 - 4.0 M.
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 AUG 4.0 - 7.5 M.
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


21 AUG 0.0 - 5.0 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 382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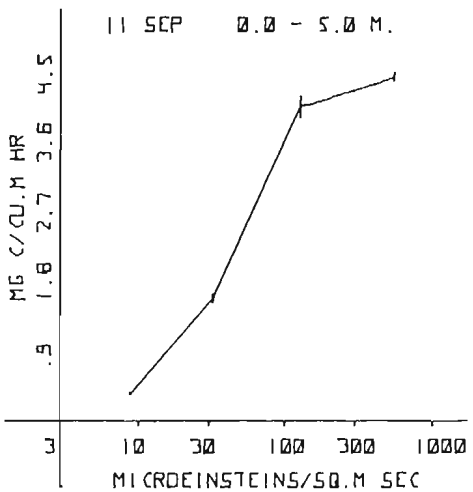
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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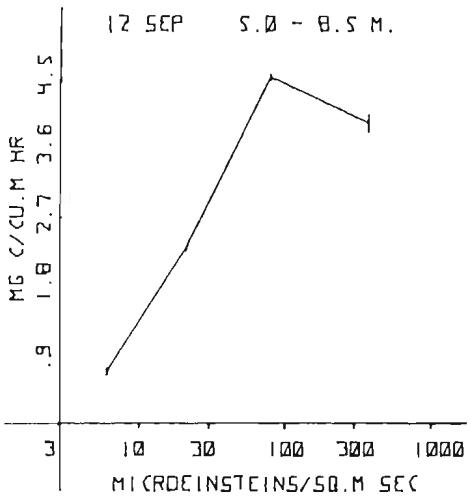
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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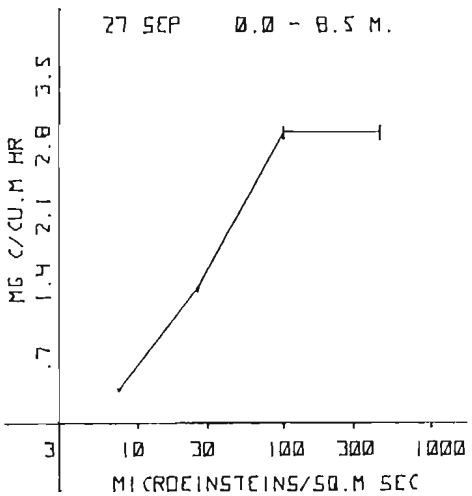
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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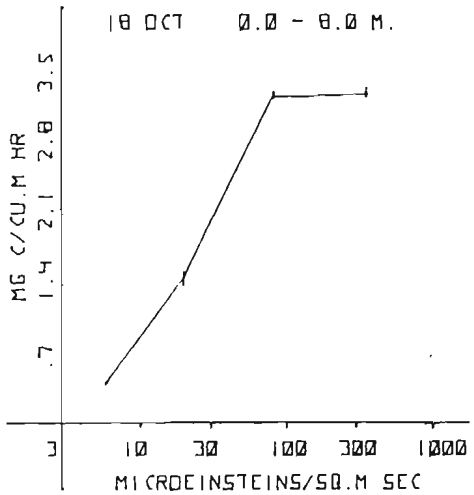
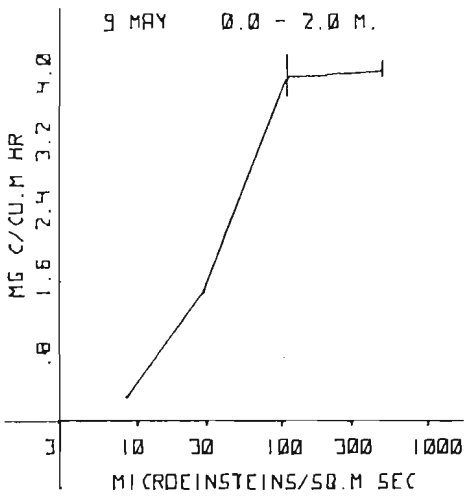
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


18 OCT 0.0 - 8.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 382 Bay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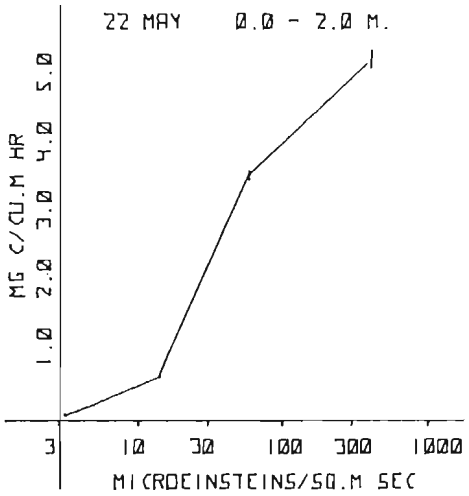
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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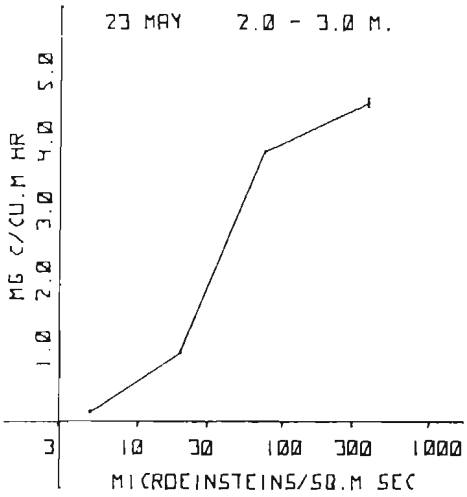
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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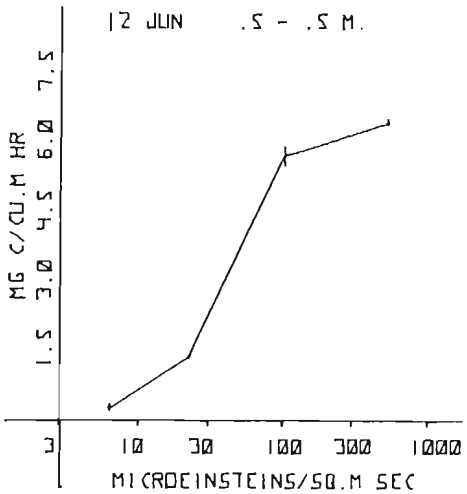
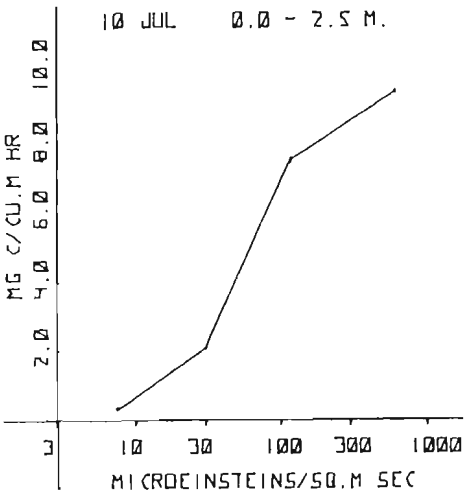
MG C/CU.M HR
1.0 2.0 3.0 4.0 5.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


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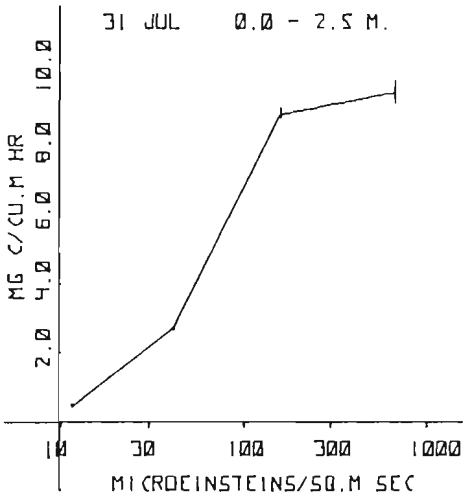
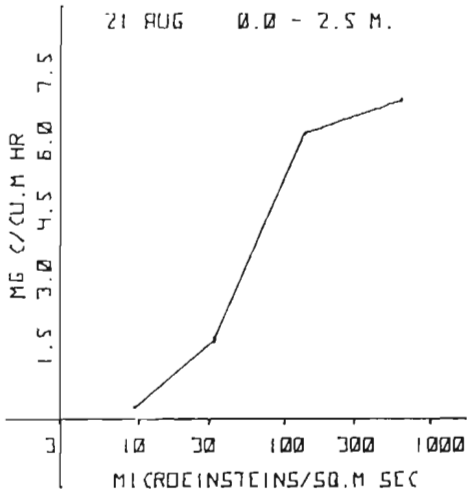
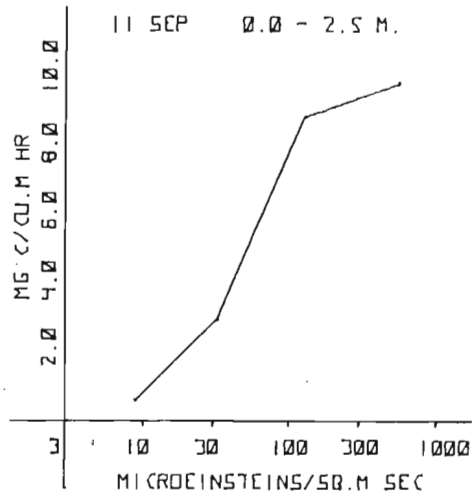
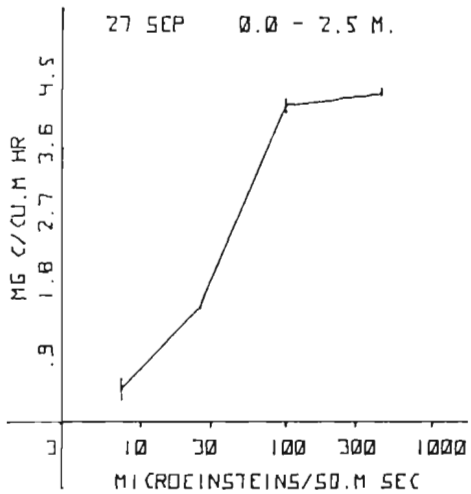
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

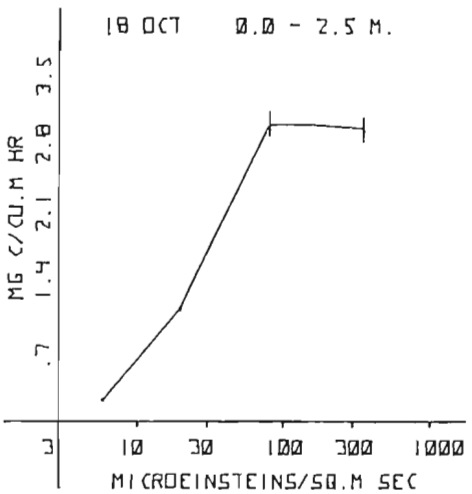

31 JUL 0.0 - 2.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 382 Bay


21 AUG 0.0 - 2.5 M.
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 SEP 0.0 - 2.5 M.
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


27 SEP 0.0 - 2.5 M.
MG C/CU.M HR
.9 1.8 2.7 3.6 4.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


18 OCT 0.0 - 2.5 M.
MG C/CU.M HR
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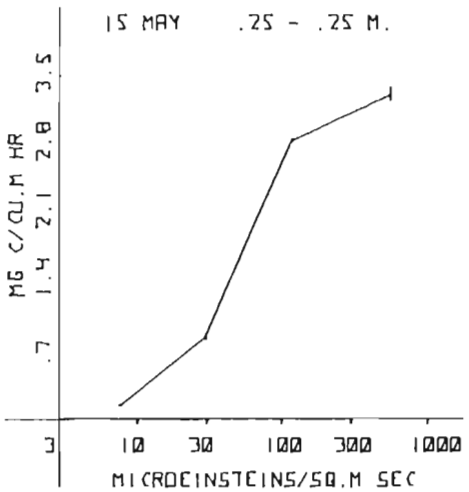
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 383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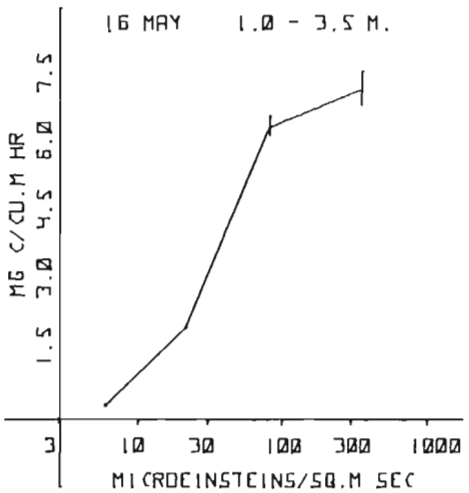
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC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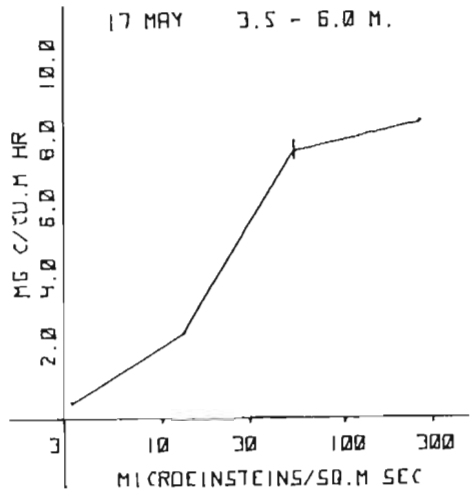
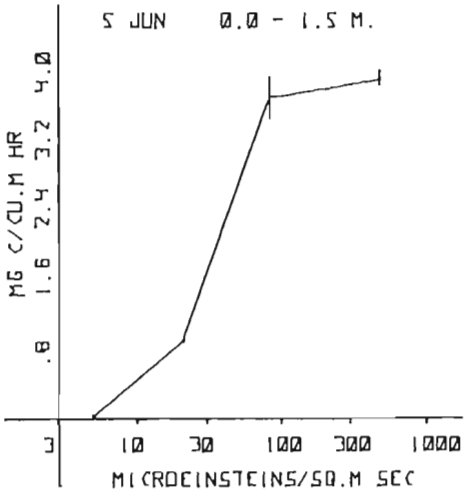
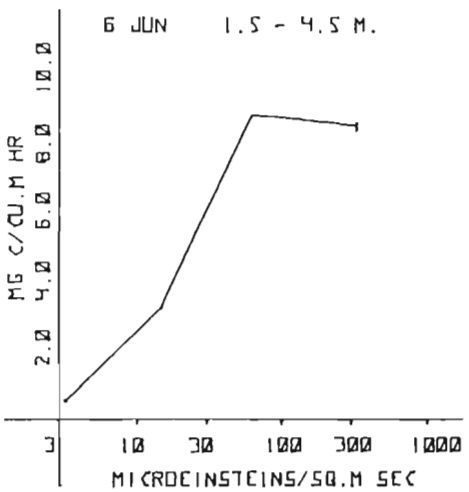
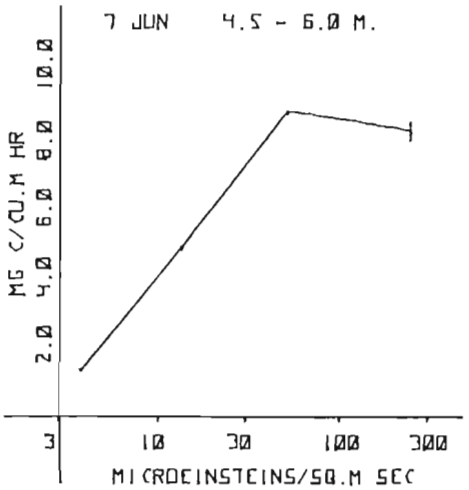
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

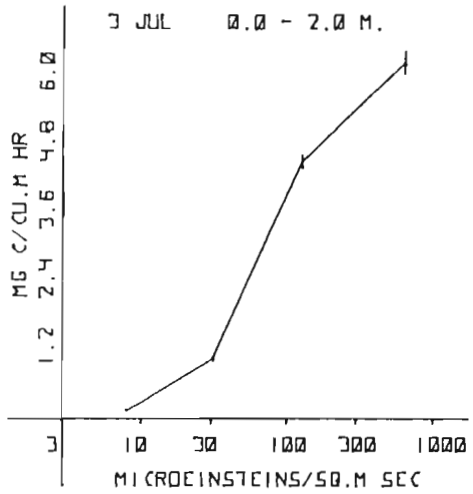

17 MAY 3.5 - 6.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

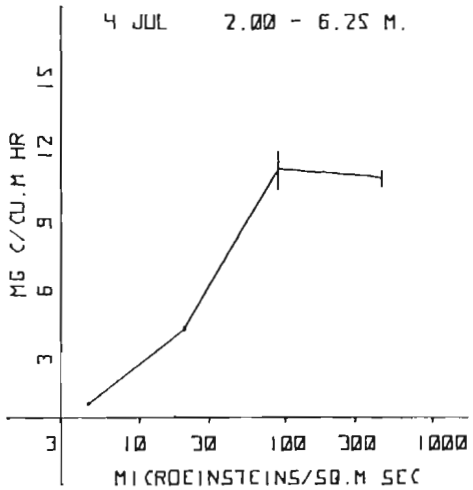

5 JUN 0.0 - 1.5 M.
MG C/CU.M HR
.8 1.6 2.4 3.2 4.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

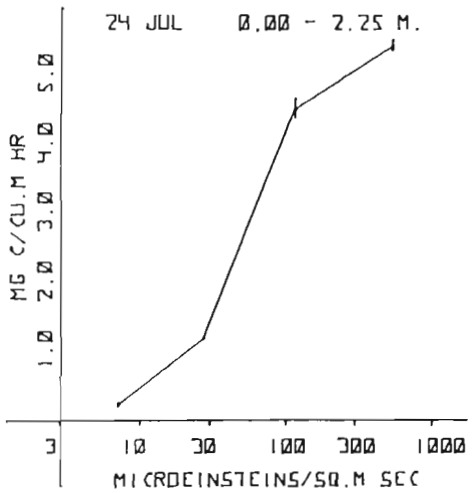

6 JUN 1.5 - 4.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

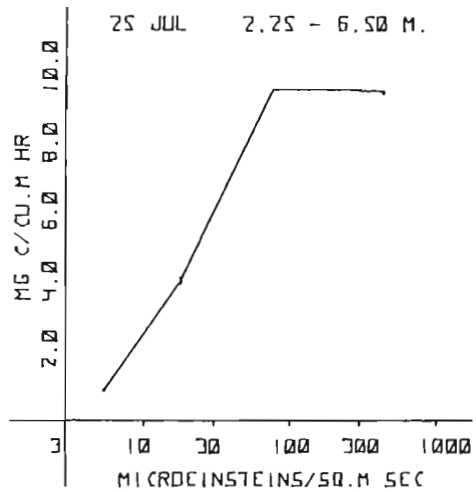

7 JUN 4.5 - 6.0 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300
MICROEINSTEINS/SQ.M SEC

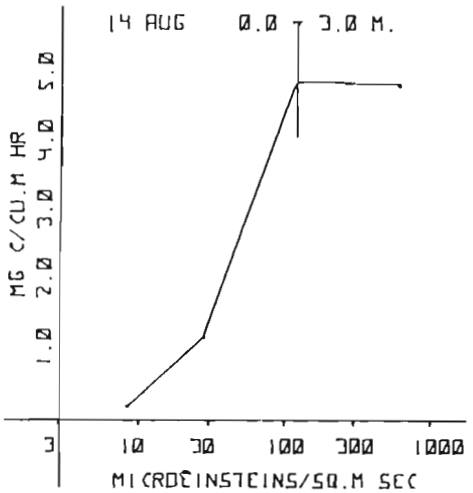
LAKE 383

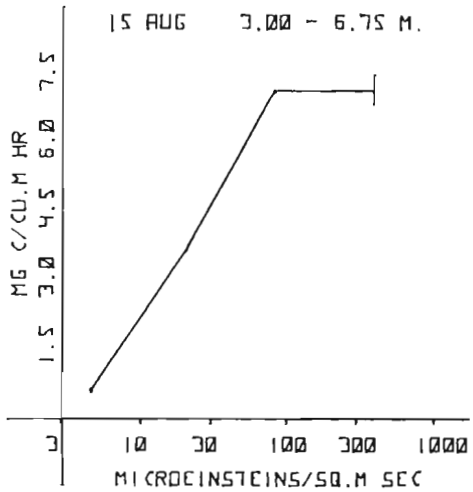

3 JUL 0.0 - 2.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 JUL 2.00 - 6.25 M.
MG C/CU.M HR
3 6 9 12 15
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


24 JUL 0.00 - 2.25 M.
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 JUL 2.25 - 6.50 M.
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 AUG 0.0 - 3.0 M.
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


15 AUG 3.00 - 6.75 M.
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

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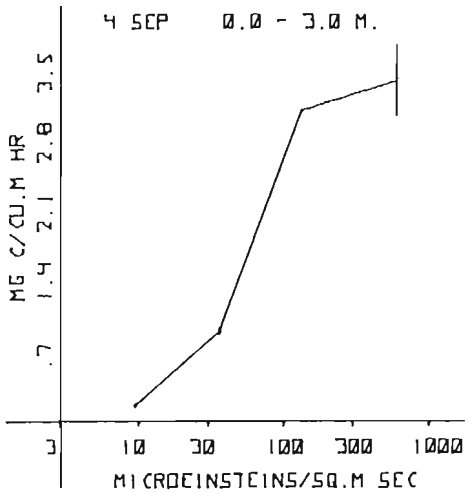
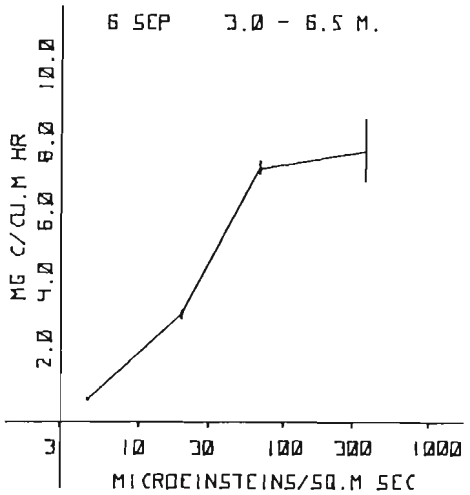
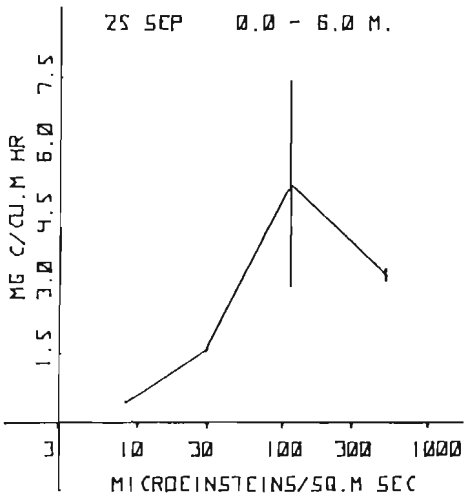
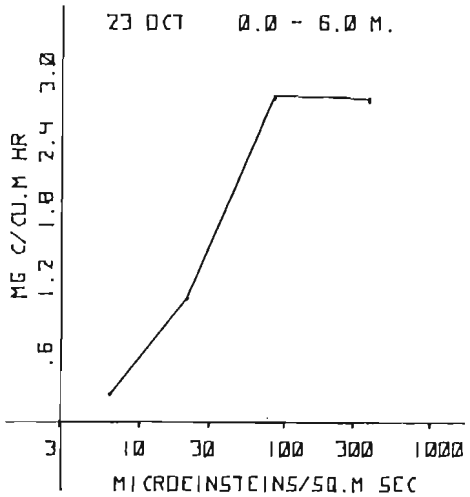
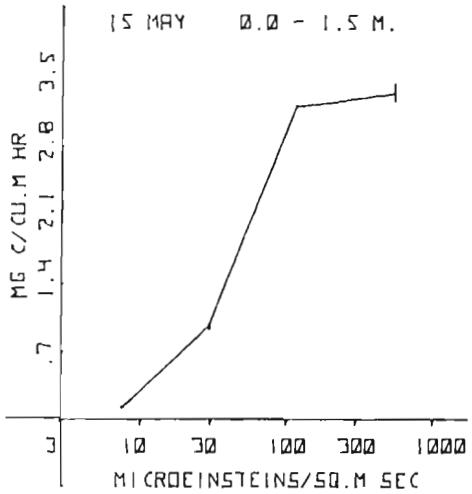

4 SEP 0.0 - 3.0 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

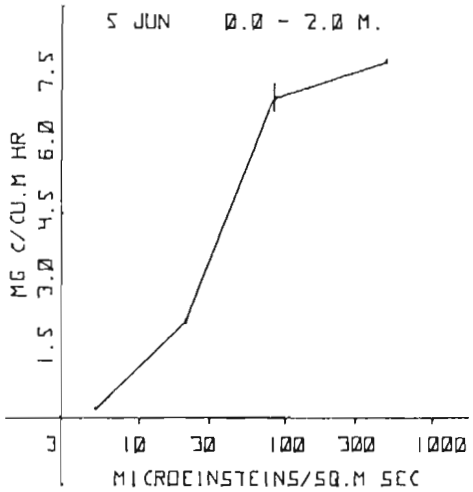

6 SEP 3.0 - 6.5 M.
MG C/CU.M HR
2.0 4.0 6.0 8.0 10.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

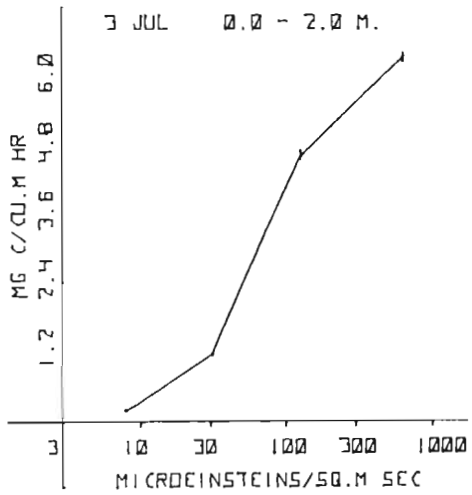

25 SEP 0.0 - 6.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

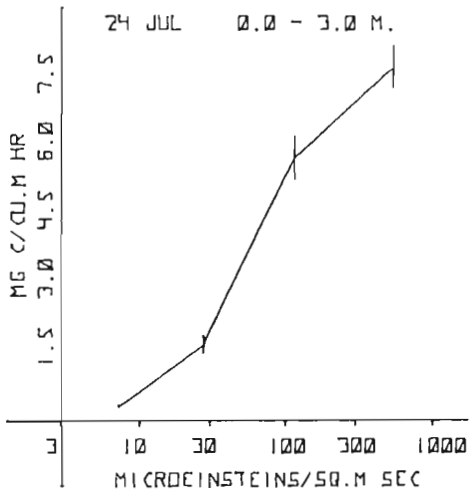

23 OCT 0.0 - 6.0 M.
MG C/CU.M HR
.6 1.2 1.8 2.4 3.0
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

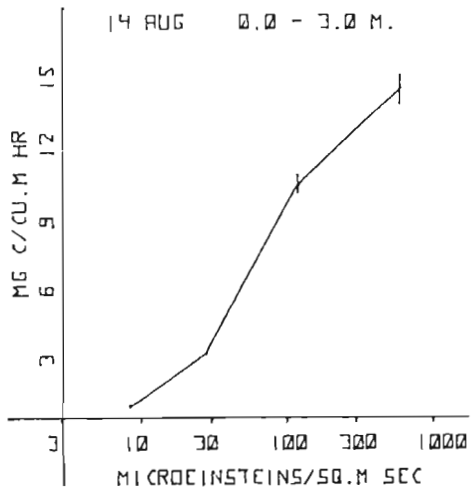
LAKE 384

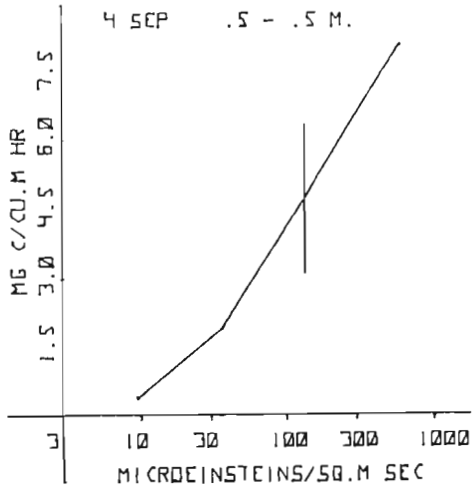

15 MAY 0.0 - 1.5 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


5 JUN 0.0 - 2.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

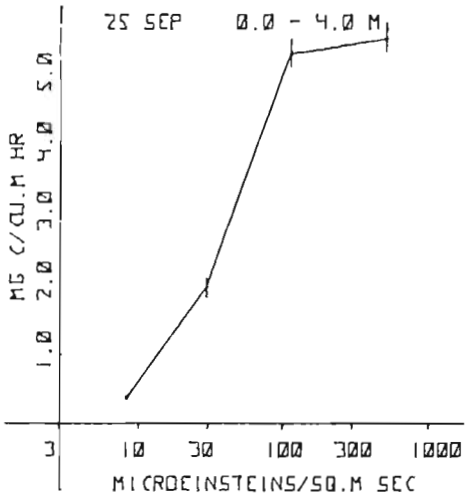

3 JUL 0.0 - 2.0 M.
MG C/CU.M HR
1.2 2.4 3.6 4.8 6.0
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

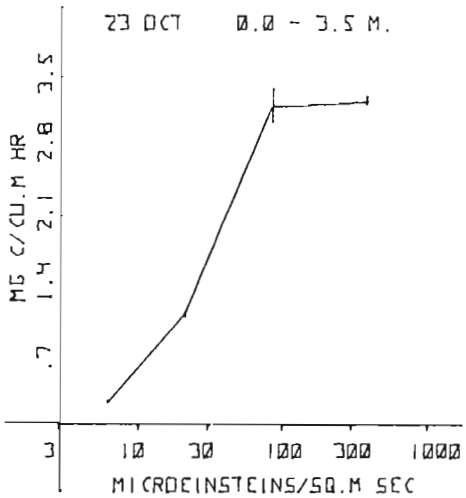

24 JUL 0.0 - 3.0 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


14 AUG 0.0 - 3.0 M.
MG C/CU.M HR
3 6 9 12 15
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC


4 SEP .5 - .5 M.
MG C/CU.M HR
1.5 3.0 4.5 6.0 7.5
J 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC

LAKE 384


25 SEP 0.0 - 4.0 M.
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


23 OCT 0.0 - 3.5 M.
MG C/CU.M HR
.7 1.4 2.1 2.8 3.5
3 10 30 100 300 1000
MICROEINSTEINS/SQ.M SEC