by

Leonard Alan Hook
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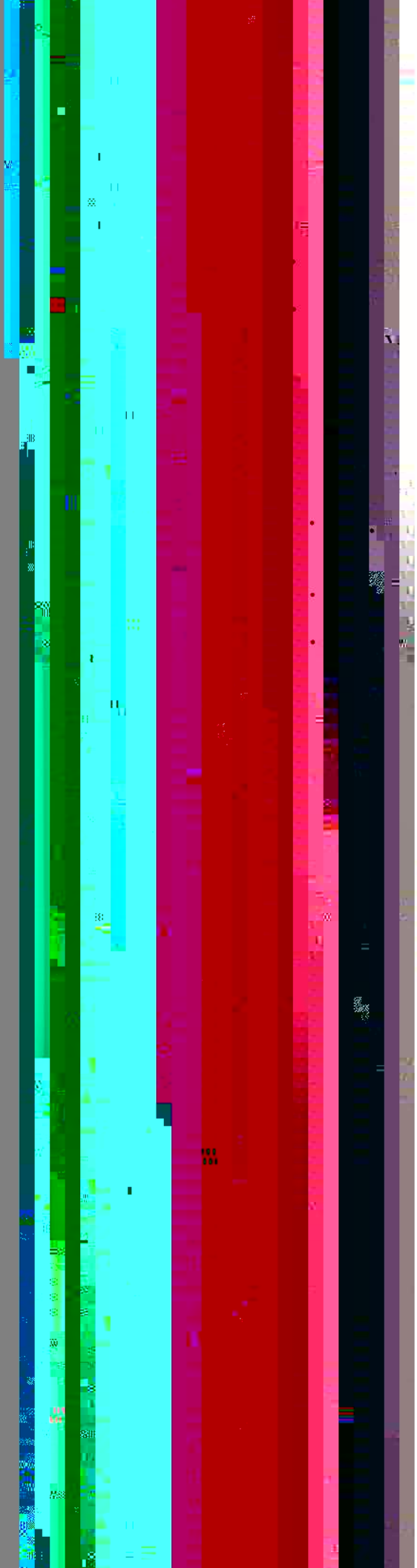
May, 1981



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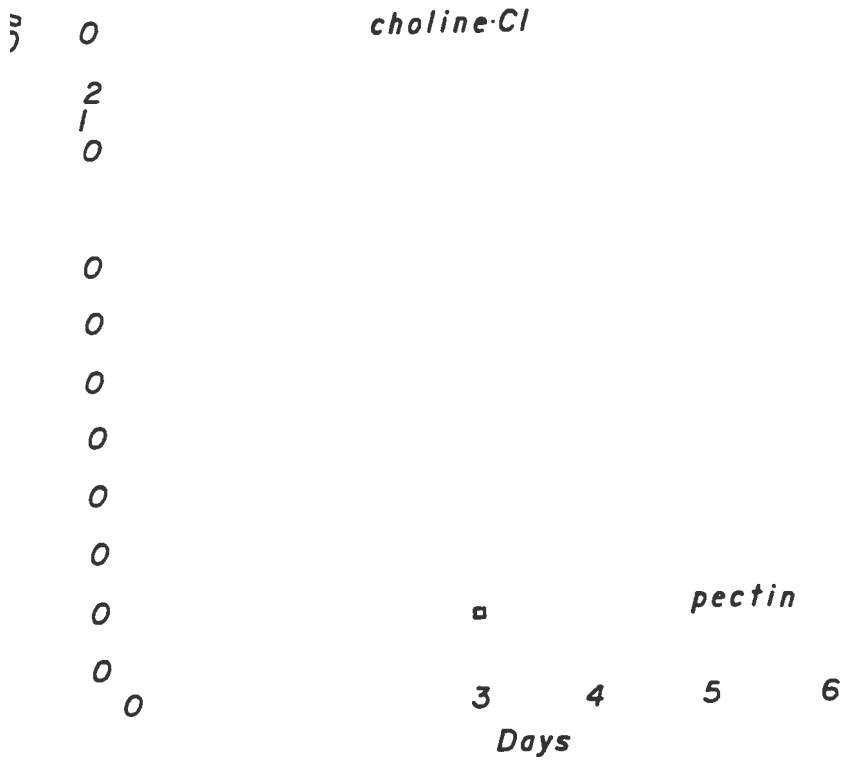
Tables 1-3. Methanogen growth media used for broth enrichments and attempted isolation by extinction dilution, Hungate roll tubes (25), and anaerobic streak plates (21). All chemicals used in these media were of reagent grade. Except where noted, the media were prepared and dispensed under O_2-free N_2.

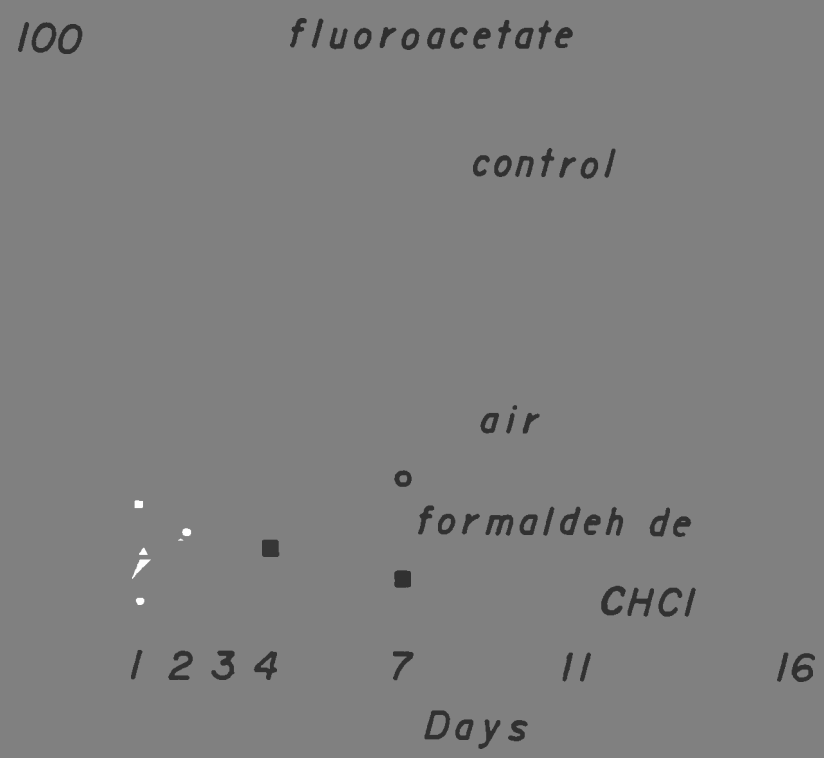
Table 1

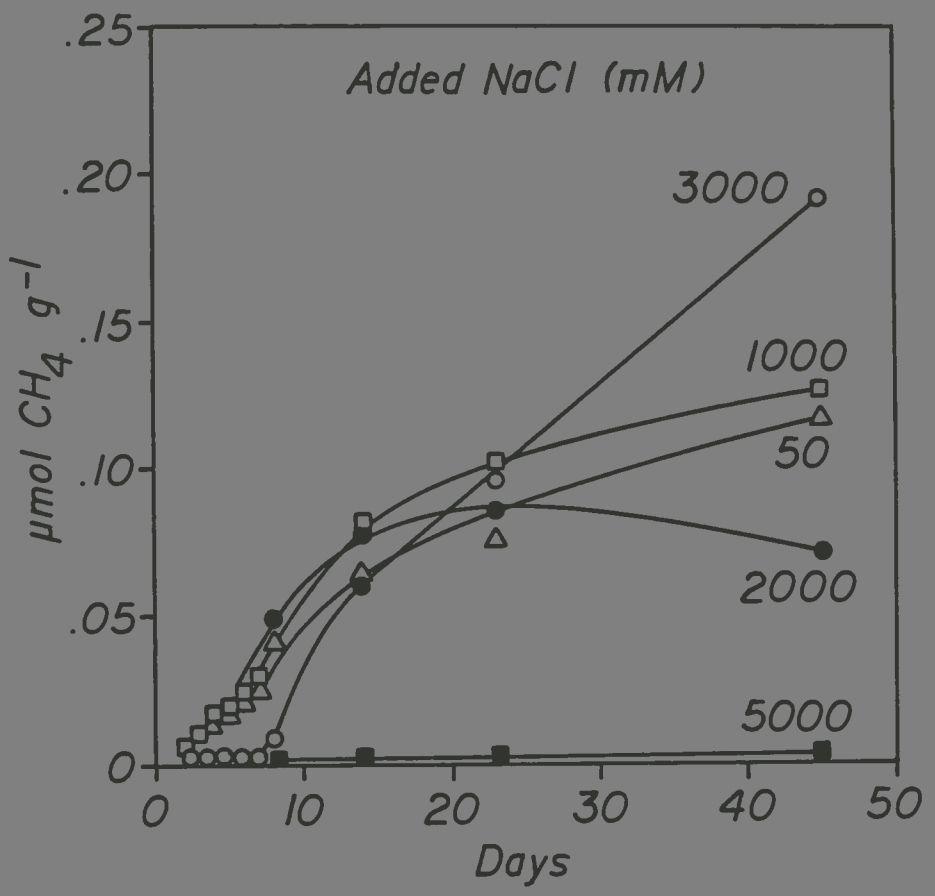
Mah, et al. (38) Enrichment Medium	
NH_4Cl	1.0 g
K_2HPO_4	0.4 g
$MgCl_2 \cdot 6H_2O$	0.1 g
$CaCO_3$	100 g
Ca acetate	20 g
resazurin	0.0001 %
artificial seawater	1 l

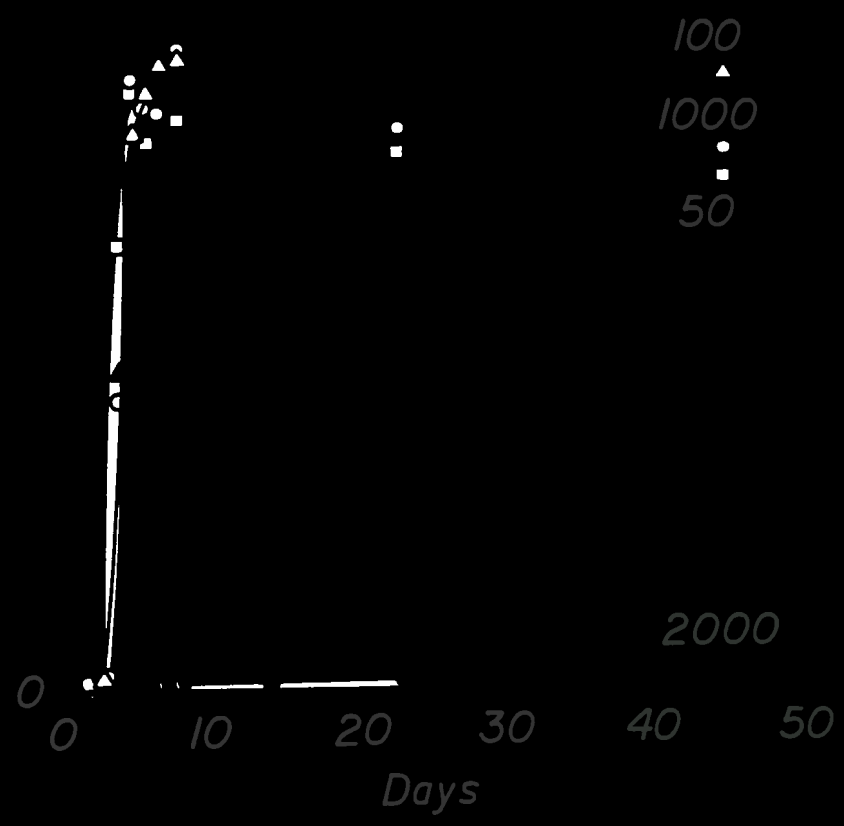
Modified Romesser, et al. (56) Medium	
10% methylamine	10 ml
10% trypticase	10 ml
10% yeast extract	10 ml
10% ammonium acetate	5 ml
10% sodium formate	10 ml
trace minerals (80)	10 ml
vitamins (3)	10 ml
HS-CoM (1 mg/ml solution)	1 ml
methanol	5 ml
10% Na_2CO_3	10 ml
5% $NaHCO_3$	40 ml
resazurin	0.0001 %
distilled water	150 ml
artificial seawater (40 g/l)	750 ml
1.25% cysteine-sulfide (3)	32 ml
H_2 + CO_2 (80/-20%, vol/vol) gas phase	

	Depth (m)	
Site 2	1.5	
	3.7	
	11.3	
	29.3	
	45.1	
	70.7	
Site 3	2.9	9.8
	18.4	2.9
	75.0	0.09
	89.0	<0.004
	101.3	<0.004
	124.1	<0.004
	131.7	<0.004
	142.1	<0.004
	157.0	<0.004
	187.8	<0.004
	212.1	<0.004


choline·Cl
pectin
0
2
1
0
0
0
0
0
0
0
0
0
0
3
4
5
6
Days


100
fluoroacetate
control
air
formaldeh de
CHCl
1 2 3 4
7
11
16
Days


Added NaCl (mM)
3000
1000
50
2000
5000
.25
.20
.15
.10
.05
0
μmol CH4 g-1
0
10
20
30
40
50
Days


100
1000
50
2000
0
0
10
20
30
40
50
Days

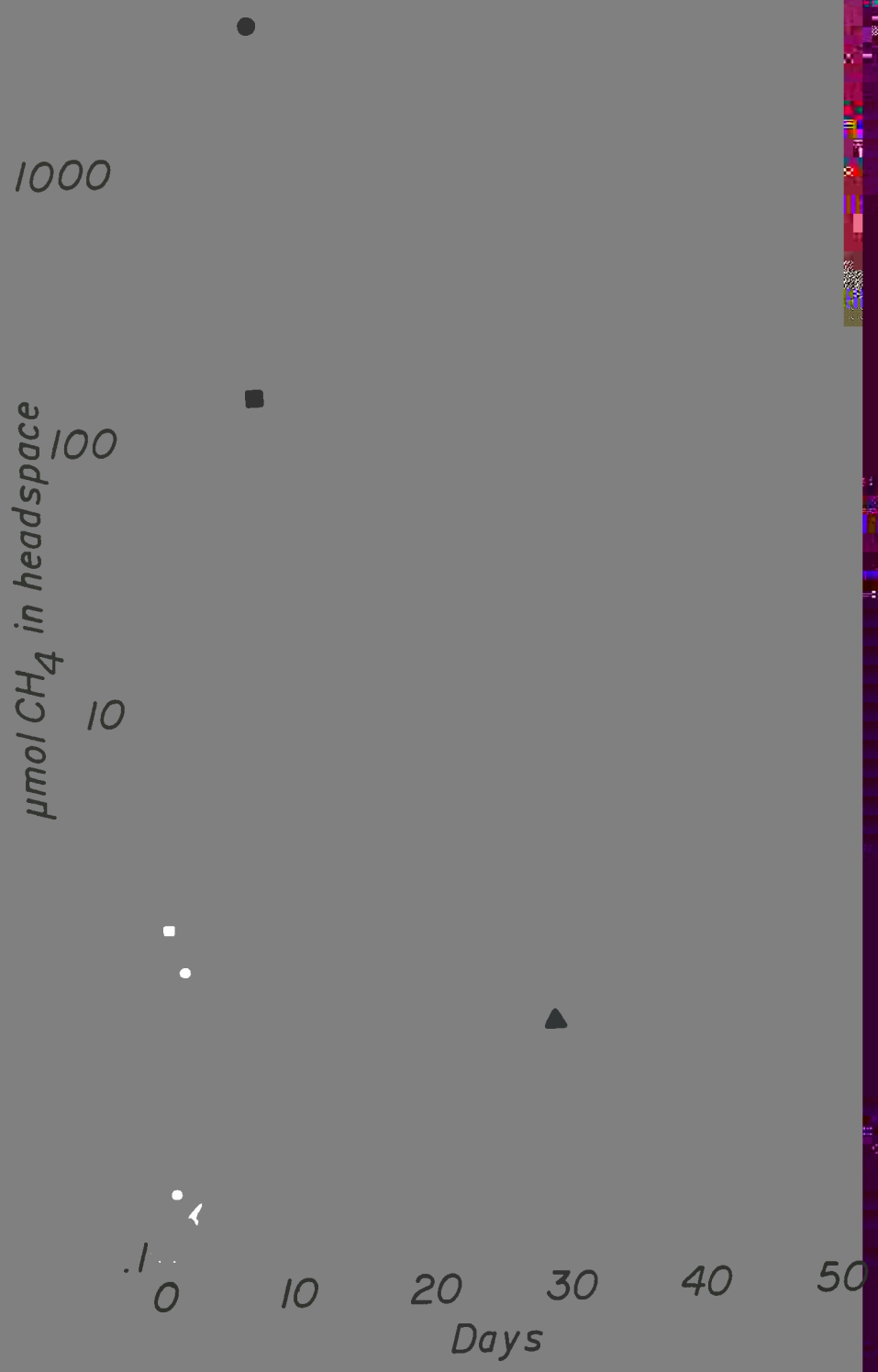
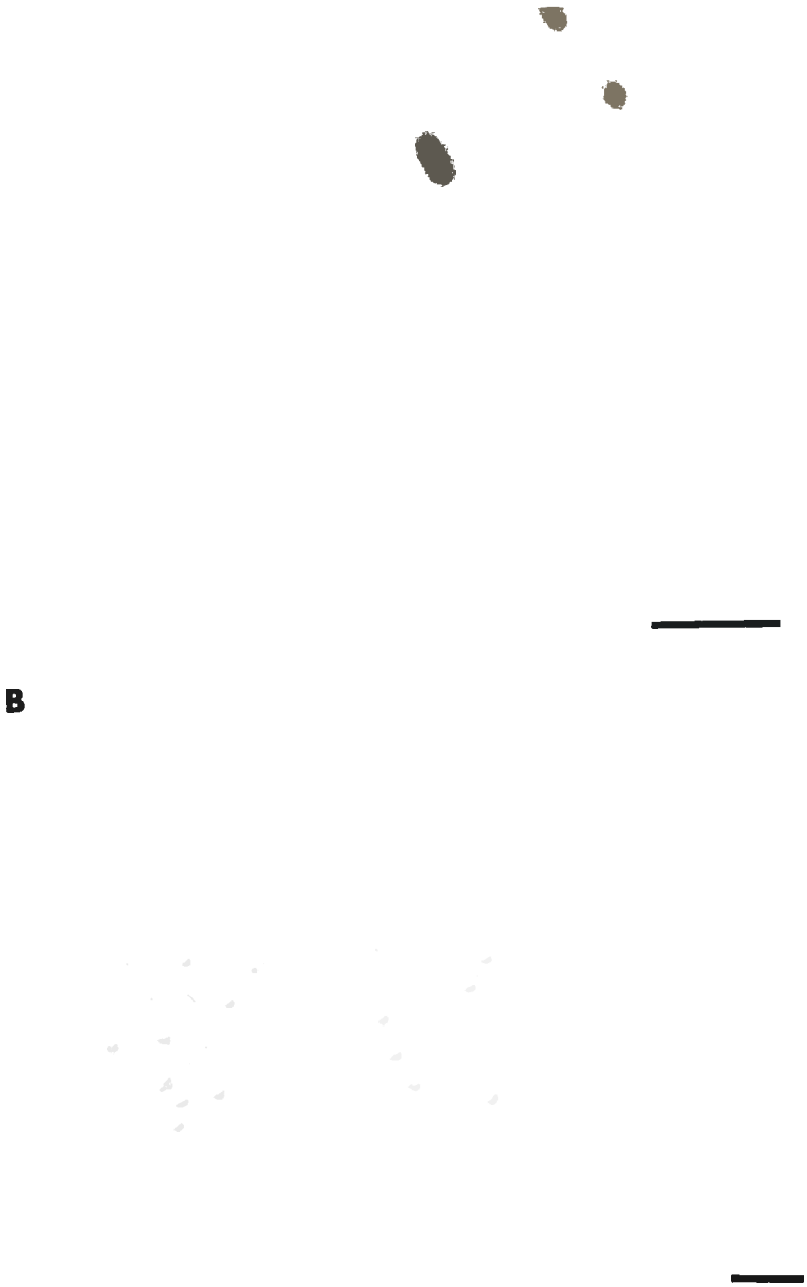

1000
100
10
.1
μmol CH_4 in headspace
0
10
20
30
40
50
Days

Table 7. Production of $^{14}CH_4$ from ^{14}C-1-acetate and ^{14}C-2-acetate by methanogenic delta samples. East Bay sediment samples from depths ranging from 0.075-29.0 m were given labeled acetate and incubated for 10 days at 30° C. The production of $^{14}CH_4$ from the C-1 and C-2 labeled carbons of acetate are given as dpm, corrected for background. The ratio of C-2/C-1 dpm are listed in the column to the far right.

B


A
B


B

DISCUSSION