F^x x ♀ 1201

DATE: 11/18/54. REF: 196

W2206M1 Remotilated and checked by EML. Mass culture is F+. Use overnight moiety 1:2 broth 9^{50} – 11^{25} Then

2 ml W2401 : 0.1 ml W2206M1 : 7 ml Penassay 37° 11:25 AM.

A. Streak out at time of setup (11:50 AM) } single colonies from EMBlac and pools of 10
B. " " " " conclusion (12^{52} AM) }
C. Single cell clones (v.i.) 1-24 ♀♀ 31-41 ♂♂♂.

♂.♀

	C		C
A1-2-3	1-2	E1-2-3	37-14-(15)
A4-5-Φ sp	3	E4-5-6-D6	38- -16-(13)
B 1-2	(4)	F1-2-Φ	17-(18)-
C1-2-3	7-(8)	F4-5-6	20-21-39
C4-5-6	34- -9	G1-2	
D1-2-3	35-(10)-(11)	G4-5-6	40-(22)-(23)
D4-5-F3	36-12-19	H1	
B4-5-6	5-6-33	H4-5	41-(24)

Then to EML. controls (1-). 2401

O = F+ by EML test

— = —

Note Babove on EMBlac sm

No SR+

ca Jan 10, suspended coli isolations to cope
with Salmonella Kangorus nire

M.A.D.S. draft mss.

Summary - Exps. c TCN diploids. 1202
5

DATE: Jan. 4, 1955. REF:

(1) MLM tested segregants I gave him from IV-2 and VII-94 by preparing lysates. I also gave him 3-144, but this scores as not being full Gal⁻ (modifier!)

Review TCN diploids 1202

DATE: 1/20/54. REF:

(1) 3-22 (W2406 x W583) given as Gal✓ Mal− S[S] Xyl✓ (Ara✓)
W785[R] Lac✓

To check Ara✓, and if so, confirm Gal quality (see over)

ess. ara- in some dark + few papillae

For Clark { 7-294 (2406 x 945) Gal₂ + Mal+ Ara✓. Xyl- Mtl+ Lac✓
· 4367 } 3-148 Gal₇+ ✓ Mal+ Xyl✓ Lac✓ Mtl+✓ send to Clark!

(4-2) Gal₇ = Xyl − Lac✓ Gal −✓ (to confirm Gal character).
4-76 Gal₇ = Xyl✓ Lac✓ mostly Gal −✓
Streaked
7B-94 Gal₇ ✓ Lac✓ Mal- Xyl −

H346 Lac✓ Mal✓ S✓ (Galete +) may be Hfr✓? G+S[S] automut or segregants.
(W)895 x W1590)

H351-5 Lac✓ Gal₁ + (Hfr?) Mal, S +/or − 1470 M-Lac, SR✓, Hfr

	Lac	Mal	S	
1	✓	−	S ✓	Gal+✓ and streak also → Preliminary trial x W2401, no SR+ but culture was largely segregated.
2	✓	−	S	Gal+ ✓
3	✓	+	R	Gal+✓
mostly	✓	−	S	Gal+
5	✓	+	R ?	Gal+✓

Remove interesting diploids in D(Lac) [centrifuge roller for aeration!]

∴ H351-5 checks out OK. Need to be tested as possible Hfr. Most auxotrophic segregants should be OK. Restreak single colonies. Note: SR's maybe more encouraging as parent piece!

Hfr 1, ✓

note again correlation of Gal$_7^{\pm}$ / Mal+ !

3-22 Repur LacV are pure Ara - !
4 papillae seen on original streak — mucoid, nonsegr.
probably contam. Check on Mal, : Ara + prove Mal+ muc
ara - Mal -
3-22 is ara -

H351. May be either Hfr/F⁻ or Hfr/- or F-/-.
(1) test segregants - need auxotrophs.
(2) test diploid itself. It is LacV Mal- S^R prototroph.
a) If S^R/S are formed, these are phenotypically S^S. N.G.
b) Try for Mal+ prototroph x Mal$^+$ auxotrophs!

DATE: REF:

1	2	3	4	5	6	7	8	9	10

H351-5 replate

11/24 (1) Mal⁻'s are revertible, occ. papillae in thick streaks.

H357X W2401 papillae on thick streaks (EMBlac sm) and ca. 1% SR+! was largely segregated at time of plating

H352, X }
H354 X } no SR+ also ⊕ plaques. Streak onto A.

(2) H346. EMBlac mostly ⊙, some ● and O
on EMBlac sm, mostly O, a few ⊙ (maybe autonomic, prototrophic. Spot some from each on EMBS to look for S^s or X^- diploids.

(3) Replate both cultures of H351, H353, H355 for segregants.

11/26. Notes: 3-11 seems Gal+, ker possible Gal✓.
Replate 3-14✓ seems Gal⁺/slow " " .

(microscopically)
H356 (EML)(1×23) - Lac⁻ segregants clearly motile Lac⁺ apparently non-motile with occasional exceptional cells (ca 10^{-6}). On motility agar 4 Lac⁺ and 1 Lac⁻ each gave clusters or trails, then isolated swarms. Reisolates were pure as mor. except 1 stated Lac⁺ now pure⁻. (Probably reflects polygenic control of motility). Line-1 parent may have been poorly motile to start also.

DATE: REF: 11/26/54

H351 – segregants: almost all prototrophs by replication. Pool auxotrophs for repurif + crossing tests.

also check possible S^R or auxotrophic diploid & haploid from H352, H355. same still in works

---

H355 2 Lac – 6 Lac + } all Mal – S^R. Pool +, – for crossing tests.

1202B1 1202B2

H346/EMB lac sm: Some Lac ⊙ seen picked + tested.

Disregard prototrophs; leaves 5 Mal – auxotrophs. Restreak to recover Lac v, if possible. (need rather to test Mal+ S^s segregants ~~for lac~~ Hfr!)

11/27 ① Now available Lac +/– auxotrophs from ~~[illegible]~~ H352+5

② H346 S^R auxotrophic Mal dipl (2 isolates = 1202C1-2)

③ 3-14 has same modified Gal – ; 3-~~[illegible]~~ 11 is pure Gal + !

④

Replate H351 and check for crossability

H346 plating: Pick Mal+ and – to Lac.

11/28 – 8 Mal – : 7 Lac – 1 Lac +/– (segregating? replic)

16 Mal + : 6 Lac +

10 Lac –

} ✓ prototrophs

1202
Cold. 4

DATE: 1/28/54. REF:

Sexduggant crosses
H355: Lac-, + = B1-B2 resp. } x W2401
H352: B3-B4

and H351 x

(all crosses are 1 or .5 ml each parent + 2401 or 477) in ? ml Pen. 2 PM.

12/7/54. Recap. (Not all protocols recorded).
H351 x W1177 } → ca < 1% SK+.
x W2401 }
control N.G.

∴ This is or carries Hfr beyond doubt.
(should also check for F+)
(H351 = Lac V Mal-S ...)
(Regrow W1177) colonies
1202D from SM plate, restreak on EMBMtl for purity + ?).
and continue to look for sexduggants.

♂ × ♀

DATE: 11/20/74 REF: 197

Cross 1:1:7 $1^{10} - 2^{20}$ Then setup.

all parentals except #3 (Lac± S^R ...); all MXM – Ara – or ♂

∴ Save

1. Lili cross somewhat hasty manipulations

See protocols for other pairs.

S.S. A4 10 → 1 :: A4 (42)

↓↘ 0 A5 (3)

0 A6 (4)

3: Lac+/- S^R Ara-MXM-Gal- (purity not checked)

4: Lac- ...

42: Lac+Gal- ...

Viability very high!

♀ complete : 12

♀ incomplete : 3

15

only 1 zygote

Yields:

A1 sap

B1

C1

D1

E1

F1 sap

G1

H1

A4

B4

C4

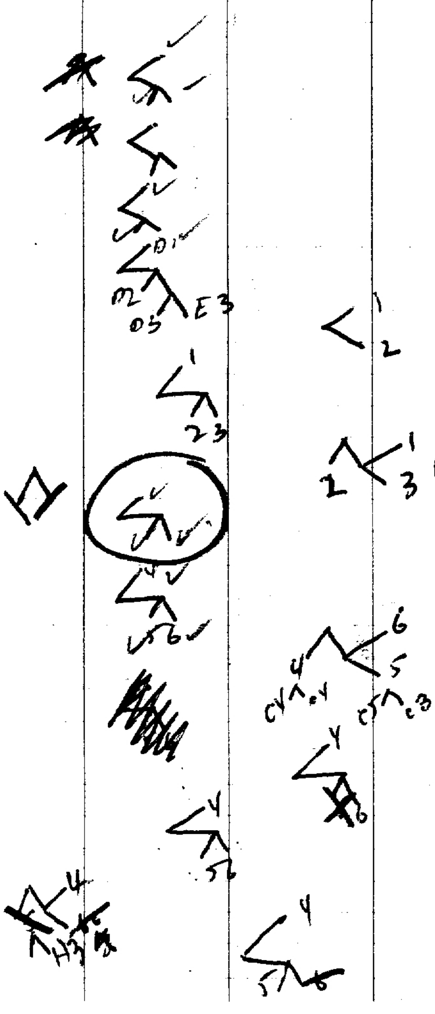
D4

E4

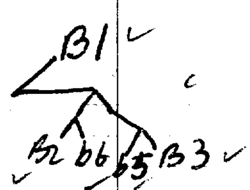
F4 sap

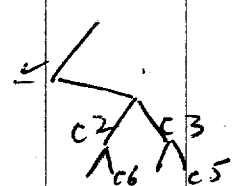
G4 sap

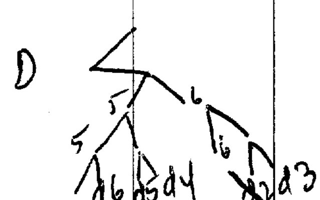
H4 leg?



manip. strongly







(see comment 1806)

See next page

	♂	♀	
A1	×	×	
A4	✓	✓p	
~~B1~~	~~✓~~		conf.
B4	✓	✓	
C1	✓	✓	
C4	✓	✓p	
D1	✓	✓p	✓ loc, dia
E1	✓	✓	
F1	✓	✓	
G1	✓	✓	
H1	×	✓p.	

✓✓ 5
✓✓p 4

9
× ✓ 1
× × 1

11

116 3C7 × C3 (♀ × ♂)
Casual.

DATE: Dec. 2, 1954 REF: 202

all purified on Lac+ Ism, Gal, M×M except D3(18) = Ara+ M×M — Lac⁻ S^R
(B2 orig. given as: iso♂? combin. checked motility not —, no record of separation).
all Gal+ checked for purity.

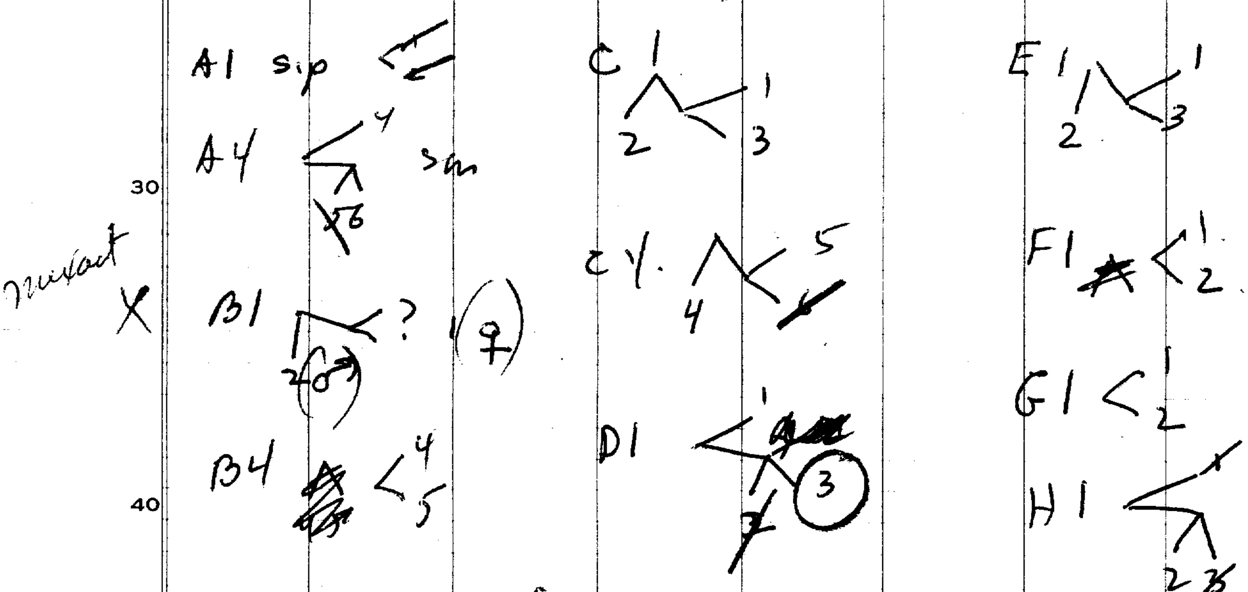
D3: —♀ → (11) D1 ♂ × 0 D2 0 D3 (2) ♀

Pedigree unfortunately incomplete.

(also demonstr. for Zelyhansky & procedure generally rather hasty & distracting) Cons. manipul. to separate in time.

check all ♀♀ for presence of Gal —.

Yield:



♀ complete: ~~B1?~~ B4 C1 E1 F1 G1 } 0
♀ incomplete: A4 C4 D1 H1 } 1 / ~~10~~ 9
Inviable ♀♀: A1

Low yield! again. May likely be due to haste in manipulation in sequences of last several weeks. Compare pedigrees!

~~This is 1204~~ from protocols

1 ~~225~~ - summary There may be inconsist. As I

read protocols (focussing on persistent pairs)

	♀	♂
A1	×	×
C1	✓	✓
C4	×?	✓
A4	✓p	✓
- B1 -	×?	✓
B4	✓	✓
D1	✓p	✓
- E1 - mixed vol seq. -		
F1	✓	✓
G1	✓p	✓
H1	✓	×

∴ complete < ♀✓ 3, ♀✓p 3 — 6

no ♀ ~~#~~ 2

no ♂ or ♀ 1

~~10~~ 9

~~Z~~ z =

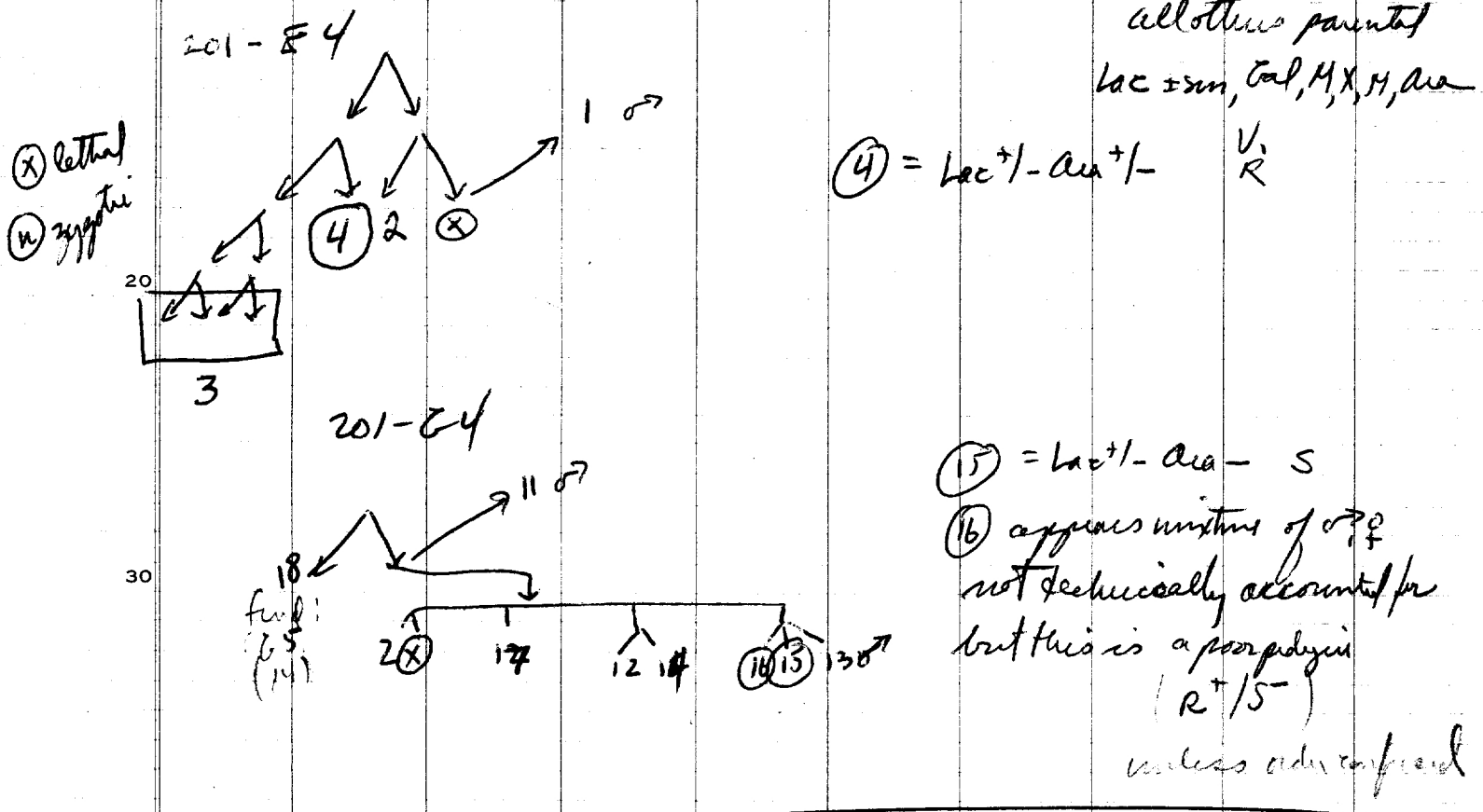
compare prev.

DATE: Dec 6, 1954 REF: /201-203/

This pair used in recent experiments as 1) pretested fertile sibs and 2) for possible selection of potentiality of Gal paratypes.

Protocols do ~~not~~ give timing of cultures, probably mixed early, about 10:15 AM by DCG during class. Isolations were begun at 11:10 AM, therefore quite fresh. Cultures also presumably overnight. Isolations completed 12N.

Yields low (0/3 complete; 2/6 incomplete) (3 illegitimate!) 2/9 total. See protocols for details. Successful (productive pairs) saved as:



201-16 is a puzzle. Not fully analyzed but contains motile and non motile elements; lac+/-; Gal+/- and seems surely a mixture. It is impossible to be ~~certain~~ certain whether this is an artifact; until a pedigree can be obtained from such an individual, it must be left in doubt, even though there have been no sources for it.

Ara, V, : streaked out cultures but not analyzed in detail for the present.

1205

~~16 part. intvls~~ 3 ill → 13

~~9 sec. in 9~~

12 total pairs coop.

♀ + ♂→ : 8 (R)

♀ no ♂→ 2 (R)

♂ no ♀→ 2

12

	♂→ ♀	(R)
A1	✓ ✓p	
A4	x ✓	
B1	✓ ✓	
~~B4~~	ill.	
C1	✓ ✓p	
C4	✓ –	
E4	✓ ✓ ✓ diag+	
D1	✓ ✓	
~~D4~~	ng.	
E1	✓ ✓p	
E4	✓ ✓	
~~F1~~	~~ill~~	
~~G1~~	~~λ not pair~~	
G4	✗ ✓	(R)
H1	✓ X	
H4	✓ X	

DATE: Dec. 7, 1954 REF: ~~[illegible]~~-204/-205

Note, use old suspensions to start cross (cf. 1205, day before)
No record of timing, presume around 90 minutes. Note very favorable yields here.

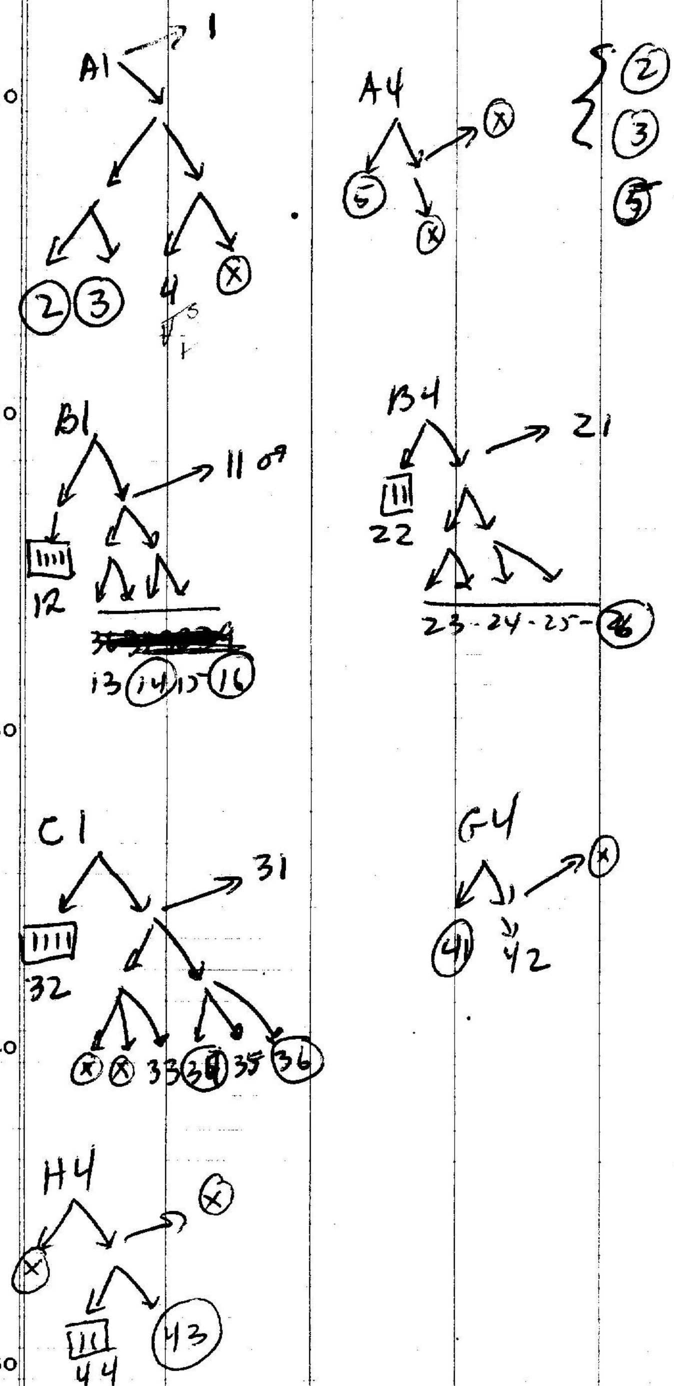
Yields (3/5 complete; 4/7 inc) 7/12 total! See protocols for full details.

Coverglasses of 1206 and 1205 were held over for isolations and scoring together.

Productive pedigrees, as saved:

All parental Lac± sm ~~[illegible]~~ Mal, Xyl, MH Gal Ara except:

V_1



{ (2) = Lac+/- Ara+/- R
{ (3) = Lac+/- Ara- S
(5) = Lac+/- Ara- S

{ (14) = Lac+/- Ara+ R
{ (16) = Lac+/- Ara+ R
(26) = Lac+/- Ara− S

{ (34) = Lac+/- Ara+ R
{ (36) = Lac+/- Ara+ R
(41) = Lac+/- Ara− S
(43) = Lac+/- Ara− R/S

V_1-Ara linkage affirmed But full analysis held off.

Interrupted since NRC-CDC meetings and reports, theses, etc. Resumed work ca 12/23.

♂ × ♀ 56 cells.

Dec. 21, 1954 - 206
Dec 22, 1954 - 207

(206), [207]

cf. 1206. Use suspensions incubated P19.

207

	Lac	MXM	Stl	Ara	Gal	SM	
1	−	−	−	−	+	R −	
2	+					R+	A2
3	−						
4	−						
5	−						
6	−						
7	−						
8	−						
9	+			+		R+	C3
10	−						
11	−						
12	−						
13	−						
14	−						
15	−						
16	−						
17	+					R+	D5
18	−						
19	−						
20	−						
21	+					R +	A6
22	−						
23	−						
24	− +.					R−+	D6
25	−						
26	−						
31-42 ♂♂	±	+	+	+	−	S	

206

Lac	MXM	Stl	Ara	Gal	SM	
+	−	+, ?	−	+	R+	A1
+			−		R+−	D1
+		−	−		R+ −	F1
−			−		R −	
−			−		R	
−			+		R	A2
−			−		R	
−			−			
−			−			
−			−			
−			−			
−			−			
−		−	−			
−			−			
−			−			
+			−		R+ −	D4
−			−		R −	
±			−		R+	A5
+			−		R+	B5
+			−		R+	C5
+			−		R+	A6
+			−		R+	B6
31-43 ±	+	±	+	−	S	

3-4 unexamined

Recheck - K Lac+, Gal+
24. v. rare (41%)
saved MA.

34 may carry
(8).

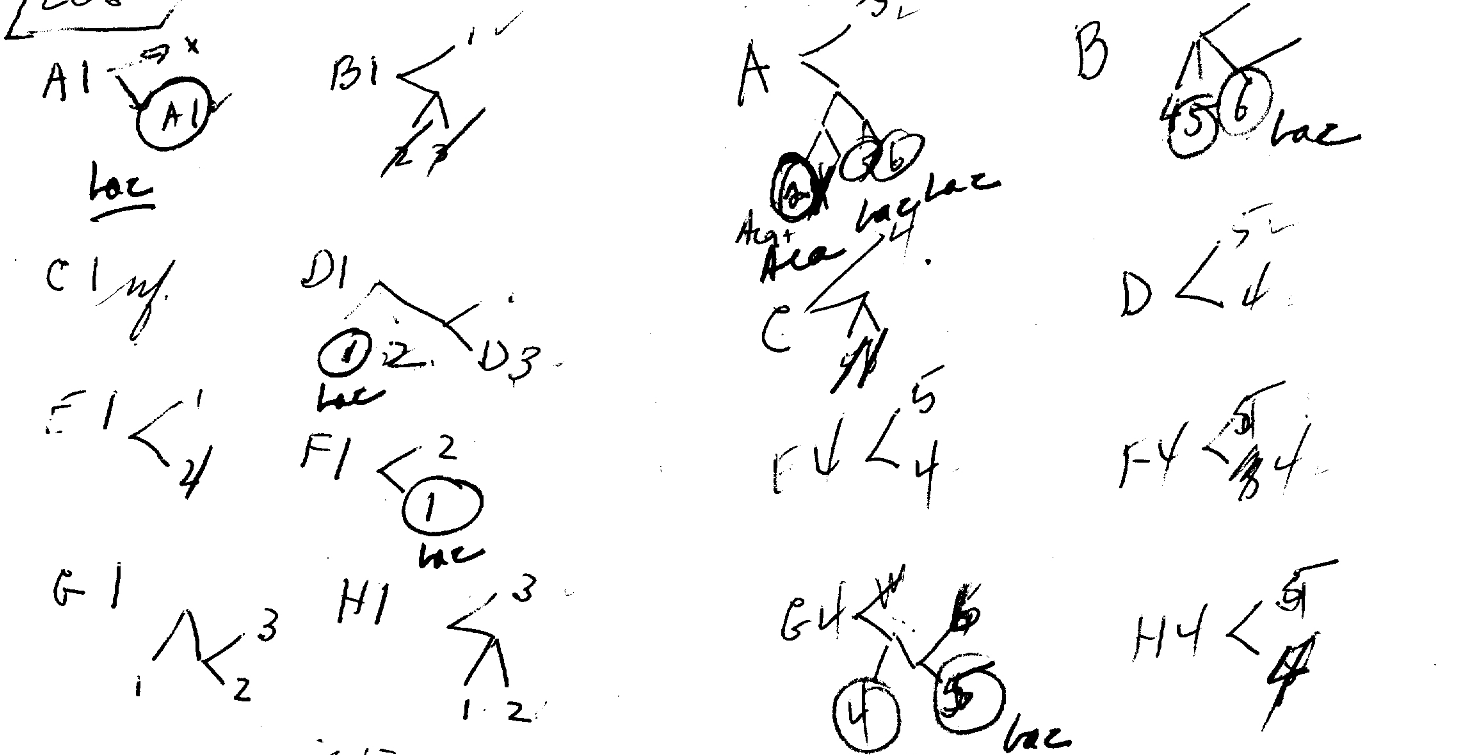
no

Yields 5/11, 1/11 ; 5/11.

recheck
isolated
others all
same −, +

see 1209

206



compare c isolates OK

Yields: 5/11 loc can

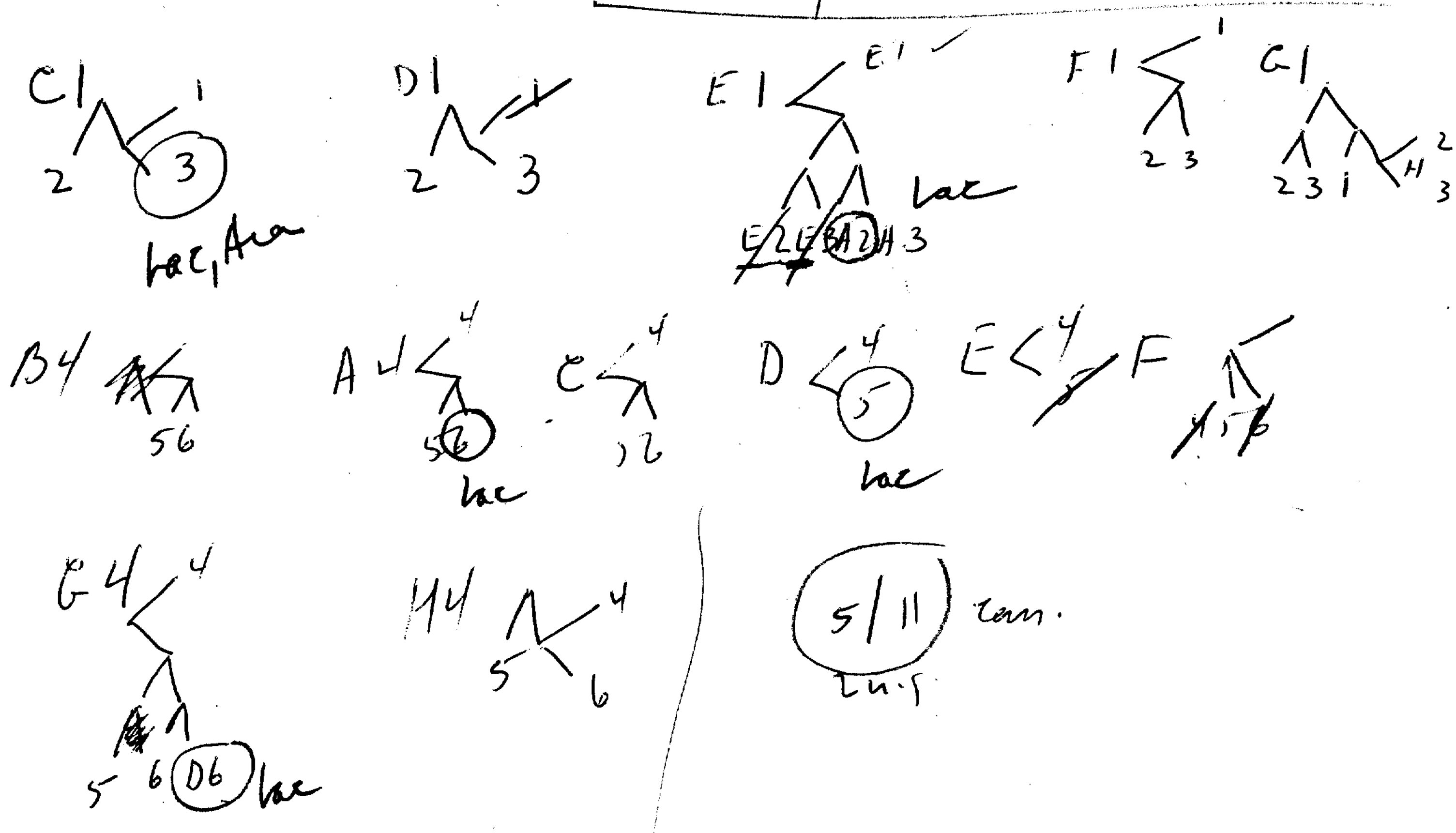
1/1 ncan

6/12

clones left alone

207

D1



5/11 can.

24.5

E1, G4 1/4 each.

DATE: Interesting pedigrees REF:

1	2	3	4	5	6	7	8	9	10

206

A4 0 → 0 05 Lact; 06 Lact; 24 A... ; 3/4!

B4/10 0 ↓ 12 cells. 1 loose B4 ♀

0 → B6 (n=3) z.

100. B5 (n=3,4) z.

partly correlated 2/8.

D1 0 → (+) 160. D1 both; D2; D3 0 ♀ sic

uncorrelated

G4 0 → 160. 15 0 4 FRACTION UNKNOWN

0 → 5; → 6 0 2/16

partly correlated

207

E1 10 → 0 0 0 0 E2 3 A2 A3

1/4.

G4. sic. 0 D6; 0 G6; 0 G5

1/4

note C1 ♀ (z)

In practice, cannot rely on pedigreed correlation of joined pairs in fertilized subclone

Transmission of fragments.

Hfr (Gal+ -x-) x F- (Gal-).
(W2730)

Dec. 21 ff. 1954

Objective: test for transmission of fragments

EML Gal+( ) → x W2344M1 (for Gal+ fragm / Gal2 - .)
p. 800:1-7 7 isolates.

Plan: a) SR+ crossing tests b) pedigree analysis of
(Gal+ → x ♂) x W2405 (Gal4-).
+/Gal2-

A. On 1st pedigree run, 800-1 x W2405 (24-48 h. cultures)(10:1 ratio
ca 3 hours in Penassay)
12/21. cross
EMB Gal, Lac + >> -
Lac sm. Not + in 18 hours. Probable slow + thereafter.
after 36 h. some probable Lac+ ϕ.

Parent: 800-1 is mostly Gal+ or Gal V, ca 15% -.
.. presumably still Hfr. (or Ara). No Lac++ or Gal+ SR
implies no transmission of fragment. → of probably Lac"+" SR, {15 Ara+ / 13 Ara-}

B 12/23 as above, all 7 isolates, streak x on Gal sm. te screen.
x 405 - 545 pm
p.m. - all Gal SR.
N25 - ditto. #1 on Lac sm. again shows SR weak +.
Conclude: at least #1 is certainly Hfr but is not transmitting
the Gal fragment with appreciable frequency. Should be repeated
under conditions selecting Gal+ prototrophs. Label 800-1 as W-2730

C). of papillae in thick streak of #1 above. (over)

D. Should check Gal character of recombinants above, but probably not
best suited material if Mal- Lp2 R±

c)
4 papillae streaked out, each gave Gal^{+}. On repurification, 3 apparently segregating occasional (1-3) Gal^{-}, #4 pure Gal+. None were Lac+ (nor were crude papillae) and ∴ unlikely to be related to recombination. Might be direct transductions from sp. lysis of W2730 parent. (Save for.) In view of possible complications, abandon expt. Might still be done c̄ prototroph test on Mal^{-} ~~Mal~~, Arg. (stab?). selection ~~and~~ and Lp^{s} ~~recipient~~ F^{-}

Transmission of allotype fragment
Hfr × F⁻ prototrophs.

DATE: 12/29/54. REF:

	1	2	3	4	5	6	7	8	9	10

Design: 2^- / + Hfr. × 4^- — Isolate Gal+ prototrophs and, if segregating, determine whether they are 2^- or 4^-.

This will reveal correlation of segment when fragment is selected. Since the cross is so strongly orthotypic, recurrence of 2^- segregants will indicate close association.

E, F W2405⁻ × W2730, W^F1895. (latter as control for paratype incidence). 1:1:7 ca 10AM – 5PM. Then plate 10^{-3} ml, 10^{-4}, 10^{-5} resp. on EMS Gal

A2: Fertility was very low – ca 1-2 per plate at 10^{-3}! probably low recombination of $M_1^- \times M_2^- H^-$.

A3 Use old susp. for mouls, recross as above 9^{30} – 5^{10} PM. Wash, plate 0.1 ml samples on S Gal.

A5-6. Count E: 8 plates 12+/722 F: 3 plates 3+/204 (41, 75, 88)
(about 1/2 + are sectored)

→ (81, 73, 112, 95, 99, 89, 108, 75)

E1 both Gal✓ — F1, F2 } pure Gal+
E2 Lac+

test segregants

	Gal	Lac	
3	+⁻ v?	+⁻ + ✓	Redunk 4 cols: pure ++ — 3 +, +
6	+⁻ +(−)	− −	
7			
8	+ −	−	
9	+ −	−	
10	+ −	−	
11	+ , −	−	
12	+ −	−	
[illegible]	M	M	
4	n.g.		

∴ all pure + Lac or when purified.
#5 maybe pure Gal +

Tests on segregants.

1208

DATE: REF:

		Hfc	1	2	4	diagnosis	
E1	1	+	+	+	−	all bal 4^-	(ortho)
	2	+	+	+	−		
	3	+	+	+	−		
E2	1	+	+	−	+	all bal 2^-	(para)
	2	+	+	−	+		
	3	+	+	−	+		
	4	+	+	−	+		
	10	+	+	−	+		
	6	+	+	−	+		
leakleach	3	+		−	+	2^-	
	5	+		−	+	2^-	
	6	+		−	+	2^-	
	2	+		−	+	2^-	
	8	+		−	+	2^-	
	9	+		−	+	2^-	
	10	+		+	−	4^-	
	11	+		+	−	4^-	
	12	+		+	−	4^-	

should test for Hfr!

(EML finds in a comparable situation

2^-	4^-	?
~~HHH~~ HHH III (10)		I

∴ when fragment appears it is usually associated with parental locus (not always), i.e., fragment is "linked" to locus.

~~3~~ (2⁻) 4 (4⁻)

~~4→5 being checked~~

It remains possible that some 4^- are transductions.

should cross × Lp^3 to examine Lp situation of the fragment.

40

50

Stl⁻ of W2401. 1209

DATE: ~~Nov.~~ Dec. 28, 1954. REF: see 1207

also prob. temp-sens.

In tests for Stl mutation (see p. 1207) exconjugant clones varied. On one plate, only 2 clones were negative, remaining ♀♀ being variable.

P27 Restreak ♂, ♀, ~~##~~ 206-11 and 206-12 on EMB Stl.

P28 ↙ : ♂ is weak + ♀ is − (5) c occasional + or v (6) colonies.

206-12 appears to be − (1)

206-11 is mostly − (2), has ± (3) and + (4) colonies!

B. P28 Restreak as indicated ° on Stl, Toler.

P29 all Blect. though 1 and 5 are weaker.

On Stl: 1 and 2 are pure −

3 is −, + (still segregating?)

4 is +, − (" " ?)

5 is pure − (some spotting in thick portions)

6 is +, − may still be segregating!

Hold over weekend for further study: inoc. small broths also.

~~A2 : F~~

On replating from colonies, read by REW

~~#3 scored as −~~ #4 as +, − #6 as + and −.

P3 Conclusion is that W2401 is a mixture of unstable + and more stable −. Since stock culture is predominantly Stl − while most clones from pairs in that experiment were v there may be some selective difference worth reanalyzing. For further analysis, replate B5 and B6 broths; discard the others.

DATE: Jan 4, 1955 = C1 = W2401 pur. Stl⁻ REF:

1	2	3	4	5	6	7	8	9	10

P4: B5 now seems pure. save stock and replate (1? colony on plate)

C) B6. 90+ % Stl+ "" , remainder – .
Replate these = C2 = Stlv ✓ ; = C3 = Stl⁻ "segregant"

D) selectivity? Streak out W2401 parent of cross this date (D1), and also the cross on EMB Lac Sm, Stl. (D2) for later comparison of cross with parent. D1 is ca 0.1% + D2 is mixed.

On testing SR+, 0/14 were Stl+ ∴ no evidence of selectivity. How account for [206]? Note [207] seemed all – while [207] was mostly +. Without further data, must assume that ♀ parent of [206] had simply accumulated high incidence of Stlv type. But why would this not be apparent in [207] which was same susp. the next day?

A11 On replating, 9C1 shows ca. 1% +. Repurify to test stability: C4 ✓ shows Stlv on two restreakings.

Conclusion: W2401 carries an Stl⁻ $\xrightarrow{\text{ca } 1/1000}$ Stlv $\xrightarrow{\text{ca } 20\%}$ Stl–

♂ × ♀

DATE: Jan 4 1955 REF [208 – 218]

36 hour mor. 10:1:7 $10^{11.4}$ – ca 12–12^{30} total.

OCB picked clones

Summary of results: (Tested on Lac±sm, Gal, MXM, ara, Stl).

208: 21–31 are ♂, but 22, 31 probably mixed with ♀ (S^R Gal+ ...)

1–13 all ♀ except: #7 Lac+ (S^R) #2 MXM+, ... Lac−

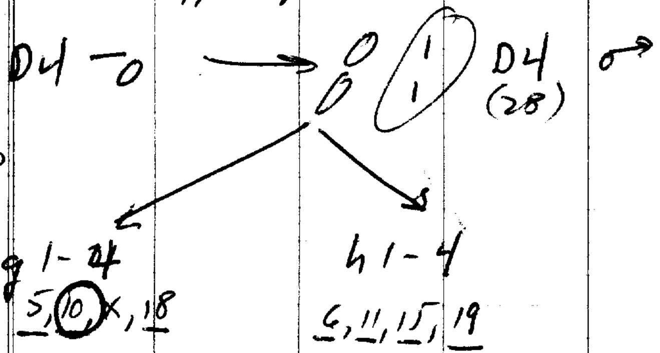
218; 1–20, 30 all ♀ exc: 3, 10, 20 Lac+ ...

: 21 ♂

Stl reactions parental (i.e., ♀♀ are −papillate) but 208-1, 12 and 218-19 are more strongly +! cf. with W2401.

Interesting pedigrees thereare:

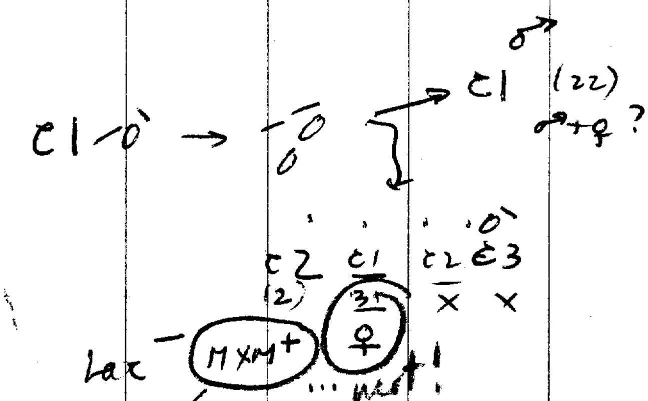
) = 208 – = 218



pure Lac+....

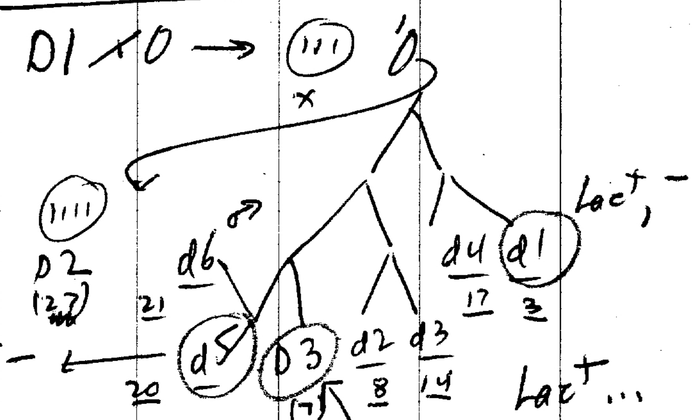
Note only 1/8 but g3 might have made 2.

No longer segregating.



save for later identity checks.

Yields:



pedigree reconstructed.

note ♀ 3/8 and not yet purified.

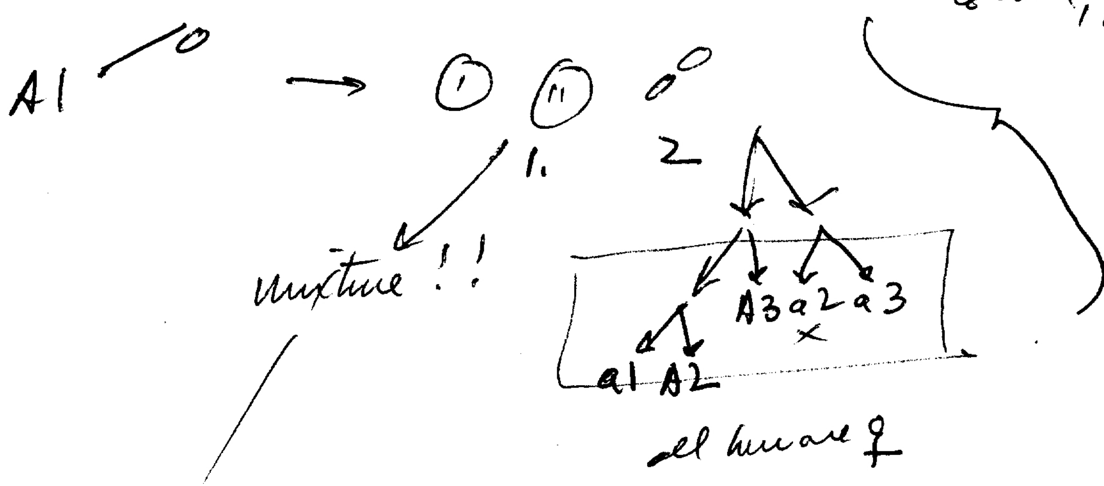
(over)

Mixed clones. In drops,
218-31 is listed as N+M but ♀♀ only found on plates.

208-22 (C1) listed as M, few cells. ♂ and ♀ app. form.

208-31 A1 is listed as N+M and behaves as mixture. This
is not accountable in pedigree unless a cell was overlooked
which is ~~not~~ neither likely nor incontrovertible.

to save, pool as A2.



1210 → B5?.

88 A ~~208C1~~ 208C1
B ~~208C2~~ 208C2
C ~~218~~ 218 C1

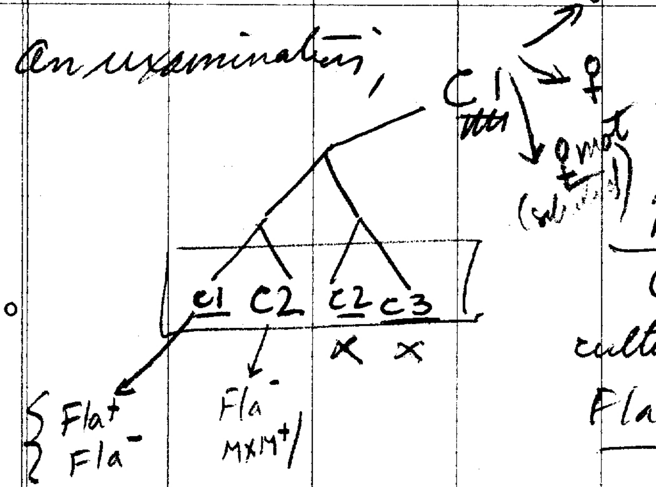
presumably one of these cells was
a motile ♀! (abortive phenotype?)

208-C1 analysis (motile recombinant) (W2732) 1210

DATE: ~~Feb~~ 1/9/55. REF:

1	2	3	4	5	6	7	8	9	10

On reexamination,



C1 has ♀♀ mainly but some motile cells. Gal+, - mixed. ~~From some may have some motile + mixture may mean only that 2 cells of diff. kinds were isolated.~~

C2 has (MXM)+. On reexamination of culture and in motility agar, no Fla+ were found. Pure Gal+ -

C2 and C3 were inviable. C3 was recorded as ♂? where ? may have been motile wg 28. No record of separation.

218C1 is equally motile (in agar) ± from semi agar. ∴ probably all still S^R. ~~als~~ also pure Gal+ ∴ Fla+ ... is presumably the only recombinant character. Note: there was no suggestion that this cell was motile at time of isolation. Isolate W2732 from agar passage.

218C1 streaked on Gal EMB. >10 s.c., and grossstreak: no motility seen when directly transferred. Inhibition by temperature?, medium?

pass single colony again through motility. Thus W2732 is selected for high motility, up to [218]C1 for original

8 s.c. all motile (flares) in wet agar

208 C1 is listed as ♂+♀. Look for ♀ Fla+ component via S^R selection, then [illegible] agar. (Not seen in [illegible] direct.)

218C1 Total of 28 colonies tested: (≐ W2732)

27 motile

1 nonmotile 218-C1A

∴ still segregating

208C1 – from spot on lac sm, select through motility agar to recover a motile, Gal+ isolate.

Most colonies (e.g. from EMB Gal Sm) are Fla⁻. Raises possibility ① had been inoculated with ♂ + ♀ heterozygotes for Fla^+/Fla^- or ② new recombinations from ♂×♀ (This should be tried further.) or ③ ♂ × ♀ (motile chain?)

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motile isolated (see 1210B) save as 208C1A.

1210B

DATE: JAN 13 1955 REF:

In earlier attempts (7/54) no motile S^{R} recombinants were observed. In view of this last experiment, renew search.

p13 – inoculate motility tubes from 1108E plated on EMB lac sm. Heavy inocula. p15 Motility noticed in 2/10 tubes.

Hfl xF only

Isolations to 9/23

~~Isol Intact~~

Isol.	Incl-	Zygotes
229	144	37

JAN 26 1955

1185	8	7	1
1186	16	9	7
1190	3	3	0
1192			not clear
1200	11	11	2
1201			
1203		14	1
1204	10	9	1
1205		9	2
1206		12	7
1207		12	6
1210			3

Incomplete 324; 230; 67

67/230 rough datum.