

SKAAR

Recd NOV 3 1955

F-disinfection by growth at low cell concentration in the chemostat.

58-161 inoculated by Novick and run at 2.4 hr. generation time for 200 generations or 20 days. I never received exact info. on cell conc.

April - May
1953

Obtained plates spread from culture at 0, 20, 70, 90, and 105 generations. Note by Novick: Between 90 and 105 generations, machine stopped for 12 hrs. and then restarted.

Inoculated broth cultures from 5 colonies on each of these plates, except 0 gen. Most of the cultures "rough" like original 58-161, but one of the 20 gen. and one of the 70 gen. were "smooth".

Cross brushed from each culture on minimal previously seeded with W1177 or W1817. Frequencies of brushes giving prototrophs:

	on W1177	on W1817
20 gen.	2/5	3/5
70 gen.	1/5	0/5
90 gen.	0/5	4/5
105 gen.	0/2	2/4

Also cross two of each with W1177. 20 gen. gave 5 and 40 cols. 70 gen. gave 140 and 0 col. 90 gen. gave 0 and 0. 105 gen. gave 0 and 0.

Inoculated 5 additional colonies from 70 gen. Subcultured one of the apparently F- 105 gen. cultures for retesting. Obtained plate for 155 gen.; inoculated 5 colonies as separate cultures and pooled 15 additional cols. in one culture. Crossed vs. W1177 and W1817, and counted protos.

	W1177	W1817
70 gen. 1.	0	300
2.	0	300
3.	0	300
4.	200	200
5.	200	200
105 gen. & (retest)	0	300
155 gen. 1.	0	300
2.	0	300
3.	0	300
4.	0	300 ²
5.	0	300
Pool	10	300

Inoculated 1 tube from 0 gen., 1 ~~fx~~ from new 20 gen. col., 3 new from 70 gen. cols. Plated on EMS-lac and scored protos. and f:- ratio. Prepared 5 pooled cultures of 5 colonies each from both 90 and 105 gen. Scored protos only.

	W1177	xxxx f/	W1817	xxxx f/
0 gen.	216		162	100
20 gen.	85	54	108	67
70 gen. 1.	0		606	99
2.	0		240	83
3.	0		30	0
90 gen. pool 1.	0		100	
2.	40		100	
3.	40		70	
4.	60		50	

	<u>W1177</u>	<u>1817</u>
F	170	150
2.	0	60
3.	0	60
4.	0	60
5.	0	50

Summary: Percent of colonies F/.

0 gen.	100	
20 gen.	100	
70 gen.	30	
90 gen.	18	(Poisson)
105 gen.	4	"
155 gen.	5	

None of the derived F- cultures were saved.