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**Strain Selection of Spirulina Alga
Suitable for Mass Production**

Interim Report No. 3

by

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Work on the strains isolated during the previously reported worked proceeded during this period. All the strains are now in a unialgal form grown under different chemical conditions. The growth of the strain isolated is demonstrated in Figs 1-4 and summarized in Fig. 5. Growth rates of the different strains under the same environmental conditions (30°C 120 μ E m^{-2} s^{-1}) are given in Table 1.

Table 1: The specific growth rate and doubling time of 4 Spirulina strains isolated in N.E. Thailand

Strain	Specific growth rate day ⁻¹	Doubling time hr
Th-11	0.041	17
Th-13	0.034	20
Th-21	0.034	20
Th-30	0.040	17

The chemical composition of the different strains is under study and the preliminary results of the fatty acid composition of each strain are given in Table 2.

Table 2: Fatty acid composition of 3 Spirulina strains

Strain	14-0	16-0	16-1	16-3	18-0	18-1	18-2	18-3	GLA	TFA
Th. 13	2.1	46.9	5.1	0.5	1.2	5.0	17.8	21.3	0.9	4.1
Th. 21	2.5	41.0	19.9	0.8	1.2	4.6	17.2	12.9	0.6	4.5
Th. 30	2.4	40.0	16.3	1.2	1.1	5.9	17.9	15.1	0.7	4.4

Work on outdoor cultivation is starting by the end of this year in NIFI visites and training.

The Thai partner visited the Israeli group for 3 weeks for training on laboratory techniques and algal growth determination. Another visit of one of the Thai team is expected on June-July 1988. The Israeli PI will be visiting NIFI at the beginning of 1988 for guiding and advice on the outdoor experiments.

Fig. 1: Growth of Th 11

$\mu = 0.041$ --- 17hr

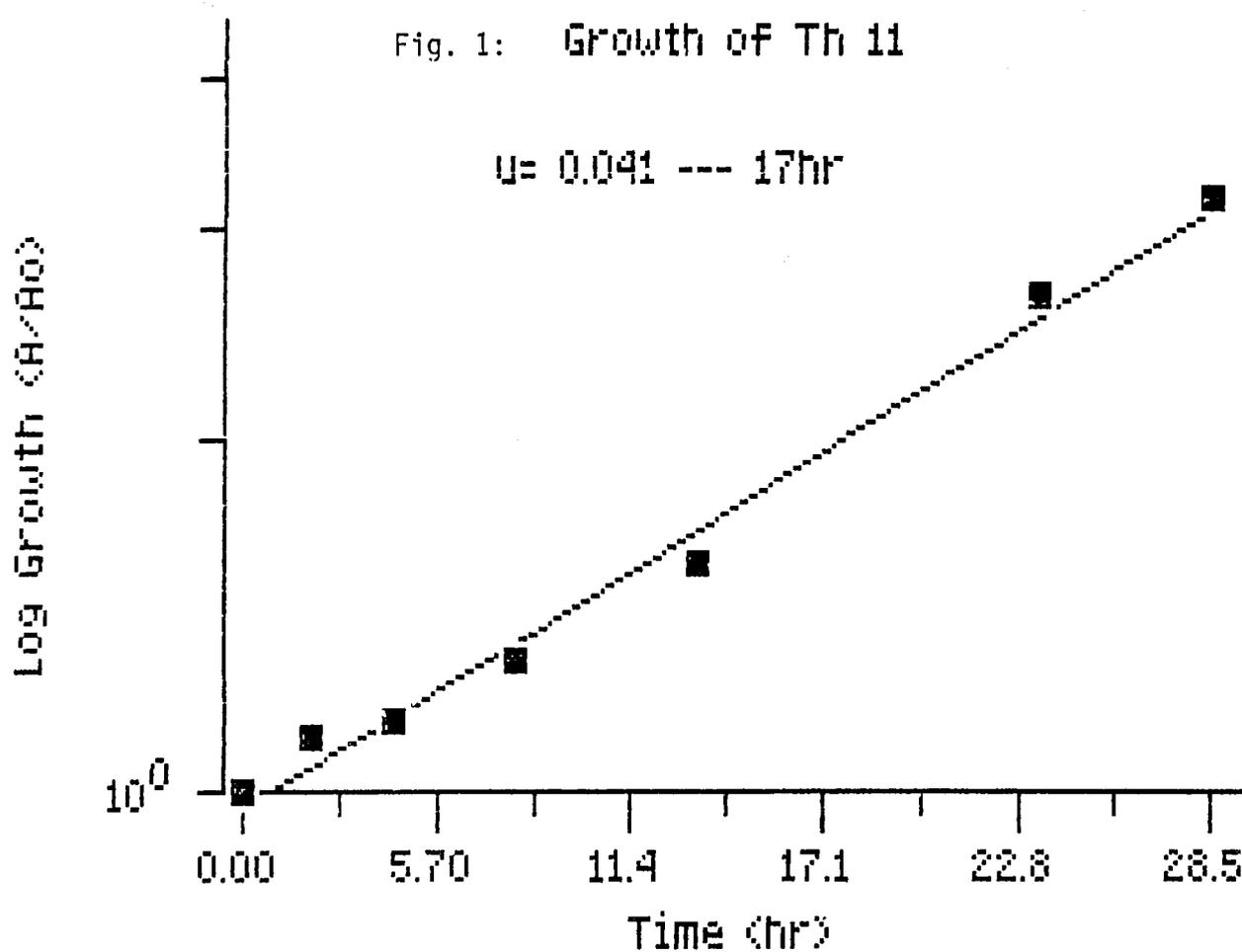


Fig. 2: Growth curve of Th 13

$\mu = 0.034$ ---20hr

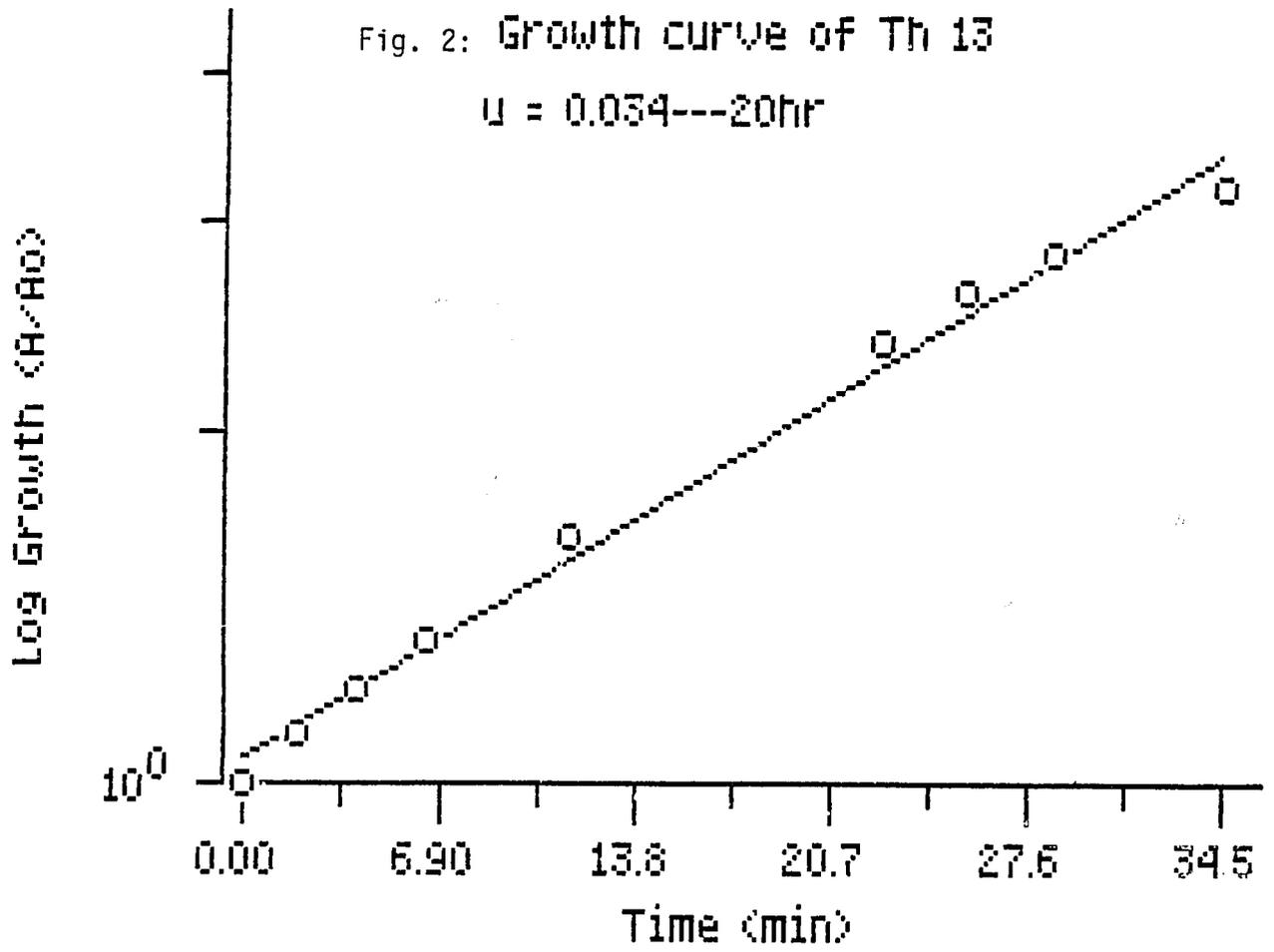


Fig. 3: Growth curve of Th 21.

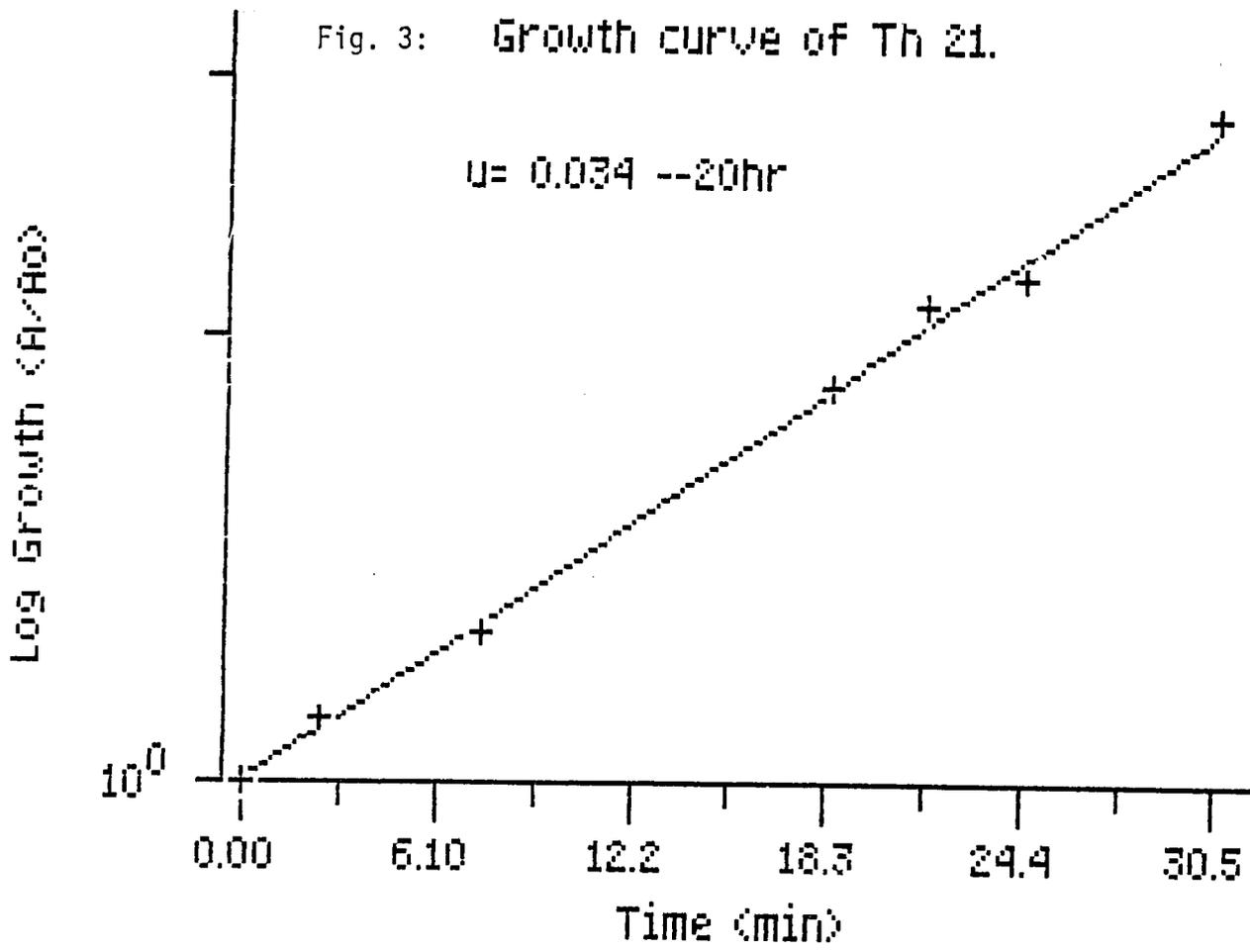
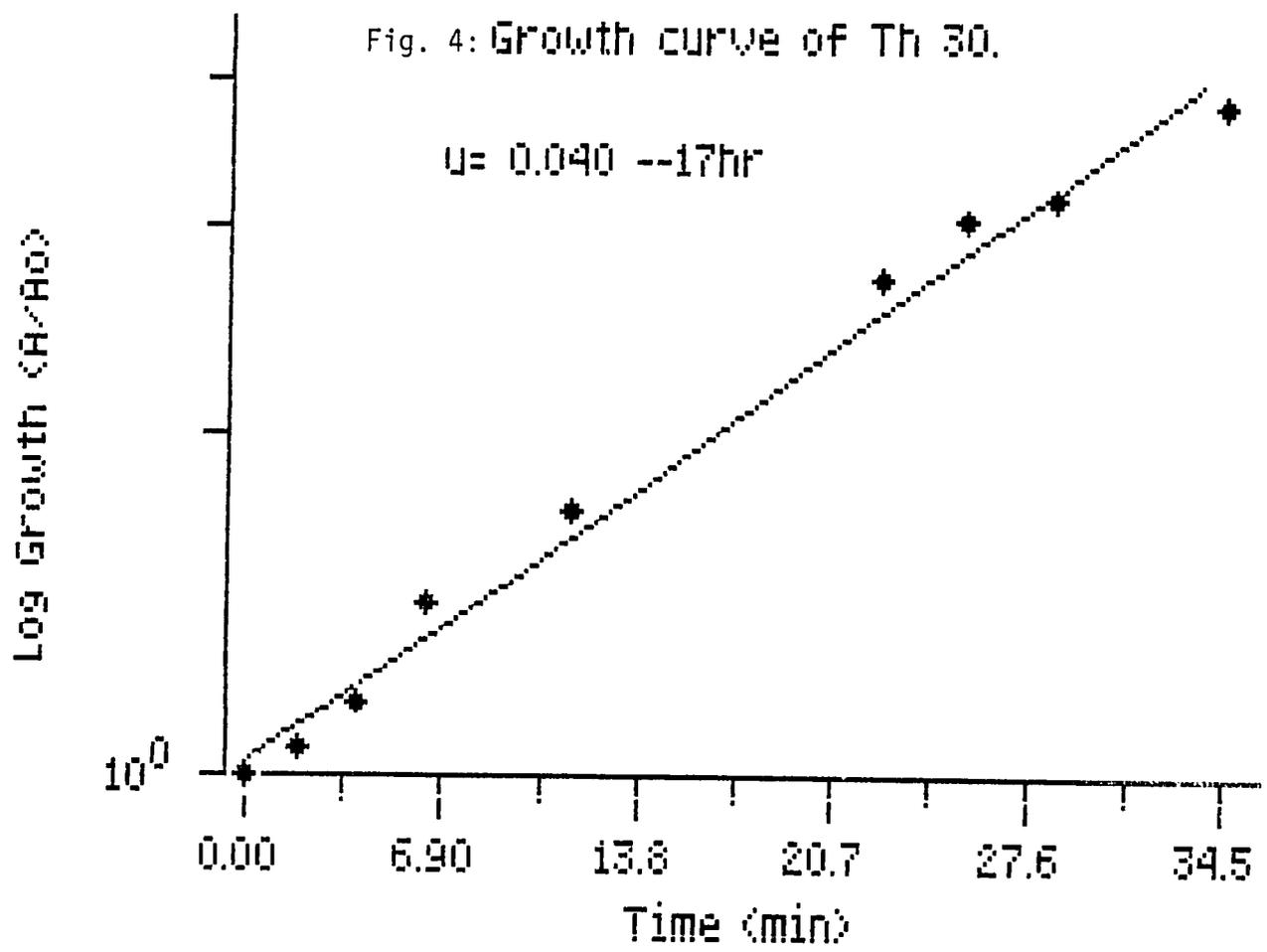


Fig. 4: Growth curve of Th 30.



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Fig. 5: Growth of Spirulina strains

