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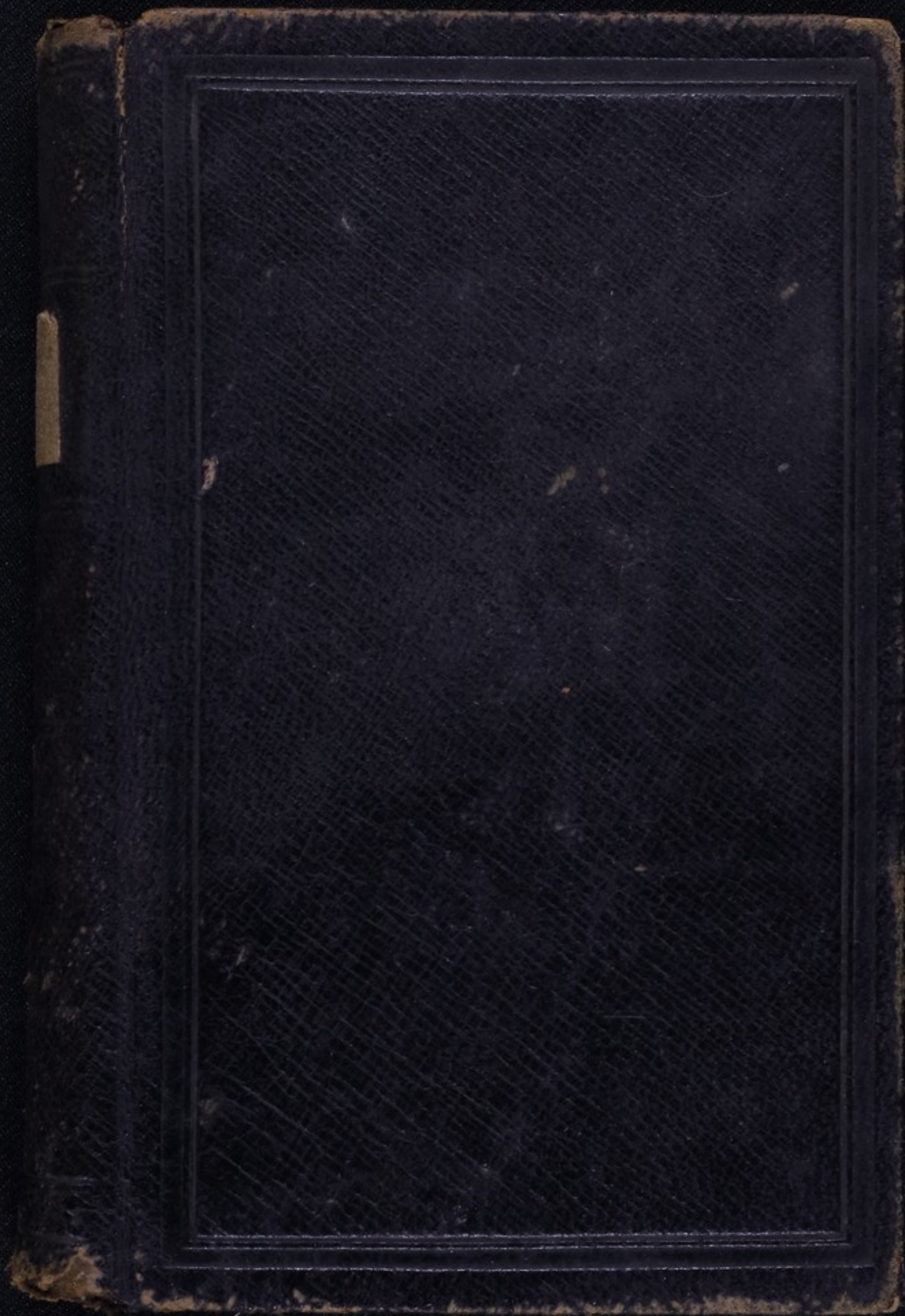
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'Watery' mentioned  
Exp. 122

'Many translucent  
whiteish colonies' Exp 129

'Turning translucent in  
places' Exp 143

'Granules' Exp 156/7  
cont.

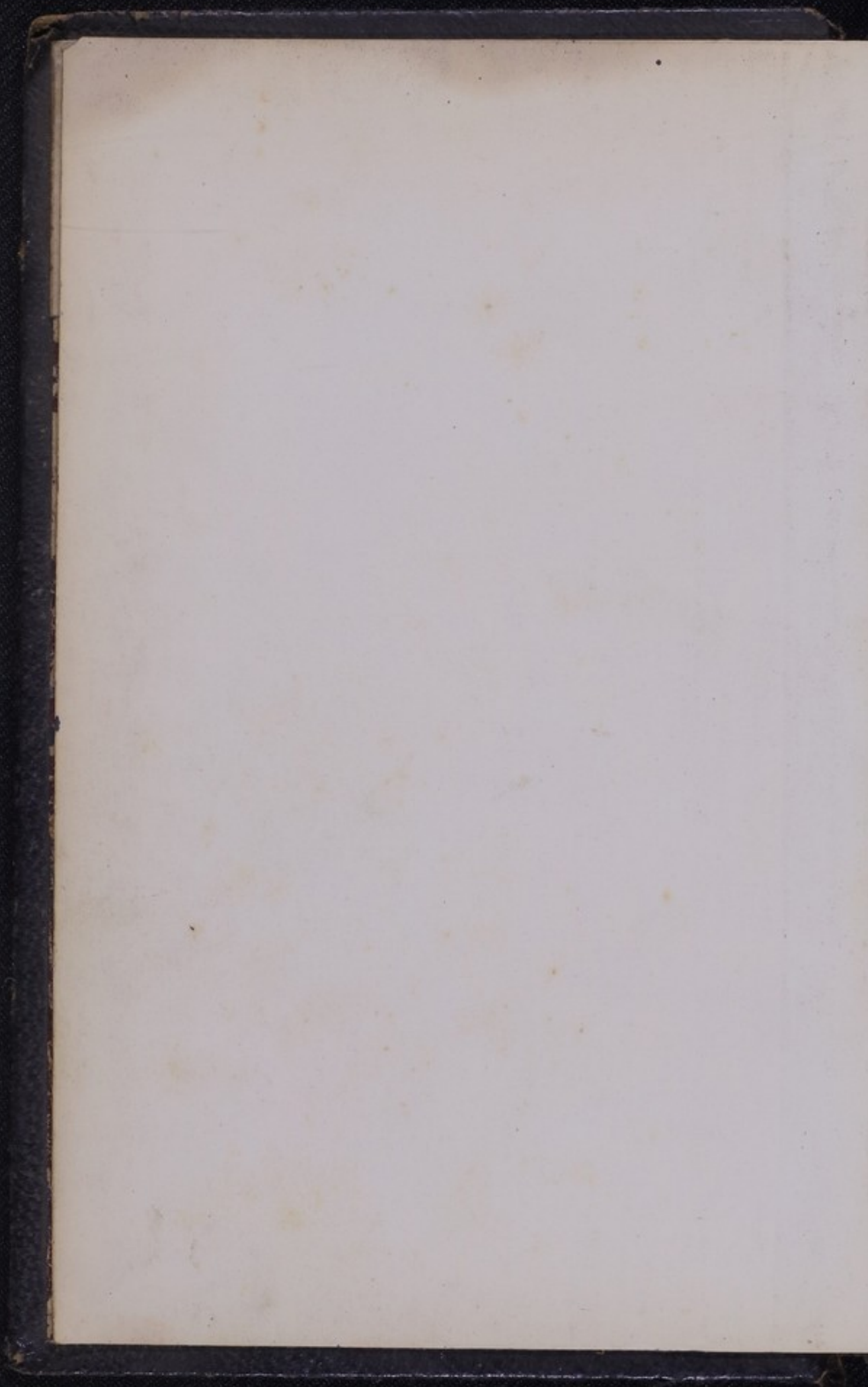
'Streptococci breaking  
down into granules' Exp 158

'Translucent' Exp. 167

'Turning transparent' Exp  
167

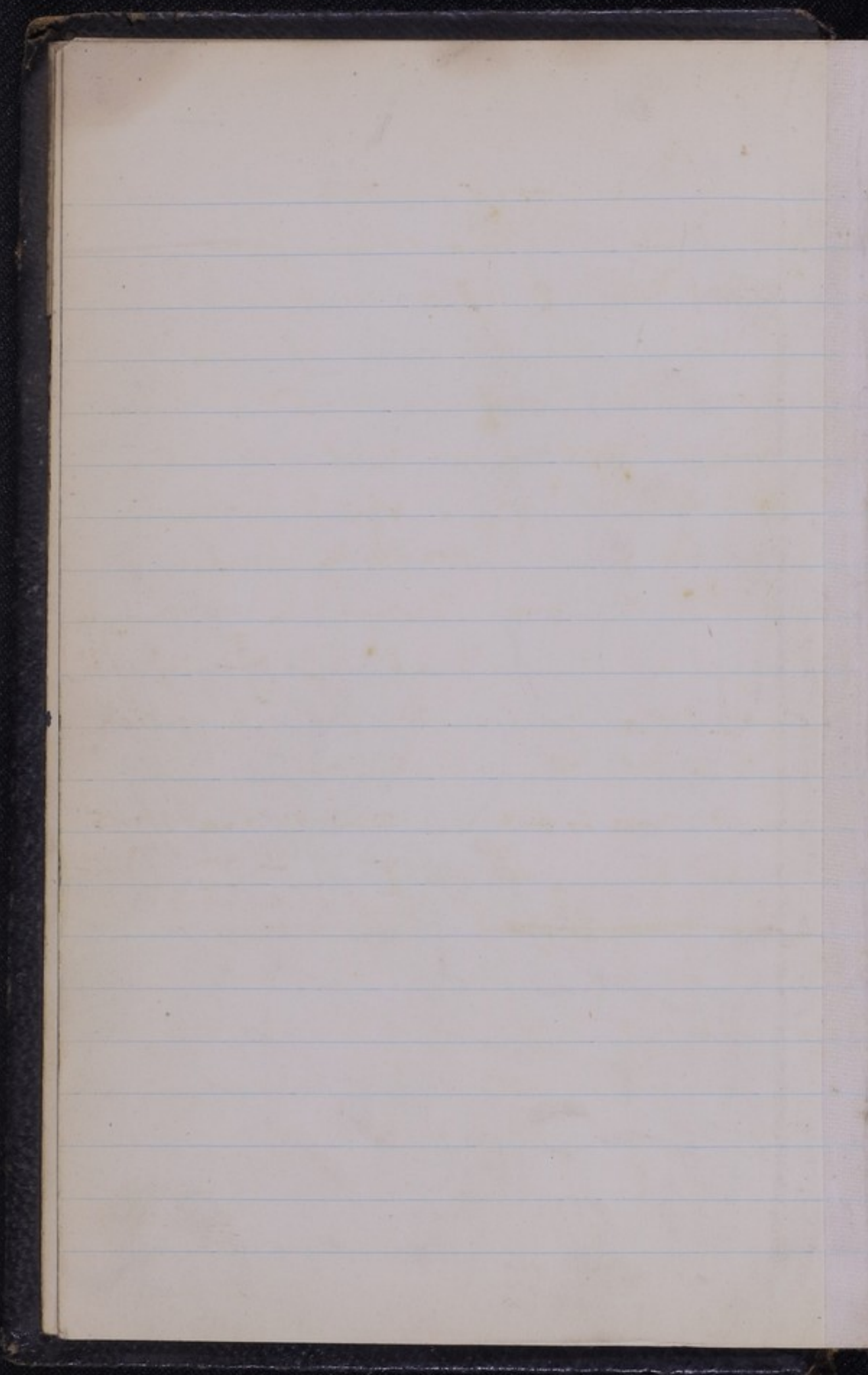
'? transparent material'

Exp. 188/9





A. M.  
GC/176/B.5/6





# Vaccinia Exp 112

27/8/15 A tube Vaccinia obtained from  
 Allen Hamb. & 15/7/15. made up into  
 emulsion with 10 cc sterile leaf water,  
 incubated for  $\frac{3}{4}$  hr at  $37^{\circ}\text{C}$  Then  
 mixed with more sterile leaf water  
 and passed through small Rockfeld  
 filter No 6 at 200 mm pressure.  
 About cc came through in minutes.  
 Filtrate pipetted into test tube of and 1/2 in  
 fine drops pipette on one tube each  
 of Ach 145, 150 and 151 (note 145 has anaerob  
 incubator since 26/5/15 - and 150 and 151 since 2/7/15)

also inc. on Ach <sup>148</sup> tube I (then <sup>not been</sup> anaerob) <sup>analog</sup>  
 also inc on Ach 146, 147, 148 and 149 <sup>lignif</sup> (ach <sup>not been</sup> anaerob) <sup>analog</sup>  
~~incubator since 27/7/15~~ ~~all discarded~~

1/9/15 Tubes show no growth.

3/9/15 Ach 148 tube II Extensive delicate growth  
 growing up from cond W, film showed thin bacillus  
 so final culture made on  $\text{H}_2\text{O}$  (col 1) capped.

6/9/15 Col 1 on  $\text{H}_2\text{O}$  <sup>not from</sup> film it shows showed <sup>not</sup> <sup>discarded</sup>  
 Ach 145 and 150 tubes I films it shows showed <sup>not</sup> <sup>discarded</sup>  
 so discarded



7/9/15 ACh 148 tube I nil seen, film it <sup>seems</sup>  
showed nil; ACh 151 tube I also nil <sup>(and)</sup>  
ACh 146, 147, and 149 tube II film also  
showed nil so discarded

ACh 148 tube II very delicate growth film it <sup>seems</sup>  
will show. Thin Bailli sometimes a chain (Col I)  
and threads so r-c on ACh 150 tube II capped

9/9/15 Col I on ACh 150 tube II from delicate growth

10/9/15 Col I r-c on frag of and on ACh 152 capped

13/9/15 Col I on ACh 152 (10/9/15) delicate water growth  
on frag? very delicate growth

Col I r-c on frag tube of ACh 152 capped  
old culture 10/9/15 immersion made with arrow  
& rubbed <sup>on</sup> in named area of 1 half from  
rabbit (no 1) two small rabbits (nos 2 and 3)

20/9/15 Rabbits were reddish in 24 hours and ~~later~~  
developed few pustules. now healed, result doubtful

Col I now r-c on ACh 156, 157 and 158  
also on ECh 830, ~~831~~ and 832.  
all capped @ 37°C.

8/10/15 ECh 830 Col I contains discarded



9/10/15 Ach 158 Col 1 prob contain discarded  
Col 1 on Ach 152 ~~151~~ 10/9/15 contain discarded

Col 1 on fly ag (10/9/15) and on Ach 156 & 157 (20/9/15)

no v. abt. growth so discarded

Ach 148 <sup>tube II</sup> probably from a little more

Ach 150 tube II probably from a little more

Sch 832 (Col 1) 20/9/15 v. delicate growth.

sch showed by fairly thin Ch. ? same as Col 1

Ach 148 tube II v. cor Sch 830 and discarded

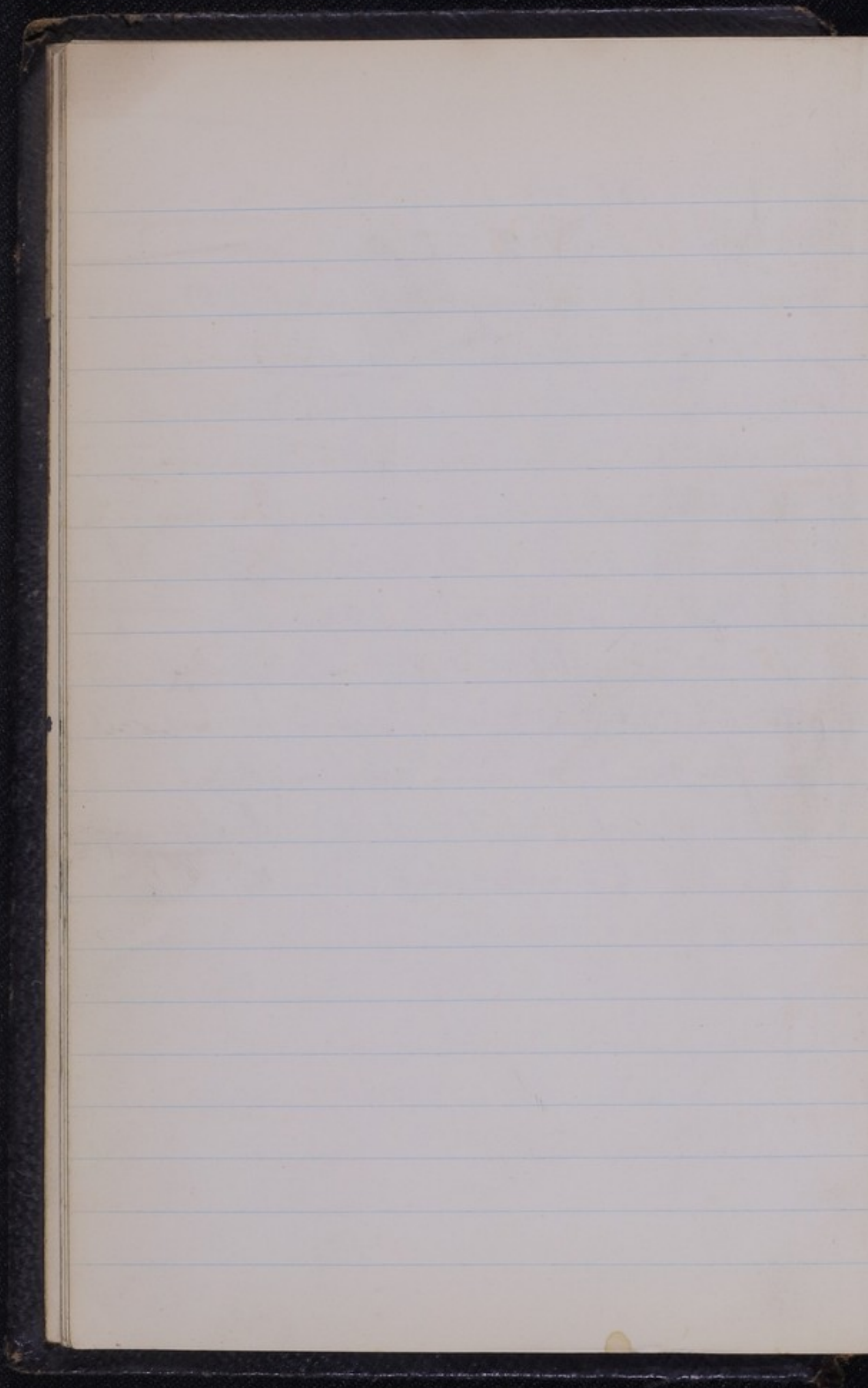
and Ach 162 and 163 tubes & capped

14/10/15 Sch 830 (Col 1 - 9/10/15) from comparatively well

sch showed thin bacilli sometimes in chain & ? threads

Ach 162 and 163 (Col 1 - 9/10/15) but discarded

Ach 148 tube II and 150 tube II growth better, discarded





Vaccinia Sept 11/3.

Vaccinia dated 28/8/5 (Allen & Hankins)

Small loopfull *Grossinia* smeared over

ach 156 and 157 each Tubes I and III

*Vaccinia* diluted with cond w. food agar. Loopfull

smeared over ach 156 and 157 each tubes II and IV

Tubes I and II placed anaerob in Buchner's tubes

Tubes III and IV capped aerobically.

alt 237°C. 18/9/5.

17/9/5 No visible growth in any of tubes  
<sup>ach 157 tube I dilute growth below from the large Sac (Col 1)</sup>  
ach 156 tube I (anaerob), anaerob tube work  
so tube discarded.

20/9/5 ach 156 tube I strong growth below.  
from whole large bacillus. no c  
made aerob on ord agar as Col 2.

Col 1 from well <sup>lyophilized group</sup> on ord agar so discarded

ach 157 tube I discarded

later Col 2 from upon agar so discarded

ach 156 tube I discarded

ach 156 tube III some yellow growth below.

ach 157 tube III few white Coli starting to turn transparent

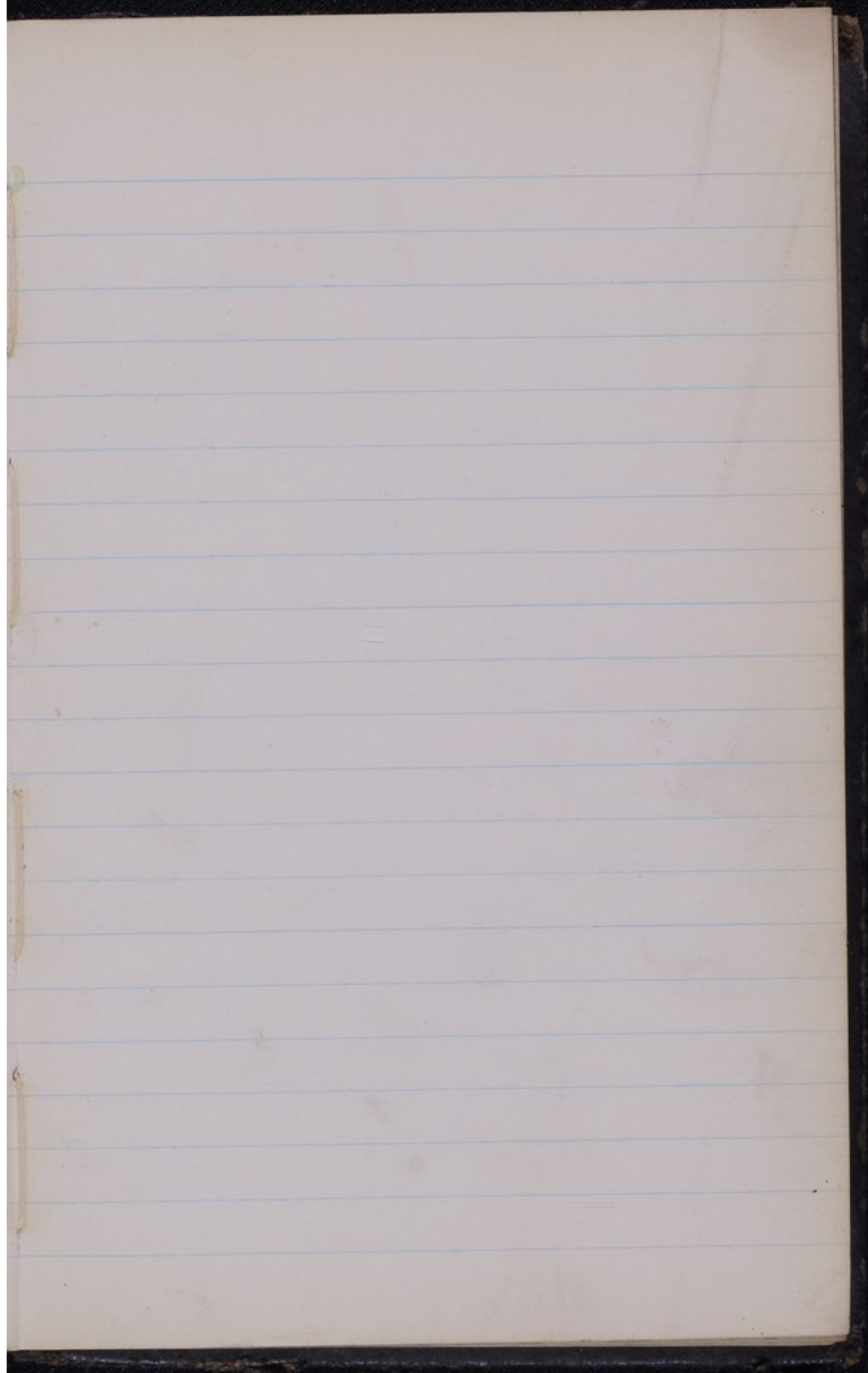
ach 157 tube IV little growth in cond. w.: upper part r-c  
on tube V. film specimens shown.



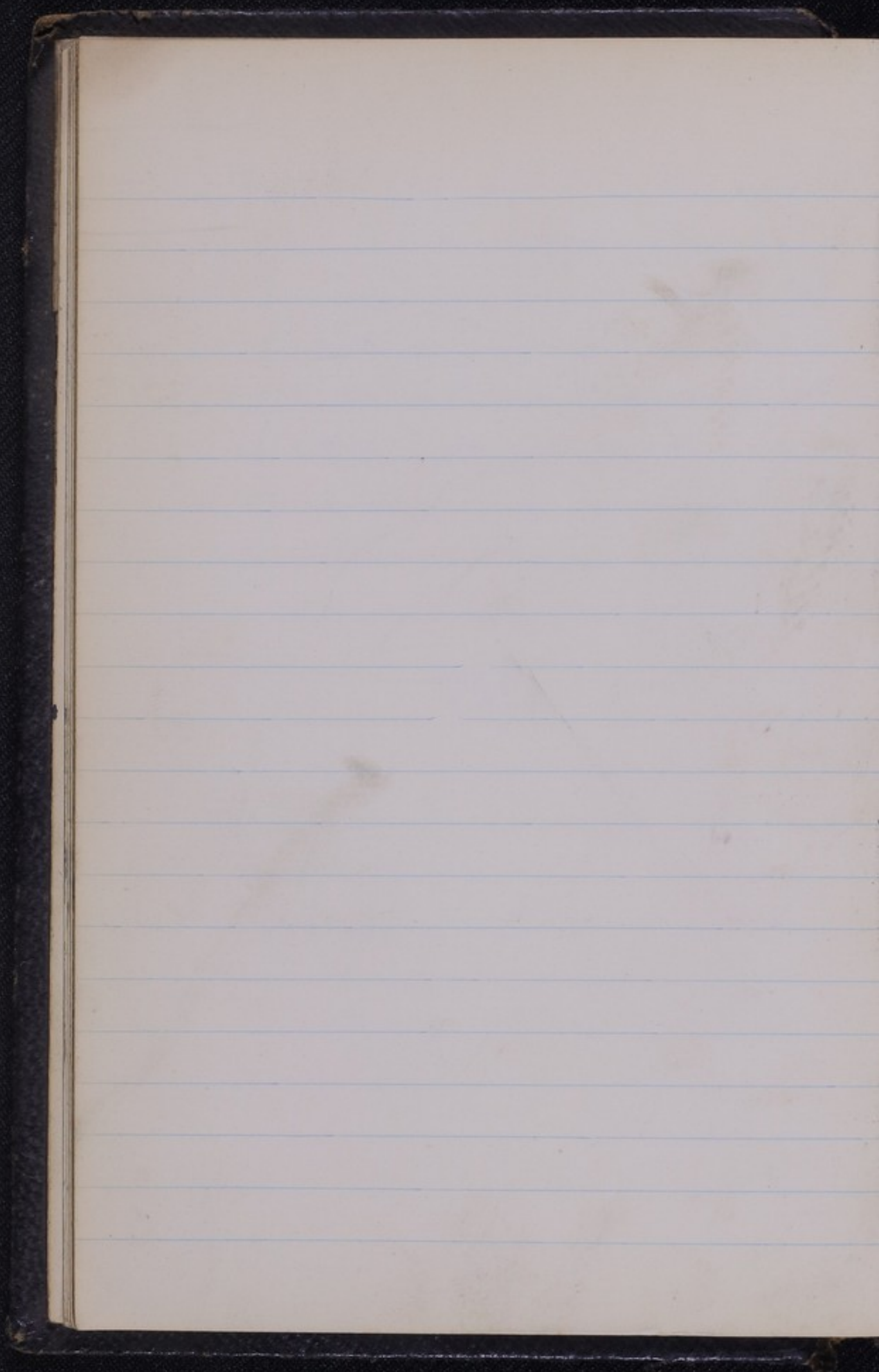
5/10/15 Ach 157 tube II Film & spongia shown  
only granules so discarded

11/10/15 Ach 156 tube IV film shown and  
Ach 157 tube IV colonies below film shown Cocc  
Ach 157 tube V and seen microscopically  
Ach 156 tube III yellowish growth below  
Ach 157 tube III Colonies which look like  
cocci & diptheroid.

*[Signature]*







Vaccinia Sep 11/4.

23/9/15 A tube of Vaccinia (Allen Hand) dated 9/15

A platinum loopful streaked up from

and W on Ech 832 tube I II III & IV

Tubes I & II anaerobically in Buechner's at 39°C

Tubes III & IV capped aerobically at 39°C

24/9/15 All tubes from many colonies

like cocci diptheroid.

Ech 832 tube <sup>not</sup> II (anaerob) film from lower

colonies appears to show most cocci

but few if probably diptheroid, discarded

4/9/15 Ech 832 tube I few large colonies

proved to be ~~Staphylococcus~~ Aureus, small cals

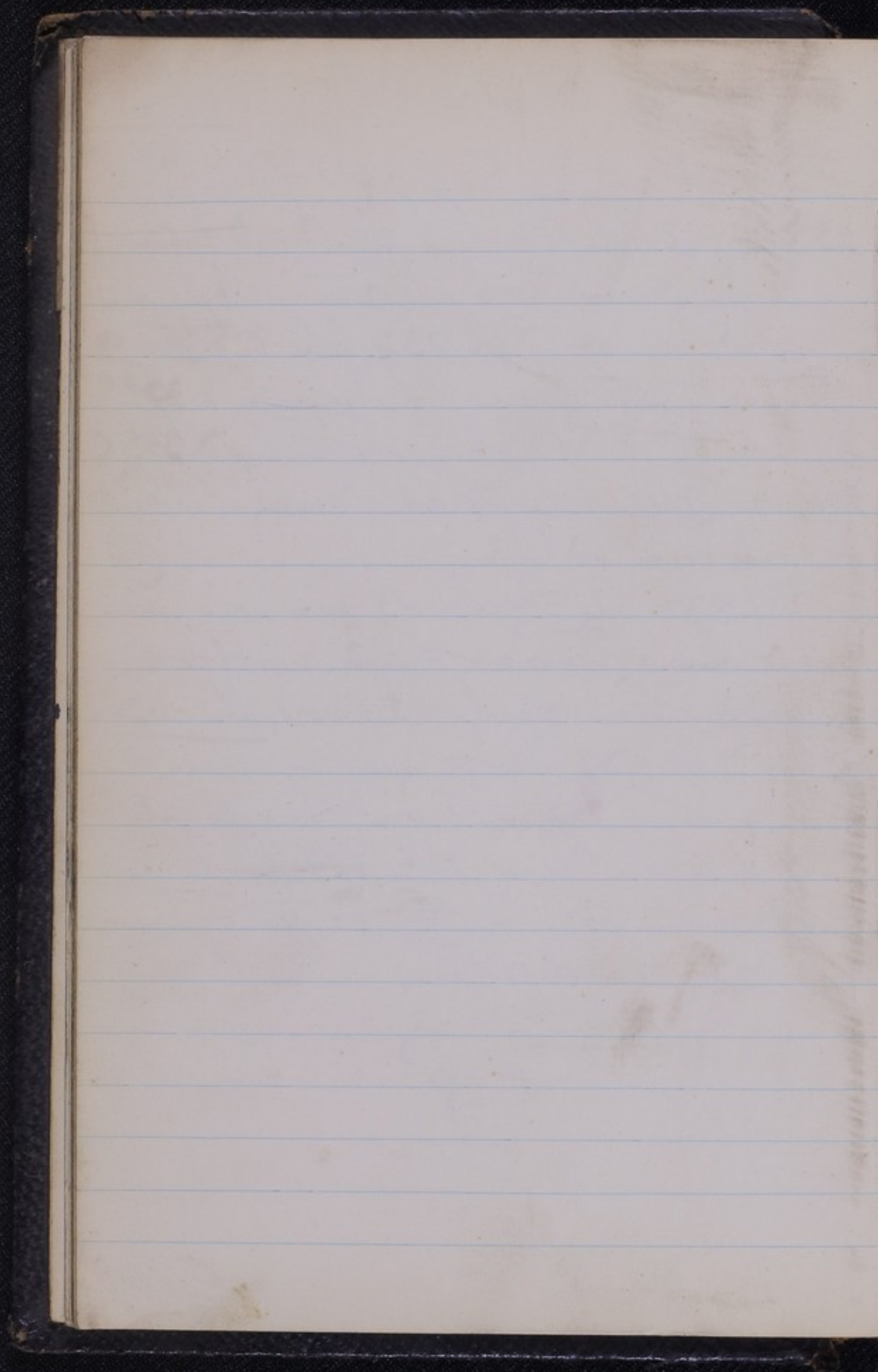
proved to be Micrococcus albus ~~diptheroid~~ discarded

11/10/15 Ech 832 tubes III and IV numerous

cals, cocci, diptheroid.







Vaccines 115

28/9/15 Same tube *Fraxinus* as used in exp 114  
now kept @ room temp

now over. 2 Ch 832 tubes I II III & IV

Tube I placed in Buchner's tube with 50% HCl in bulb

II " " " " " 50% <sup>0</sup>/<sub>10</sub> in water

of a mixture of HCl and nitric acid

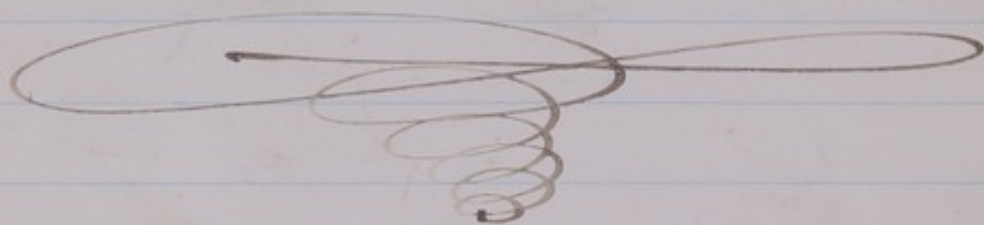
III placed in Buchner's tube with 50%  $H_2SO_4$  in bulb

IV " " " " " urine (human)

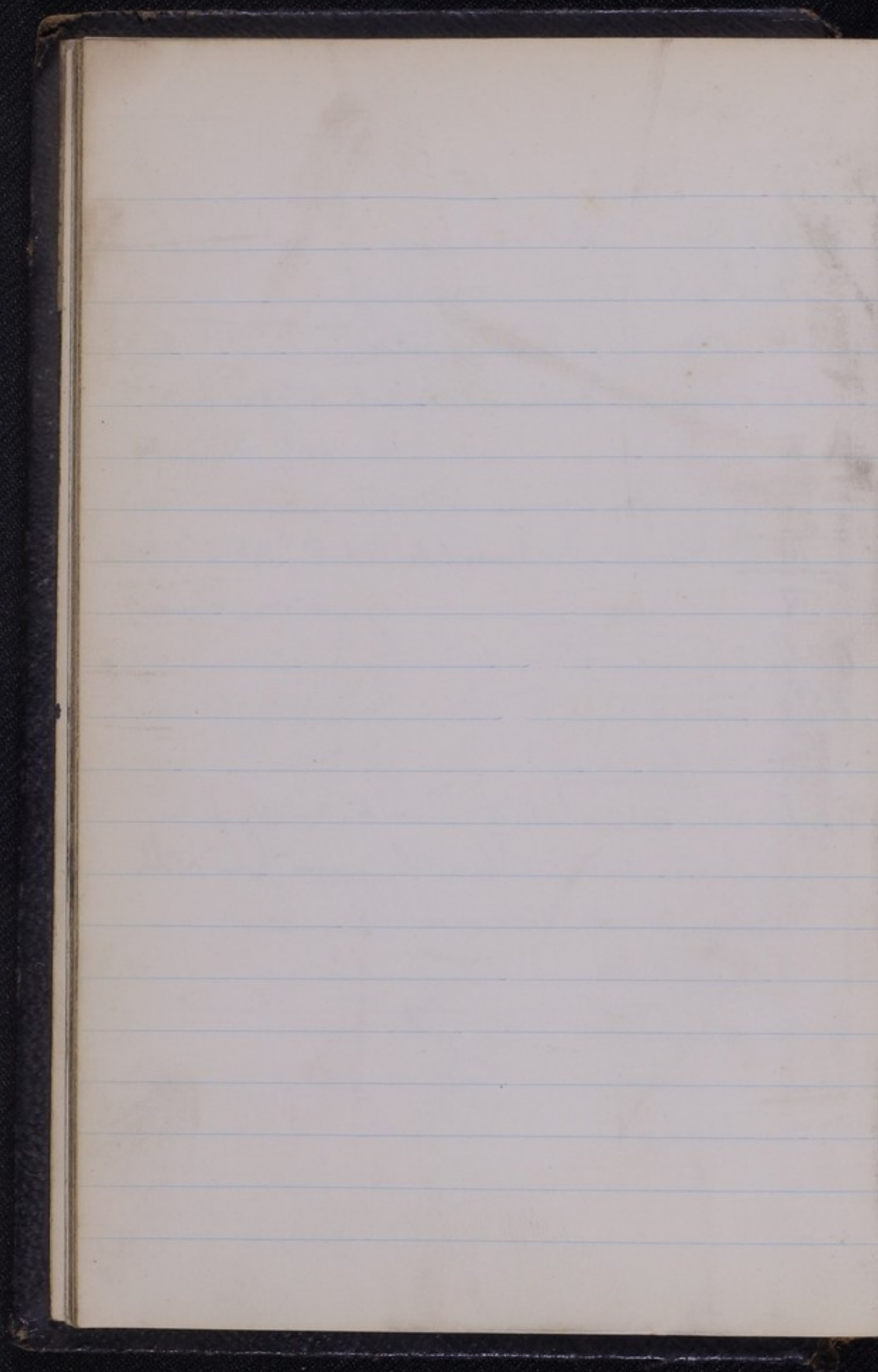
30/9/15 Tube I <sup>II & III</sup> placed aseptically @ room.

7/10/15 Tubes I II & III showed numerous colonies,  
so dis carded

9/10/15 2 Ch 832 tube II ? Cells in middle, fibres  
of penicillin showed. debris only, fibres from growth  
tube showed micrococci







6/10/15 Vaccinia Sup 116

Tubes Vaccinia dated 4/10/15 received  
from Allen Hamb. 5/10/15 placed in ice  
chest, next day a drop inoc

on ACh 159 tubes I II III and IV

also on Sch 833 " I II III & IV

Wrote tubes I & III dil 1, tubes II and IV = dil 2

Tubes I & II placed anaerobically in Bushners

Tubes II and IV capped aerobically at 37°C

9/10/15 ACh 159 tube III may be cal only discarded

ACh 159 tube IV Vg growth & con to toad skin discarded

All other tubes show some cal. anaerob tube

now placed uncapped aerobically.

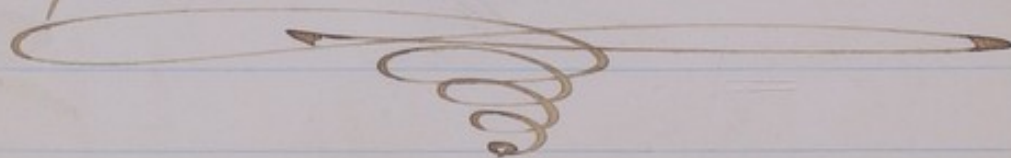
Sch 833 tube III Small cal. film of fimsa

showed micrococci

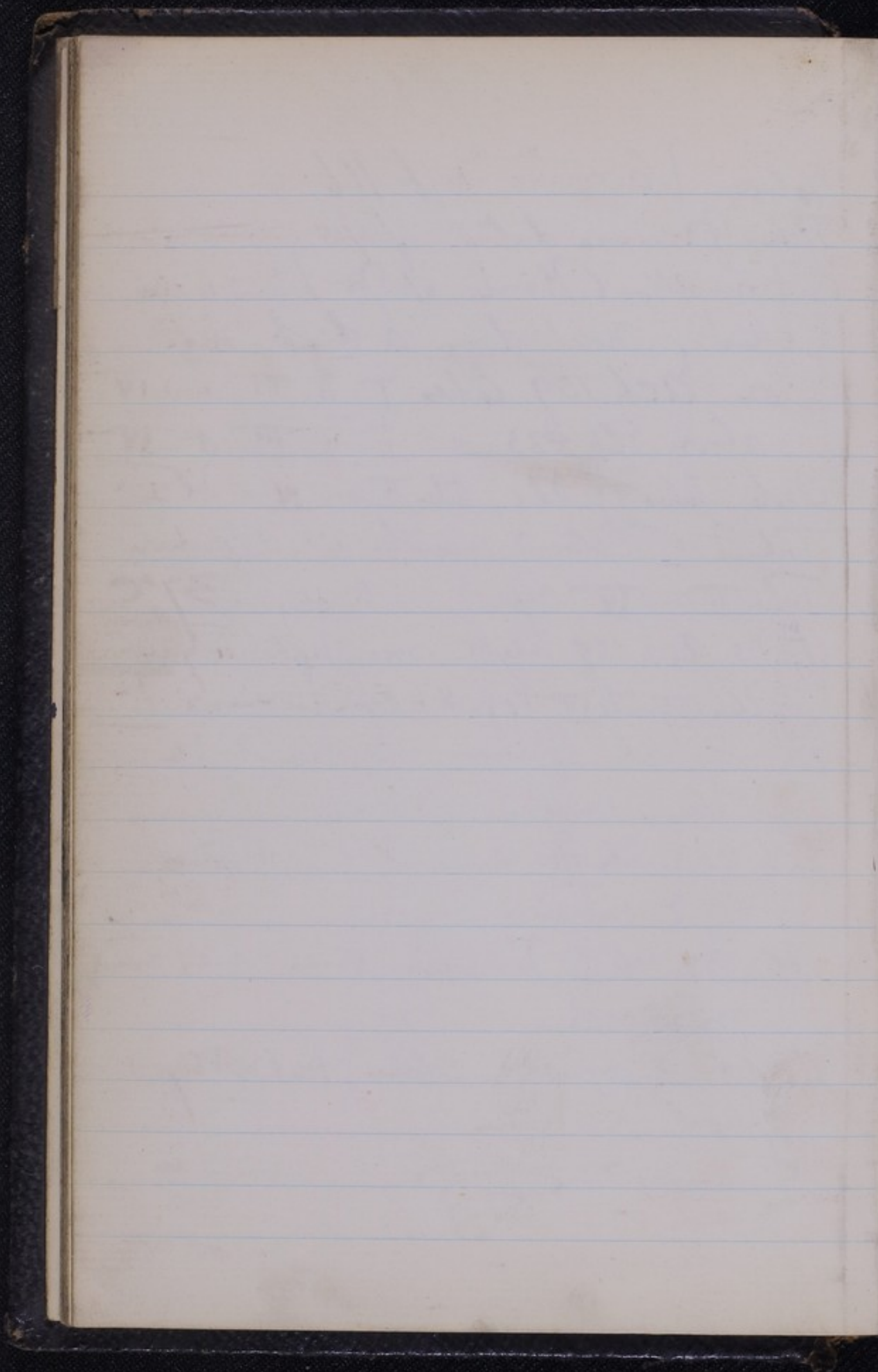
ACh 159 tube I Film from small caly showed

micrococci

11/10/15 Numerous colonies, but nothing  
special on tubes







Vacc Sep 117

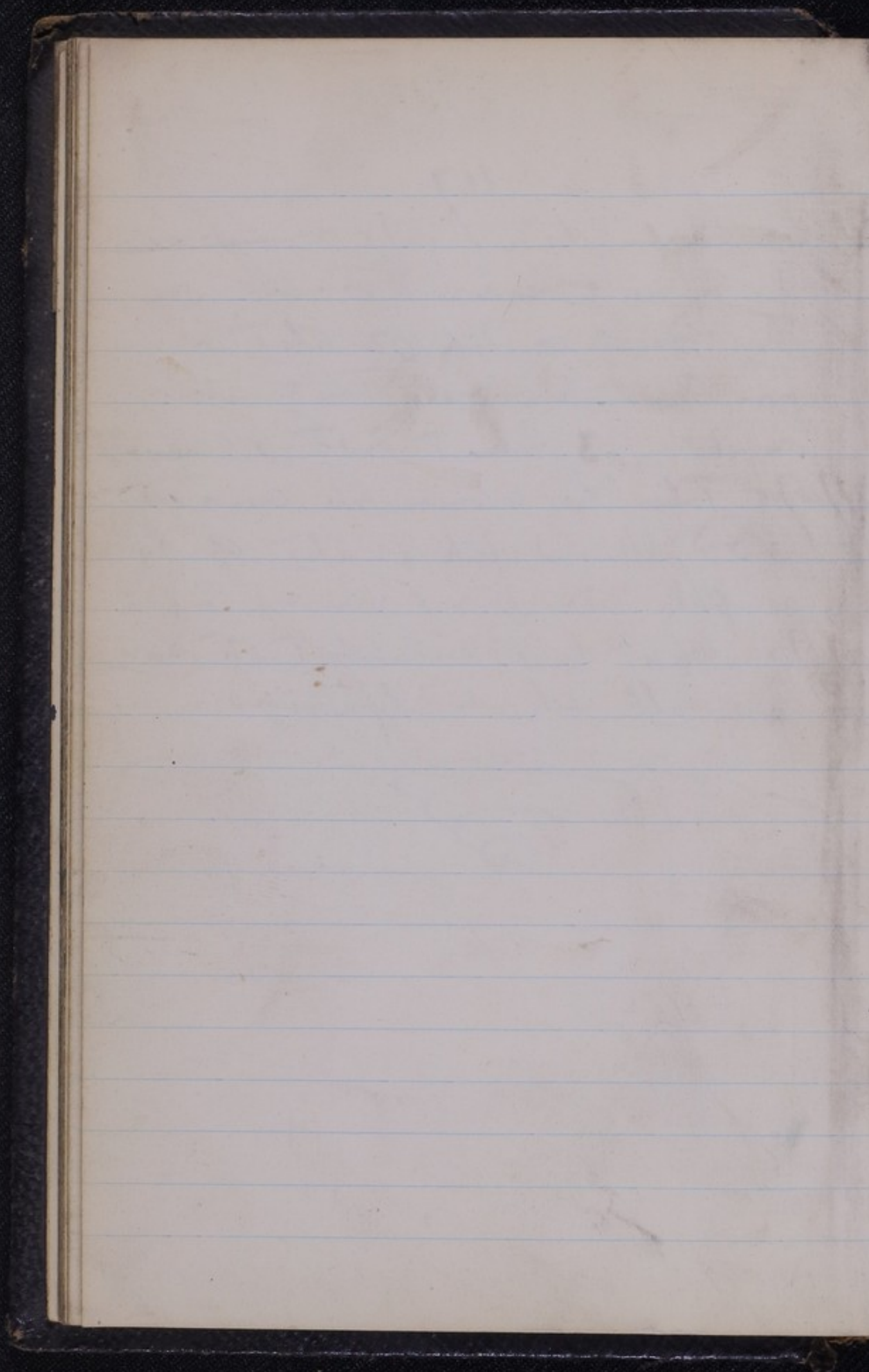
9/10/15 Vaccine dated 4/10/15 same as used  
for Sep 116 & was kept in ice chest one  
drop placed on Aek 162 tube I and  
from this culture made tube II also  
on Aek 163 tubes I and II, all capped 37

10/10/15 Tubes show colonies like micrococci  
and diphtheroid, Aek 162 tube I also shows  
a lighter colony from old micrococci.

15/10/15 Aek 162 and 163 each tubes I & II show  
only dull white cols? diphtheroid







Vaccinia Sep 118

- 15/10/15 Same Vaccinia as used in Sep 117, none  
kept in cell chut. One drop mvc on 2  
Aeh 172 tubes. Cond in flasks on, and  
from this to tube II & from II to tube III  
Cond in flasks on. Tube I placed anaerob  
in Buchner's tube. Tubes II and III capped & 37°C.  
16/10/15 Aeh 172 tubes. 1/2 This film growth and  
much gas, film from surface. Very large  
bacteria so s.c. on agar tubes I and II  
Tube I Anaerob. Buchner's. Tube II capped anaerob  
Aeh 172 tube I discarded  
Aeh 172 tube II few small white cols  
Aeh 172 tube III one small white col below.  
26/10/15 Anaerob. Tube No change discarded  
9/3/17 Tubes show nothing special



Vaccinia Sep 119.

18/10/15 Same tube of Vaccinia as used for 118  
but since 118 has been left a room temp  
one platinum loopful inoc in conc to of  
Ach 173 tube I & then rec to tube II  
conc to flooded on

Tube I Anaxol & Buchner's D 37°C

Tube II capped aseptically

20/10/15 Ach 173 Tube II covered with sterile-like from 14  
of layer 14. 20 discarded

Ach 173 Tube I Varies contains cells in medium  
& conc to. Not apparently anything from  
from Vaccinia

28/10/15 Ach 173 Tube I (Anaxol) no change



Vaccinia 120

22/10/15 Another old tube Vaccinia which has  
been a worn lamp since last used, (one  
plate was kept full and on Ach 175 tube I  
and from this a tube II and from II to tube III  
and it flooded over all.

Tube I anaerob. to 37°C.

Tube II & III capped to 37°C

Cultures also made on three tubes of Ach 176 (pili)  
177 (pili) and 178 (pili) - 179 (pili)  
the same way ~~tube~~ being anaerob.

25/10/15 Ach 175 tube growth like places now aerob.

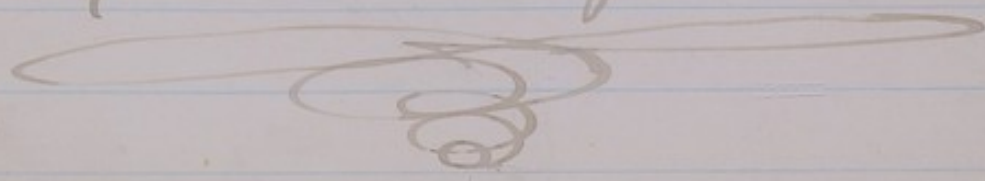
26/10/15 Ach 175 tube I growth now comes like  
membrane ~~is discarded~~

Ach 177 tube I growth like

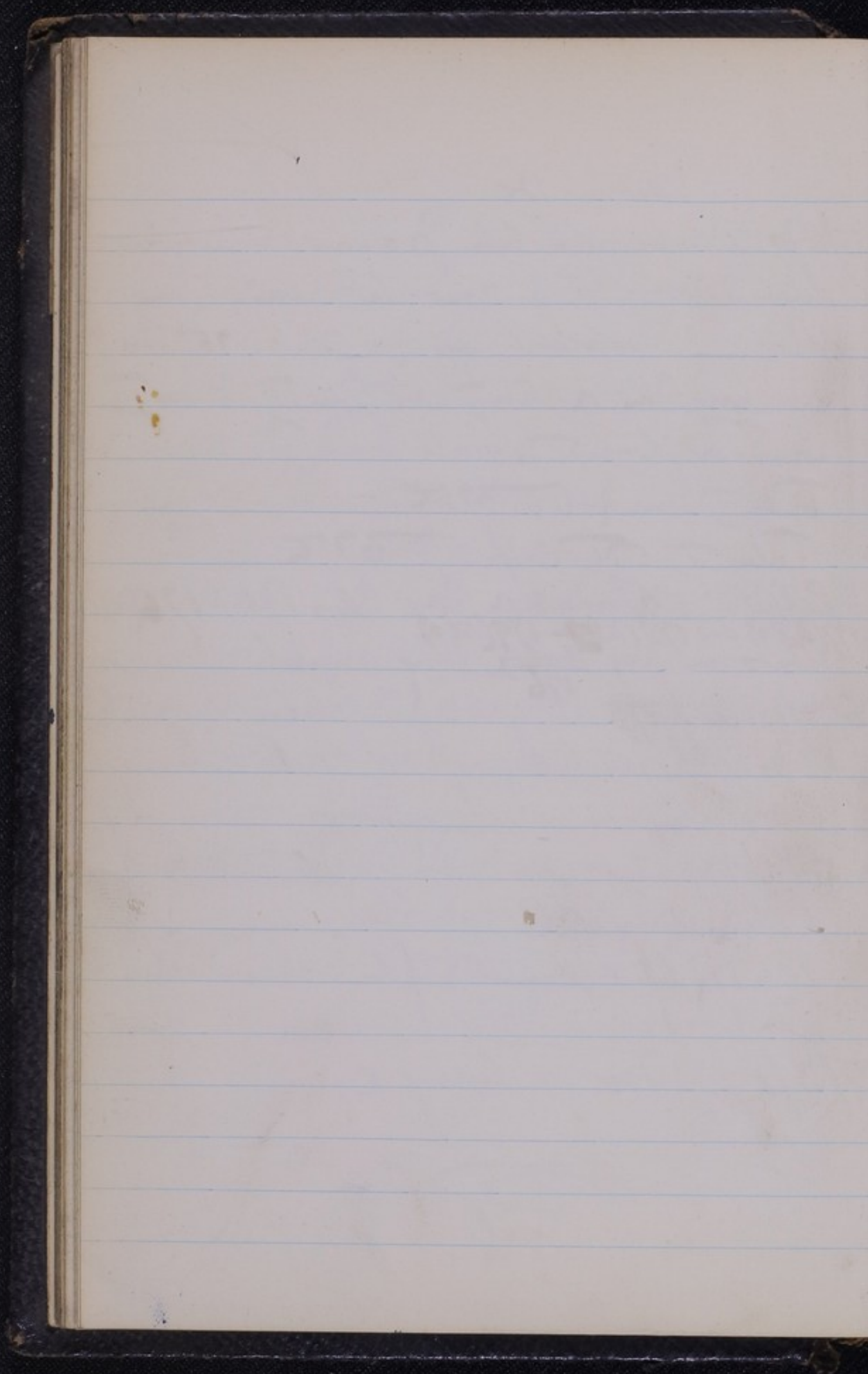
Others tubes and variable

Ach 176 tube I (anaerob.) film showed debris  
only, discarded

9/3/17 No change







Vaccinia ref 121

Vaccinia received 4/10/15 @ room temp past and  
one platinum loopfull inoc on Sch 836 and  
from this on Sch 837 and 838 23/10/15  
all capped @ 37°C. and w flooded over  
from Sch 836 tube also inoc on Ach 174 and 175  
and w flooded over capped @ 37°C.

25/10/15 Sch 836 tube large number of colonies  
found with diptheroid (large heaped up whitish)  
few cocci

Sch 837 and 838 ? any colonies

Ach 174 One white col: Ach 175 Nil.

26/10/15 Sch 837 tube Col he too found to be  
micrococci so discarded

9/3/17 All discarded except Sch 838



Vaccin Exp 122

Vaccin received

inv. on Aeth 174 tube I (dls 152)

All coffee & 37 C 27/10/15

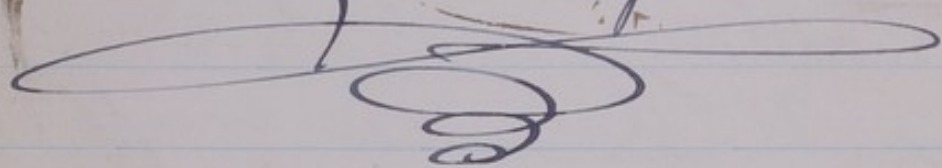
28/10/15

Tube I whitish col. very minute delicate wavy  
between them on Aeth 174 tube III coffee  
film showed few cocci & fine granules

1/11/15 Aeth 174 tube II ? delicate growth a trace  
large col film showed micrococci.

9/3/17 All discarded except Aeth 174  
tube I

21/3/17 Aeth 174 tube I many col. film  
showed only cocci & diphtheria





Vaccines Sep 123

Vaccines obt'd dated 23/10/16 from Allen Hamb (List 21)  
live dts 1, 2 & 3 on ord of tubes I II & III  
also on it a tube of agar with a on  
which is a 4 days growth of Col 4 diaut exp 74  
This called tube IV also as dts 2  
on one tube Feacht of Alh 182, 183  
184 and 185 also 186 also 176  
also on ord of V and this then streaked on  
Col 9 Diaut Sep 74 10/11/15  
all capped @ 37°C.

11/11/15 All Alh tubes still viable, of II & III nil  
of tube IV unchanged, tube V covered with like growth  
of tube I several small white colonies

Culture Notes as Col 1 I II & III

Of tube IV film showed large to many free spores  
so seen of tube VI

Of tube V film from upper part showed tiny short G  
this seen of tube VII. Film from lower part  
showed the bacilli some of which were larger so

this seen of tube VIII: All capped @ 37°C.



12/11/15 Cal 1, 2 & 3 from 20 2-culture

Agar tube VI on King's diploids,

Agar tube VII & VIII short growth, spreading out like motile

Agar tube I probably transient and also below 21 Cal 1

breaks down into IX & the other covered with transp.

later

Agar tube IV film shows large l. some 2 spores & few look  
like diphteria

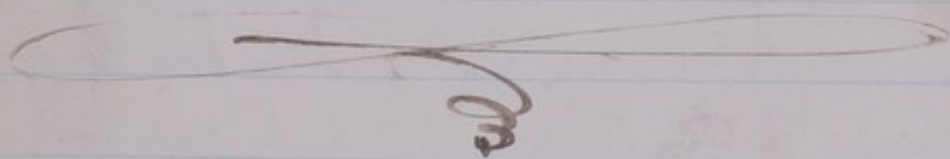
Agar tube V shows Alkali growth, films show  
large l. & 2 spores.

Agar tube I large white cal growth in plates on on  
from agar tubes.

13/11/15 (Ag plate (12/11/15) white Cal, pure culture Cal 4

Agar tube I a yellow cal = Cal 5.

- No Malical change - all discarded



Vaccinia 124

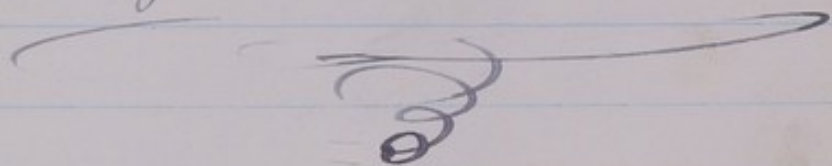
Tube vaccinia (Allen Stamb (hit 2nd)) rec 24/10/15

more or ag tubes T 6<sup>th</sup> (dls 1 & 2) also on

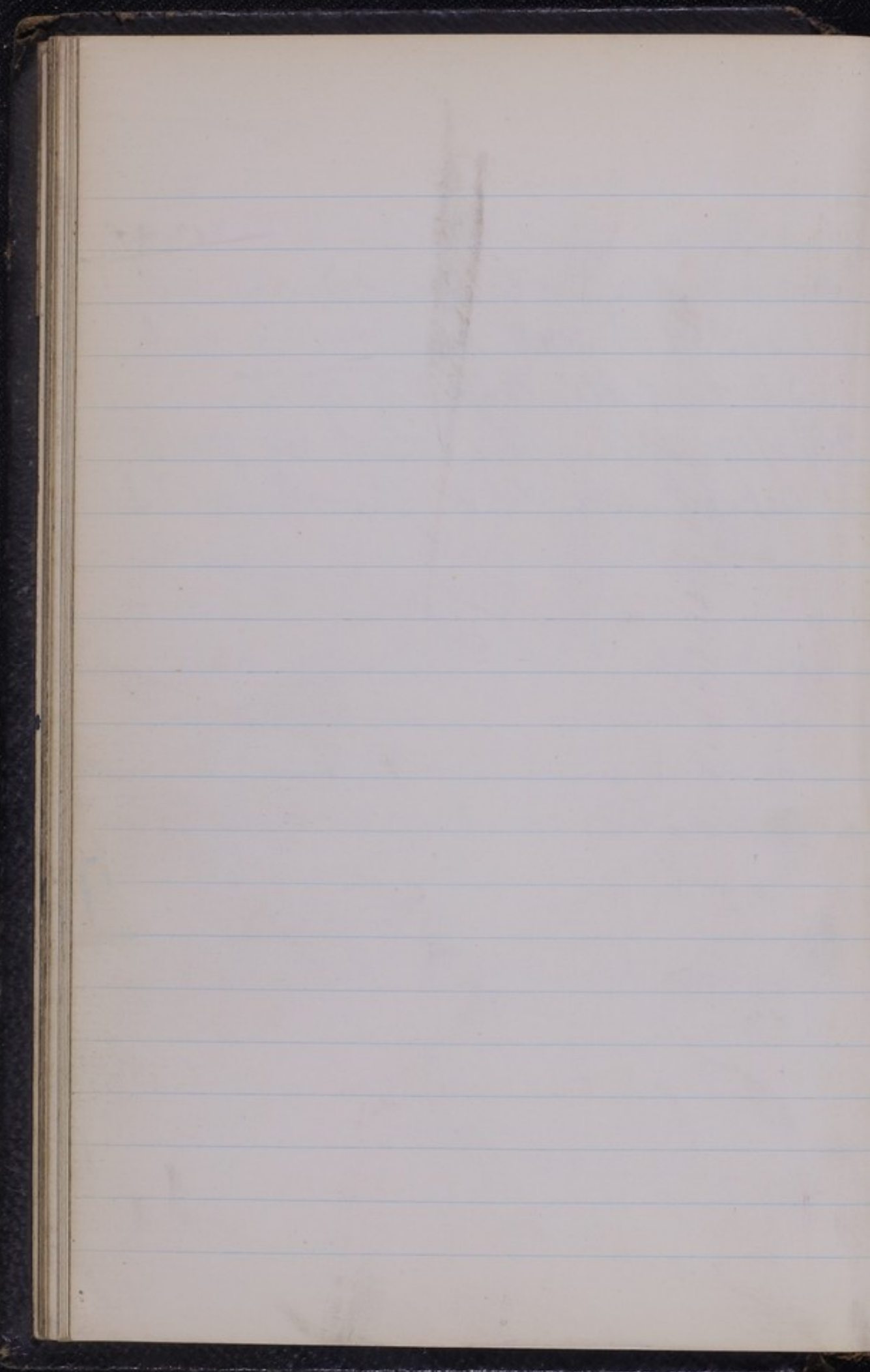
839 to 848 each one tube each

del 2 ; all capped to 37°C.

20/3/17 All tubes show vj growth  
except agar del 2 this shows no







Vaccines 125

Tubes of Vaccines (Allen & Hanley (L.S. 125)) dated 17/12/15  
more on three of tubes (del 1, 2 & 3) and  
from 1(1) on to Sch 839 to 848 each  
one tube, each del 2, all approx 53° C  
on 18/12/15

21/12/15 Tubes show only an occasional cal  
Sch 842, 845 and 846, films from  
where no definite cal stained films  
showed little tubes only

20/3/17 Ag tubes I II ~~III~~ growth all  
over dense, mottled clear tiny spots, discarded  
Agar tubes III not discarded

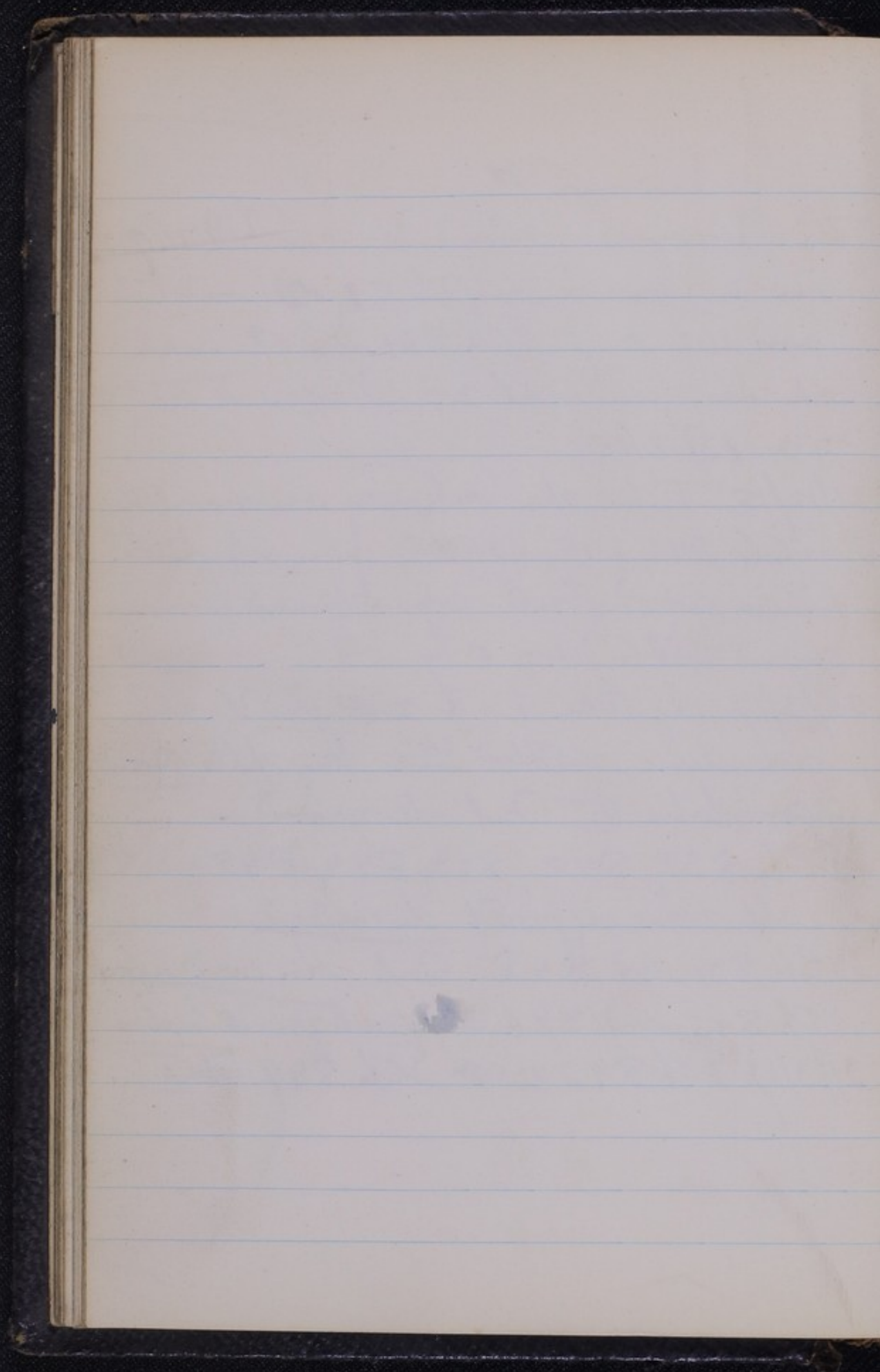
Sch 839, 840, 843, 844, 845 and 847  
all some vigorous discarded

Sch 841 and 848 not discarded

Sch 842 and 846 delicate growth tubes

21/3/17 Sch 842 & on Sch 849 tube I





Saccaria Sep 126

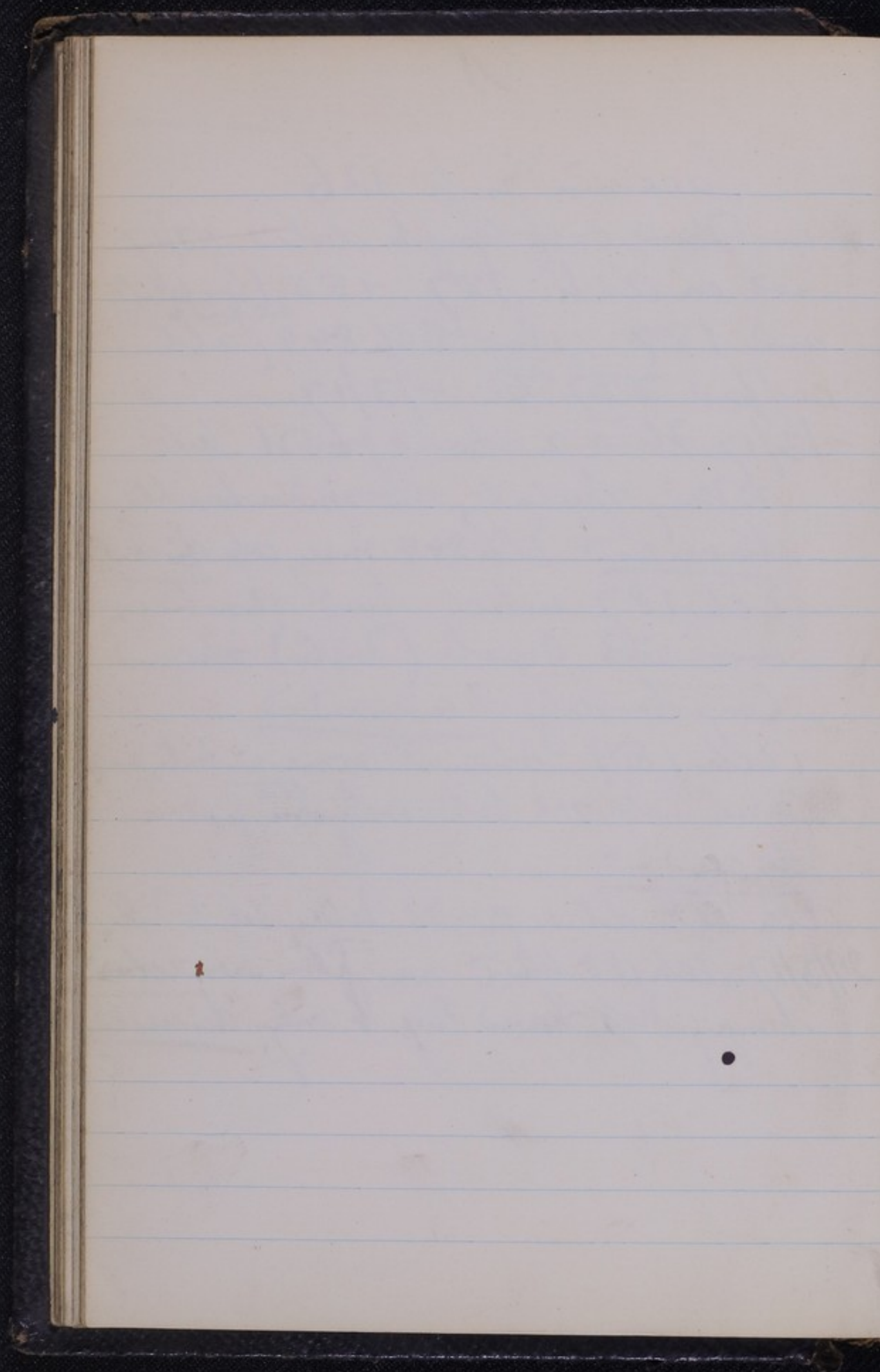
Allen Hare calflymph dated 9/3/17  
moir on Ach 187 188 (two tubes)  
and 189 also Ech 849 <sup>and fine 2</sup> all  
capped & 37°C. -/3/17.

-/3/17 This 2 showed good but  
nothing special, no spiracles.  
discarded Ech 849 many cat discarded  
Ach 187 which had also been  
moir with Anole (Foster) showed  
large only discarded

Ach 189 showed some whitish cat  
three cat r-c but only <sup>two</sup> ~~one~~ green.  
discarded

Ach 188 del 1 port below, del 2 tub.  
29/3/17 Ach 188 tube 1 now film over surface  
hanging drop showed large only. discarded





Vacc Sep 127

Same tube space as Sep 126 was  
on Aeh 190, 191 and 192, all  
capped at 37°C. 23/3/17

26/3/17 Aeh 192 contains large &  
excess lower half so r-c on Aeh 192  
tube II from upper unincubated half  
and old tube discarded

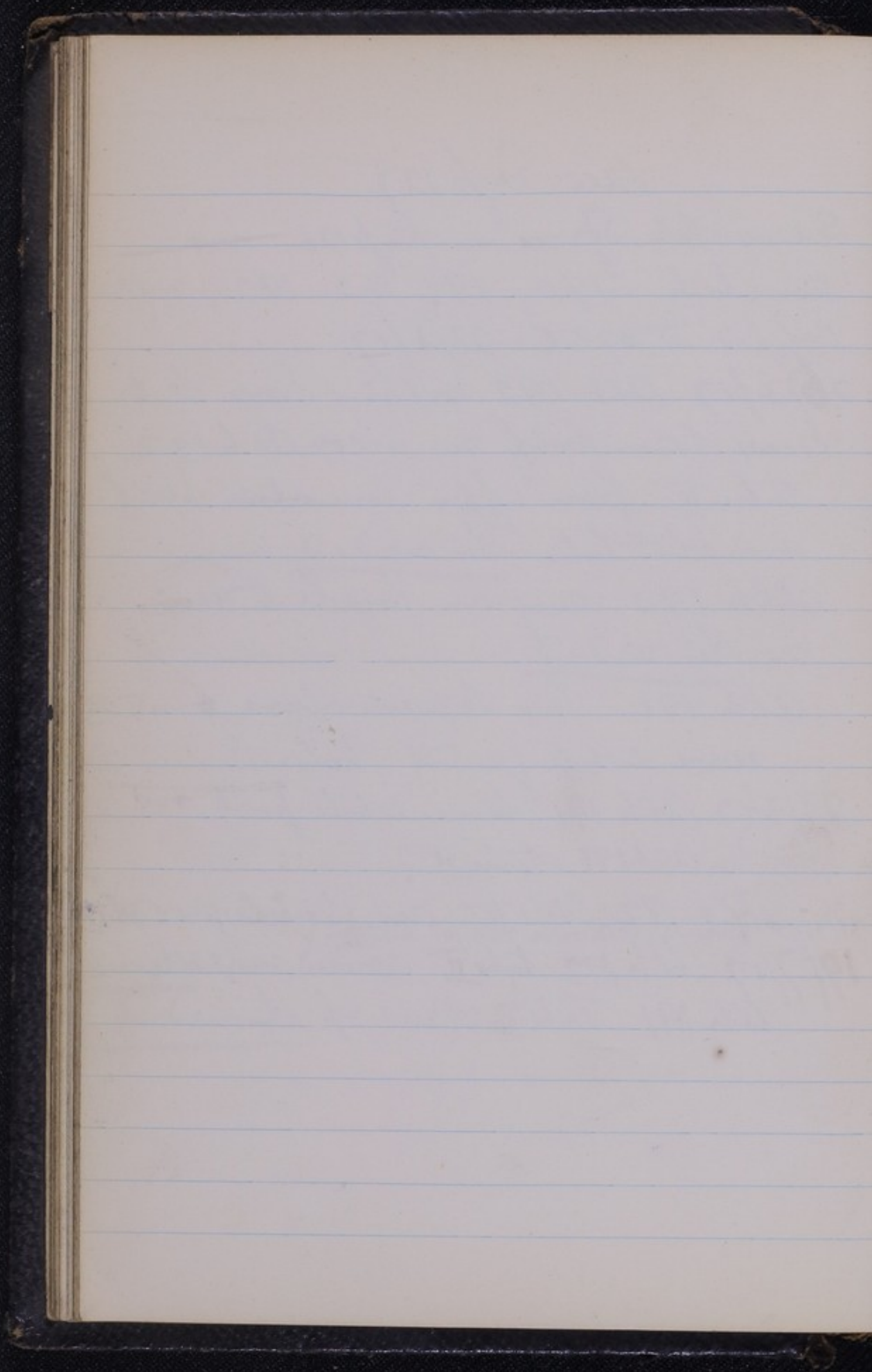
Aeh 190 overgrown large & excess  
so discarded

Aeh 191 two large colonies above &  
some white growth below.

29/3/17 Aeh 191 lower white part r-c  
on Aeh 191 tube II.

31/3/17 Aeh 192 tube II No visible growth.  
Spores from r-c on Aeh 191 tube III  
19/7/17 Aeh 192 tube II covered mold discarded  
Aeh 191 Tube I dried up discarded





Vacc 128.

Same tube *Gracilaria* as esp 126  
muc on Ach 190, 191 and 192.  
all in Buckner tubes anaerob.

237-L. 26/3/17

27/3/17 Ach 190 ? growth below.

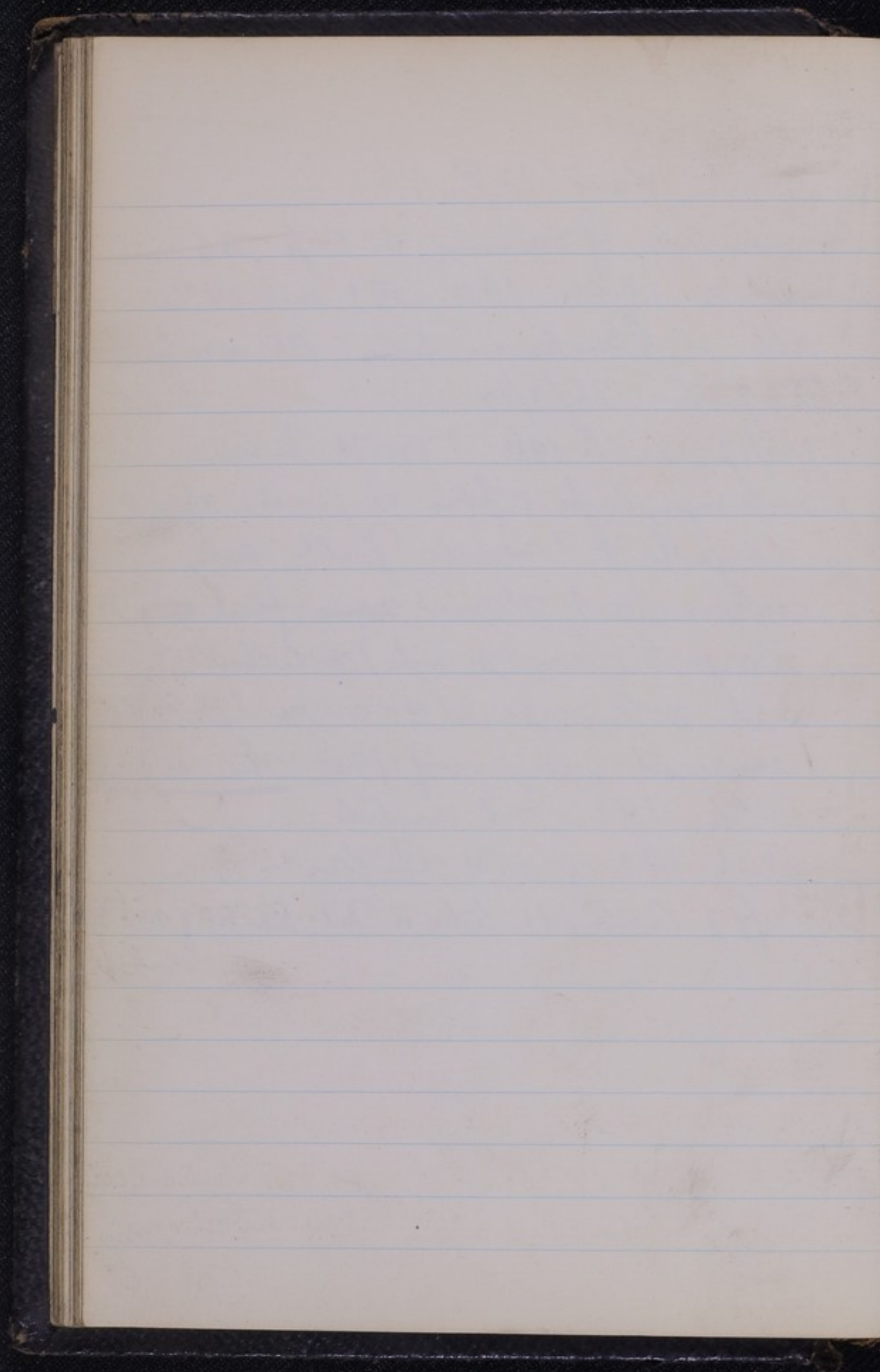
hanging drops & film of *Gracilaria* showed  
large b. & ? nucleic cells only  
upper part showed ~~some~~ few <sup>large</sup> cells.  
large b. (Acro cap type) & cells.

upper & lower parts o-c on 190 tube II & III  
anaerob, and orig 190 this carded  
Ach. 191 Nil visible

Ach 192 growth below.

28/3/17 Ach 191 tube II Nil; tube III growth





Vaccinia Sep 129

Tube Fracenia from Allen Stanton (Ref  
(List Int Reg No 5417) ? dated 5/4/17

Inc. on one tube peach of

Ach 198, 200, 201, 202, 203, 204, 205,  
206, 207 and 208: all capped & 3) T.  
on 10/4/17.

11/4/17 Ach 198 ? few tiny cols

Ach 200 Some small whitish cols

Ach 201. Fair number cols. fair size white, few yellow

Ach 202 Fair number medium & small whitish cols

<sup>and 204 and 207 and 208</sup>  
Ach 203 Considerable number fair size cols mostly white

Ach 205 No cols visible

Ach 206 considerable number small whitish cols.

12/4/17 Ach 198 one white col: Ach 205 Nil

Ach 200 Many translucent whitish cols

Ach 201 Some large white & yellow cols

Ach 202 white & yellow cols

Ach 203 Fair size white & yellow cols

Ach 204, 206 and 208, many white, yellow, & smaller waxy cols

Ach 207 many large white & yellow cols. also waxy.



13/4/17 Ach 208 hanging drop, col = cocci  
cond w = cocci, and interesting granular  
masses? degenerated cells

Ach 203 cond w showed (hanging drop) cocci  
few bacilli none? degenerated cells discarded

Ach 200 cond w showed cocci (hanging drop)  
spreading way col = cocci, most small  
but some large, discarded

14/4/17 Ach 207 cond w, hanging drop, many cocci, bacilli,  
and what appear to be remains of cells.

Following cols picked off tubes

Ach 208, ting (Col 1); white (Col 2); brownish-yellow (Col 3)  
(yellow (Col 4); Ting (Col 5); Rough yellow (Col 6)

Ach 206, colorless, spreading a little (Col 7)

Ach 207, yellow Col 8; white (Col 9). All on Ach 195

18/4/17 All cols grew except 1, 5, and 7

All orig tubes discarded except Ach 201 and 208

27/4/17 Cols 2, 3, 4, 6, 8, 9, 7-1 on fly of capped

25/6/17 Ach 201 and 208 discarded

Cols 3 & 6 on fly of no growth discarded

Cols 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



Vacc Sup 130

Same lake *Fraxinus* as sup 129  
more on one lake *Fraxinus*

Ach 200, 201, 202, 203, 204  
205, 206 and 207 all places  
analyzed in *Fraxinus* 18/4/17  
11/4/17 Ach 200 Nil visible

Ach 201, some small whitish cals

Ach 202 Nil visible.

Ach 203 few small whitish cals

Ach 204 fair number small whitish cals

Ach 205 Nil visible.

Ach 206 Nil visible.

Ach 207 Considerable number small white cals.

12/4/17 Ach 200 and 205 Nil.

Ach 201, 202, 203 fair number waxy cals

Ach 204 ~~fair number~~ white & waxy cals

Ach 206 Some rather large waxy cals

Ach 207 Many white & waxy cals.

13/4/17 Ach 204. "Mucous" cal hanging drop, bacilli.  
cond w. <sup>small</sup> mostly cocci, discarded  
some? degenerated cells also present.



Ach 206 Small cts alone hanging drop, small cocci  
large many col, hanging drop, cocci  
some? degenerated cells also present discarded

16/4/17 Ach 207, Many coalesced cts, no cond w.  
hanging drop from streak showed various size  
cocci & few granular bodies? remains of cells discarded

Ach 203 ~~few~~ number. colourless cts  
Cond w., hanging drop showed cocci and few  
granular bodies, also one clear? fat globules discarded

Ach 201 many colourless cts. rather small,  
Cond w., hanging drop. showed cocci and  
many globular granular bodies, various size, some  
larger than amoeba? felt, discarded

Ach 205 Horrible from hanging drop from streak  
showed cocci some probably degenerated cells discarded

~~14/4/17 Following cts picked off~~

~~Ach 208 (Col 1); white (Col 2), brown yellow  
(Col 3)  
yellow (Col 4); Tint (Col 5); Rough yellow (Col 6)~~

~~Ach 206. Colourless spreading a little (Col 7)~~

~~Ach 207 Col 8 yellow: Col 9 white (All on Ach 195)~~

~~18/4/17 All cts from except 1, 5 and 7  
all on tubes, discarded except Ach 204  
continued after Sep 134~~



Vacc Sup 131

And the tube *Fraccinia* (same no and date  
as cap 129) one <sup>small</sup> drop mot into cond  
water of Aeh 198 and streaks from  
this made down the Aeh 198 also  
on Aeh 204, 205, 206, 207 and 208  
all capped @ 37°C 11/4/17

12/4/17 Aeh 198, 205, 206 and 207 Nil  
Aeh 204 on small col

Aeh 208 several small cols.

14/4/17 Aeh 208 cond w. hanging drop, showed  
cocci, no cells seen.

17/4/17 Aeh 206 two large white cols  
and one colorless; colorless <sup>(Col 1)</sup> 2-c on Aeh 206

26/4/17 Aeh 206 not much change discarded  
Col 1, cols collapsed & watery, film showed  
small cocci & granules so not on fly ag.

Aeh 205 now shows few tiny cols together  
so 2-c on fly agar as (Col 2). film showed granules  
and probably few cocci ~~on fly ag.~~

27/4/17 Col 1 and 2 grown on fly ag. Col 1 small cols  
Col 2 large white



27/4/17 Act 208 large white yellow col (few)  
from - cond w. discarded

Act 206 No charge discarded

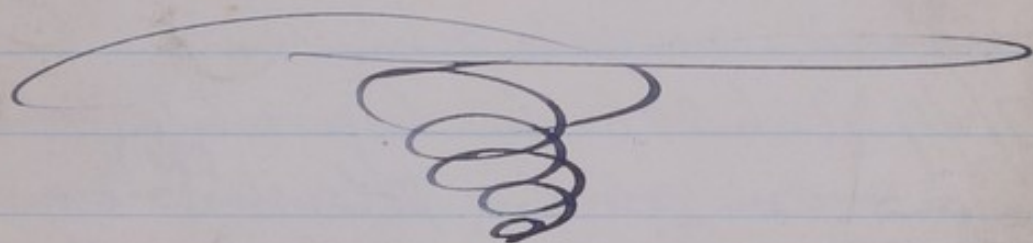
Act 205 No charge discarded

Act 198 little from - cond w only discarded

Act 204 one large col only discarded

Act 207 several white col & some from by cond  
discarded

19/5/17 Col 1 proved to be short  
Streptococcus and Col 2  
proved to be micrococcus



Vacc Sup 132

Cont w of act 198 Vacc sup 131

~~before~~ immediately after misc 2-C as  
check down Act 205, 206, 207 and 208  
all placed anaerob in Buckner's and

37°C. 11/4/17

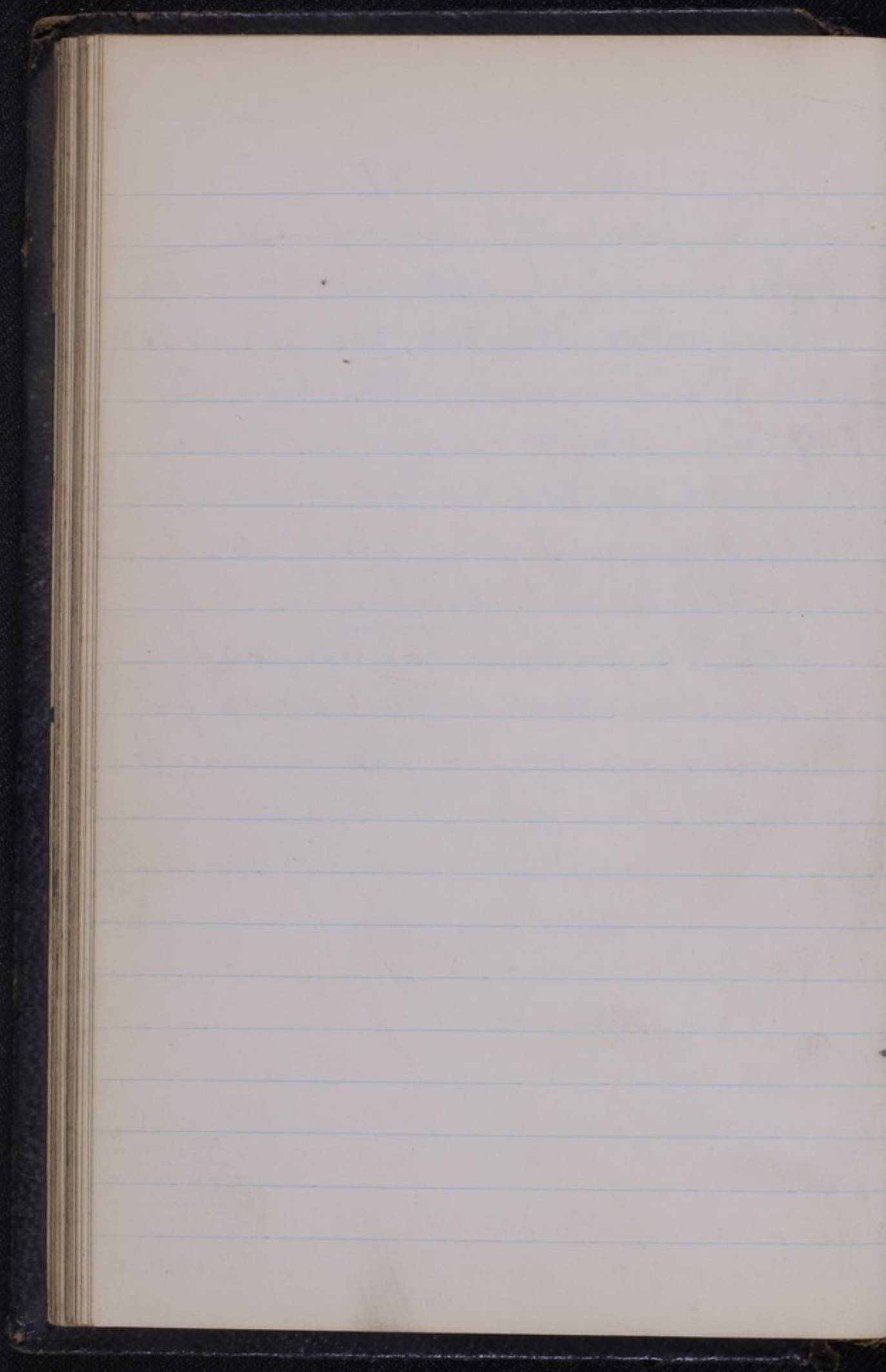
12/4/17 Act 205, 206 and 208 Nil.

Act 207 several tiny cals.

16/4/17 Act 205 Nil discarded

Act 207 few small white cals, cont w hanging  
showed cocci & many granular bodies size of <sup>drop</sup>  
amoeba and larger. ? yolks etc. discarded





Vacc Sep 133

Same like Fractinia as Sep 131

Small portion not on Aeth 198, 204

206, 207 and 208. all capped

239<sup>or</sup> 12/4/17

16/4/17 Aeth 198, Coars spreading, small white.  
and fungus like Col.

Aeth 204 few large domes whitish Col only

Aeth 206, fair number white, yellowish, and  
some colourless inclined to spread Col.

Aeth 207, Some large domes, white to yellowish Col

Aeth 208 Fair number large, white, yellowish, &  
few. smaller heaped white like yeast Col.

18/4/17 Aeth 206 Cond. ls. hanging drop shows  
Cocci & dull debris.

27/4/17 Aeth 198 coarse spreading & thin funny mould  
so discarded

Aeth 204 whitish Col, one haust in middle  
so not on fly as (Col 1) back 204 discarded

Aeth 207 large Col, some dull yellow discarded

Aeth 208 white Col, ~~discarded~~

Aeth 206, a large flat colourless (Col 2) tube discarded  
on fly



Act 208 cont'd showed cocci & round  
granular bodies (? Myxobolus) 200x on

Act 208 tube II capped

19/7/17 All discarded except Cals 1 + 2

these now translucent with white  
secondary colonies on top of both 2-c  
from lower part on to Act 209.

Tubes now placed @ 37°C

Vacc  134

Same tube of vaccine as Sep 131

Small portion inc on Ach 204,  
206, 207 and 208 all anaerobic  
w Buchners @ 39°C 12/4/17

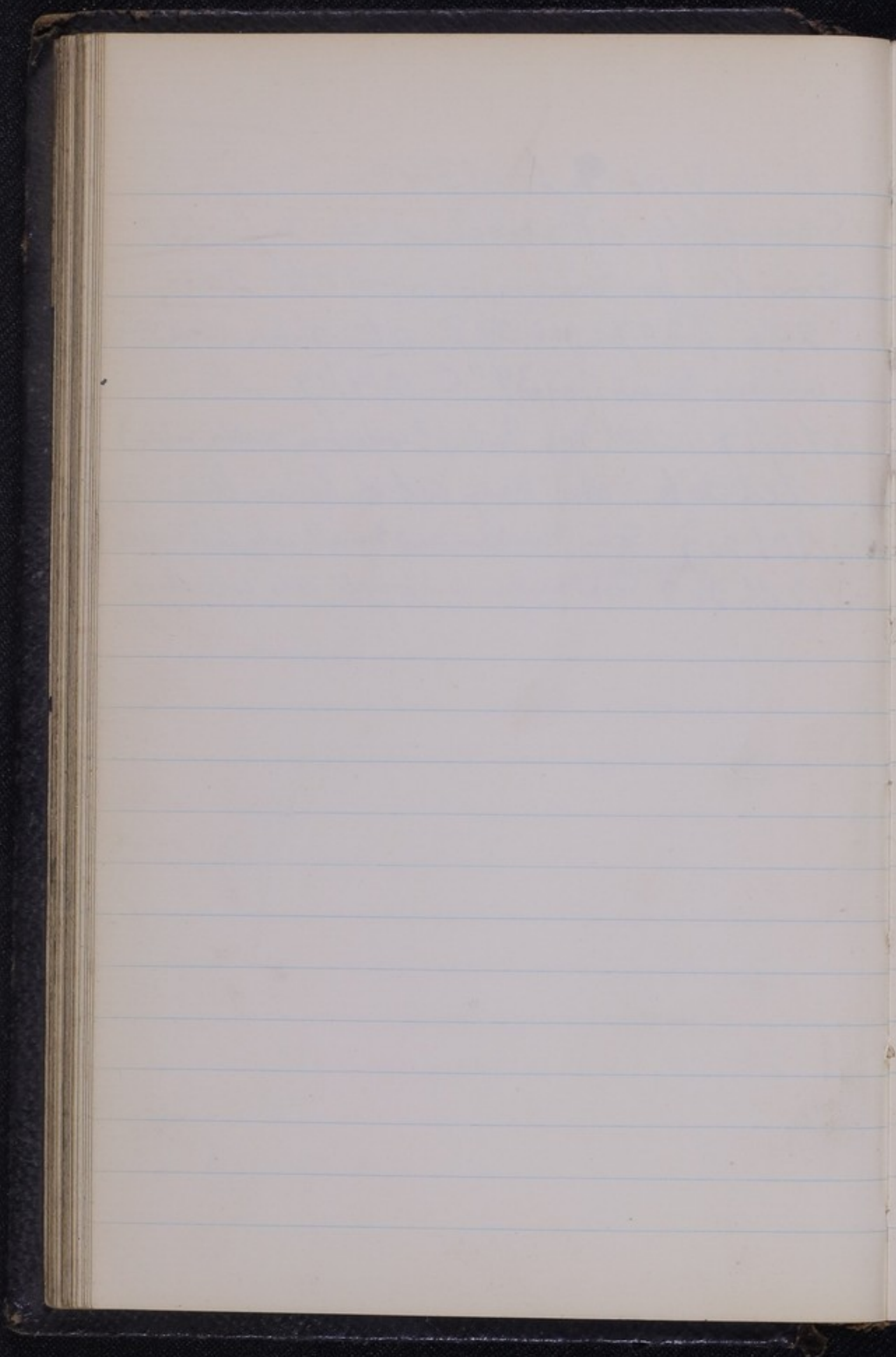
16/4/17 Ach 204 Nil (? contain in media below)

Ach 206 one wavy col on lower third

Ach 207 Some medium and small col, colourless.

Ach 208 Some medium and small col, colourless.





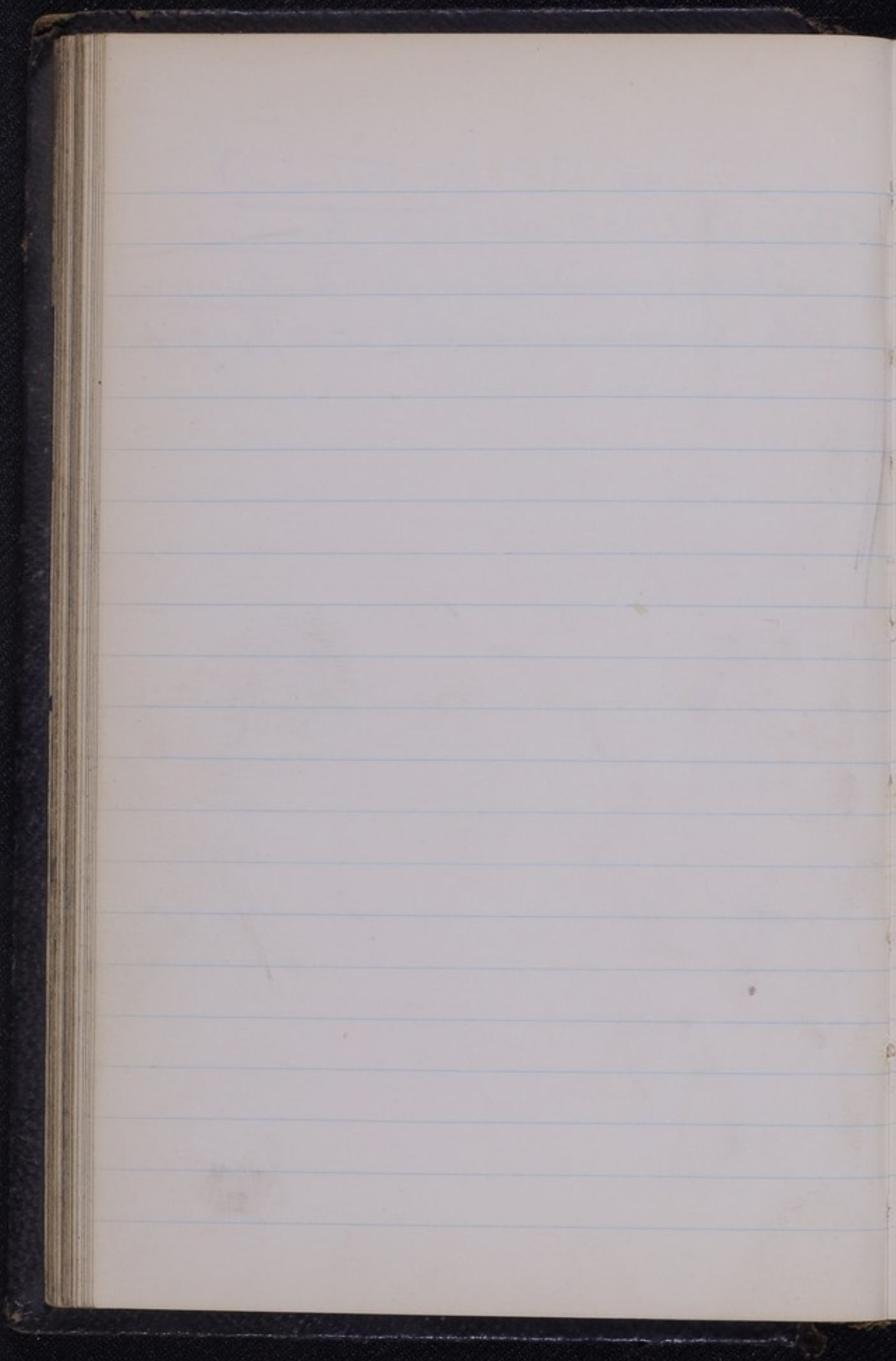
Exp 130 (continued)

27/4/17 Ach 208 overgrown discarded

~~Cols 1, 7, and 5 no frost discarded~~

~~Cols. 2, 3, 4, 6, 8, & 9 2-c on fl. of coffee.~~





Vacc Sep 135

Same tube of Vaccinia as Sep 131  
small drop moi down Ach 197. Then  
Amoeba "Foster" moi in cont li. capped

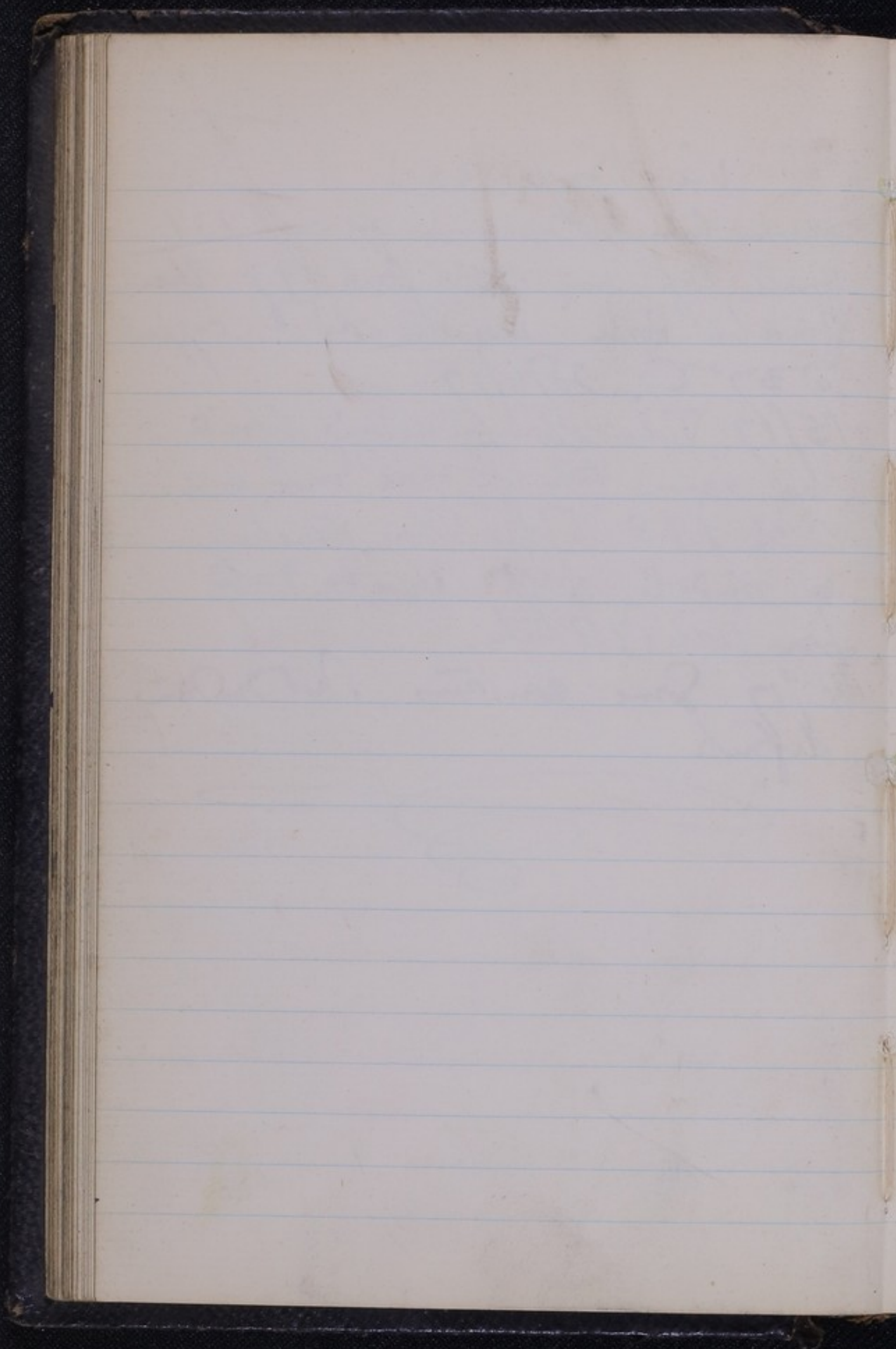
237°C. 28/4/17

2/5/17 Tube showed nothing definite  
so same tube of Vacc moi on  
Ach 198 & this then touched  
in middle with Amoeba Foster  
from Ach 198 tube.

19/5/17 Some on/ans, but nothing  
definite







Vacc Sep 13 6

8/1/19 Vacuina (Allen & Hamb. - dated 12/12/18)

a little with platinum loop mix as  
shears down one tube of each of

Ach 246, 247, 248, 249, 250, 254, 255, 256  
271, 273, 277, 278, 279, 280, 281, 282, 283,  
285, 286, 287. All capped at 37°C.

9/1/19 Ach 246 contain v. dull rough growth like Sakti:

Ach 247 v. v. rough growth - large c. bluish col. = large c.

Ach 248, 249, 250 v. growing from flake & so  
all discarded

Ach 256 film from lower ft. showed few large c.  
which were discarded

Ach 285 film from watery drop showed no  
definite microorganisms, only few dot like large cocci.

10/1/19 Ach 247 and 254 contain all our discarded

Ach 271 contain wrinkled growth discarded

Ach 273 Colonies of white cocci & bacilli (v.) from well  
film from ? growth showed few cocci & bacilli.  
so tube discarded

15/1/19 Ach 280 tube shows two fair size cabs only  
proved to be large cocci.



Ach 283 slight film lower pt. film  
showed debris

29/1/19 Ach 277 Nil discarded

Ach 246 and 279 overgrown Suttles by  
no discarded. ~~Ach 287~~

Ach 287 covered with Phlegm & moss in  
middle, film from this showed cocci  
no no on Ach 294.

Ach 280 About  $\frac{1}{2}$  day watery white cols  
no on no on 295.

Ach 281 about  $\frac{1}{2}$  day watery white cols no one  
no on 295.

Ach 286 Two big colonies - middle discarded

Ach 282 about  $\frac{1}{2}$  day whitish col no growth  
by cond. no on 295.

Ach 285 Small whitish col, no one  
no on 295

Ach 283 white + yellowish cols, growth by  
cond no on 295.

Ach 278 Two big white & several watery white fair  
size cols, one watery white no on 295.

## Vaccinia Sep 137

11/6/19. Some Vaccinia taken (Allen & Hunt.

dated. 12/12/18) a small quantity  
inoc in fluid 94 tube and on for surface  
of tubes I & II of Acl 359.

Fluid 94 + Acl 359 tube I capped aerob.

Acl 359 tube II placed anaerob. in Buchner's

13/6/19. Media all contaminated.



Vaccinia 138.

Vaccinia dated 12/6/19 (Allen & Hanbury)

17/6/19 Small portion inoc on surface  
ACh 360, 361 and 362, tubes I & II  
Each. Tube I capped aerob. @ 37  
Tube II Anaerob. i Buchner's tube @ 37

19/6/19 ACh 360 and 361 <sup>tube I</sup> fair number colonies  
mostly cocci (360 media also contain many cobs.)

362 tube I Vig growth nearly covering from end to

360 + 361 tube II few tiny cobs

362 tube II fair number medium size cobs

362 tube II ? transp below film showed granules

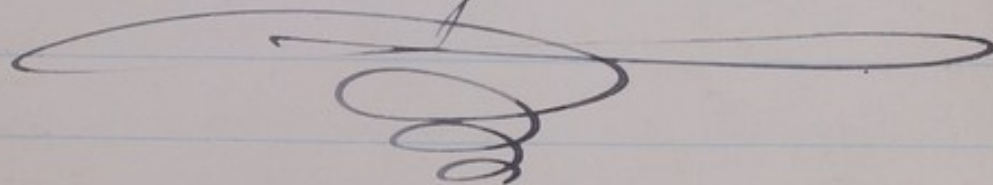
361 tube II ? transp in middle, film stained

Carbol fuchsin showed granular groundwork.

All tubes II now placed aerobically.

20/6/19 No material change.

3/7/19 Contains grown otherwise no  
material change





Vaccinia Sep 139

Vaccinia dated 12/6/19 (Allen & Hamb)

23/6/19 Small portion vis. on surface.

Ach 364 and 366 each tube I & II

Tube I capped aerobically

Tube II placed anaerobically in Buchner's tube

25/6/19 Ach 364 tube II one small white col  
in middle, film from lower  $\frac{1}{3}$  it shows a  
showed debris & many faint granules only

Ach 366 tube II three small white & one big col  
film from lower  $\frac{1}{3}$  showed debris & granules only

Ach 364 tube I two white cols below. film from  
upper pt showed debris & granules only, wrapped

Ach 366 tube I two white cols lower  $\frac{1}{2}$

Ach 364 & 366 tube II replaced anaerob.

7/7/19 Ach 364 tube I four white contain cols, film from  
uncertain pt st shows a showed granules & debris, this  
pt on 364 tube III anaerob, Tube I discarded.

Ach 366 tube I Two white contains only, discarded

Ach 366 tube II film from tiny watery col showed micrococci, discarded

Ach 364 tube II film from uncertain pt showed granular debris, discarded

11/7/19 Ach 364 tube III Nil visible



Vaccinia 140

Vaccinia dated 12/6/19 (Allen & Banks)

24/6/19 Small portion smeared on three  
tubes of ECh 857 its 1, 2, and 3,  
All capped aerobically @ 37°C.

25/6/19 No definite growth visible on any tube.

1/7/19 Tube I contain all over, discarded

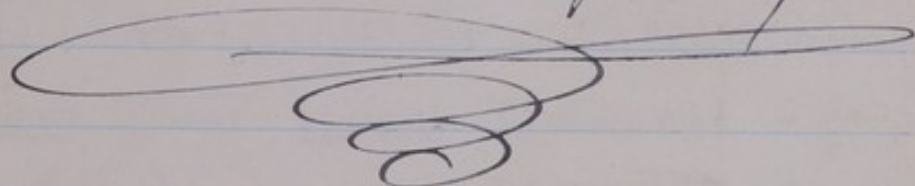
Tube II Yellow Salinae - middle

Several watery lobes below found both  
microscopic no discarded

Tube III Nil.

8/7/19 ECh 857 tube III few oily looking  
drops on surface. film of Carbon Fuch  
showed some very short threads ~~in~~ probably  
dead Phloia not spiculate, cond. w. floated over.

11/7/19 Nil viable macroscopically





Vaccinia 141

Vaccinia dated 12/6/19 (Allen & Daint)

24/6/19 Small portion smeared on Three  
tubes of Ach 367, at 1, 2, & 3.  
All capped @ 37°C aerobically.  
Tubes II & III aerobically  
Tube I anaerobically.

25/6/19 Tubes I & III No visible growth  
Tube II one contain col in middle.

26/6/19 Tube I Vg growth running down tube  
film from upper watery col showed medium size b.  
film from lower in contain pt showed debris &  
granules only. Tube now capped aerobically.

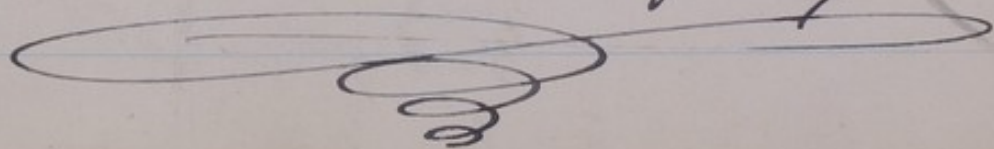
1/7/19 Tube I contain mostly all over, discarded  
Tube II contain discarded

Tube III Nil, Cond. to flocculated over.

8/7/19 <sup>Ach 367</sup> Tube III Film st. Part. 7. shown

many very fine granules so 2c on Ach 367 tube IV  
also on Ach 375 and 376 each tube I. All capped @ 37°C.

11/7/19 Nil visible macroscopically





Vaccinia Sep 142

Vaccinia dated 12/6/19 (Allen Hamb)

27/6/19 Small portions rubbed flat of  
tubes I & II of Ach 370 and 371

Tubes I capped aerobically

Tubes II placed anaerob & Buchner's tubes

3/7/19 Ach 370 tube I Nil viable

Ach 371 tube I Two col of cocci. contain  
area 2-c on Ach 371 tube III aerobically  
and tube I discarded

Ach 370 tube II film & fenns shown  
debris granules only discarded

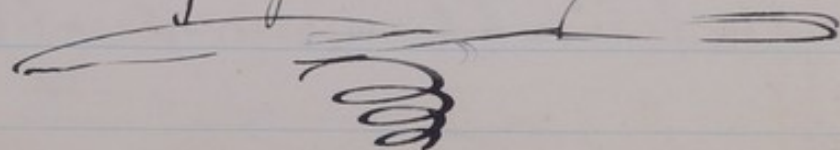
Ach 371 tube II film & fenns shown  
debris interesting granules 2-c on

Ach 371 tube IV placed anaerob. tube II discarded

7/7/19 Ach 371 tube III Nil viable, discarded

Ach 370 tube I Nil viable, discarded

Ach 371 tube IV probably nil, film & fenns  
shown. fine granules only





Vaccinia 143.

Vaccinia dated 10/7/19 (Allen & Hunt)

11/7/19 Small portions streaked down each of  
Ach 373, 375, 376, 378, 379, 380 → 381  
and 382

14/7/19 Ach 373<sup>and 375</sup> Vg grown down whole streak

376 Vg grown down streak, ? delicate growth outside  
streak. Film <sup>from this showed</sup> some cocci of granules

379 Vg grown down streak. ? delicate growth  
outside streak. Film from this showed some granules only

378 Vg grown down streak ? starting to be transparent

380 ? any growth. Film of (Fuch showed) very fine  
granules so r-c on 380 tube II

381 Vg grown down streak ? starting to be transparent  
in several places so has r-c on 381 tube II.

382 Fair Vg grown down streak.

All original tubes discarded

16/7/19 Ach 380 tube II ? any growth. film of  
(Fuch showed) few beaded R. threads, it seems  
showed several heads R. so r-c on

ach 378 tube II



Ach 381 tube II striat ? starting to turn  
translucent so 2-c on Ach 381 tube III  
and from this on as 2+3<sup>rd</sup> dit on tubes IV & V

17/7/19 Ach 378 tube II Nil

One of cols on Ach 381 tube V pretw off as Col 1

21/7/19 Ach 380 tube II no definite macrophyte felt, discarded

Ach 378 tube II no viable growth, discarded

Ach 381 tubes II <sup>III</sup> growth more translucent, discarded

Ach 381 tubes IV & V especially IV growth turning translucent

so 2-c from IV on 381 tube VI. tube V discarded

Pungrowth of Col 1 from well

22/7/19 Ach 381 tube VI white growth (not hamp)

Ach 381 tube IV now 2-c on Ach 358 (or 358) tube I

23/7/19 Ach 358 tube I growth partly translucent 2-c on tube II

29/7/19 Ach 358 tube II 2-c on Ach 358 tube III capped.

8/9/19 All discarded except Col 1 and Ach 358 tube III

Both these 2-c on Ach 372 capped.

20/10/19 Ach 378 tube I formed a room lamp amongst

discarded tubes shows dark crimson

Scarlet

orange

lemon green

bluish blue

24/10/19 Ach 372 & Col 1 on 372 white turning translucent no 2-c on 393

30/10/19 Ach 393 tube I now translucent in places so 2-c on 393 tube II

4/11/19 all discarded except 393 tube II & Col 1 on 393 (24/10/19)

Continued after 147



Vaccinia 144.

Vaccinia dated 10/7/19 (Allen Hunt)

11/7/19 small portion streaked down each of  
Ach 375, 376, 378, 379, 380, 381 and 382

All placed around in Bruchner's tubes.

14/7/19 Ach 375 movable front, film from streak  
it's fresh showed. tissue debris.

376 shows faintly by front down streak

378 shows numerous white cells on tube

379 numerous white cells on most of tube

380 uneven surface but no definite front

381 numerous white cells on most of surface

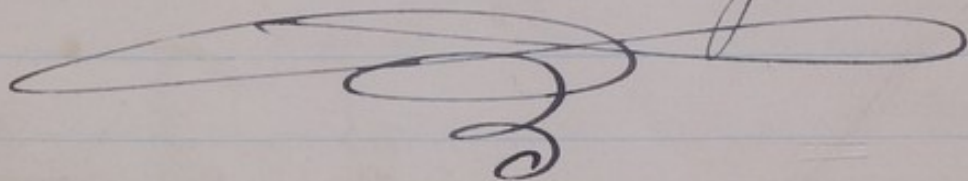
382 numerous white cells mostly along line of streak

Tubes discarded except 378, 379, 381 and 382

these now capped aerobically.

16/7/19 Ach 379 tube 1 small colony lower  
part at side film showed microscopically.

Other tubes no change.





Vaccinia 145.

Vaccinia dated 13/9/19 (Allen Hank)

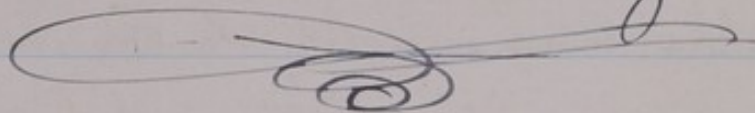
15/9/19 Small portion streaked down

two tubes (dts 1+2) each of  
Ach 394 and Ech 858 and 859.

Tubes I placed anaerobically: Buchner's tubes

Tubes II capped at 37°C.

17/9/19 All tubes contain Mergal Contain Mergal





Vaccinia Sep 14 6

Vaccinia dated 13/9/19 (Allen & Hamb)

18/9/19. Small portion streaked down

two tubes (dets 1 + 2) each of Ach 389,  
Ach 394, 395, 396 and 397 and 399  
also Ech 861. All capped at 37°C.

23/9/19 Fresh topfills of Vaccinia now on

Ach 404. tube I & II capped at 37°C.

later Ach 404 tube I 2-1 on Ach 405 + 406  
and 405 placed Anacard. then capped and

24/9/19 Most of tube show a few cocci of cocci.

Ach 395(a) tube I transparent col film  
st. fennia showed granules of ? disc. app. col.

so - e. (touching conc. col adjoining) on Ach 403 tube I

Ach 397 tube I, curv. mottled granular col  
film st. fennia showed large sporing h.

Ech 861 tube I magenta col. also much of  
big pink red - lower pt. film from here  
st. fennia showed large cocci & granules so

plated out on two tubes of Ech 855 capped at 37°C

Ach 389. tube I lower half covered present type discussed



25/9/19 Ach 396 tubes I & II, Ach 389 tube II

Ach 397 tube II, Sch 861 tube I show  
no material change so discarded

Ach 403 tube I, 404 tube (I?) & II, 405 tube I  
& 406 tube I, show no visible growth.

Ach 399 tube II also shows nil, could be flooded on.

Ach 404 tube I, little whitish sediment in  
cond. w. film it seems showed. large  
number of fine granules some debris.

ref from this on Ach 403 tube II & 404 tube I  
broken accident & discarded

Ach 403 tube I The ? disapp. col put on this tube  
shows no evidence of growth. film it seems  
shows. some cocci & many fine granules

Ach 394(a) tube I shows some large white  
cols, one of them taken as pure cult Col 1 &  
394(b) tube I, discarded

Ach 395(a) tube I one of the white cols  
taken as Col 2 & orig tube discarded

Ach 395(a) tube II discarded

Ach 397 tube I shows white cols, turning translucent



in middle one of these s-c as Col 3 being like discarded  
Ach 394(a) tube II besides cocci also shows one  
heaped up yellowish wrinkled film showed short  
branching threads with many cocci-like spores  
Culture taken named (Media organism 61)  
and only like discarded

Ach 399 tube I film from underneath of it of same  
showed greenish patches of.

Ach 403 tube I surface washed over shell  
saline & mixed with 200 cc saline  
passed through Doulton White No 2 & 500 mesh  
about 70 cc passed in two hours

Filtrate called Col 4, 403 tube I discarded  
Col 4 = filtrate 2 drops pipetted over  
one tube each of Ach 403, 405, 406  
Five drops pipetted over three tubes of  
Ach 393 after 10 min, one of them  
streaked with Col 4, one with Col 2 & one with Col 3  
Ten drops pipetted over three tubes of Ach 396.  
One of them afterwards streaked Influenza 81  
All capped & set.



26/9/19 Tubes taken yesterday show no  
"disappearing growth" so from orig 395(a)  
tube I transf col mixed with neighbouring  
while s.c as "Col 4 infilt + Col 2(a)" on  
A Ach. 393.

-/9/19 Railway Strike!

7/10/19 Ach 405 tube I (anawb), no  
visible evidence of growth, discarded  
Cond. W. floated over all tubes showing  
no visible growth.

8/10/19 Ach 399 tube II s.c on to  
Ach. 399 tube III. Film from tube II  
stained piece showed granules (some fair size).

10/10/19 Ach 399 tube III s.c on 399 tube IV  
and cond W. floated over tube III

Ach 403 tube II, 404 tube II and W floated over.

15/10/19 Ach 855 tube I few of white cols broken  
stirring medium - yellowish pale at s.c as Col 5  
<sup>white granules Col 7. Col 6</sup>  
old tubes show but little change or evidence  
of disappearing growth. Influenza + Col 4 shows  
good growth of Influenza

Following Notes discarded

Col 4+1, Col 4+2, Col 4+3 all on Ach 393.

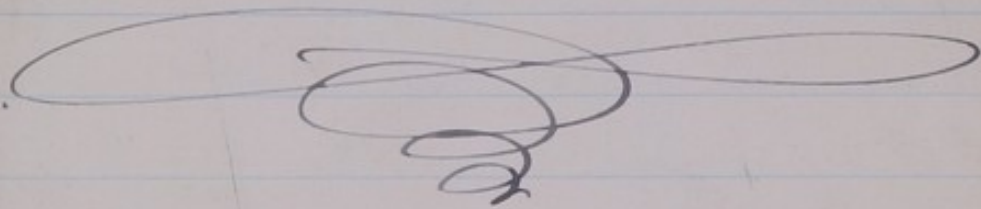
Col 4 unfelt + Col 2(a) <sup>I</sup> on 393, Col 4 on 405,  
Col 4 + Infla 81, Col 4 on 406, Ach 406 tube I  
Ach 403 tube II Ach 404 tube II

Ech 855 tube II, Ech 861 tube II.

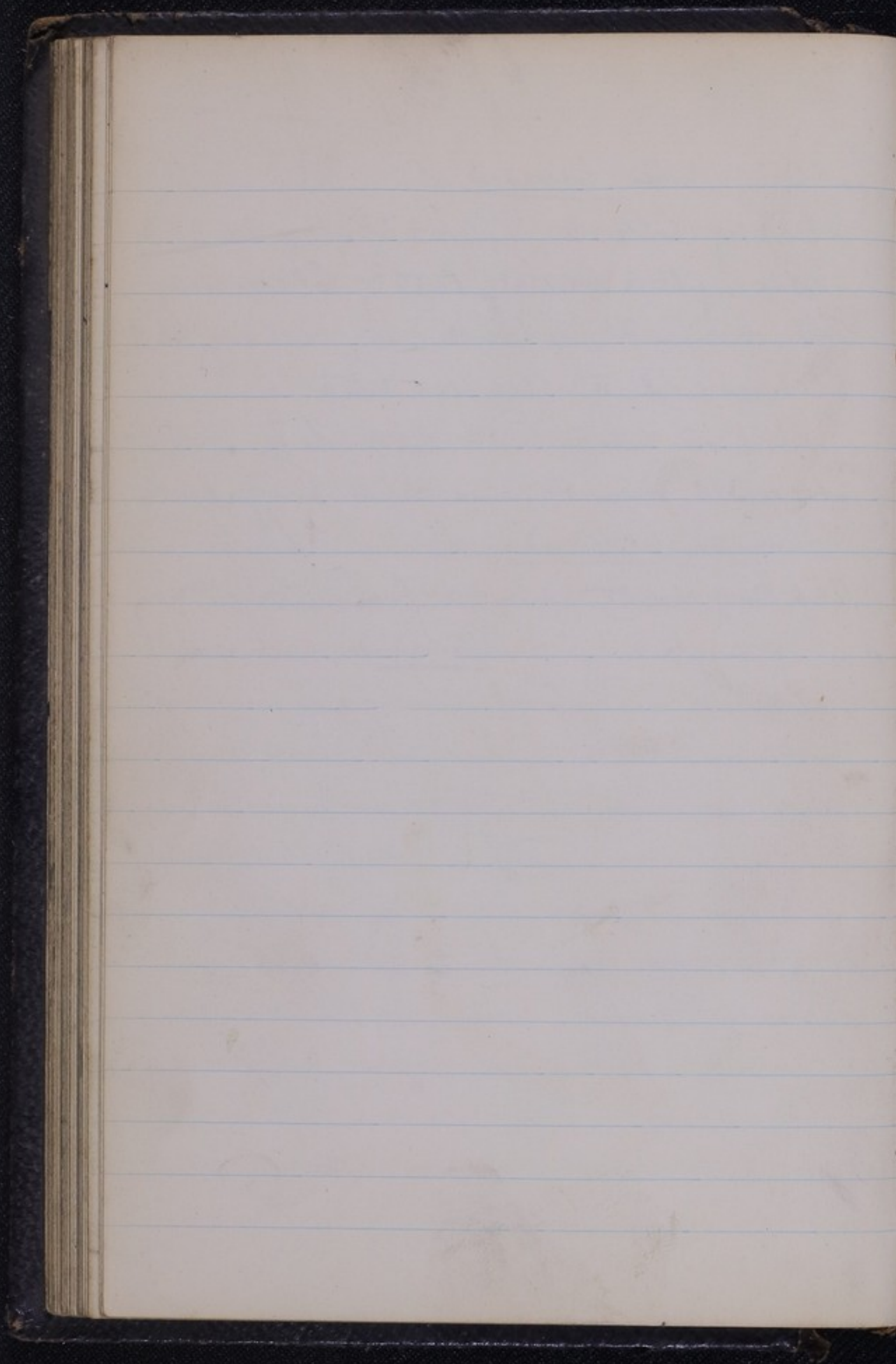
Col 4 on 396 Film it peria shows many frames  
only so discarded

Ach 399 tube II film + peria shows many  
frames only so discarded

30/10/19 No material change







Vaccinia 127.

Vaccinia dated 24/9/19 (Allen & Hamb)

8/10/19 Small portion streaked down on tube  
of each of Ach 410, 411, 412, & 413  
all capped at  $37^{\circ}\text{C}$ .

9/10/19 Ach 413 tube I Some white col  
film from uncontaminated part of pinna  
showed debris some granules.

14/10/19 Tubes show usual colonies of cocci.

Ach 410 shows also two small transparent  
col. proved to be thick pleomorphic branching  
organism rather short not well stained, many granules  
One of these (impure) seen on Ach 410 tube II

Ach 413 shows also one fair size transparent  
col. lopsided made into film at pinna showed  
masses of granules only so seen (2 touching the col)  
on Ach 413 tube II & III.

transparent col mixed with a white neighbouring  
micrococcus seen on Ach 393 tube I

15/10/19 Ach 410 tube II white growth. Micrococcus only  
Ach 413 tube II & III white growth only.



24/10/19 Ach 393 tube I white growth

? having hair in middle of which so so

on 393 tube II & tube I discarded

30/10/19 No material change, All discarded

except Ach 413 tubes II & III

When tube II & con 417 tube I

" III " " 417 " II

note Ach 413 tube II blood - medium brown brown

and appears granular surface outside streak growth

Ach 413 tube III blood - medium light red

purplish tinge, surface more outside streak growth

between medium & glass at bottom of tube

some growth appears like present so

bottom of tube broken off & from this area

film of furia showed microscopically, discarded

31/10/19 Ach 413 tube II film from granular

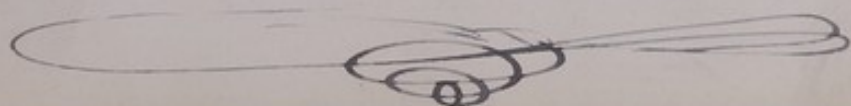
surface outside streak of furia showed

crystal organisms only this so on to

Ach 412 tube II

4/11/19 Ach 417 tube I & II show similar dense tubular growth

Ach 412 tube II Nil





Exp 143 Continued

4/11/19 Ach 393 tube II white from 2-1 on 393 tube III  
Col 1 on 393 (24/10/19) turning translucent - places so  
2-1 on fresh 393 tube.

8/1/20 Ach 393 streak now very looking, with  
secondary dense cols about. These mixed  
to cult? on to Ach 455 tube I

Col 1 on Ach 393. Streak now very looking,  
but no secondary dense cols. This 2-1 on  
to Ach 455.

One drop of filtrate of filtrate exp 129 was  
injected into a tube of Ach 455, <sup>tube II</sup> this  
later streaked down with culture of Col 1  
All capped at 37°C.

9/1/20 Ach 455 tube II shows white streak of  
micrococci down center typical Col 6 density  
all over tube as cols.

28/1/20 Col 1 (8/1/20) white streak

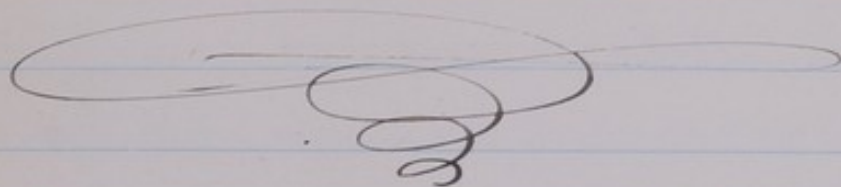
Ach 455 tube I (8/1/20) streak now more translucent

Ach 455 tube II (8/1/20) center streak of cocci now  
more translucent so plated out on three agar tubes



29/1/20 Aga tube plate show dycent col only  
30/1/20 <sup>Cap</sup> tube <sup>plate</sup> show show large col dycent & few small  
col of microc.

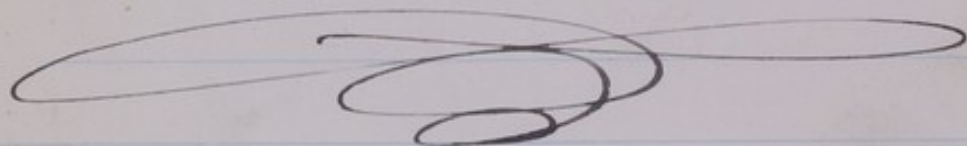
2/2/20 Aga tube plate, col from somewhat but no  
evidence of disappearing so discarded  
Aet 455 tube discarded



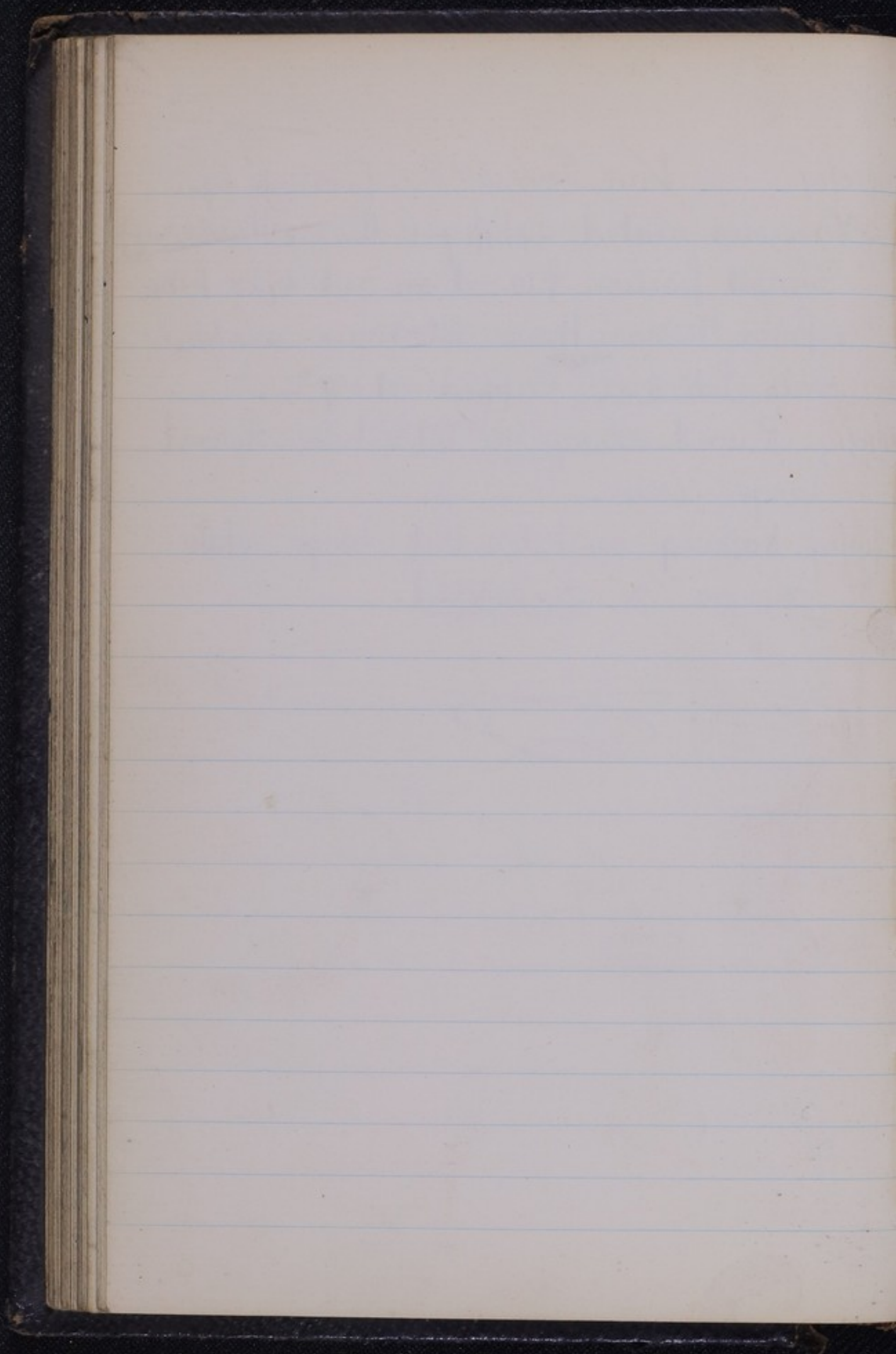
10/10/19 Vacc Sep 148. - To is date def.  
Vaccunia dated 24/9/19 (Allen & Hambury)  
Small portion placed on ord agar tube  
from Mence. Three dilutions made  
onto Pch 862. ~~440~~ Capped at 37°C.

11/10/19. Raised colony on Dil. 2 tube showed  
large coccus.

13/10/19. Nothing on tubes but large white  
colonies so discarded.







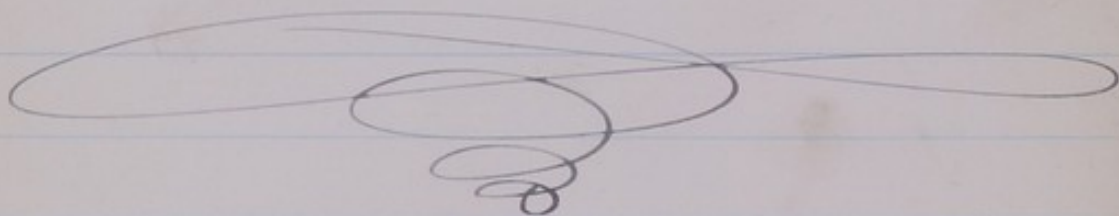
Vacc 149.

15/10/19 Vaccinia dated 14/10/19 (Allen (Dank))  
small portion nos on Aeh 410 411  
412 & 413 each tube I and from  
412 & 413 tubes I 2nd del made on 412<sup>and 413</sup> tubes II

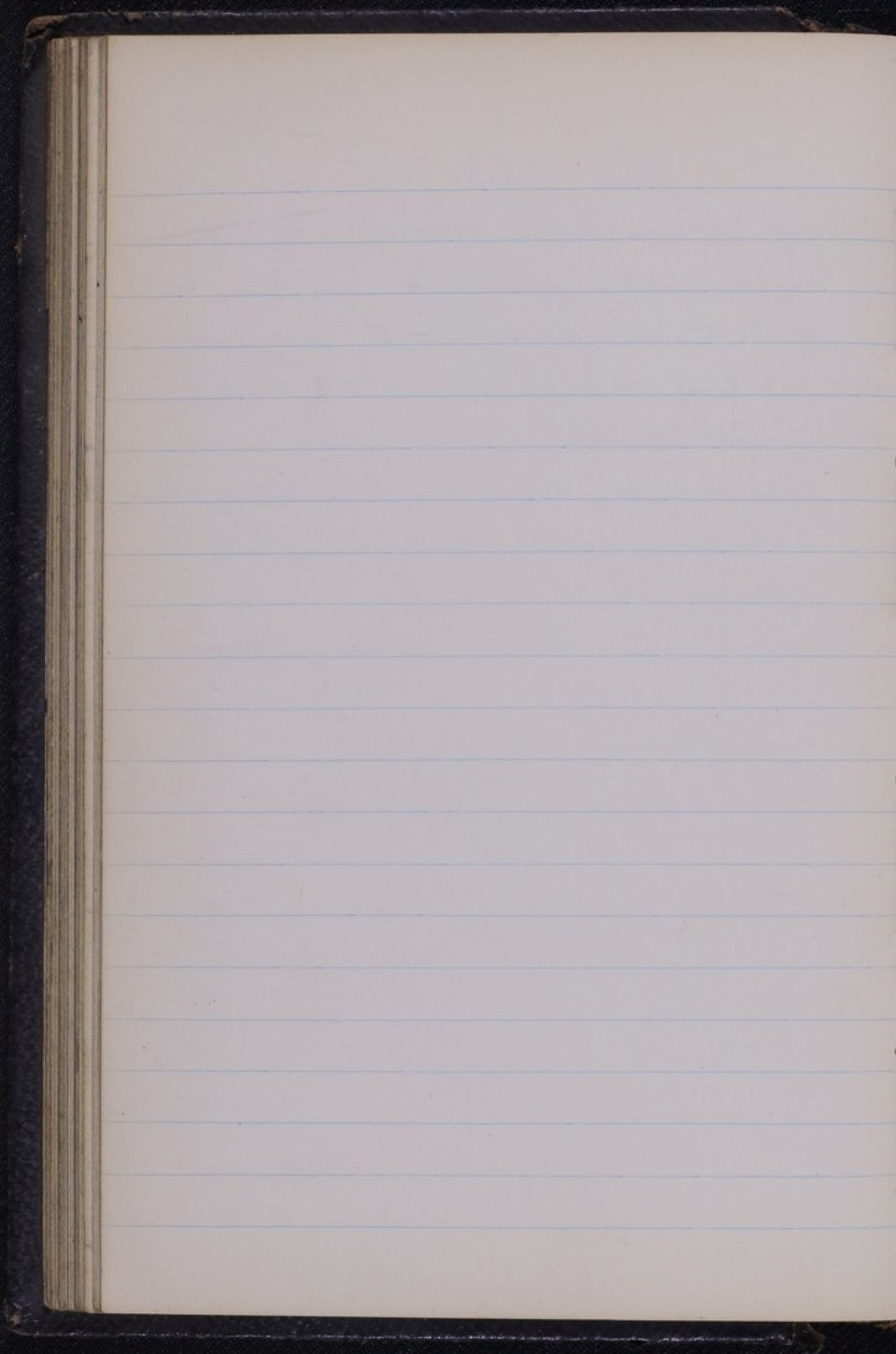
17/10/19 All tubes show colonies of cocci

Aeh 411 tube I, 412 tube I & 413 tube II also  
show some spreading growth from the  
fair size C.

30/10/19 Tubes showed nothing special



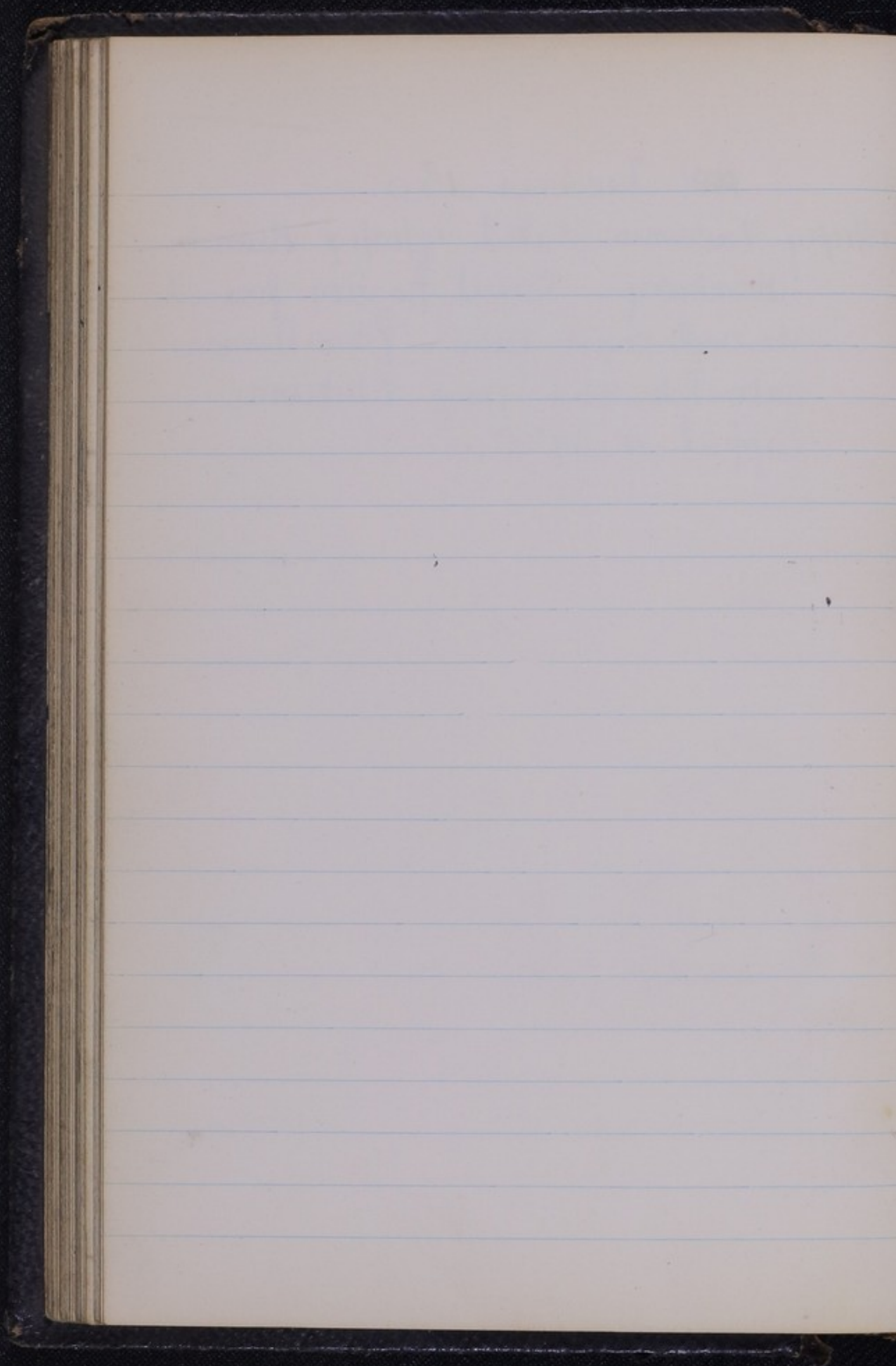




~~A~~ Vaccinia 150.

13/10/19 Vaccinia dated 14/10/19 Allen &  
Hambury - Small portion placed  
on ord. agar tube - from thence  
onto Ich. 862. Three dilutions.  
Capped at 37°C.

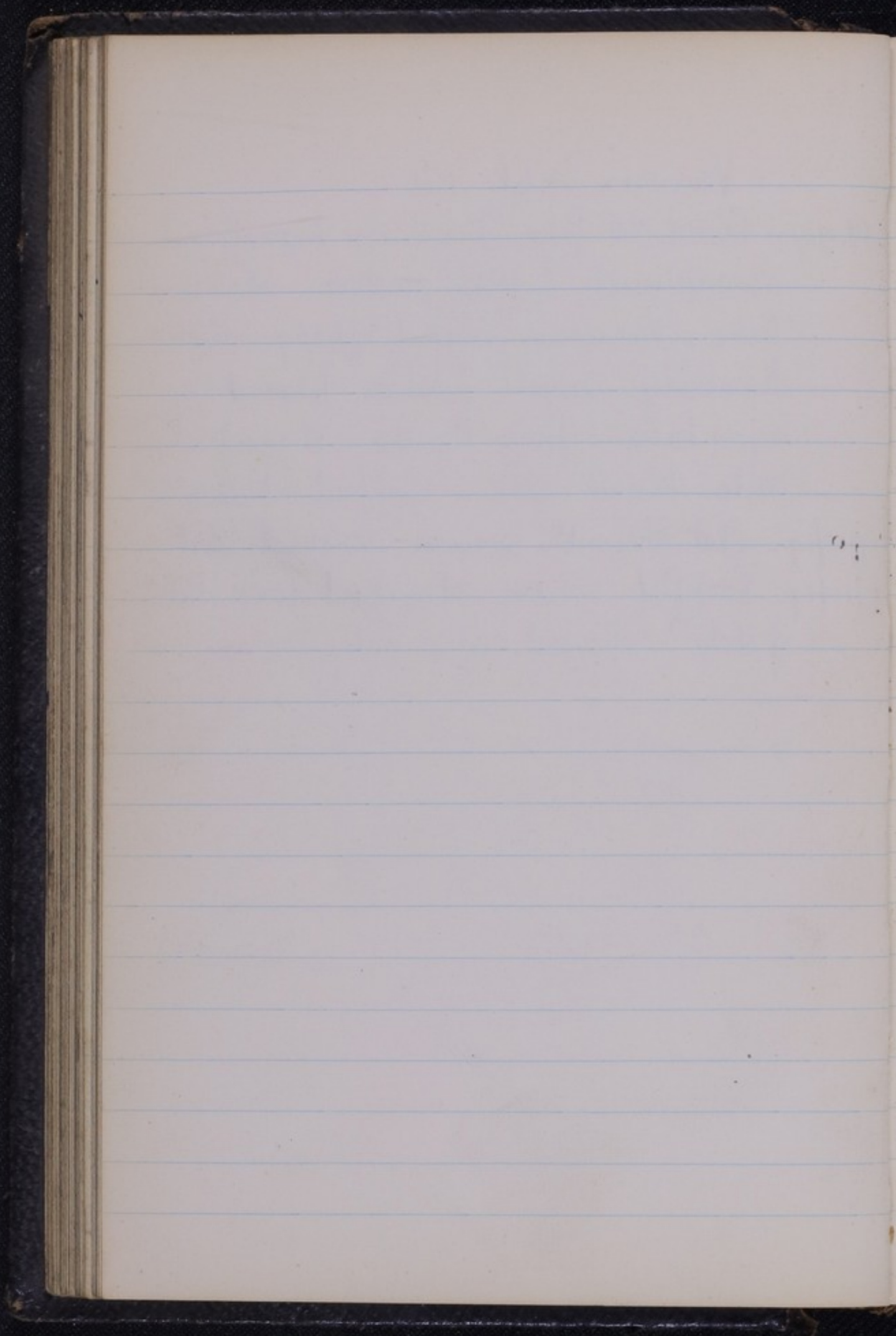




Vaccinea Prept. 151.

- 14.10/19. Blood clot from fluid 130 transferred aseptically? into another sterile tube. Vaccinea dated 14/10/19 Allen & Hambury. small portion placed on agar tube & from thence streaked onto blood clot - Capped at  $40^{\circ}\text{C}$ .
- 17/10/19. Clot shrunk - serum covered clot.
- 110/19. Scoopful serum streaked down tube of stch? showed cocci only.

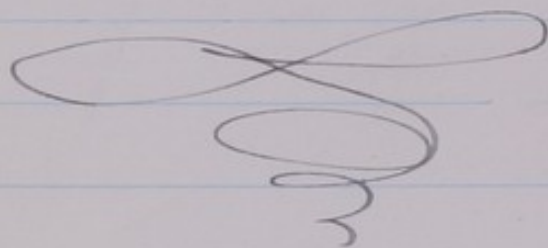




Vaccinia Escht. 152.

3/10/19 - Vaccinia dated 14/10/19. Allen &  
Hanbury - small portion placed on  
ord. agar tube. from Mence ~~subculture~~  
onto 1 tube each of Ich. 417 -  
Ich. 855 (Powers) 861<sup>862</sup> - 864. Capped at  
37°C.

3/10/19 - 2 colonies examined proved to be  
Staphylococcus - no diptheroids.





Vaccinia 153.

7/11/19. Vaccinia dated 6/11/19 Allen, Hanbury  
placed on Tch. 865 - Three dilutions  
Capped at 37°C.

Dil 2. placed in Buchner's tube with a  
suspension of lime in distilled H<sub>2</sub>O  
at the bottom. (very cloudy liquid).  
Placed at 37°C.

Vaccinia 154.

14/11/19. Vaccinia dated 6/11/19 Allen Hank  
small portion incised down a tube of ach 426  
and placed in Buchner's tube with  
heated animal charcoal below & air in  
Buchner's "washed out" with  $\text{CO}_2$  from  
cylinder then cord rapidly put in  
incubated at  $39^\circ\text{C}$ .

17/11/19 1/4 part Probable coccons. discarded





Vaccinia 155.

14/11/19 Vaccinia dated 6/11/19 Allen & Thoms  
Small portion mi. down one tube of  
each of Ach 420, 422, 423, <sup>6426</sup> also  
421, 424 and 425 placed in Bull's  
apparatus with Pyropallin and not before.  
Then air removed with  $\text{CO}_2$  from cylinder.  
Then partial vacuum made with air  
pump until gauge registered 300 mm  
Then caustic Soda.

17/11/19 Contain coils like cress on most tubes, chiefly  
most vigorous 426. Next 425 and 423, then 424  
and 422; nothing definite on 420 & 421  
between coils on 420 & 421? any water from? Vaccinia  
put on. Film from edge of coils on 426 it seems.  
Some small mites on glass faintly & from coils discarded  
Ach 425 discarded, 424 discarded  
Ach 420 showed some granules & few cress discarded  
Ach 421 showed some granules? several cress & some all  
showed numerous white (unstained) granules  
Ach 422 showed some fine granules discarded



Act 423 film & fume show him 6 frames

Act 421 r.c on 421 tube II & tube I discarded

Act 423 r.c on 423 tube II & tube I ~~discarded~~  
<sup>placed aerobically</sup>

tube II from under same conditions as tubes I originally used

18/11/19 Act 421 tube II but cond is flooded over.

Act 428 tube II ? too tiny coils below, film

& fume show, fine pink & granules & ~~roughly~~  
cond is flooded over

Act 423 tube II but cond is flooded over.

19/11/19 Act 423 tube II film & strip fume  $\frac{1}{2}$  hour  
show more of pink granules (very fine) on

20/11/19 Act 423 tube II tube shows metallic luster  
a low pt tube cond is flooded up

film from low pt & fume too at last but show

more of fine granules. film from up metallic pt show

some fine granules, low pt r.c on Act 429 tube I

21/11/19 Tube show no material change

Act 423 tube I film from low pt show

Diphtheroid Microc. & some? very minute cocci.

so this part r.c as this did on

Act 433 tube I II & III aerobically 37°C



24/11/19 Ach 433 tube I film shows cocci diphtheroid  
tube II shows cocci & some ? very minute cobs

tube III showed large number of ? very minute cobs  
film & C. Fuchsii showed ? very minute organisms

r-c made on Ach 433 tubes IV, V & VI aerobically

All tubes under  $\text{CO}_2$  anaerobic conditions discarded

(Note Ach 421 & 423 films from rather no cobs

it (Fuchsii showed some granules)

25/11/19 Ach 433 tube IV ? minute cobs film it C. Fuch  
showed debris granules, cond. w. floated partly over

Ach 433 tube I various growth. part = middle  
where flatter & more translucent film showed

cocci diphtheroid & granules. This r-c

as three obs on Ach 439 tubes I, II & III

26/11/19 Ach 433 tube II film from try col looking down

showed cocci & rather small c. discarded

Ach 433 tube I Small cobs out no. discarded & microc discarded

Ach 433 tube III little growth - cond. w. so this floated over.

15/12/19 Ach 433 (dil 3 21/11/19) cobs proved to be  
micrococci





Vaccinia 156.

14/11/19 Vaccinia dated 6/11/19 Allen & Hamb.

Small portion mtd down one tube each of  
Ach 420, 421, 423, 426; 421, 424, 425  
427, 428 and 429 placed in Pullachi's  
apparatus with Pyrogallol. and luteol., then air  
removed to ~~300 mm. pressure~~ with  $G_2$  from cylinder,  
then partial vacuum made with air pump  
until pressure gauge = **200 mm. pressure**,  
then Canth. Soda sol. allow to enter thru tap  
with Pyrogallol. and sol. all at  $37^{\circ}C$ .

17/11/19 Contain cat on mtd luteol., decided  
most v. g. on 426, next 429, then 425  
and 423, then 428 and 424 and nothing definite  
on 420, 421 (<sup>few white</sup> 422) and 427 on these  
and between cells on other tubes? any watery  
growth? Vaccinia put on

Ach 425, 426 and 429 discarded

Ach 424, 421 discarded

Ach 420 films from luteol. on st (7 inch round)

three many granules, it lyses, decolorized and Alcohol, contrast



blue showed tissue of granules

it seems showed tissue of granules

Act 422 film from uncertain pt it seems showed  
little tissue many fine granules

falling r-c taken on tube II

from 420, 422, 423, 427 & 428.

Act 428 also r-c on Act 426 tube II.

18/11/19 Act 426 tube II white col. along needle

track film showed cocci of few granules discarded

Act 420 tube II Nil r-c on 426 tube III

Act 428 tube II ? two tiny col. lower pt. <sup>427 tube I</sup> film it seems  
showed degenerated tissue of granules only. Cond. B.

flooded over

Act 422, 423 & 427 tubes II Nil, condensed over

19/11/19 Act 422, 423 & 428 plus it shows some  $\frac{1}{2}$  hour  
showed many grey fine granules of.

428 tube II r-c on 428 tube III

20/11/19 would be perhaps cond. B. flooded over 420

& 417 tube I. Act 423 tube II show ~~some~~ metallic

tissue in places. hanging drop showed granules with

r-c on 429 tube I

21/11/19 Aeth 420 tube II film <sup>7th sheet</sup> showed three granules on  
24/11/19 Aeth 427 tube II film showed  
granules!





Vacc 157.

19/11/19. Vaccines (dated 18/11/19) (Allen & Hanb)

Small portion mix from cond to upwards  
as stick on one tube for each of  
Ach 420, 422, 423, ~~424~~, 424, 428,  
427, 428, 429, 430 and 431

also on to Ach 416 and 417 + Ech 865.

all placed anaerob in  $CO_2$  as exp 156,  
except vacuum only to 100 mm. pressure

20/11/19 Injunct visible on Ach. 420, 422, 423  
427, 428, 430 and 431

? few tiny wh on 424, few small on <sup>416 and</sup> 425

Some small on 429, Vg on 417 & Ech 865

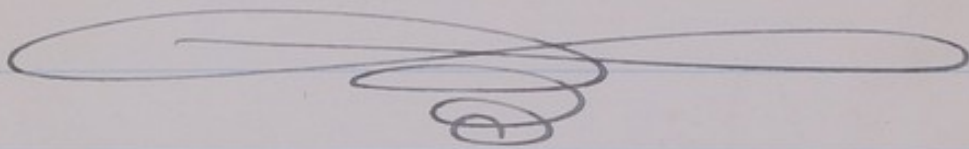
Ach 416 film from between col. it seems to show.

micrococi & granules, 7-c from another part  
between col made on Ach 416 tube II.

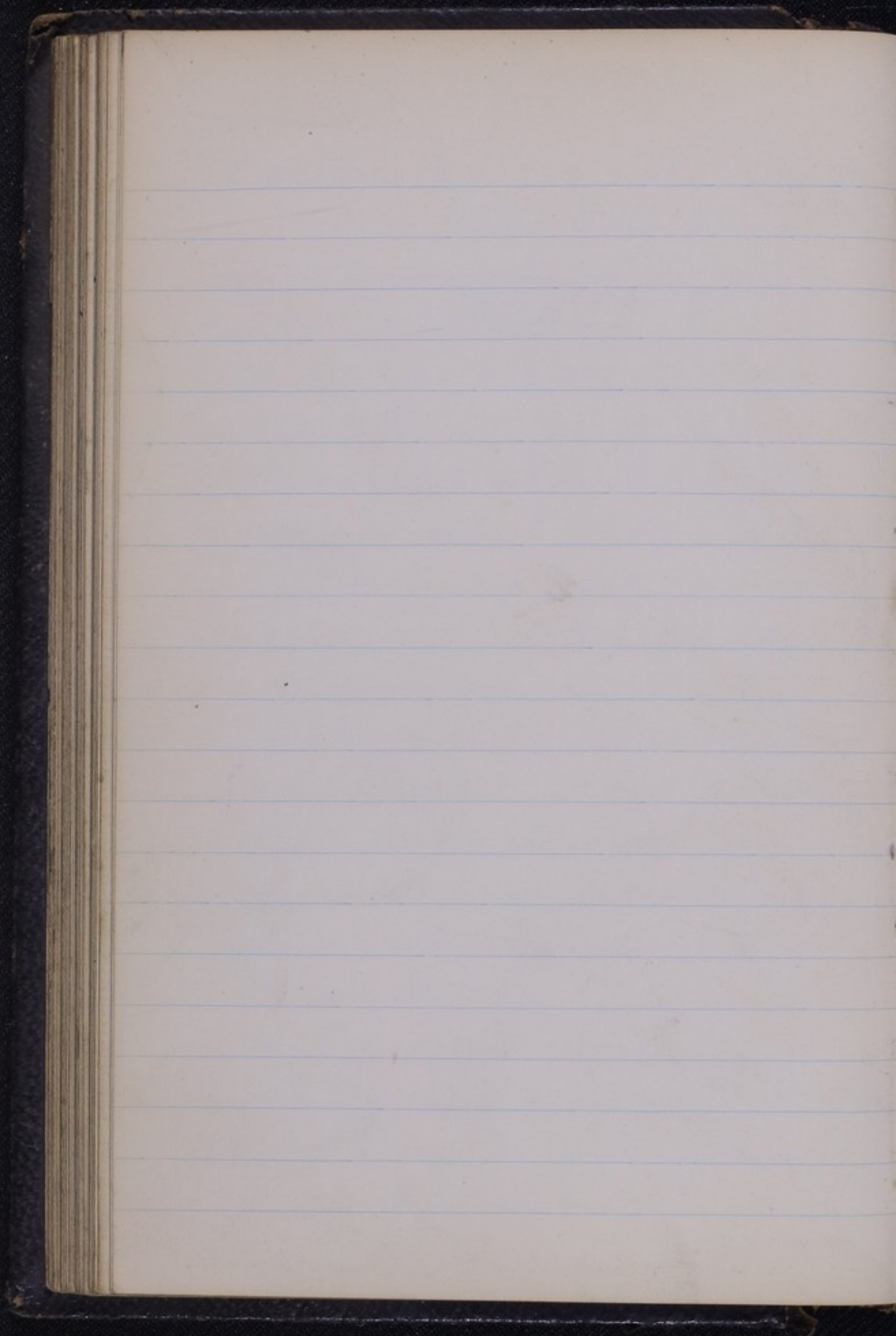
21/11/19 Ach 420 tube I film of P. fructus showed  
thin det. of granules only.

24/11/19 Ach 420, 423, 427, 430 & 423 films from  
area? prob. stained Carol fructus showed  
thin & granules, granules not marked

on 427, 430 & 423, especially 423.







Vacc 158.

19/11/19. Vaccinia dated 18/11/19 (Allen Hunt)  
small portion inc from Cond W. upwards  
as break on one tube each of

Ach 420, 422, 423, 424, 425, 427.  
428, 429, 430 and 431. all applied  
aerolically to 70°C.

also on to Ach 430 & 431 tubes II  
by inc Cond W. & then floating this vac.

20/11/19 Ach 430 tubes I & II, 431 tube II, 420

shows no from A 431 tube I dull cat. con  
431 tube III

21/11/19 Ach 430 tubes I & II Nil.

Ach 431 <sup>tubes I</sup> many cat of coc & diphtheroid

" tube II few cat of coc, few delicate diphlococci

" tube III pure diphtheroid

" 420 & 427 Nil

" 422 Many small coc & diphtheroid cat

" 424 Many small coc & few diphtheroid cat

" 423 & 428 more vig from of coc.

" 425 & 429 1/2 from of coc

" 431 tube III ... on today as cat 1

Det varicinas as above inc as det 102 near Ach 433 tubes I & II  
tube I then had both Amato cellae (17/7/18) streaked up lower half.



24/11/19 ACh 433 tube I fanging drop from  
upper half showed bacill. & amoebae.

ACh 424 tube I, broken discarded

ACh 433 tube II shows one white col. fungus  
some diphteroid, also ? minute sp. granules col.  
film from this & Fuchsii showed some very  
fine granules so r-c on 433 tube III

25/11/19 ACh 430 shows three cols. one med. in  
size dull like diphteroid, a second delicate dull  
proud the ? oval bacillus & a third near  
cond. w. tiny hair growth. film showed nil  
so this r-c on ACh 430 tube III

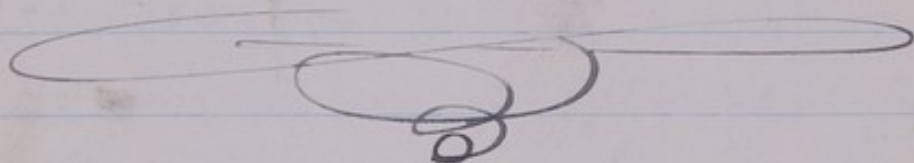
ACh 431 tube II small black ? col. film  
showed nothing definite.

ACh 433 tube III ? minute cols film &  
carb. Fuchsii showed. debris & fine white stained  
granules so r-c on ACh 438 & 439. Aerobically

~~ACh 430~~

28/11/19 ACh 430 tube I fluffy - cond. w.  
film showed branching diphteroid  
breaking down into granules.

15/12/19 No Material change  
Col 1 now marked media organic 62





## Vacc 159

19/11/19 Same vaccine as 158 exp.

small portion shaken up from cond. w.  
on one peak of Ach 422, 425, 427.  
428, 429, 430, 431, 416, 417 and Ech 865  
tube placed in Bueloch's apparatus with.  
Oxygenated Air Inlet. Then  $\text{CO}_2$  passed  
in from cylinder until I measured  $\frac{1}{4}$  to  $\frac{1}{2}$  of  
air was displaced. Then <sup>partial</sup> vacuum with air pump  
until gauge showed 100 mm pressure.

Then Canth Plate not allowed to flow in  
to Oxygenated Air inlet; placed at 37°C.

20/11/19 Nil visible on 422, 427, 430 & 431

few very tiny col on 424 & 428

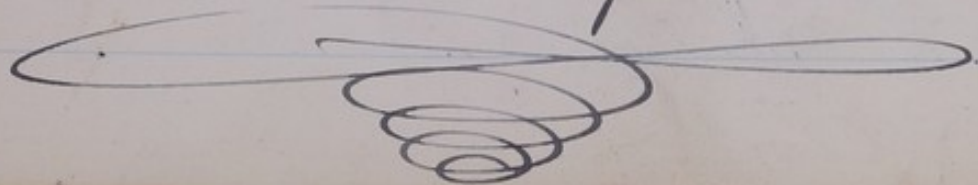
few tiny on 425

May try on 416 which also has several thin plates  
film from one there showed big bacillus.

Ach 417 & 429 show many small col

Ech 856 shows many fair V. col coating

24/11/19 No material change





Vacc Sep 16 4.

Vacuum dated 22/11/19 Allen O'tamb taken

19/12/19 Some spread over 4 tubes of Ech 865.  
all capped 237 °C.

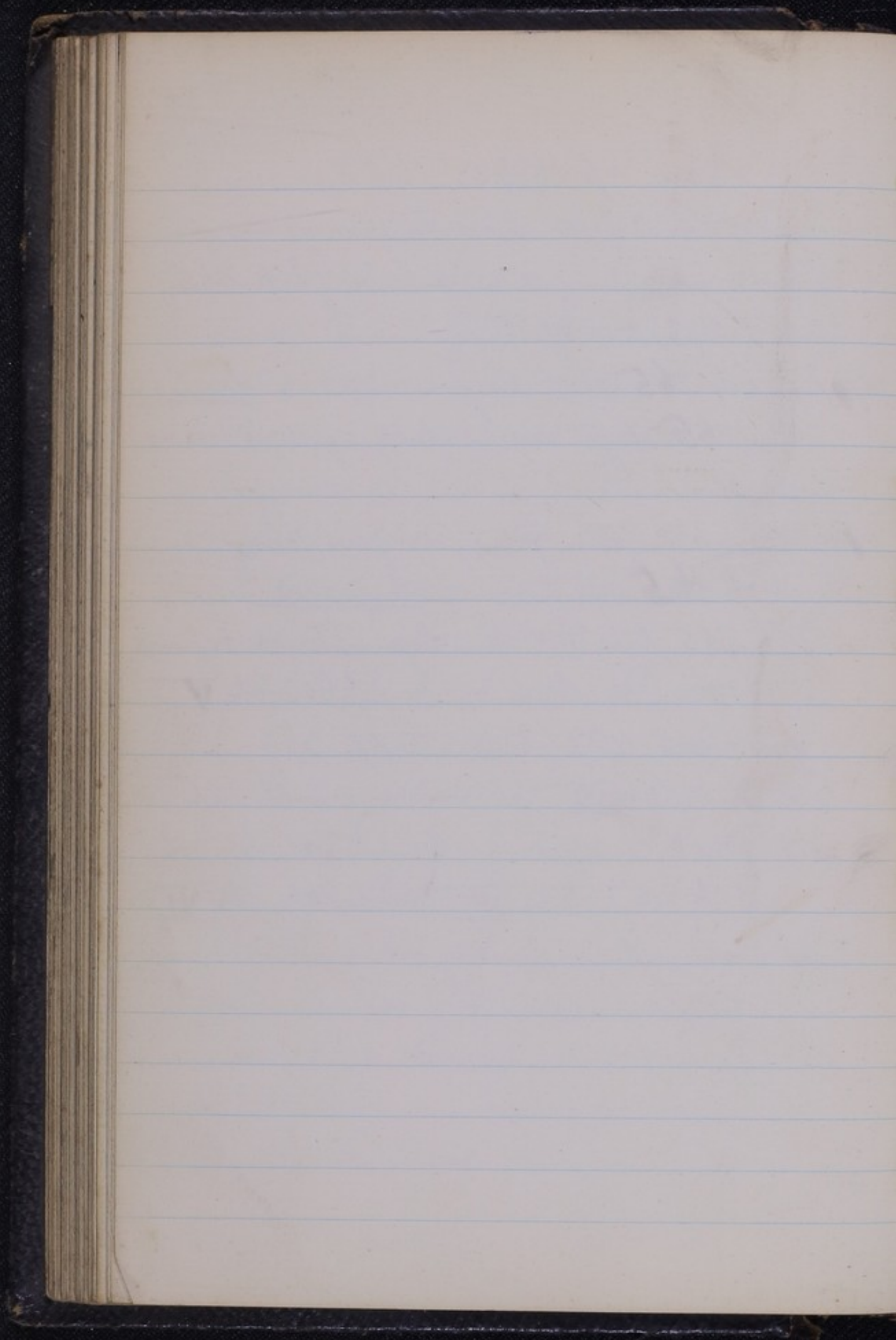
14/1/19 Ech 865 tube I overgrown mould & discarded  
Ech 865 tube II overgrown partly by, condensation  
on agar.

15/1/19 Agar on taken yesterday overgrown sporing, discarded  
Ech 865 tube II also discarded

Ech 865 tube III few large white colonies & growth  
in condensation. Also on Ech 865 tube V  
and Aeth 457 tube II capped.

Ech 865 tube IV shows one small white colony.  
growth in condensation. Condensation on Aeth  
Aeth 457 tube III & Ech 865 tube VI



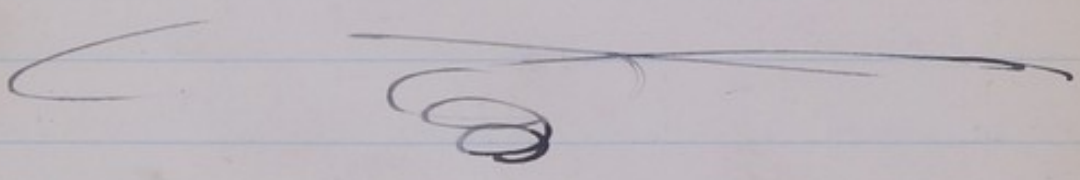


Vaccinia Sep 160.

19/11/19 Same Vaccinia as ref 158.

Small portion sheated up from lower pt of film  
(not touching cond W). of each of Ach 424  
425, 427, 428, 429, 430, 431, 416, 417  
+ Ech 865.

24/11/19. Ach 431, 427, 425 + 424 film  
from uncontain pts of C Fuchs in  
showed granule most marked: 424





Vacc Sep 165

Vaccinia dated 16/1/20 (Allen & Hunt)

Small portion inc on 6 - three tubes of Ach 456  
as these did & could be flooded over. also from tubes  
I or 2 Ach 447, 451, 452 & 453. each  
tube I (dib 2) All placed in Bulb's

anaerobic Apparatus with  $\text{CO}_2$  as per ref 134

28/1/20 Ach. 447, 451, 452 & 453 show no definite growth  
so all discarded

- Ach 456 I II III show mostly heavy cols, some denser  
& few? spreading. Then replaced on various tubes of Ach 458

28/1/20 various cols picked off on Ach 458, and 2 plates of Ach 458  
out on these independent

30/1/20 Pure growths of Cols 1, 2, 3, 4 taken on orig. Ach (459)

Capped @ 37°C, 1, 2, 3, microsc. & Diff. lit. 10 min, 1 med. in  
3 light

For 2d 1? disapp. replaced on Ach 459. Capped. All orig. tubes  
discarded

2/2/20 Cols 1, 2 & 4 fair/vig. Col 3 delicate. These 4 for growth,

dense, translucent & very delicate looking. These 4 for 2-cultures.

3/2/20 3(a) = microsc. varying in size of fls & pairs. Very dense cols.

3(b) & 3(c) ? growth, nil seen each after 2-c on Ach 458, fresh  
cultures taken from orig mixed Col 3.

10/2/20 All tubes discarded except Cols Col 3(b) & 3(c)  
"from orig" on Ach 458 no growth discarded

Continued after Sep 162



Vaccinia Sep 16/

21/11/19 Same Vaccinia as exp 158

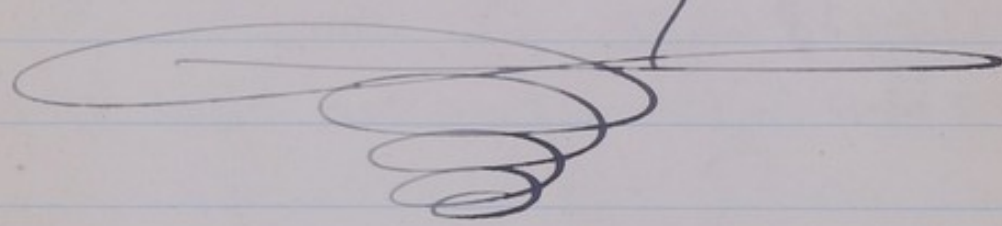
Small portion streaked up a tube of  
Ach 432 and 433 then each of these  
streaked down with light Cal bacillus isolated  
from Foris Amoeba culture. All @ 37°C.

24/11/19 Hazy drops from both tubes showed  
bacilli only.

25/11/19 Ach 433 some col down streak quite long,  
then from try col it (much showed, medium size b.

15/12/19 Hazy drops showed no amoeba  
433 large small b.

432 small b only.





Vaccinia Sep 162.

25/11/19 Small portion of vac dated 22/11/19 (Allan Hunt)  
streamed down one tube & each of.

Act 424, 427, 428, 429, 430, 431, 433,  
434, 436, 437, 438 and 439. do 440

also on 434 <sup>and 439</sup> tubes II which were then  
touched in low pt with Zoster Amara culture

26/11/19 But little growth on any of tubes except where  
amara planted.

Act 438 film showed debris of granules &  
vac on Act 438 tube II

Act 439 tube I movable growth, vac on 439 tube III

28/11/19 Act 440 tiny trans. col. from whole microc.

Act 438 tube II film from low pt.  
showed tiny granules, some more definite large pits  
so could be streaked out.

Act 427, 438, 433 film showed debris of granules

Act 428 and 431 films showed debris of granules

Act 437 vac on Act 444 tube I

Act 424 tiny col. in cond. vac so this streaked out

Act 434 & 439 tubes II discarded



1/12/19 ~~Tubes~~ show no material change  
Ach 424, 428, 429, 431, 433, 436  
437 & 440 discarded

5/12/19 No visible change, all tubes  
now placed back in the same  
Pullich's apparatus without fresh  
Grap + canula without CO<sub>2</sub>.

12/12/19 No visible change.

All discarded except

430, 438 and 439 tubes I

Ach 438 r-c on 442

Ach 439 r-c on 443

Ach 430 Tail is lower third from tube vacuoli

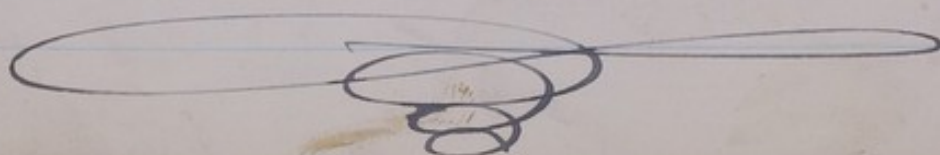
? Col at bottom? Facelli r-c on 430 tube II

Vagdelicote col in middle, Nil seen in film r-c  
on 430 tube III All placed CO<sub>2</sub> Anacard

15/12/19 Ach 430 tube II film showed short fat  
tail: discarded

Ach 430 tube III chalky white part discarded

Ach 430 tube I discarded





Exp 165 continued.

10/2/20. Col 3(a) 2-c on Ach 460

Col 3(b) 2-c from oip mixed 3 on Ach 460

Col 3(c) 2-c from ? growth on Ach 458 (3/2/20)

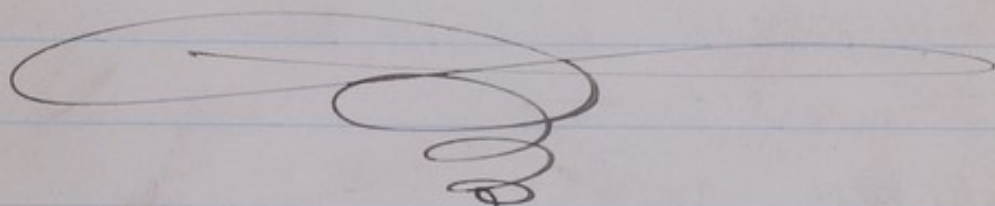
Col 3(b) on oip mixed 3. film showed. numerous  
microvesc some large. general streak from tube  
2-c as Col 3 on Ach 468

Col 3(b) & 3(c) ? growth on Ach Ach 458 film show  
frames only. Cond. floated over.

17/2/20 Cols 3(b) & 3(c) no growth on any of tubes  
so discarded

Col 3 on Ach 468 (10/2/20) no growth discarded

Col 3 on Ach 459 (30/1/20) 2-c on Ach 473 tube.  
and oip tube discarded





Vacc 163

25/11/19 Small portion of vac dated 22/11/19 (all in 8 tanks)  
skated down one tube each of

Ach 430, 431, 434, 436, 437, 438 + 439.

also down 434, 438, & 439 tubes II

also down upper pt of Ach 433 (to be made 21/11/19)

where amebae & not from

26/11/19 Ach 434, 438 & 439 media tubes show  
white col. = substance media, evidently contaminated  
media.

Ach 439 tube I one small delicate spreading  
col. = lower pt film showed large coccus.

Most of the tube I show few small cals

Ach 439 tube II delicate growth spreading up from  
lower growth film from edge showed  
rather large bacilli.

15/11/19 No material change

Ach 434 & 439 tube II hanging drop show Amabae

Ach 438 tube II hanging drop no amebae found.

Ach 431 ? growth below. film at C Rich  
showed granules.



Vacc Exp 166.

29/1/20 An old tube Fraccina used (Allen Hank)  
+ small portions inc on to a tube fecal  
of Aek 460, 461, 462, 463. from then  
on to tubes II as 2nd dils.

Tubes then placed uncapped in Bullock's  
anaerobic apparatus (without any Gyroball or P. H.  
Bell jar then filled with expiratory air from the  
incubator at 37°C.

30/1/20 Tubes then incl., first expiratory air  
placed in Bell jar.

2/2/20 Aek 460 tube I one large col of micrococci  
several smaller. Two tiny proved to be micrococci  
so tube discarded

Aek 460 tube II Nil visible

Aek 461 tube I far off white col alone of growth is  
condensed. discarded

Aek 461 tube II Nil

Aek 462 tube I condensed large col of micrococci, discarded

Aek 462 tube II Nil

Aek 463 tube I growth is condensed.

Aek 463 tube II Nil discarded



3/2/20 ACh 462 tube II dense growth by cond L.

ACh 463 tube I fairly dense growth by cond L.

4/2/20 Tubes show no material change.

ACh 463 tube I ? watery color in lower  $\frac{1}{3}$  r-c on  $\delta$

ACh 463 tube III

9/2/20 ACh 460 + 461 tube II a lot of watery material on tubes but no definite growth

ACh 461 tube II r-c on ACh 461 tube III

ACh 463 tube III some micrococ cl along streak

ACh 463 tube I Micrococ growth lower part? Disapp

no r-c on ACh 463 tube IV

ACh 462 tube II Growth of yellow microc in lower part.

10/2/20 ACh 463 tube IV some white color some very tiny

ACh 461 tube III Nil visible

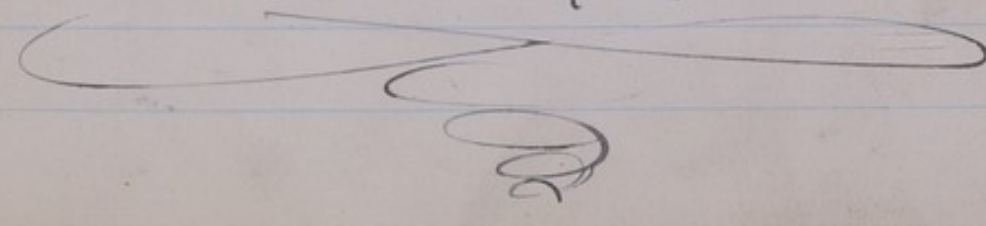
ACh 461 tube II r-c on ACh 468 tube I

13/2/20 Tubes show nothing special so all discarded

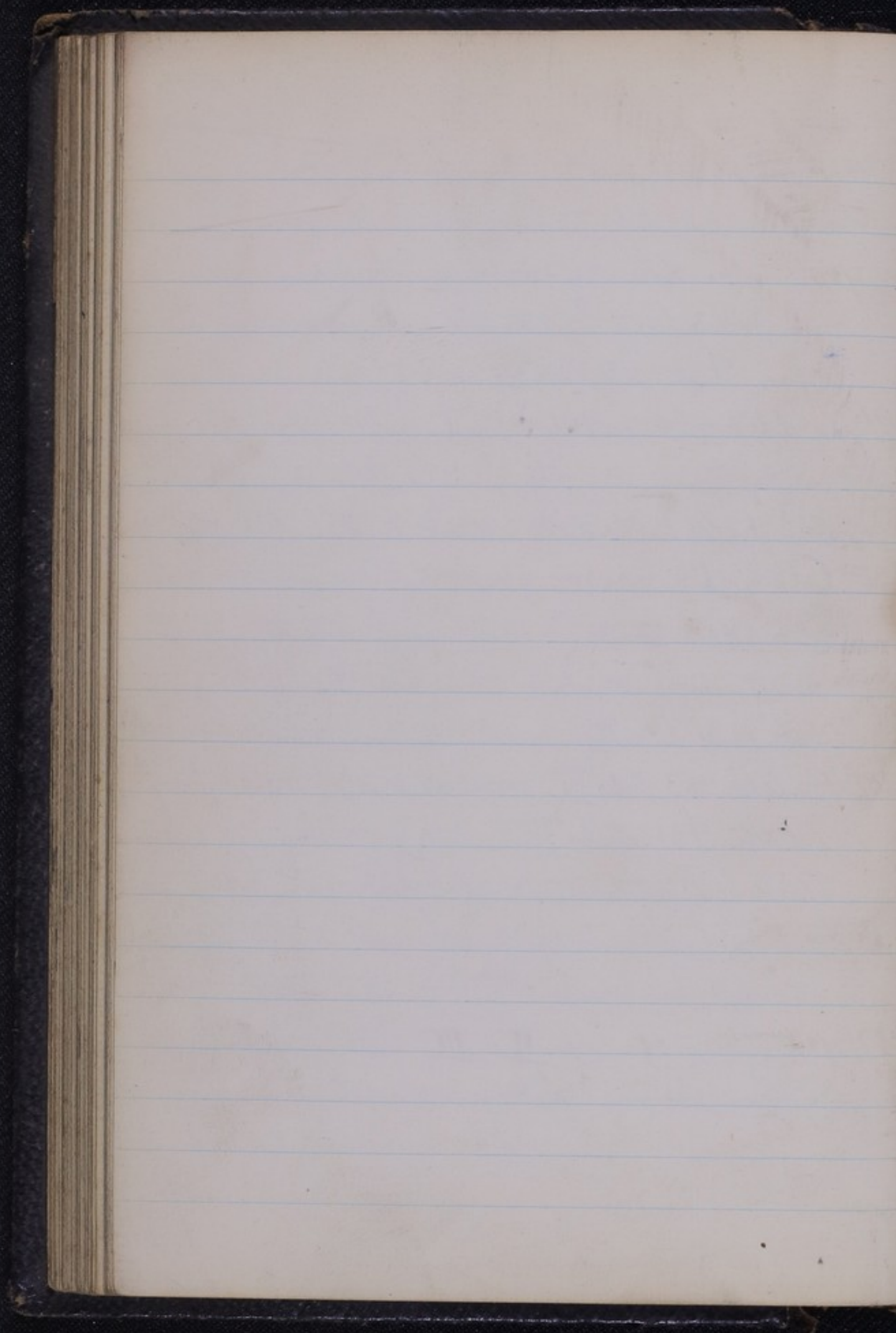
except 461 tubes II & III and 468 tube I

17/2/20 ACh 461 tube II & III + 468 tube I

films showed nothing definite.







Vacc 167

Varinia dated 4/2/20 in lead tube Allen Hamb

9/2/20 Small portion taken & rubbed over one tube  
of each of Ach 466, 467, 468 & 469, 461, 462  
all capped & 37°C. 463

10/2/20 Ach 461, 462 & 463 slight growth? disappearing

Ach 466, 467, 468 and 469 show a considerable  
number of white at some time. Ach 468 where  
colonies coalesce appear most varieties of one.

? disappearing so this part placed out  
on four tubes of Ach 468 as dts 1, 2, 3 & 4.

11/2/20 Ach 468 dt 2 (10/2/20) covered cal. with  
? disappearing spectra so 2-5 on Ach 460 tube I

Ach 468 dt 4 (10/2/20) no new growth below  
promised rather large vacuoles.

Ach 462 tube I slight growth? disappearing  
in lower  $\frac{1}{3}$  film showed few micrococci  
sub-cultured onto Ach 466 tube II

12/2/20 Ach 466 tube II streak growth from A.

Ach 460 tube I streak growth, translucent in places  
film showed micrococci. Translucent in mixed places out  
on Ach 459 tubes I II & III (dts) + white film placed out on tubes IV V VI



12/2/20 3 (b) <sup>30</sup> on Ach 458 (3/2/20) no growth discarded  
Col 3(a) on 460 (10/2/20) fair growth. Col 3 on 468 nil  
Col 3 (16 3/1 on 460 nil

13/2/20 Agar tube plate IV V VI show white cols  
one r-c from VI as Col 1 on Ach 459.

Agar tube I II show white cols of film starting  
to become transparent so one of this r-c as Col 2 on Ach 459.

Ach 467 tube I usual contents, discarded

Ach 468 tube 162 (10/2/20) covered growth discarded

244 growth large & below. few cocci Col above discarded

243, Col diff. theroid, cocci, also delicate Col. Micro: Col 3  
orig tube discarded

Ach 468 tube I usual contents, discarded

Ach 466 tube I usual contents, discarded, tube II nothing special discarded

Ach 460 tube I white cocci little more brown transp. discarded

Ach 469 tube I usual contents, cocci Col very brown, one

r-c as Col 4 & orig tube discarded

Ach 462 tube I nothing special discarded

Ach 463 tube I nothing special discarded

Ach 461 tube I ? Col in middle, film showed few fair size very

round bodies so this r-c as Col 5 on Ach 461, orig discarded

Ach 459 tube II III IV V VI now discarded

Continued after exp 168



Vacc 168

9/2/20 Same Vacc as exp 167, small portion  
mci on to one tube each of ACh <sup>161, 162, 163,</sup> 466, 468 & 469  
all placed in Bullock's anaerobic apparatus  
(without Glycolic acid or NaOH), air replaced by  
expiratory air from lung.

10/2/20 ACh 462 slight prodn &? disappearing  
ACh 461 and 463. few white cols &? disappearing  
ACh 466 many white cols & few tiny  
ACh 468 many white cols, fair number of small  
& delicate spreading prodn from below.

ACh 469 many white cols & few tiny  
13/2/20 ACh 461 tube I. tiny col prodn in  
microcosm so tube discarded

ACh 468 & 469 each tube I, usual contains  
so both discarded

ACh 466 tube I colonies for white micro discarded

ACh 462 few micro cols also one? col. film  
from this showed nil so on 462 tube II  
tiny discarded

~~16/2/20~~

- 1/2/20 No change



17/2/20 Aek 462 & 463 tubes no no  
natural charge



Exp 187 continued

16/2/20 Col 5 on Ach 161 no definite growth,

film & (Arch showed little dark granules only  
Col 2 sub-cultures as on a little transparent

17/2/20 Col 2 on a little turning transparent

Ach 459 tube I most transp. pt. 2-3 on

to Ach ~~472~~ <sup>459</sup> 459, 472, 473, 474 & 476 tube I

18/2/20 Ach 459 tube VII good growth no transparent pt.  
<sup>474 and</sup>

Ach 476 tube I good growth no transparent

Ach 472 tube I little more veg than 474 & 476

Ach 473 tube I growth more veg still, no transparent

20/2/20 Col 5 on 461 (13/2/20) no definite growth so  
2-3 on Ach 474.

23/2/20 Col 5 on 474 no growth so platinum  
loop (uninv) drawn down the surface  
& tube recapped.

24/2/20 Col 5 on 474 still shows no evidence of growth.

5/3/20 Col 5 on 474 still shows no evidence of growth  
so this tube 2-3 on to Ach 499 & capped.

17/4/20 Col 1 <sup>2</sup> on 459 (13/2/20) mostly transparent  
with secondary white cols.

Col 3 delicate white cols. Col 4 rather stringy

Col 5 on 461 Nil, on 499 & 474 Nil



Ch 472, 473, 474 & 476 tubes I + 458 tubes VI  
show growth only hairs & minor dentures.



Vaccini Exp 169.

17/2/20 take Vaccinia dated 10/2/20 (Allen Hamb)

Small portion moic on the two tubes of each

of Ach 472, 473, 474 and 476

All placed in Bullock's Anaerobic apparatus  
(without Gypsumella & NaOH) but in an atmosphere  
respired air.

18/2/20 Ach 472 & 473 Dets 1 show large number of Cals

Det 2 show considerable number of Cals

Ach 474 & 476 Dets 1 & 2 show but little growth.

19/2/20 Ach 474 & 476 tubes still show but little definite  
growth. Intersurface covered with watery particles

474 tube I r-c on 474 tubes III & IV (Dets 1 & 2)

film from tube show several b & large number granules

Ach 472 tube I uncontain pt r-cultures (? touching

col of cocum) on Ach 472 tube III

20/2/20 Ach 474 tube III & IV no definite growth

no tube III r-c on Ach 474 tube V

Ach 474 tube II r-c on Ach 474 tube VI

Ach 472 tube III growth of cocum discarded

Ach 473 tubes I & II covered with r, discarded



21/2/20 Ach 472 tubes I & II many cols discarded

Ach 474 & 476 tubes I discarded

Ach 474 tube VI? grown in bottle 20-20 on 474 tube VII

23/2/20 Ach 476 tubes II & 474 tubes II III & IV no change  
so all discarded

Ach 474 tubes V & VI no change tube VII Nil

25/2/20 Ach 474 tubes V VI & VII show Nil.

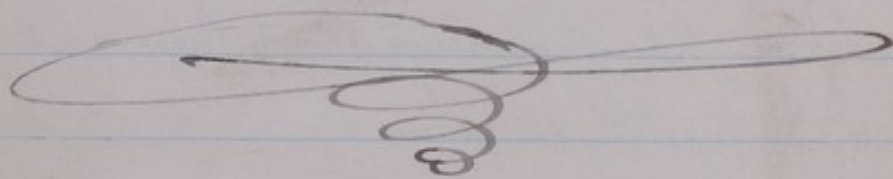
1/3/20 Ach 474 tubes V VI & VII? several tiny cols  
tubes V & VI discarded tube VII 20-20 on

to 486 tube I

2/3/20 Ach 486 tube I Nil visible.

Ach 474 tube VII Nil visible discarded

4/3/20 Ach 486 tube I Nil





# Vacc exp 170

19/2/20. Taken 100 cc of saline, add 1 cc of fluid 157.  
add remainder of tube, Fracina (same as used in exp 169)  
left in dark at room temp

20/2/20 Flash of fluid now passed through  
New Berkefeld English No 2 @ 100 mm pressure  
about 60 cc passed in 2 minutes. Residue

distributed into test tubes. One of them taken  
and 10 drops of fluid injected over Alk  
474 tubes I II III + IV + 476 tube I.

Alk 474 tubes I + II + 476 tube I placed in  
atmosphere of oxygen air. Alk 474 tube III  
capped aerobically. & tube IV placed  
anaerobically in Buchner's tube.

21/2/20 Alk 474 tubes I + II ? any growth so  
tube I & c on 474 tube IV. V

Alk 476 tube I no evidence of growth.

Alk 476 tube I + 474 tube II and flooded over

Alk 474 tube III looks like slight growth

Alk 474 tube IV & c on Alk 474 tube VI  
and tube IV now left aerobically. for from  
this it (Fuchs) showed



23/2/20. Ach 474 tubes III & IV few tiny flakes on surface but nothing definite so discarded

Ach 476 tube I Nil discarded

Ach 474 tube III Nil discarded

Ach 474 tubes I & II few flakes only, an unnnio. platinum loop drawn up tube I from cond. v.

Ach 474 tube VI ? few tiny col. along streaks  
no r-c on 474 tube VII <sup>macroficial & Ruelma's</sup> ~~under exposed air~~  
& tube VI discarded

24/2/20 Ach 474 tube VII few flakes - brought  
to break but otherwise Nil.

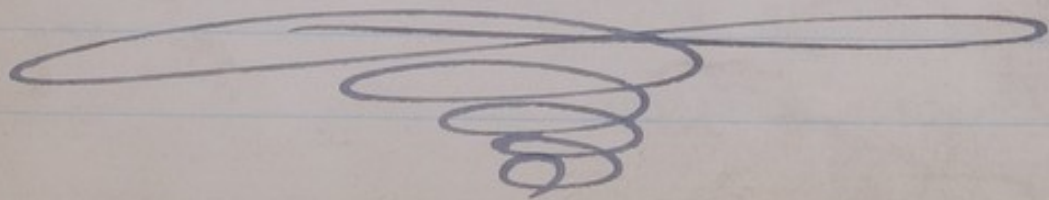
Ach 474 tubes I & II ~~cond. v.~~ unnnio. platinum  
loop streaked up from cond. v.

25/2/20 Ach 474 tubes I & II Nil. tube VII no change

1/3/20 Ach 474 tubes I & VII ? few tiny col., tube II <sup>VII</sup> discarded  
tube I r-c on to Ach 486 tube I, ~~after now~~

2/3/20 ~~all but~~ Ach 486 tube I shows Nil

4/3/20 Ach 474 tube I & 486 tube I Nil visible





Vacc Exp 171.

8/3/20 Vaccinia dated 5/3/20 Allen Stamba  
large loopful taken from with one drop  
sterile tap water this 2-con B  
Ach 499 tubes I II and III (III is a 2<sup>nd</sup> dil)  
all placed @ 37°C under exposed air.

9/3/20 Ach 499 tubes I II & III ? any minute cols  
? one on dil 3, following 1st taken.

tube <u>I</u>	on Ach 499	tube <u>IV</u>	} <del>discarded</del>
<u>II</u>	"	<u>V</u>	
<u>III</u>	"	<u>VI</u>	

10/3/20 Ach 499 tubes I II & III no change discarded

Ach 499 tubes IV & VI fail

tube V ? one col but pt. film showed  
granules & debris only.

12/3/20 Ach 499 tube IV 2-con Ach 500 tube I

"	<u>V</u>	"	<u>II</u>
"	<u>VI</u>	"	<u>III</u>

~~Ach 499 tubes IV V & VI discarded~~

16/3/20 Ach 499 tubes IV & V may ? cryt cols discarded

tube VI ? cryt cols discarded



16/3/20 Ach 500 tube I shows large small  
? cryst cols ~~discarded~~, film of Cuch  
shows granule fls - clumps. discarded  
tube II shows large small ? cryst cols  
20-25 on 504 tubes I & II by  
first making <sup>some</sup> into emulsion with  
shute sap water

tube III shows few large ? cryst cols, film  
of Cuch shows large flakes granular  
containing minute granules & many  
unstable ~~small~~ minute round dots.

20 of ? fresh made into emulsion with  
little shute sap water & this 20-25 on

A Ach 504 tubes III & IV (dis 182)

17/3/20 Ach 504 tubes ~~II~~ <sup>III</sup> & IV growth  
Very slight if any. 20 fresh cults taken by  
scrapping off some growth from Ach 500 tube II  
into few drops sterile water & this 20-25 as before  
on Ach 500 tubes IV & V and culture made  
same way from Ach 500 tube III on the  
Ach 500 tubes VI & VII



18/3/20 Ach 500 tubes IV shows fair number cyp' cols  
tubes V & VI few cyp' cols tube VII? several.

19/3/20 Ach 504 tubes I II III & IV possibly a  
few? cols, as discarded

Ach 500 tube II & III unchanged discarded

Ach 500 tubes IV V VI & VII show few  
large? cyp' cols tubes V & VI discarded

Ach 500 tube IV single col - on 506 & 507 tubes I  
" " VII " " " " " II

22/3/20 Ach 506 tubes I & II? several small cyp' cols

Ach 507 tubes I & II several round cyp' cols on

tube I - on 507 tube III  
II " " IV

23/3/20 Ach 507 tubes III & IV show some not many  
small round cyp' cols.

24/3/20 Ach 500 tube IV round cyp' cols discarded  
discarded

" VII possible cyp' cols some roundish discarded

Ach 506 tube I Nil tube II Nil discarded

Ach 507 tubes I & II roundish cyp' cols discarded

Ach 507 tubes III & IV fair size roundish cyp' cols  
tube IV discarded



25/3/20 ACh 500 tube IV given to Mr Barnard.

ACh 507 2-c on 2 ACh 506 tube III

ACh 507 tube V and ACh 508 tube I

An uninv tube ACh 508 tube II had an  
uninv platinum loop drawn up.

26/3/20 ACh 506 tube III + 507 tube V no definite fruit.

ACh 508 tube I large number small cal

tube II Nil 2-c on 508 tube III

29/3/20 ACh 508 tube II & III Nil discarded

ACh 506 tube III Nil discarded

ACh 507 tubes III & V few roundst cyp cal discarded

ACh 508 tube I many cyp cal

30/3/20 ACh 508 tube I 2-c on 508 tube IV

-1/1/21 Vacc Exp 175

Vacc dated 20/8/20 mvc on Sch 883

This placed under bell jar <sup>over mercury</sup> filled  
with Oxygen. 1/4 ~~at 37°C~~ and CO<sub>2</sub> 4/16. 23°C

-1/1/21 No growth.

Vacc Exp 176

-1/1/21 Vacc dated 11/1/21 mvc on Sch 883

This placed under bell jar (over mercury)  
filled with CO<sub>2</sub> from cylinder. 23°C

-1/1/21 No growth

Vacc Exp 177

-1/1/21 Vacc dated 11/1/21 mvc on Sch 883

and Aeh 535. & then placed under

bell jar (over mercury) filled with equal  
quantities of O<sub>2</sub> & CO<sub>2</sub> from cylinders. 23°C

-1/1/21 Sch 883 shows various cultures of micrococci  
Aeh 553 Out.

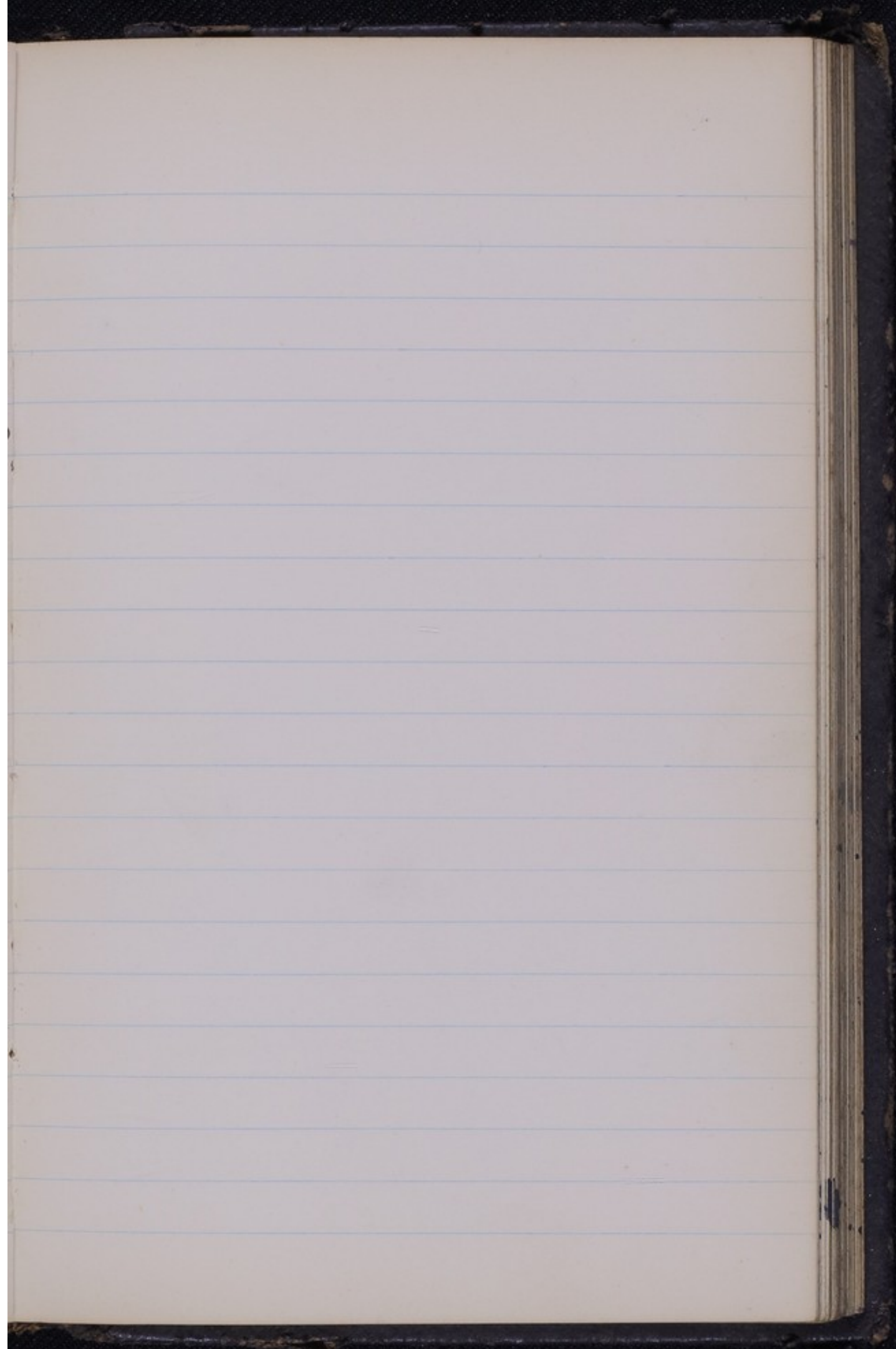


## Vacc 178.

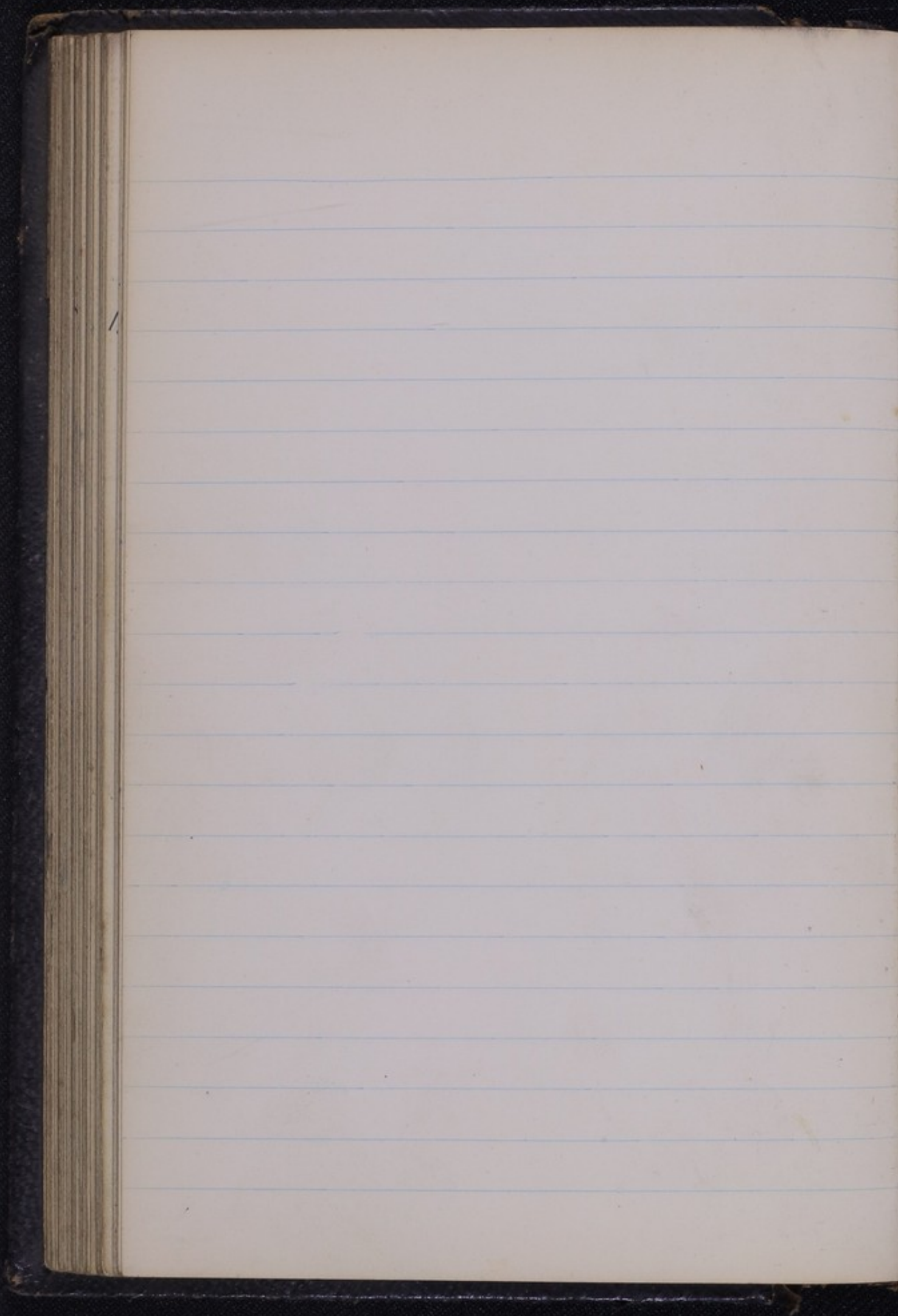
- 17/1/21 Vacc dated 11/1/21 noc on to  
 Eeh 883 + (this placed in closed jar  
 filled with  $O_2$  then removed  
 with air pump until ext pressure = ~~22 inches~~  
 = 55 Cm. of mercury. Incubated @ 37°C. <sup>metan</sup>  
 18/1/21 Tube shows few faint colonies  
 of micrococci only

## Exp 179

- 18/1/21 Vacc dated 11/1/21 noc on to inc  
 tube part of Eeh 883 + Aeh 535  
 then placed in closed jar filled with  $CO_2$   
 $CO_2$  then removed with air pump until  
 ext pressure = 55 Cm. of mercury.  
 Incubated @ 37°C.







Vacc Sup 172

Vacc dated 6/3/20 Allen & Bant

drop taken & inc into cond 2 of Ach 508

tube I cond 2 of this & c into cond 2 of tube II

old cases cond 2 flooded over

then cond 2 of tube I dropped & streaked down

Ach 508 tube III. All capped @ 37°C.

26/3/20 Tubes show few? small cryst cols

no one on tube III & c on tube IV

29/3/20 Ach 508 tube IV Nil.

Ach 508 tube I several? col picked off

on to Ach 508 tubes V VI & VII VIII  
1/4/20 tube I? cryl? & c on 508 tube IX unicel tube X also put @ 37°C.

7/4/20. Ach 508 tube I cocen overgrown discarded

Ach 508 tubes V VI & VIII Nil discarded

Ach 508 tube VII? several cryl cols discarded

Ach 508 tube IV? several cryl cols discarded

Ach 508 tubes II & III Nil discarded

Ach 508 tube IX one cryl col along needle track

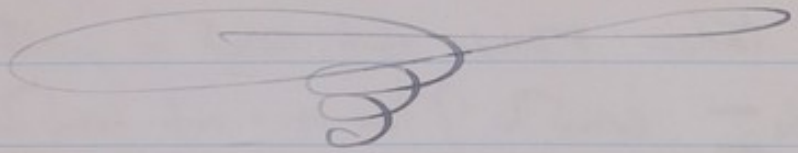
~~no one on 508 tube XI.~~

no one on 508 tube XI.

tube X? two cryl cols & c on tube XII



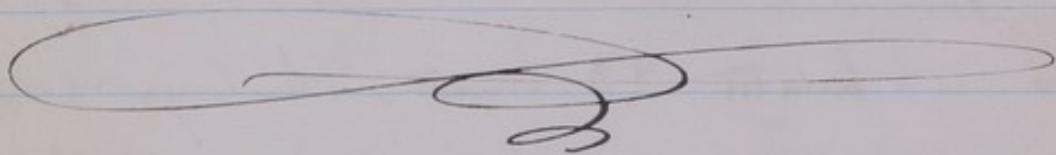
19/4/20 Tuber show ? any cryst. cal.



## Vacc Exp 173

Vaccinia dated 14/4/20 (Allen Hart)

21/4/20 large loopful placed in fluid 170 tube I  
uncapped @ 37°C. flr  $\frac{1}{2}$  hour s.c.  
on Ach 509 tube I uncapped @ 37°C  
Small Negative



## Vacc Exp 174

2/9/20 Vacc dated 20/8/20 (Allen Hart) Small  
portion mov onto lower pt of tube II of  
Amal exp 80 (Amal + flu) 7 days old  
also on a 24 hr growth of flu 81 on Ach 523.  
Amal + flu = tube I, flu culture = tube II  
6/9/20 Tubes I & II show vig growth at side of  
mic down to end v. Hanging drops show  
nothing special. Tube I s.c. made from  
just above Vacc vig growth on Ach 523 tube III  
+ capped.



8/9/20 Tube III shows typical fish growth

Tube I Hanging drop from low pt shows

many active resting animals & various organs

Tube III 2-3 on ECh 867 tube I capped

9/9/20 ECh 867 tube I hanging drop mostly mobile  
~~small, motile or firm~~

showed delicate growth of hair large to

13/9/20 ACh tube III H.D. Small to the large of <sup>only</sup> ~~discarded~~

Tube II H.D. from pt above of growth small to of ~~discarded~~

Tube I 2 from discarded

ECh 867 tube I moderate growth. fish pt  
for eye swollen & tapering to some red lines.





# Vacc 180

Tube of Vaccinia dated 1/4/21 streaked down  
on late fresh 542 & two tubes of Ach 546  
near streaks <sup>of tubes I</sup> was then streaked down

Col 7 of fas exp 16, ~~Vaccinia also used~~  
cond ~~W~~ of Ach 546 & on Ach 546 tube II  
was streaked down Col 6 of fas exp 16.

Vaccinia was also used - cond ~~W~~ of Ach 546 tube III  
allowed fresh ones, allowed to settle & then  
Col 7 of fas exp 16 was used as streak down center  
all capped @ 37°C.

6/4/21 Ach 542 tube I may have eye contain col  
growth along streak

Ach 546 tube I covered col very growth disused  
tube III large contain col growth along streak  
tube II small way col & very growth along streak

one way col (film out) rather one Ach 540 tube I  
as Col 18 then tube streaked down with the eye streak with

7/4/21 Ach 542 tube I + 546 tube III no material change  
Ach 540 tube I growth along streak only.

Note 3 white col picked off Ach 546 tube III as Col 423  
on to Ach 540 tubes + Col 4, 2, 3, Crown Col 1 also  
taken on Ach 540 tube.



Ach 546 tube II a very mottled col shows  
few granular bacilli & very many minute granules  
some in streaks on three tube of Ach 540  
as Col 5.

8/4/21 Col 1 + "streak" on (6/4/21) shows streak  
growth of few col on surface of tube proved  
to be micrococci.

Cols 2 & 3 show very white growth; 2 & 3 covered  
Col 1 shows some very growth, not compared with.

Col 4 (+ 4+1) more delicate growth, especially  
upper  $\frac{2}{3}$  where col extremely tiny, film  
from tiny col shown micrococci.

Col 5. shows nil on any of dils. film from dil 1  
below. shows nil (tube now streaked down  
(hydrolysis of the streak) with streak growth on  
Ach 546 tube II

12/4/21 Ach 546 tube II drying up discarded

Col 2, + 2+1, white streaks discarded

Col 1 + "v" streak growth & few ~~isolated~~ micro col discarded

Col 5 dil 1 very growth along streak only discarded

dil 2 very growth below only, dil 3 nil



Col 3 whitish froth.

Col 3+1 waxy whitish froth.

Col 4 & 4+1 dense white froth, discarded

25/4/21 Col 5 & 5+1 Out discarded

Col 5 & 5+2 Some v. pale with marked

brownish orange yellow coloration from  
secondary brownish? crust col, coming  
from the "Col 6" type originally placed on  
Ach 546 tube II, discarded

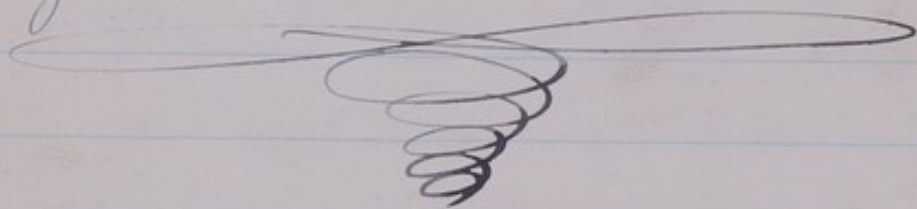
Col 2 dense white froth discarded

Col 3 v. yellowish froth

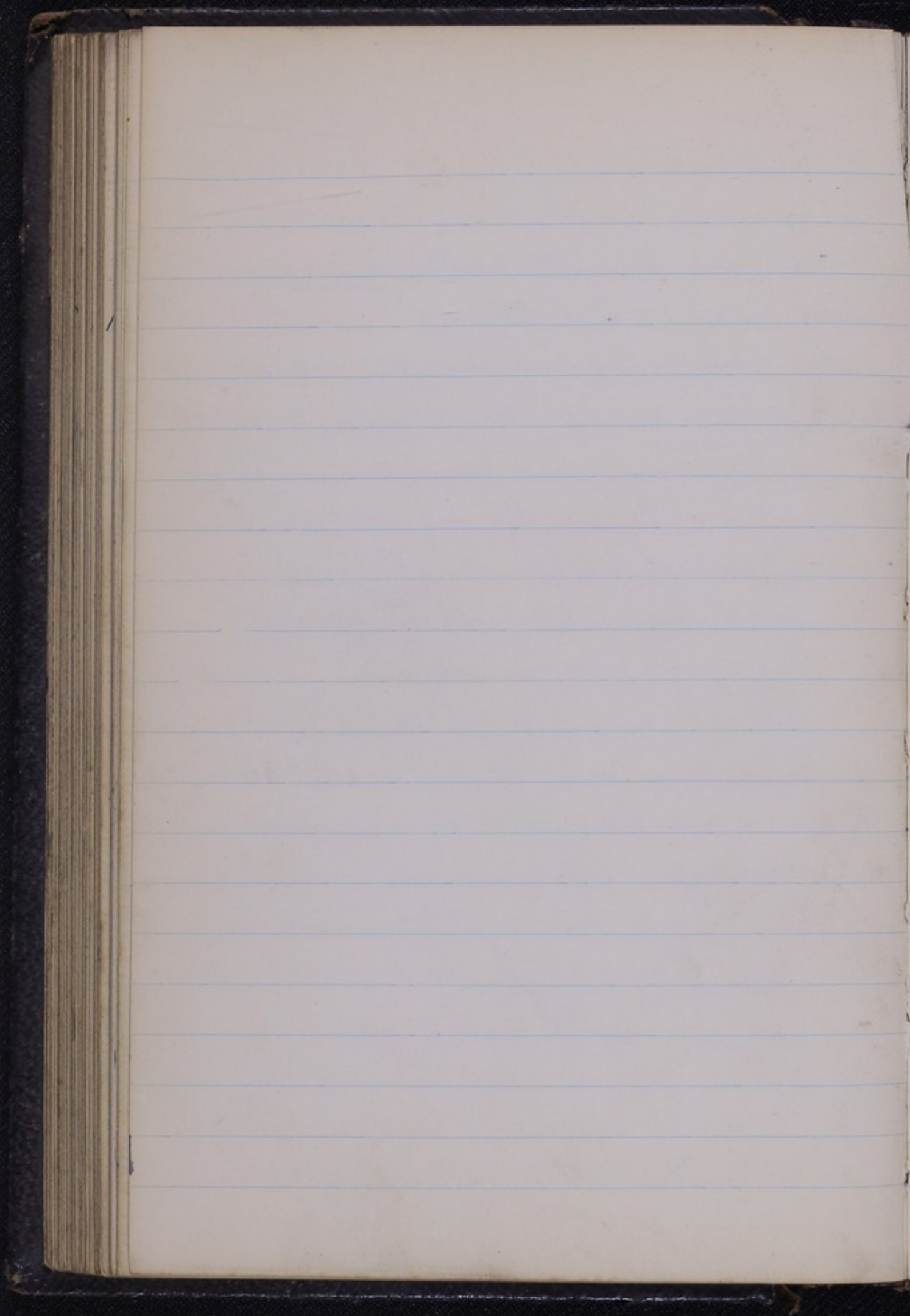
Col 3+1 more delicate whitish froth.

Col 3 & Col 3+1 rec on Pt Ach 536 (fly or)

3/5/21 Col 3 & 3+1 both show yellowish white  
froth.







# Vaccinia ~~180~~ 181

19/4/21 A small drop of Vaccinia placed  
on Ach 540 tube I + a drop of cont. 2  
rolled up to mic with it. The r-c  
a streak down Ach 540 tubes I II III  
also streaked down Ach 898 tubes I II III  
Tubes I then <sup>inoc</sup> ~~the~~ dropping streak of Col 3 streak up 85  
II " " " " " " 7 far up 16  
III " " " " " " streaks Col 3 285 & Col 7 & 16.

Thus tubes I & II <sup>Col 3 or 7</sup> <sub>vacc</sub> tube III <sup>Col 3 or 7</sup> <sub>vacc</sub>

21/4/21 Ach 540 tubes I & II contain tubes only growth  
tube III Col 3 only growing.

Ach 898 tube I Col 3 growing well, few contain along  
tube II ? any growth of Col 7, but along vacc streak.

tube III Col 3 growing well, Col 7 growing in places. Not  
visible along vacc streak, film from line  
it (Fuch showed) little droplets & few granules.

25/4/21 Ach 540 tube I contain only lower  $\frac{1}{3}$  discarded  
tube II contain only lower  $\frac{1}{3}$  discarded

Tube III Not definite. ? slight growth along Col 3  
film show. back of shell. discarded

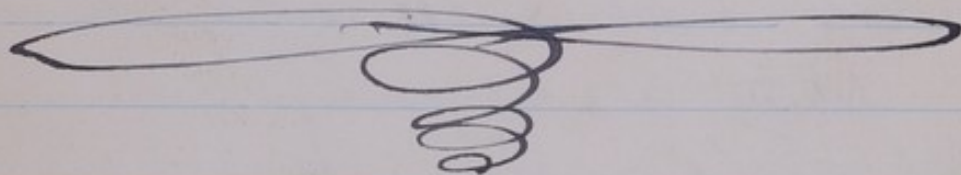
Ach 540 Tubes I II & III show that Ach 540 unsuitable for  
growth of Col 3 & Col 7.



Elch. 898 tube I good growth of Col 3, but few  
contains only a few Vaccinia streaks discarded

tube II good growth of Col 7 with much heaped  
up lump - lower pt. but a few Vaccinia streaks  
film from heaped up shows minute organisms  
a few threads discarded

tube III both Col 3 & Col 7 streaks growing fairly well  
Col 3 growth - lower pt. <sup>only</sup> Vaccinia streaks  
probably grown up from on former streaks,  
film showed minute bacillus discarded





Vacc Exp ~~81~~ 182

19/4/21 Ach 540 tube (a) of exp 180 was r.e  
as streak down Ach 540 tube I, both  
capped at 37°C.

20/4/21. Ach 540 tube (a) shows some contains  
probably uncontain pts r.e as streaks  
down centre of four tubes of Ech 901.  
Tubes then streaked down with other growth  
diverging above & finally made to join tubes  
as follows.

Ach 540 & Ech 901 tube I with Col 3 ameb ref 85  
and Col 7 for Sep 16. Thus

Ech 901 tube II with Col 3 2858 Flu 68 thus

" III " Col 7 S. 16 + Flu 68 thus

" IV with flu 68 drawn up & crossed in middle thus

" IV with flu + Col 3 & Flu + Col 7 thus

Ech 901 tube I broken discarded.

21/4/21 Ech 901 tube IV Vacc streak up growth contains disco  
tube II Col 3 streak starting top row. ~~not off~~ not along  
tube III Col 7 streak started top row, not along flu or vac streaks

25/4/21 ~~from~~ Ach 540 growth. brought up tubes from up streaks  
a short way. discarded

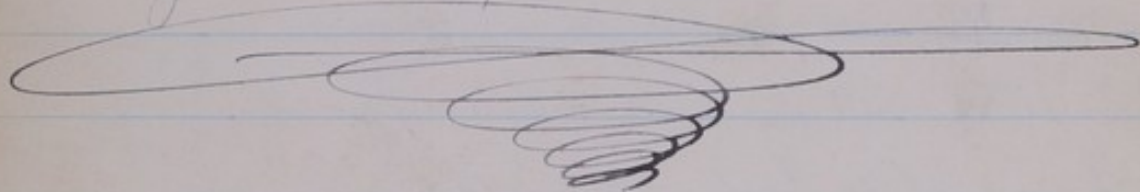


25/4/21 ECh 901 tubes II & III no growth  
along the strata, but growth along  
Col 3 & 7 & shaped up brown where the  
meets the mac below.

Tube II film from vac streak has linear shre  
few cocci & few granules.

Tube III film from vac streak has linear shre  
? few cocci & many fine granules.

2/6/21 ECh 901 tubes II & III now show.  
dense heap of yellowish brown growth  
lowest at where film meets Col 3 or 7  
also delicate film growth where streak is  
near that of Col 3 or 7. No evidence  
of vacuaria growth.



# Vacc 183

Vaccinia dated 25/4/21 (Allen & Hunt)

Small leafy full more as streak down seven tubes  
of aeh 545

27/4/21 Tube I nothing else put on

II parallel streak touching below of Col 3 Amal 285

III " " " " + flu

IV " " " " 7 p 16

V " " " " + flu

VI " " " " flu 57

VII " " " " Col 1 felt 8155

~~VIII " " " " large 6. felt 156~~

28/4/21 All second streaks from fair well

Vaccinia streaks show fair number of white Col

29/4/21 All secondary streaks from well.

Vaccinia streaks show micro loci.

2/5/21 No material change. Vaccinia streaks  
mostly overgrown & contain micrococci





# Vaccinia 184.

10/5/21. Vaccinia dated 25/4/21 (Allen & Hunt)  
small particle streaked down four tubes  
of Ach 548 & four tubes of Ach 547.

Tubes I the streaks merge; streak Col 7 p. 16 then

II

Col 3 p. 156

III

Col 3 Prot 85

IV

Col 1(a) p. 156

11/5/21 Tubes I Col 7 just starting to grow, Tubes II no growth

III good growth Col 3 on 547 but? nil on 548

IV Col 1(a) growing down streaks

13/5/21 Ach 547 tube IV good growth of Col 1(a)

" III fair good growth of Col 3 Prot 85

" I fair growth Col 7

" II very delicate growth Col 3 p. 156

Ach 548 " IV good growth Col 1(a)

" I fair growth Col 7

II delicate growth Col 3 p. 156

III no growth of Col 3 Prot 85

18/5/21 Ach 547 all tubes colonies of cocci. Tubes I III IV

secondary streaks of pure Col 7 grown well

tube II secondary streaks remains quite delicate.



Ach 548 vac streaks show core only

Tube IV secondary streak good, tube I secondary streak faint

tube II secondary streak delicate, tube III secondary streak delicate

All discarded except Ach 548 tube I II III

each of these on Ach 549. I to I, I to II

& III to III uncertain vac streaks but big

put on other secondary streak, with tube III this

taken from prot up 85 & no secondary streak

from it on any tube.

23/5/21 Ach 549 tube II & III uninteresting so discarded

Ach 548 tube II & III discarded

Ach 549 tube I film from vac streak showed parallel

Ach 548 tube I upper uncertain pt of vac streak

film showed parallel so on Ach 547

tube V & VI, tube V then had parallel

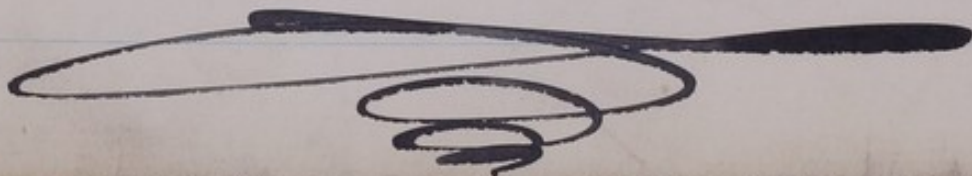
streak of the contour vac core streaks down

& tube VI parallel streak of Col 7 f. 8 16.

31/5/21 Ach 547 tube V shows front of core streak only

Ach 547 tube VI shows front of Col 7 streak only

Ach 548 & 549 tube I no material change





Vacc Sep 185

21/6/21

Vaccines dated 25/4/21 (Allen & Hamb)

Small portion rubbed over three tubes of  
Ech 904 as at 1, 2 & 3, Cond. w. fluid on tube

All capped at 37°C.

28/6/21 Tubes show few odd contents only

Vacc 186.

Vaccinia dated 16/7/21 (Allen & Hamb.)

Small portion inoc on to Ach 905, 906 & 907  
two tubes of each as dts 1 & 2 (tubes I & II).

and placed at 37°C capped 18/7/21

21/7/21 Tubes have grown some cbs

Two sinking in media on Ach 907 tube II

were re as Cbs 1 & 2 on to Ach 549.

growth on Ach 906 tube I mixed with cond W.

& plated out on three tubes of Ach 549

All capped at 37°C

(? 548) tubes I II III

22/7/21 Cbs 1 & 2 grown well, dts of growth on Ach

549 tubes I II & III show cbs but no the

disappearing.

Ach 905 tube I growth mixed cond W (the

then plated out on Ach 549 tubes IV V & VI

25/7/21 Cbs 1 & 2 remain dense.

Ach 549 tubes I II & III no transparent growth discarded

Ach 549 tube IV cbs coarsening? starting to form trains of 20

&c plated out on Ach 548 tubes IV VIII & IX

Ach 549 tubes V & VI all dense cbs no discarded

Ach 905 tubes I & II no change, discarded



2Ch 907 tube T lower pt plated out on Ach 548

Antes  $\overline{x}$   $\overline{x_I}$  e  $\overline{x_{II}}$ . Schokolade  $\overline{10_{II}}$  deswegen

26/7/21 Ach 548 Tuber VII VIII IX X XI XII totale calyptor H<sub>2</sub>

29/7/21 Tubes show no sign of desapping from

Tales VIII, IX, X & XII discarded

Col 1 + 2 2.c on Ach 558

Tube IV on Rep. 558 tube I, tube VIII on II & XI on III

1/8 pr. Call yellowish white from M 2-c on Ach. 558

Col 2 on 558 .. .. with ? two sp. of *transp*, 1-c on 558

Ach 558 like 1 yellowish white frill. Starting transp w edge 2-con tab.

*Act. 558* luteII yellow front n.c. or *Act. 558* luteV

Ach 558 lutum yellowish white spm, ? starting hairs @ edge & on lute VI

4/8/21 Cullins (1/8/21) show. Col 1 yellowish white frost. Col 2 path + brown.

Tales IV V & VI yellowish white. poth. translucent in place  
560 + 561

Cal 1 + 2 Cal 7-1 on Oct. 558. <sup>560 561</sup> Tube IV 7-1 on late VII

lute V r-c on lute VIII, lute VI r-c on IX

but iv also rec on 560 & 561 but T, but v rec on 560 & 561 but ii

tuber VI on 5601561 tuber III, Tuber uncapped @ 37°C

58721 Col 1 whitey gray on all Col 2 whitish with some translucent but on 560  
58722 Col 1 whitey gray on all Col 2 whitish with some translucent but on 560

558 July 14 to 560 & 561 <sup>1911</sup> Yellow white from same environment but on 560  
" July " " <sup>1911</sup> " " " " " " 560

[illegible]



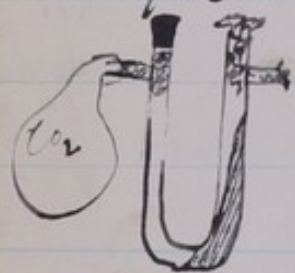
# Vaccinia 187

Vaccinia dated 16/7/21 (Allen Hunt)

18/7/21 Whole tube made into emulsion with saline containing 10% glycine. Placed at room temp in dark.

19/7/21 20 hours after making emulsion. This passed through a smallest new Berkefeld filter at 200 mm. About 20 cc. passed in 10 minutes. The distribution into two test tubes.

Tube I has drops pipette over ECh 906 and 907 tubes I (V tubes)



Empty arm sealed top with rubber bung. Tubulure connected with bag of  $\text{CO}_2$ . media arm uncapped, incubated  $37^\circ\text{C}$ .

Filtrate tube I 10 drops also pipette over ECh ~~906~~ 906 and 907 <sup>tubes II</sup> and Ach 553, 554 555 and 556. Tubes I & II (ord not V tubes)

Filtrate placed uncapped in dark at room temp. All tubes II (ECh & Ach) capped at  $37^\circ\text{C}$ .

Ach tubes I placed in bell jar filled  $\text{CO}_2$  (Byg at Kp below) then reduced so that L.P. on L.P. = 300 mm.



20/7/21 Ech 906 and 907 tubes no evidence of growth  
no cond. v. floated over.

Ech 906 and 907 tubes no definite evidence  
of growth no cond. v. floated  $\frac{1}{3}$  way up  
Ach 553 tubes? growth below. films showed  
large l. no discarded

Ach 554, 555 & 556 <sup>tubes</sup> no evidence of growth  
no cond. v. floated  $\pm \frac{1}{3}$  way up

21/7/21 Tubes show no evidence of growth.

Ech 907 tubes (V tubes) films showed sub-granular  
no cond. v. floated over when one drop of C. v.  
puller down Ach 549 tubes (V tubes) and  
empty arm of V tube connected by  $\text{CO}_2$  as before  
Ach 553, 554, 555, 556 ~~tubes~~ anaerobic  $\text{CO}_2$   
show Nil no discarded

25/7/21 Ach 554, 555 & 556 tubes Nil discarded  
Ech 906 & 907 tubes Nil discarded  
Filtrate tubes Nil discarded

28/7/2 Ech 906 & 907 tubes no definite growth. films old granular tubes  
no discarded



Vacc 188.

Vaccinia dated 23/7/21 (~~24/7/21~~) Reimann from  
Wm Heinemann Esq. 20 Bedford St Lond W.C. 2

26/7/21 A small chop moc on the Ech 905 & 906  
and on B Ach 548 tube I II & III (del 123)

All capped D37 C.

27/7/21 No definite growth on any of tubes.

Ach 548 tube I ? transparent malic acid lower pt  
film of granules below so as rubbed over  
Ach 548 tube IV & the then shaken down  
with col 2 of Vacc cap 186. capped D37 C

29/7/21 Ach 548 tube IV whitish growth on so  
so C from lower pt on Ach 558 tube I  
& 548 tube IV discarded

1/8/21 No growth on any except low contents  
on Ech 905 and yellowish white growth  
without any evidence of disappearing on Ach 558  
so this on on Ach 558 tube II <sup>tube I</sup>

4/8/21 Ach 558 tube II whitish yellow growth  
on 558 tube III & 560 & 561 tube I  
uncapped D37 C.



5/8/21 Ach 558 tube III + 560 + 561 tube I yellowish white  
growth.

9/8/21 Ach 558 tube II + con 558 tube IV + 563 tube I <sup>growth</sup> capped

10/8/21 Culture taken yesterday on 558 tube IV yellowish white growth  
563 tube I poor growth.

Ach 558 tube II + con 558 tube V + 564 tube I

11/8/21 Ach 563 tube I fair orange yellow growth discarded

Ach 560 + 561 tube I yellow growth discarded

Ach 558 tube II growth pale yellow, tube III yellow, IV orange yellow  
so all discarded

Ach 558 tube V + 564 tube I orange yellow growth

12/8/21 Ach 564 tube I + con 567 tube I + II  
tube I capped & tube II uncapped.

15/8/21 Ach 567 tube I yellowish white growth

tube II dense yellowish growth, more translucent

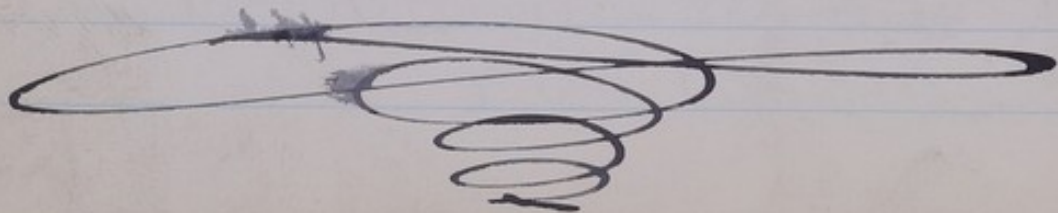
in places so con 568 tube I + II, tube I capped  
II uncapped

18/8/21 Ach 905 tube I central cell big median, very delicate

growth above pruned the base. The org tubes

no growth. All org tubes + old mic tubes discarded

Ach 568 tube I yellowish white growth. tube II orange yellow growth





Vacc 189

Vaccinia dated 25/7/21 Roberts & Co. 76 New Bond St.  
London W.

26/7/21 A small drop m.c. on Ach 905 & 906  
and on Ach 557 tube I for Ach 548 tube II III  
(on ab 1 2 & 3)

27/7/21 No definite growth on any of tubes.  
Ach 548 tube II ? transparent material from pt.  
film showed many fine granules only so  
I & C & rubbed over Ach 548 tube IV & then then  
streaked down Coll. of vac. cap 186. capped

29/7/21 Ach 548 tube IV tube growth, no disappearing part,  
no m.c. from growth on Ach 558 tube I  
& 548 tube IV discarded

1/8/21 Ach 557 tube I grows (contains discarded)  
No growth on any of the tubes except  
Ach 558 tube I where Micrococcus streak  
is starting to become translucent at edge  
so I & C on Ach 558 tube II

4/8/21 Ach 558 tube II from growth, no translucent pt  
no m.c. on Ach 558 tube III & Ach  
560 & 561 tubes I uncapped @ 37°



5/8/21 Acl. 558 tube III & 560 & 561 tubes yellowish white growth.

9/8/21 Acl. 558 tubes I & II on 558 tube IV & 563 tubes <sup>uncapped</sup>

10/8/21 Acl. 558 tube IV shows yellowish white growth

Acl. 563 tube I slight growth.

Acl. 558 tube I & II on 558 tube V & 564 tube I

11/8/21 Acl. 558 tubes I II III IV yellow growth tube I III & IV

tube IV turning aureus color all discarded

Acl. 563 tube I now fair growth aureus color discarded

Acl. 560 & 561 tubes I yellow growth discarded

Acl. 558 tube V & 564 tube I yellow growth.

12/8/21 Acl. 564 tube I & II on 567 tubes I & II

tube I capped, tube II uncapped.

15/8/21 Acl. 567 tube I yellowish white growth. Tube II dense

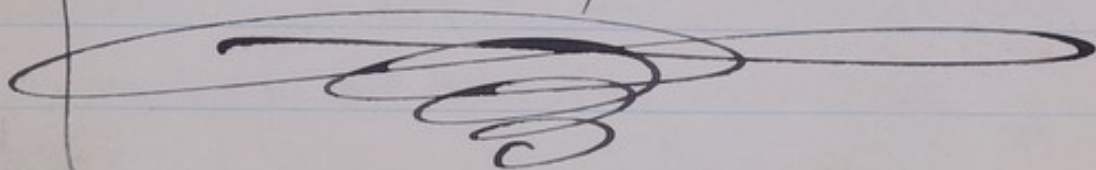
orange yellow growth, tube I & II on 567 tube III

~~capped~~, Tube II & III on 567 tube IV capped

17/8/21 Acl. 567 tube III yellowish white growth. Tube IV orange yellow

Tubes show no change. Org. tubes from

vacuum show no growth.



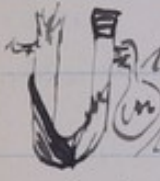


## Vaccinia 190

Same tube of vaccinia received in sep 189

~~26/7/21~~ The large tube (a 15 person tube) contents made into emulsion with 0.85% saline. Slow for 1 hour then passed through small Syph. - Burkfeld. @ 200 W.P. About 20 cc passed in 5 minutes. Of this 5 cc pipetted into test tube T. Of the 5 drops pipetted one Ach 548 + 559 tube T.

Ach 548 stood for 5 min. then streaked down with Col 1 of Vacc. sep 186. Capped @ 37°C. Ach 559 in U tube, Empty arm closed above

 with rubber cork & tubulure connected by rubber bag containing  $\text{CO}_2$ , placed @ 37°C.

27/7/21 Ach 548 tube T growth of corium but no sign of turning transparent.

Ach 559 tube T Nil visible.

29/7/21 Ach 548 tube T a minute transp spot on growth so mixed up with cond. &c. on Ach 558 tube T

1/8/21 Ach 557 tube T (U tube) no macroscopic evidence of growth.



Acth 548 & 558 tubes, no evidence of disappearing  
growth so Acth 548 tubes I & on 558 tubes II  
& 558 tubes I & on 558 tubes III & long tubes discarded

4/8/21 Acth 558 tubes II & III dense growth  
tubes II & on 558 tubes IV & 560 & 561 tubes I  
III .. .. V .. .. II

uncapped & 37 °C.

5/8/21 all tubes show yellowish white growth.

9/8/21 Acth 558 tubes II & on 558 tubes VI & 563 tubes I  
" " III " " VII " " II

uncapped & 37 °C.

10/8/21 Acth 563 tubes I & II slight growth. 558 tubes VI & VII yellowish white  
growth  
Acth 558 tubes VI & on 564 tubes I : 563 tubes I & on 564 tubes II

11/8/21 Acth 558 tubes II & III pale yellow, tubes IV & V yellow  
tubes VI & VII orange yellow growth all discarded

Acth 563 tubes I & II fine orange yellow growth discarded

Acth 560 & 561 tubes I & II yellow growth discarded

Acth 564 tubes I & II orange yellow growth.

12/8/21 Acth 564 tubes I & on 567 tubes I ; 564 tubes II & on 567 tubes II

15/8/21 Acth 567 tubes I & II yellowish growth, & on 568, I on I & II on II  
Acth 557 tubes I & tubes (CO<sub>2</sub>) ? film on upper 1/2, film on granules so capped  
& on Acth 549 & tubes with tubercles tubes connect CO<sub>2</sub> bag.

17/8/21 Acth 568 tubes I & II normal growth. All tubes discarded except  
549 tubes I & tubes connect CO<sub>2</sub> bag. film on granules so capped  
20.2.1 on 569 & tubes I connect CO<sub>2</sub> bag. film on granules so capped  
Continued after Sep 192



Vaccinia 191

Vaccinia dated 23/7/21 (Allen Hanft)

29/7/21 whole of contents of tube nos on  
New tubes of Sch 905. Could then  
float on. All capped at 37°C.

1/8/21 Sch 191 tubes from contain discarded  
Tubes I & II show few round cal. (small)  
Three cal picked off as Cal 1, 2 & 3 &  
placed on Sch 907

5/8/21 Cal 1, 2 & 3 found to be microscopii.

8/8/21 Sch 905 tube II shows a roylt dull white  
heaped up cal from in media not making into  
emulsion. This lifted off with attached media  
& rolled down Ach <sup>558</sup> as Cal 4

Tubes showed. Long thick granular branching  
threads broken into segments, not acid fast  
but showing tendency to retain some of fuchsin in  
places thin discolored with acid alcohol.

Sch 905 tube I & II discarded

15/8/21 Cal 4 from better on fly agar  
than on ord agar.



18/8/21 Col 1, 2, 3, & 4 each on 569 capped  
Col 1 & 2 also on 567 capped

(Note Col 1 & 3 moist, Col 2 dry & more difficult  
to remove from resin - <sup>from Col 1 & 3 rather</sup> ~~delicately~~ <sup>disposition</sup> ~~off~~ <sup>the</sup> ~~resin~~

19/8/21 Col 1 on 567 & 569. fair good dense white growth  
Col 2 Nil on 569, slight on 567

Col 3 fair dense white on 569. Col 4 Nil

22/8/21 Col 1 & 3 on each 569 <sup>very</sup> showing dense from white streaks

so Col 3, being like Col 1, was discarded

Col 1 & 3 on 567 & 907 discarded. Col 1 on 567 & 569 equal good  
so 569 discarded. Col 4 like discarded

Col 4 fair good on 567, but on 569 slight on 569.

Col 2 Not grown, so tubes now streaked down with Col 1

& put in mass for Col 2 on 567 & 569

24/8/21 Col 2 on 567 & 907 (22/8/21) Nil

25/8/21 Col 2 on 907 (1/8/21) placed out on three tubes of each 571 capped  
tube I then streaked down with more growth

26/8/21 Col 2 on 571 del 1. fair good del 2 & 3 Nil.

29/8/21 Col 2 not grown, so all tubes discarded except 571 del 1, and 2  
of this placed out on 572 tube I 571 uncapped.

6/9/21 Each 572 tube I & II Nil discarded

Col 2 on each 572 capped. Col 2 (on Col 571) fair good.

film down from

21/9/21 Col 2 (6/9/21) Nil discarded. Col 1 on 572 only showed

on each 562 capped. Note Col 1 is not used or removed

22/9/21 Col 1 tube getting growth normal but not eq.

23/9/21 Cellulose shows no material change  
Col 1 old tube & from removed dense white not used & one proved it to be dead



Vacc 192

5/8/21 Acc 561 tube II of Vacc exp 186  
minute weak cal at side on

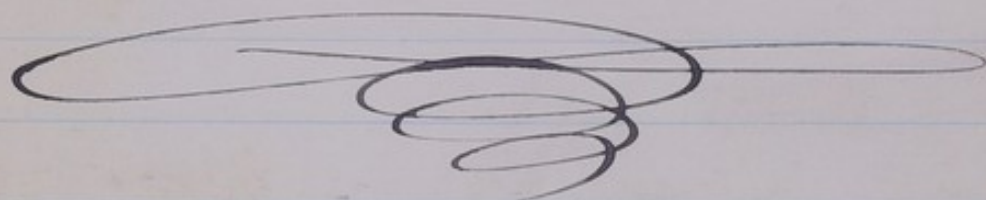
Acc 561 tube I + cond W flooded over stone  
5 min then streaked down from dense growth

~~Acc 558 tube VIII of exp 186 delicate cal growth  
growing out from side of thick on can 3~~

~~Acc 558 tube cond flooded over stone  
stone 5 min then streaked down from dense growth~~

~~Tube uncapped @ 37°C~~

8/8/21 Acc 561 tube dense yellow growth along  
streak with very slight brown growth growing  
out from this, discarded



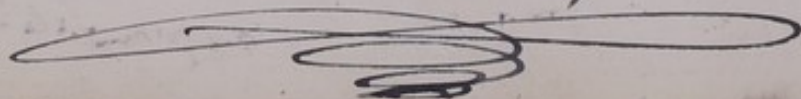
Exp 190 continued

18/8/21

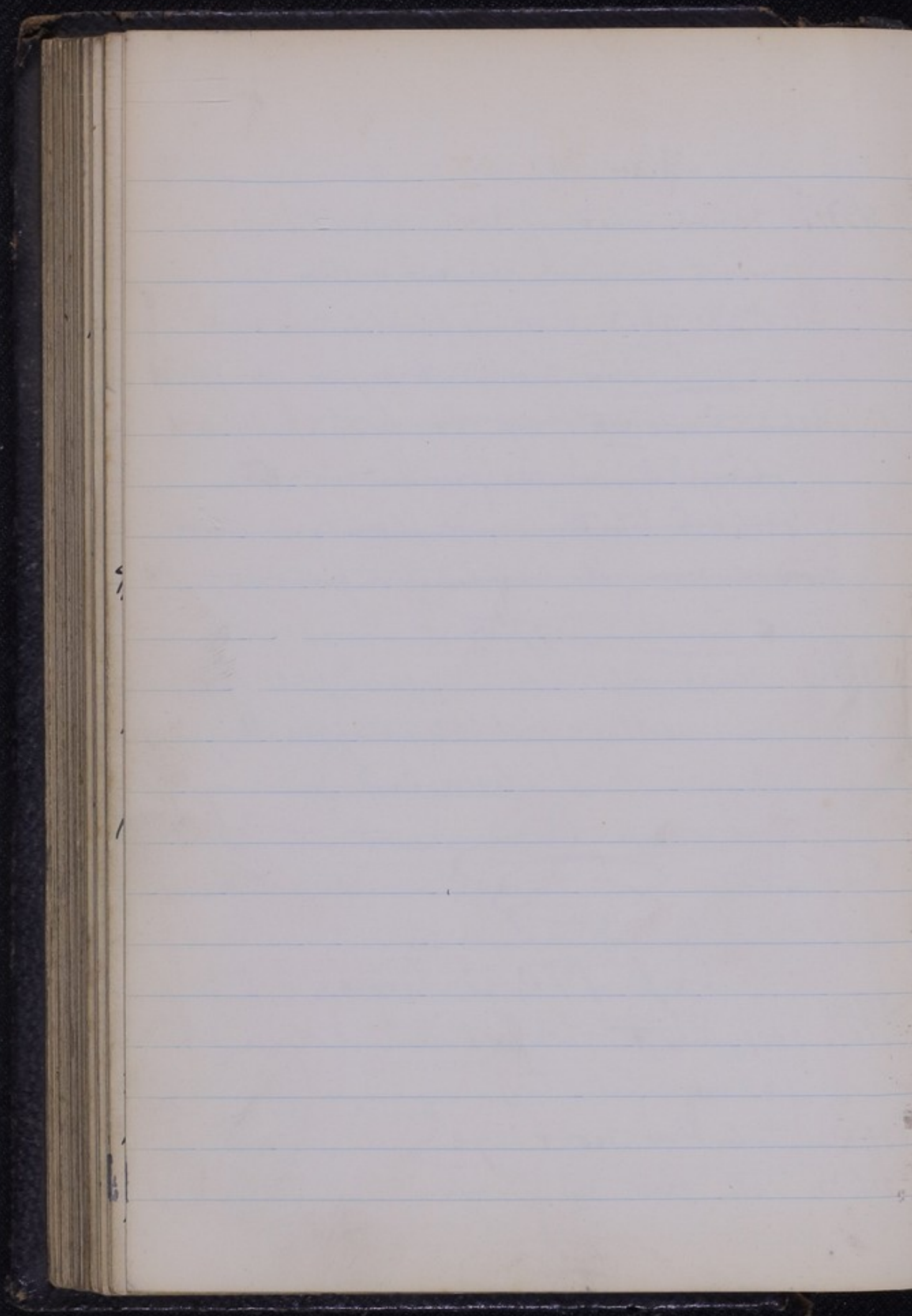
Acc 569 tube I ? several minute dense cal  
for long refilled Co<sub>2</sub>

19/8/21 Tube shows no change

22/8/21 Tube shows no change





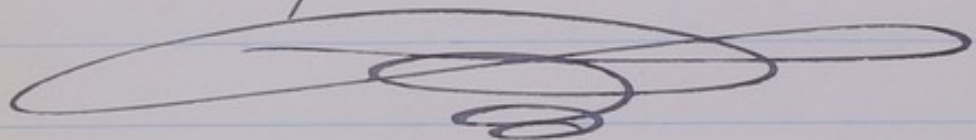


Wacc Sept 1933

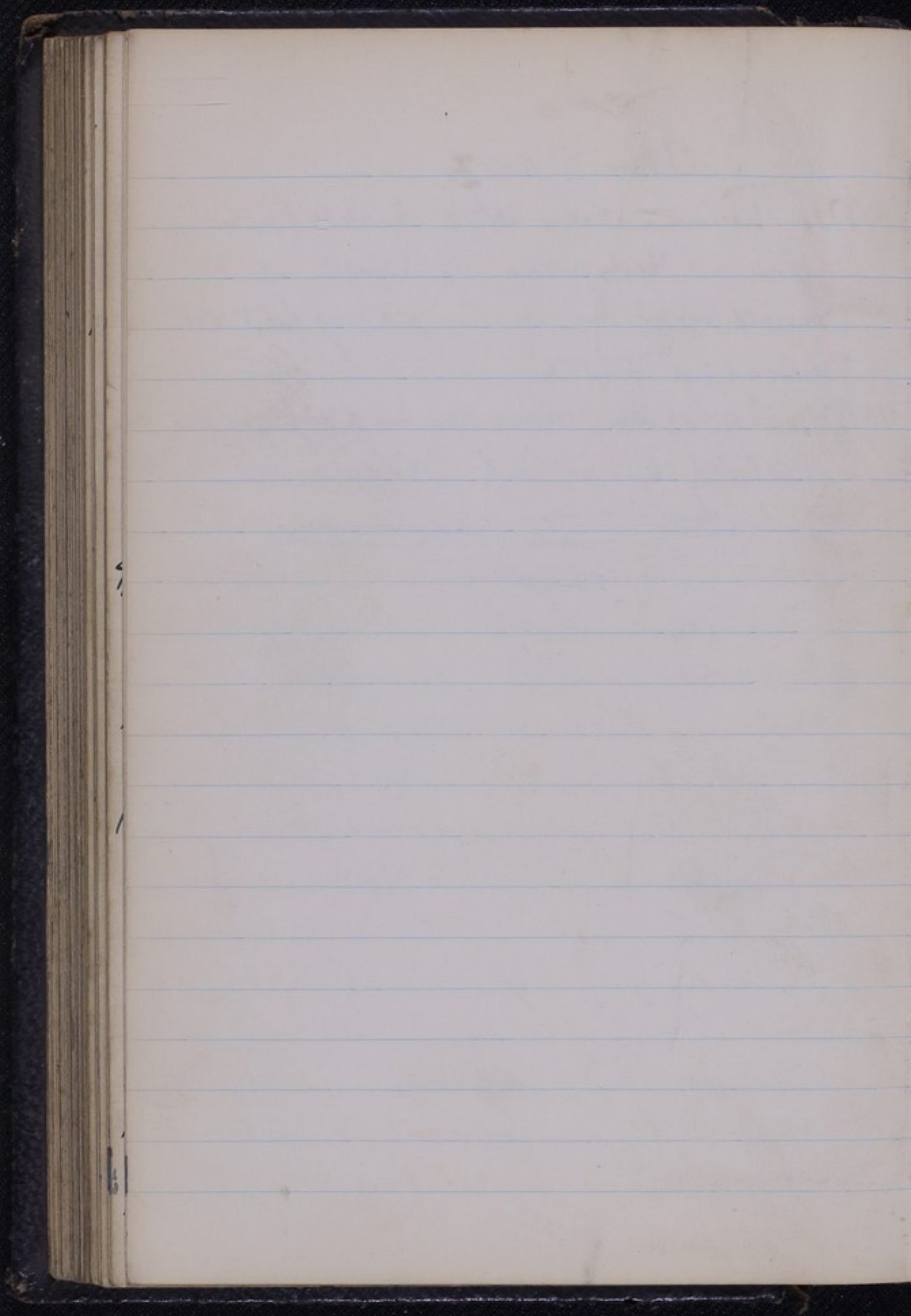
5/8/21 Vaccinia data 25/7/21 No 4434 (Rebmanis)  
from Wm Heinemann, 20 Bedford St W.C.

Small drop on R. Sch 907 tube RT  
uncapped at 37°C.

15/8/21 Sch 907 tube shows one leafy petiole  
colony. Tube II not discarded.







Vacc 186 Continued

9/8/21 Col 1 + 2 on Ach 558 each 2-  
on Ach 558 + 563, uncapped 237°

10/8/21 Culture taken yesterday Col 1 + 2 on 558 show  
yellowish white growth on 563 very poor growth  
Squellum made from Col 1 + 2 on 558<sup>(4/8/21)</sup> on to  
Ach 558 + 564.

11/8/21 Col 1 + 2 on Ach 563 fair orange yellow growth discarded  
Ach 560 + 561 yellow growth discarded

Ach 558 (4/8/21) yellow growth; (7/8/21) orange yellow  
growth so all discarded

Ach 558 + 564 (10/8/21) orange yellow growth, Col 2 later  
on 564 showing also? starting brown spot below.

Col 3 on 558 (8/8/21) fair yellowish white growth.

Col 1 + 2 on Ach 558 each 2- on Ach 566.

12/8/21 Ach Col 1 + 2 on 566 fair growth? turning brown in place  
with Col 2 so this 2- on 566 later of 566 capped

Col 1 + 2 on Ach 564 each 2- on 567 capped

15/8/21 Col 1 on 567 Vg yellowish white growth 2- on 568 capped

Col 2 on 567 fair poor growth somewhat brown in places so  
2- on 568 later capped.



1898<sup>1</sup> Col 102 on 566 (11/8/21) dense yellow white part.

Cal 2 on 566 capped (12/8/22) more brand from 20-21 <sup>distance</sup>

on 566 & cap/w. Col 3 on 568 & on 568 (-/h)

Col 1 on 566 (15/2/21) yellowish white 2-1 on 568 cap

Col 2 on 506 (15/11/11) yellow white with hoarse bluish

Box 566 capped. All old letters discarded

19/8/21 Col 1 & 2 from well, Col 2 some light parts

Col 3 from hair well

22/8/21 Cal 2 on 566 (189921) normal growth. 566 tubes discarded.

23/8/21 Col 3 or 568 (18/8/21) now dark lemon yellow.

24/8/21 Cor 1, 2, + 3 each 7.00 on Act. 558 capped

25/8/71 Col 102 from well, Col 2 little hand places

Col 3 fair good, will want appearance & plan

no net on Arch 571

8/9/21 Col's rec on Act. 572 capped

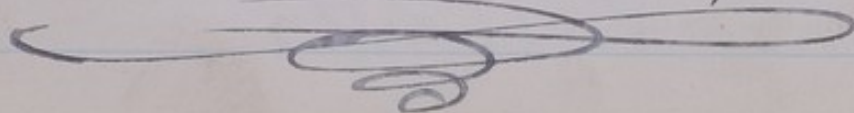
7/9/21 Col. *Colony* growth to old culture discovered

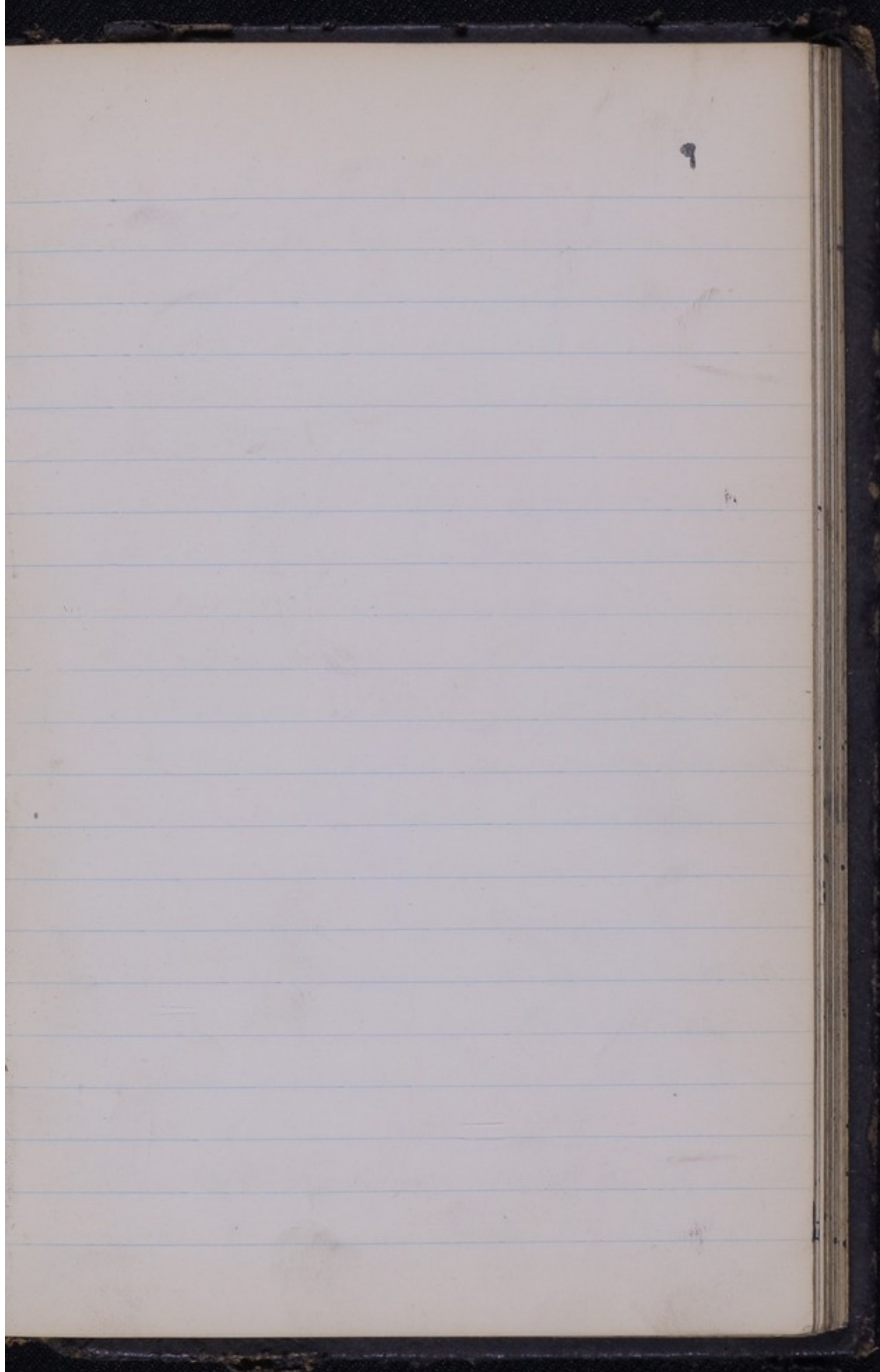
21/9/21 Cal 1, 2, & 3 from Not Viced. each

on Ach 572 capped.

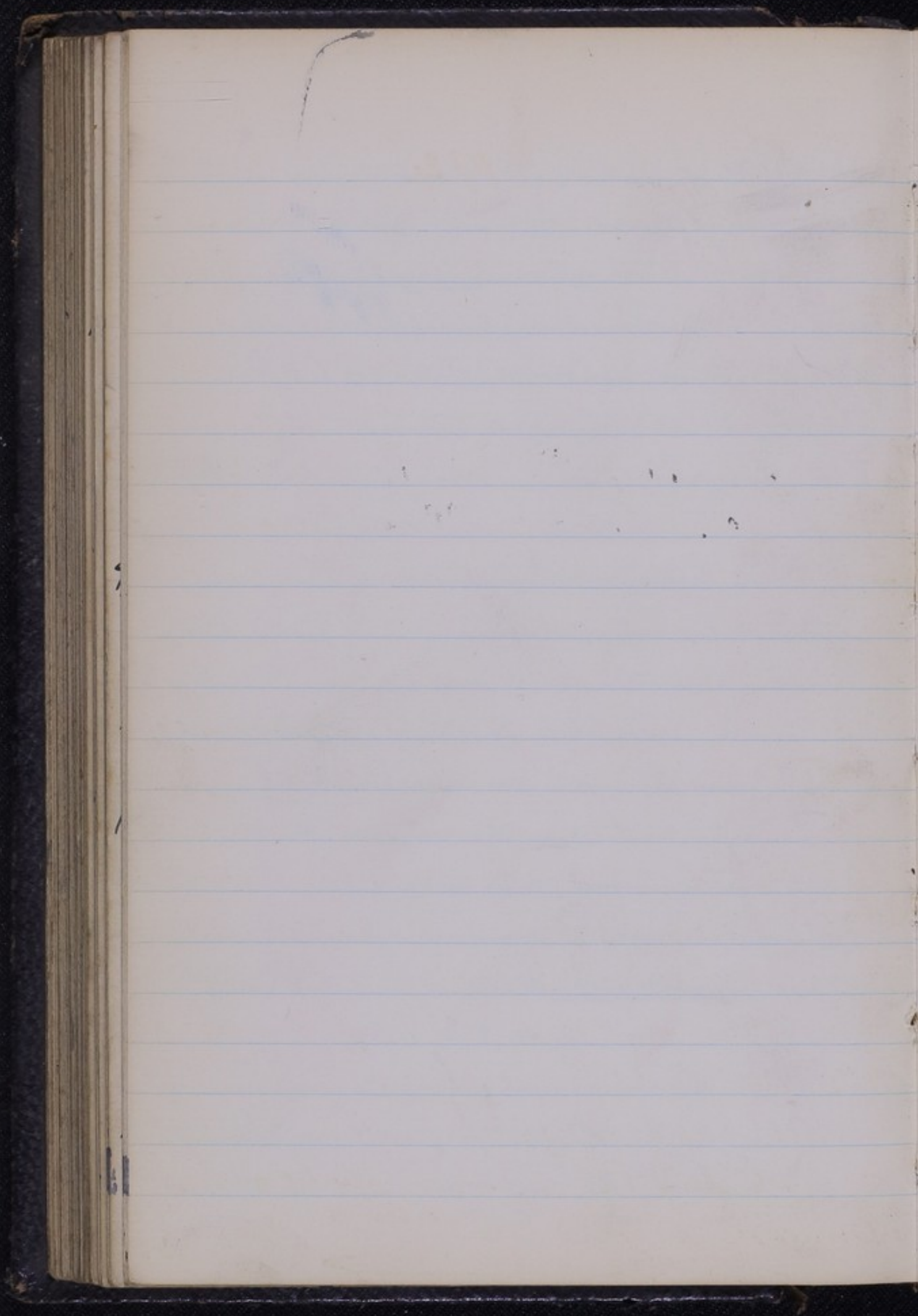
22/9/24 Col taken yesterday now normal prob.

23/9/21 Cellini shows no material change









# Vacc Exp 1974

- 11/8/21 Reiman's vacuum - same tube as used  
in exp 188. Small platinum loop held  
measured up from cond L on  
Ach 566 tube I  $\overline{171}$  + 564 tube I  
tube I capped at 37°C.
- Ach 566 tube  $\overline{171}$  placed in bell jar (Pyrex 1KOH tubes)  
filled  $\text{CO}_2$ . Reduced to about 20 mm Hg - 400 mm.
- 12/8/21 Ach 566 tube II Oil visible through jar  
Ach 566 tube 564 tube I No definite growth.
- 15/8/21 Ach 566 tube II No definite growth discarded.
- 18/8/21 By mistake tubes left down on bench since 15/8/21.  
Tubes show nothing definite. Ach 566 tube I? Col  
below, film at bottom tubes but granulation only  
Ach 564 tube I Oil is now streaked down  
Col 1 of Vac exp 186 (from Ach 558 10/8/21) then capped.
- 19/8/21 Ach 564 tube I fairly good growth along track  
? more toward up glass. Cond W flooded over.
- 22/8/21 Ach 564 tube I Oil discarded.  
Ach 566 tube I growth now all over? waiting  
No turn lamp - glass cover on 564 tube II capped
- 23/8/21 Ach 564 tube II dry, yellow growth - on 565 tube I capped.
- 24/8/21 Ach 565 tube I yellow growth



# Exp 195

11/8/21 Vaccinia - Anociaria Calthra from below 7.5  
 small looped more on east of Ach 564 tube I  
 + 566 tube I + II. Tubes I uncapped @ 37°  
 Tube II of 566. placed in bell jar @ 37°. By a KOH tube  
 filled CO<sub>2</sub>. Reduced so that 20 cm 2P = 400 mm.

12/8/21 Ach 566 not viable through jar  
 Ach 566 tube I not viable. 564 tube I some turbidity  
 of cond. w. only; film red granular tubes  
 so so on 567 tube I ~~II~~ cond. w. flooded on  
 Tube I after standing sheath down Call vac 4/186  
 B.M. tubes then capped @ 37° C.

15/8/21 Ach 567 tube I streak yellowish growth; ~~not~~  
 no evidence of transp. Other tubes not viable  
 Ach 566 tube II No definite growth discarded

18/8/21 By mistake tubes left on bench & light since 198°  
 567 tube II not discarded. Tube I growth? little transp  
 in place so so on 565 tube I capped + 567 tube I discarded

Ach 564 tube I <sup>more</sup> Corium growth below so as Cal 1 on 565, <sup>capped</sup> cond. w. <sup>cond. w.</sup> <sup>fungus</sup> <sup>on 568 tube I</sup>

Ach 566 tube I white powdery cob like Cal 4 of exp 191 so as  
 Cal 2 on 565 and 569 capped

19/8/21 Cal 2 no growth: Cal 1 slight growth. 565 tube I no growth so  
 Ach 564 tube I no show rather watery flat on surface so so on 568 tube II <sup>on 568 tube I</sup>

Continued after Exp 196



Vacc Sep 196.

11/8/21 Vaccines for Jennie Int for (L. 73 Church Rd  
(through buttons 203.) No 5703 (4/9/21) <sup>Buller's</sup> <sup>Land S.W.</sup>

Small leafy pul mo on A. Ach 564 tube I  
and 566 tube I. Tubes I uncapped 23) &

Tube II of 566 placed in bell jar 23) & R.O. CKOT tube.

Yellow Co., produced rather SP on 29 = 400 mm.  
~~at 100 mm~~

12/8/21 Ach 566 tube II not viable through jar.

Ach 566 tube I. Out. 564 tube I not cond. floater

on W. tubes & these now capped.

15/8/21 No viable growth on any

Ach 566 tube II no definite growth discarded

18/8/21 By mistake tubes left in light & room on bench  
since 15/8/21. Tubes show nil.

Ach 564 tube I now streaked down Col. 1 space of 186  
<sup>the capped</sup>

19/8/21 Ach 564 tube I now shows yellow streak along back  
no cond. floater on.

22/8/21 Ach 564 tube I now growth all on 2-1 on 565 & 568  
<sup>capped</sup>

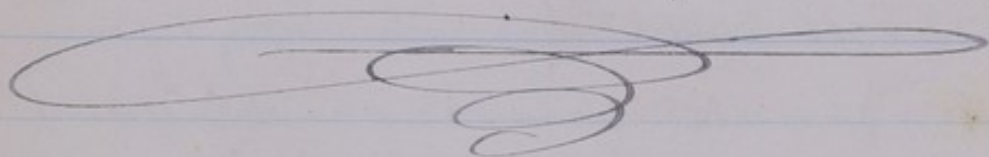
23/8/21 Ach 565 & 568 tube I orange yellowish growth each on tube II

24/8/21 Ach 564 tube II yellowish growth 2-1 on 568 tube I (capped)

Ach 564 tube I, 566 tube I, 568, 565 tube I & II all discarded



- 25/8/21 Ach 558 lute I yellowish streak on 571 lute I
- 26/8/21 Ach 571 lute I yellowish streak.
- 1/9/21 Ach 571 lute I flatwork on 571 lute II III IV
- 21/9/21 Ach 571 lute II III IV shows col lining translucent  
Col on lute III on 572 as Col 1, all the lute disappeared
- 22/9/21 Col 1 taken yesterday shows vj yellowish white frost.
- 23/9/21 Col 1 Normal change





Exp 195 continued

22/8/21 Aet. 565 tube I front unchanged discarded

Aet. 568 tube I yellowish white streak discarded

Aet. 564 tube I No change discarded

Aet. 568 tube II whitish front, definitely

turning transparent! <sup>tube II</sup> so n-c on 565 & 568 <sup>tube III</sup> capped

Col 1 on Aet. 565 shows yellowish <sup>very nice</sup> front n-c on 565 & 568 capped

Col 2 on Aet. 565 & 569 shows no front but only

Col 5 on Aet. 566 are now beautiful orange

rough heaped up edge with deep crater in center

so one of them n-c a Col 2 on each of

Aet. 564, 569, 566 & Sch 906 and 907 capped

23/8/21 Col 1 on 565 (22/8/21) whitish streak

Col 1 on 568 (22/8/21) translucent whitish streak n-c perfect 568

Col 2 from fair on Sch 906 & 907 touch 566; less on 564

& less still on 569, cultures 565 & 569 (18/8/21) still nil

Aet. 565 tube II whitish streak n-c on 568 tube I

Aet. 568 tube II not much change n-c on 568 tube IV

Aet. 568 tube III whitish streak with several trans spots

so n-c on Aet. 568 tube V

All new tubes capped 23/8/21.



24/8/21 Col 1 on Act. 568 whitish growth

Act. 558 tube I and 568 tube IV & V whitish growth

Act. 565 tube II & 568 tube III no change discarded

All old culture of Col 1 discarded

Act. 558 tube I whitish streak discarded

Act. 568 tube V whitish streak discarded

Act. 568 tube IV whitish streak

Act. 568 tube II has now starting to grow

by Cocci growth so made into emulsion with

dist H<sub>2</sub>O. Then on drop streak Act. 558 tube II capped

rest of emulsion used for Vacc. exp. 197

Act. 568 tube IV & on 569 tube I, 558 tube IV discarded

25/8/21 Col 1 on 562: dense growth, Act. 569 tube I dense growth

Act. 558 tube II delicate growth living trans

the now plated out on three tubes of Act. 571

tube I II & III capped. 558 tube II given to Charles

all old tubes discarded.

26/8/21 Col 1 on 562 normal growth & on 569.

Act. 569 tube I white growth with some transverse spots

so plated out on Act. 569 tube II III IV capped

Col 2 cultures later 22/8/21 show 566 + 907 good beautiful pink orange

dry surface, 566 fair growth, 564 + 569 not so good. all  
planned to room & date.



Act 571 tubes I shows few median rays & many tiny cols  
tube II & III Pril

30/8/21 Act 569 tubes III & IV tail discarded

tube II white growth & col mostly turned  
descriptly translucent, with some coloring col  
rather like delicate californian - film of granule.

Act 571 tubes I II & III, growth of col  
mostly turned translucent.

Act 569 tube II lower like californian col moved the cal  
plated out on Act 571 tubes IV V VI

translucent growth & center of tube plated out on

Act 571 tubes VII VIII and IX, 569 tubes from Charles

Act 571 tube II a col with some white growth still  
remaining plated out on Act 571 tubes X XI & XII

Act 571 tube III one translucent col turned quite

transp. & one plate, 2-c on 571 tube XIII

translucent col 2-c on tube XIV

the almost col 2-c on tube XV

31/8/21 Act 571 tubes IV V VI, VII, VIII, IX, X XI XII

all show nil, tubes XIII, XIV & XV show one or two

small col ably needle track, 2-c growth transp

Tubes V VI VIII, IX, XI & XII discarded



3/8/21 Tube XIII. A Small cat placed out on  
Ach 571 tubes XVI & XVII (tube XIII discarded)  
Tube XIV a Small cat placed out on  
Ach 571 tubes XVIII & XIX (tube XIV discarded)  
Tube XV a Small cat placed out on Ach 571 tubes XX & XXI  
Cat 1 - - - on Ach 571 (tube XV discarded)

Ach 558 tube II recovered now shows yellowish foam  
with trans. sp. 200 - on 571 tube XXII  
& placed out on tubes XXIII & XXIV cond.  
Healed one tube XXIII & XXIV but not on XXV

Other tubes taken today

Cat 1 placed out on 571 tubes XXV, XXVI & XXVII

Ach 571 tube I cond. placed out on tubes XXVIII & XXIX  
all left uncapped @ 37°C.

Ach 569 tube II cond. placed out on 571 tubes XXX & XXXI  
and 569 tubes V & VI

1/9/21 Of cultures taken today the only tubes showing any growth are -  
XVI slight, XVIII fair, XXII good, XXIII good but trans.  
XXV fair, XXX slight but trans. Cat 1 on 571 fair,  
Cat 1 on XXV fair. Some of the tubes show what looks  
like minute cat then on XIX film & also debris from  
of ? small the XXIII film from trans. edge shows some  
tube XXIII from center.

Continued after Sep 198



Vacc Sep 197

24/8/21 Ach 568 tube II of Exp 195 was made into emulsion with <sup>200 cc</sup> sterile dist H<sub>2</sub>O & stood & room temp for ~~14~~ <sup>12</sup> hours. Then then passed through Soxhlet while filling No 11 & 200 Wm.

About 50 cc passed in 8 min, most of time taken up in filling filter. Some of filtrate distributed into three test tubes.

Tube I filtrate: fine drops pipetted over one tube of Ach 562. Stood for 15 min. Tube then streaked down as follows.

Tube I with Col 1 Vacc Sep 195 & Col 1 Va Sep 186

II " Col 1 Vacc Sep 186

III " Col 1 Vacc Sep 191

IV " Col 1 **Vacc Sep 195**

V " Col 6 Dy Sep 79

VI " Typhoid

25/8/21 No evidence of disappearing, all ports normal. Each one on Ach 571, tube I, II & III etc capped.

26/8/21 All cultures taken yesterday show good normal growth.

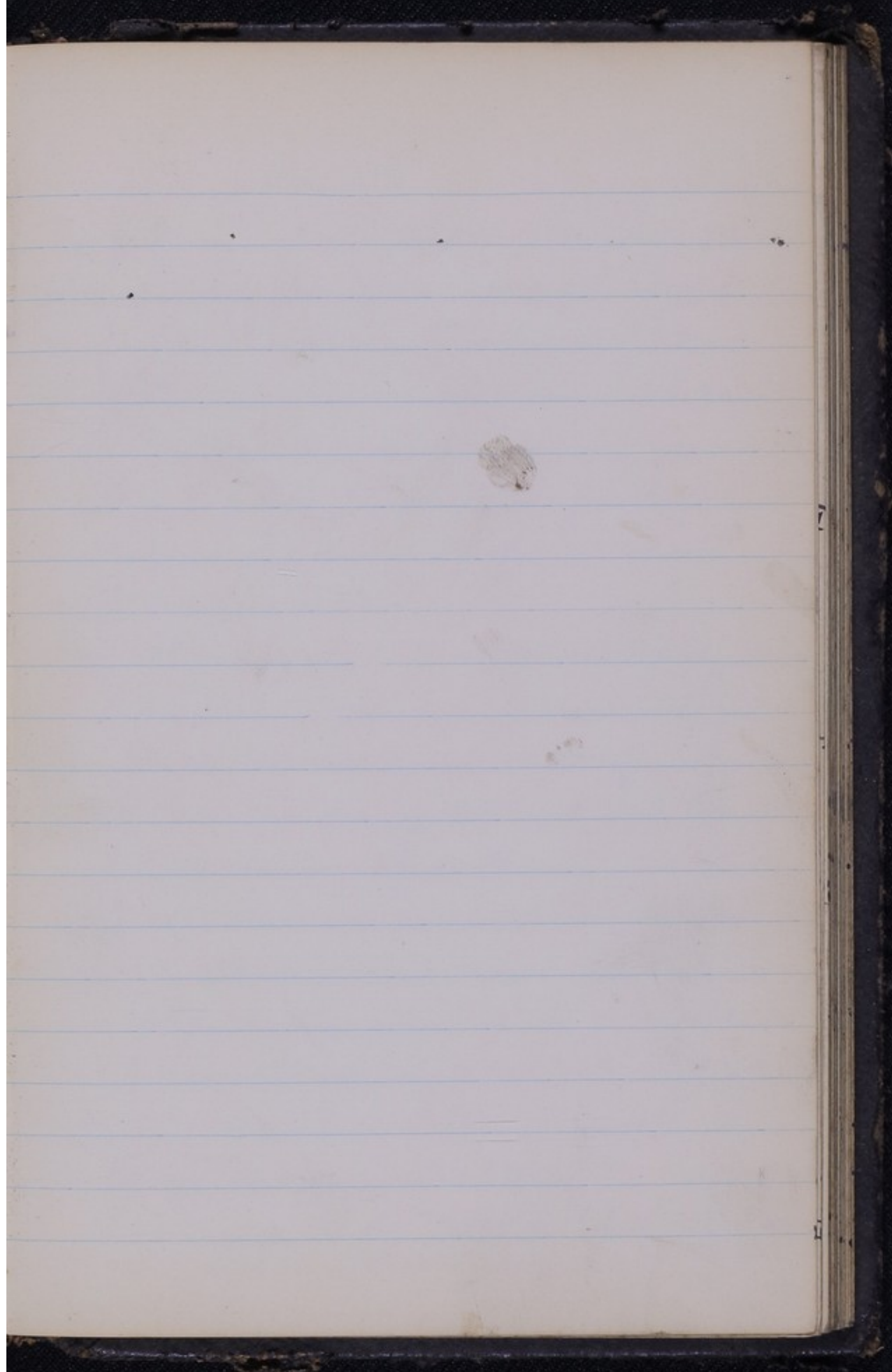
1/9/21 Tube IV growth more translucent & very tender.

all tube no. on 571 marked I (a) II (a) etc  
all original tubes discarded. capped.

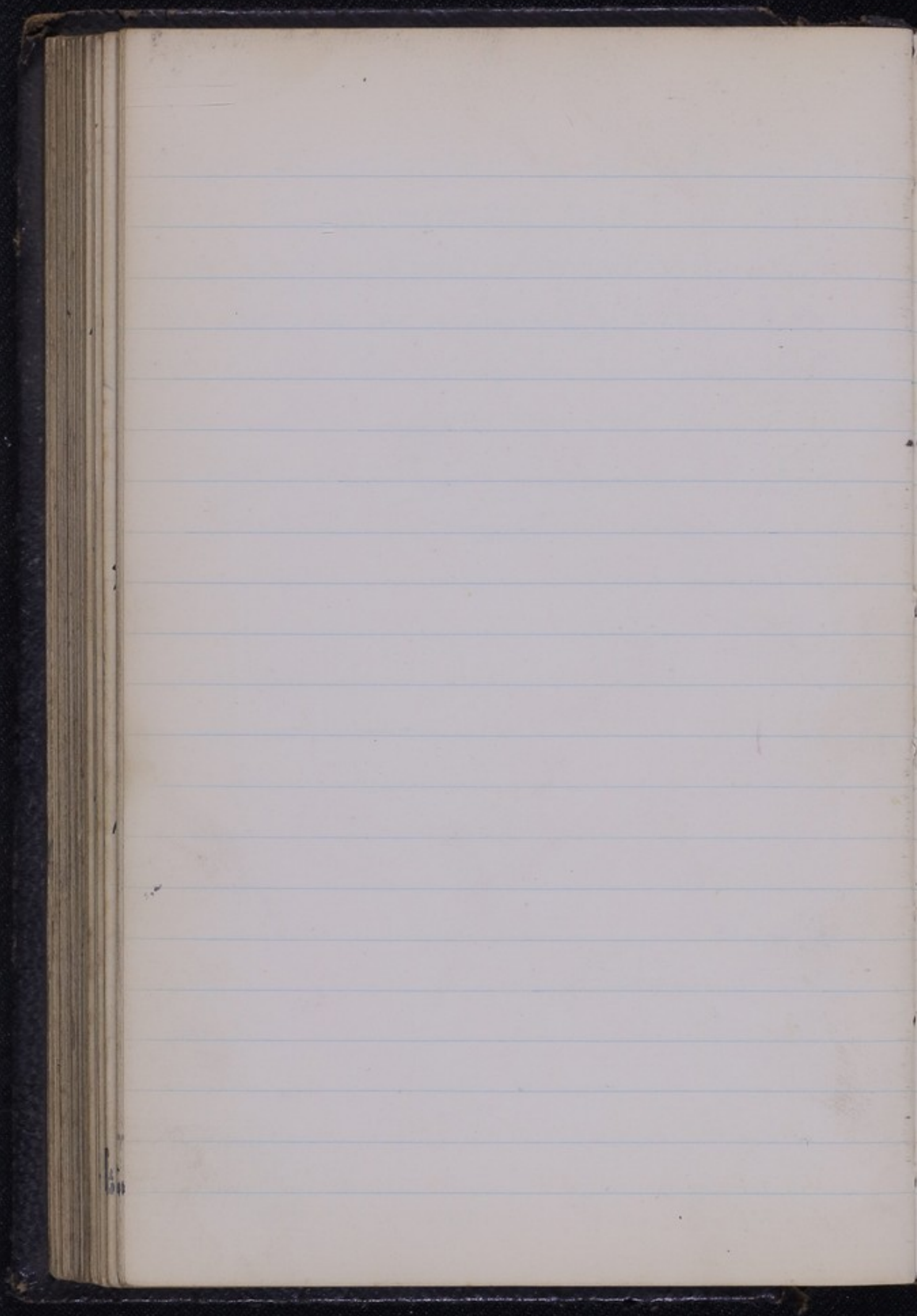


- 2/9/21 Acc 571 tubes IV (a) Nil other (a) tubes good growth  
 6/9/21 Tubes on acc 572 I (a) to I; II a to II etc  
 7/9/21 Cultures taken yesterday good growth no old tubes discarded  
 21/9/21 All tubes on acc 572, I to I (a), II to II (a) etc.  
 22/9/21 Cultures taken yesterday show normal growth, old tubes discarded  
 23/9/21 Cultures remain normal









Nov 198

Tube of *Vaccinia* ricini from allin Hart dated 23/8/21

24/8/21 One drop placed on Act 558 tube I &  
cond & flanked on <sup>one</sup> floppet of cond v.  
Of this tube then rubbed on Act 562 & 569  
& ECH 906 & 907 each tube I

Act 558 tube previous had few drops of  
dist H<sub>2</sub>O pipetted on surface. <sup>to</sup> inside  
All capped & 37°C.

25/8/21 558 tube I one yellow white col, 562 one dull greyish, 569 nil  
ECH 906 nil, 907 one heaped up small white col.

26/8/21 Ech 906 & 907 show several small col

Act. 562 show sparingly dull white froth some col

Act. 569 shows one white col like corum.

Act 558 shows few number white cols some yellow. <sup>like corum</sup>

30/8/21 Act 558 tube I shows several fine white cols  
starting to turn trans so two as col 1 & 2

A normal orange col as col 3. All capped.

31/8/21 Col 1 & 2 from as white streak, Col 3 as yellow streak

1/9/21 Col 1 now shows some heat as white.

Col 1, 2 & 3 now on Act 571. Ech 906 cond & pipetted on 571 tube I <sup>to</sup> <sup>in</sup>

Ech 907 duplicate like & cond & pipetted on 571 tube <sup>IV</sup> <sup>V</sup> <sup>VI</sup>

All old tubes discarded

capped & 37°C.



2/9/21 Cals 1, 2, & 3 good growth.

Ach 571 tubes I <sup>0</sup> IV may col. tubes II <sup>8</sup> V few.

6/9/21 Ach 571 tubes I <sup>II</sup> <sup>III</sup> <sup>IV</sup> <sup>8</sup> V <sup>8</sup> VI discarded

Cals 2 - con Ach 572 capped

7/9/21 Culture taken yesterday good from 20 old Col cult. discarded

21/9/21 Cals 1 whitish growth, Cal 2 whitish with translucent spots

Cal 3 yellowish. Note Cal 2 Virid, Cals 1 & 3 not Virid.

All cals 2 - con Ach 572 capped.

22/9/21 Cultures taken yesterday show normal growth. Old tubes discarded

Vacc Sep 199.

Same tube of Vaccines as used in exp. 198.

25/9/24 Tube of Ach 589 with tubulure had fifteen drops of fluid 177 pipetted over, then a drop of Vaccinia placed & fluid, flooded the surface. Two drops of cond. w. then pipetted over Ach 589 tube II (old tube) & 5 drops on Sel 907 tube I.

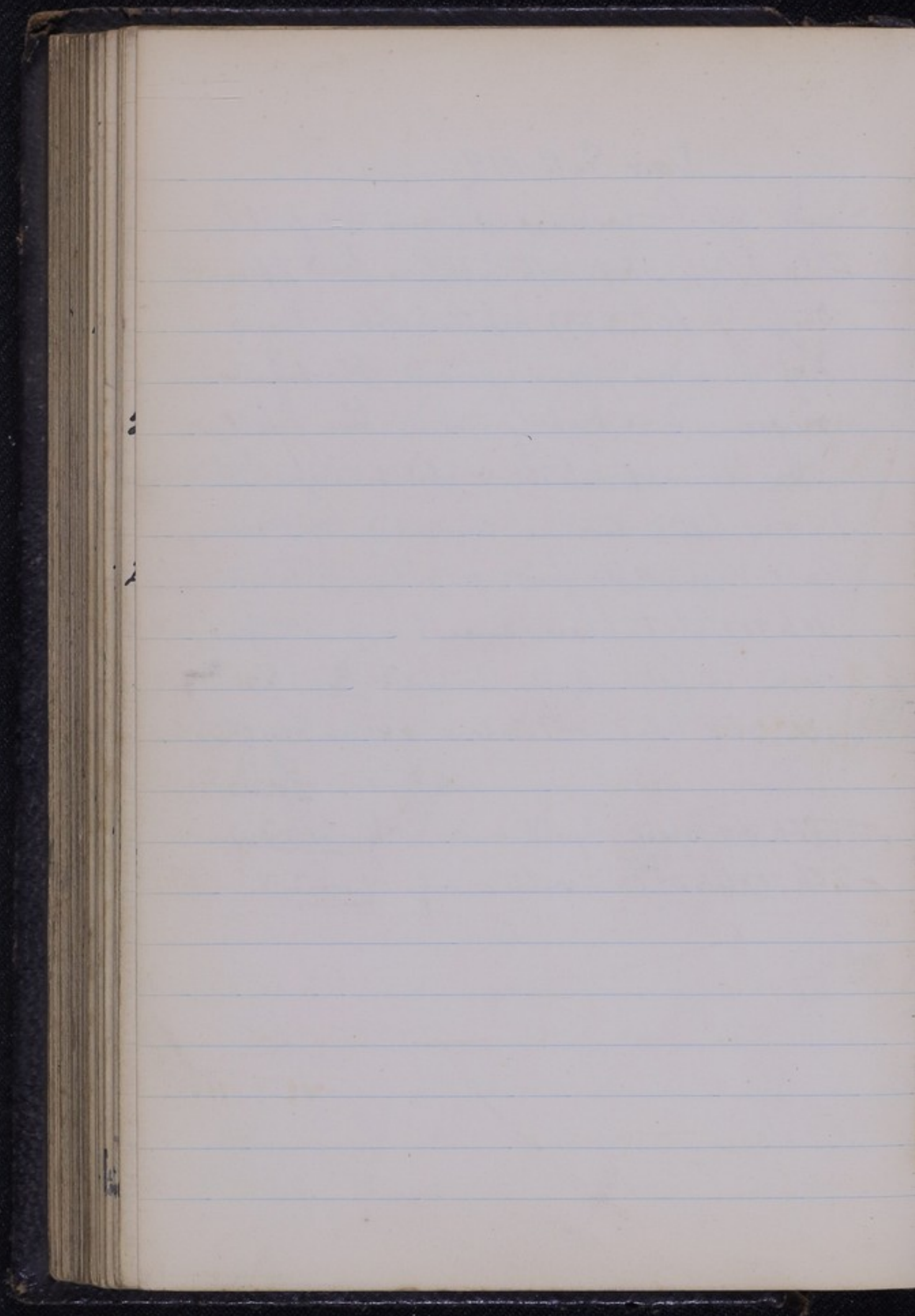
Ach 589 tube I tubulure connected by containing about equal pt of  $CO_2$  & Hydrogen. Tube II capped. Sel 907 tube I placed anast. in jar with Gly & KOH tube, jar filled  $CO_2$ . The pressure so that 5 l in 10 = 450 mm.

29/9/24 Ach 589 tube I, old? contain cob, one small black speck probably piece of burnt wood. discarded

Ach 589 tube II old growth & cond. w. only discarded

Sel 907 tube I <sup>few</sup> old? contains only discarded





Vacc Sep 195 continued

2/9/21 Tubes show as follows of Aeth 571.

tube IV Nil, VII one cal, X no. may cal, XVIII <sup>food</sup>  
 XVI, XVII, XIX, XX fair growth & place <sup>many minutes in center</sup>  
 XXI small growth, XXII <sup>XXIII</sup> food, XXIV fair cal,  
 XXV food, XXVI some tiny cal, XXVII fair growth  
 above tiny cal tube, XXVIII some tiny cal  
 XXIX Nil, XXX fair, XXXI Nil  
 Cal 1 on Aeth 571 food.

Aeth 569 tube V & VI food cal

Following tubes only named. 571 tubes X, XVI and  
 XVIII and XXIV and 569 tubes V & VI & Cal 1 on 571

Aeth 571 tube XXIV fair growth tiny cal & spores  
 some not many, cocci & spores. now capped.

tube XVIII placed out on Aeth 572 tube I & II & III  
 & IV & V placed out capped.

Aeth 571 tube XXIV tiny cal placed out on 572 tube IV & V  
 and to floor in our capped tube IV after standing  
 shaken down with a white cal from tube XVI; IV & V  
 Aeth 571 tube XXIV accidently dropped and covered  
 placed over.



5/9/21 Acc. 572 tubes I & VI good from no transp.

6/9/21 Acc. 572 tubes I, II, III Col. mass starting to look waxy  
tube IV distinctly waxy transp.; V some of col starting to  
look waxy, Tube IV & con 572 tube VII  
and 558 tube III. Tube V single col on c  
on to 558 tube IV + 572 tube VIII uncapped

7/9/21 Acc. 572 tubes I, II, III, IV, V, ~~VI~~ discarded  
Acc. 571 tubes X, XII, XVIII and XXIV still non.  
all translucent & lying vertical all discarded

Acc. 569 tube VI few dense col. discarded

Acc. 569 tube V dense & hard from 2 con 569 tube VII

Acc. 572 tubes VII & VIII and 558 tubes III & IV good from

21/9/21 Acc. 558 & 572 tubes taken 6/9/21 all now show

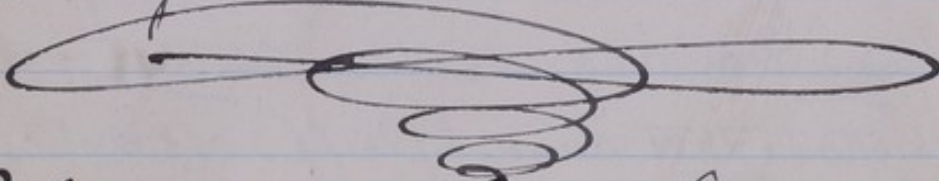
some hard so all discarded except 572 tube VIII

Col 1 on 571 (31/8/21) shows also some transp. <sup>some on 562</sup>

Acc. 569 tube VII from above discarded, 569 tube V discarded

22/9/21 Col 1 culture taken yesterday growth normal but not vig

23/9/21 Col 1 from above but still normal



Col 2 renamed Media Organum

Vaccinia Seps 200

To test is dissolving of case will be better @ 30°C.

Cultures taken on Ach. 572 23/9/21

Col 2 Vacc up 186 = tube a

Col 1 " " 191 " " b

Col 1 " " 195 " " c

Col 1 " " 196 " " d

Col 1 " " 198 " " e

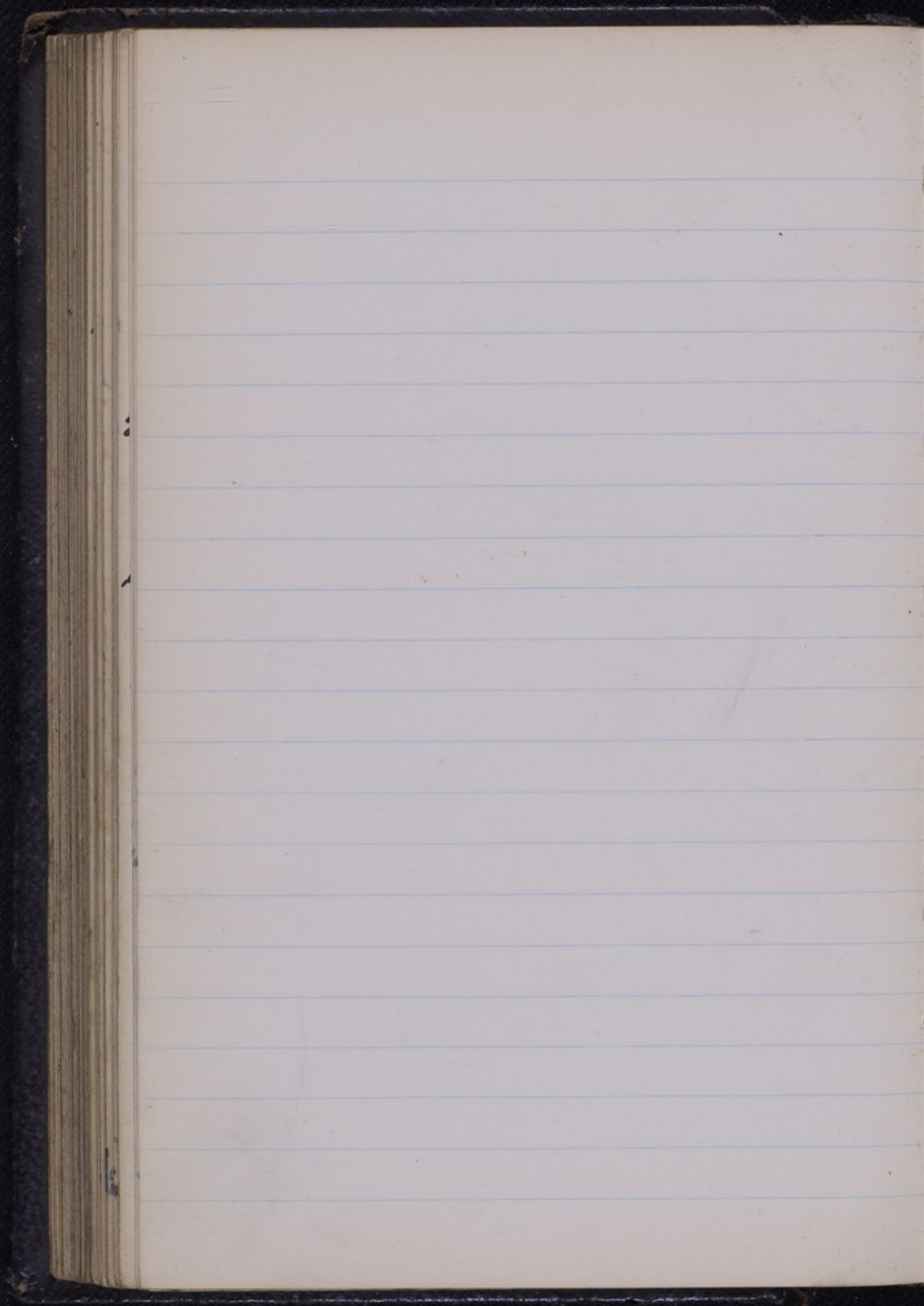
Col 2 " " " " f

Col 3 " " " " g

incubated

24/9/21 from the apparatus normal





Sep 201.

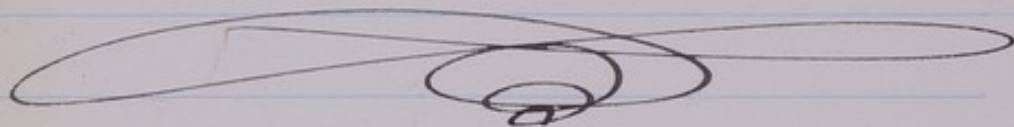
Total of drinking of coco will be better @ 39°C

Cellular taken on Feb 5/22 23/7/21

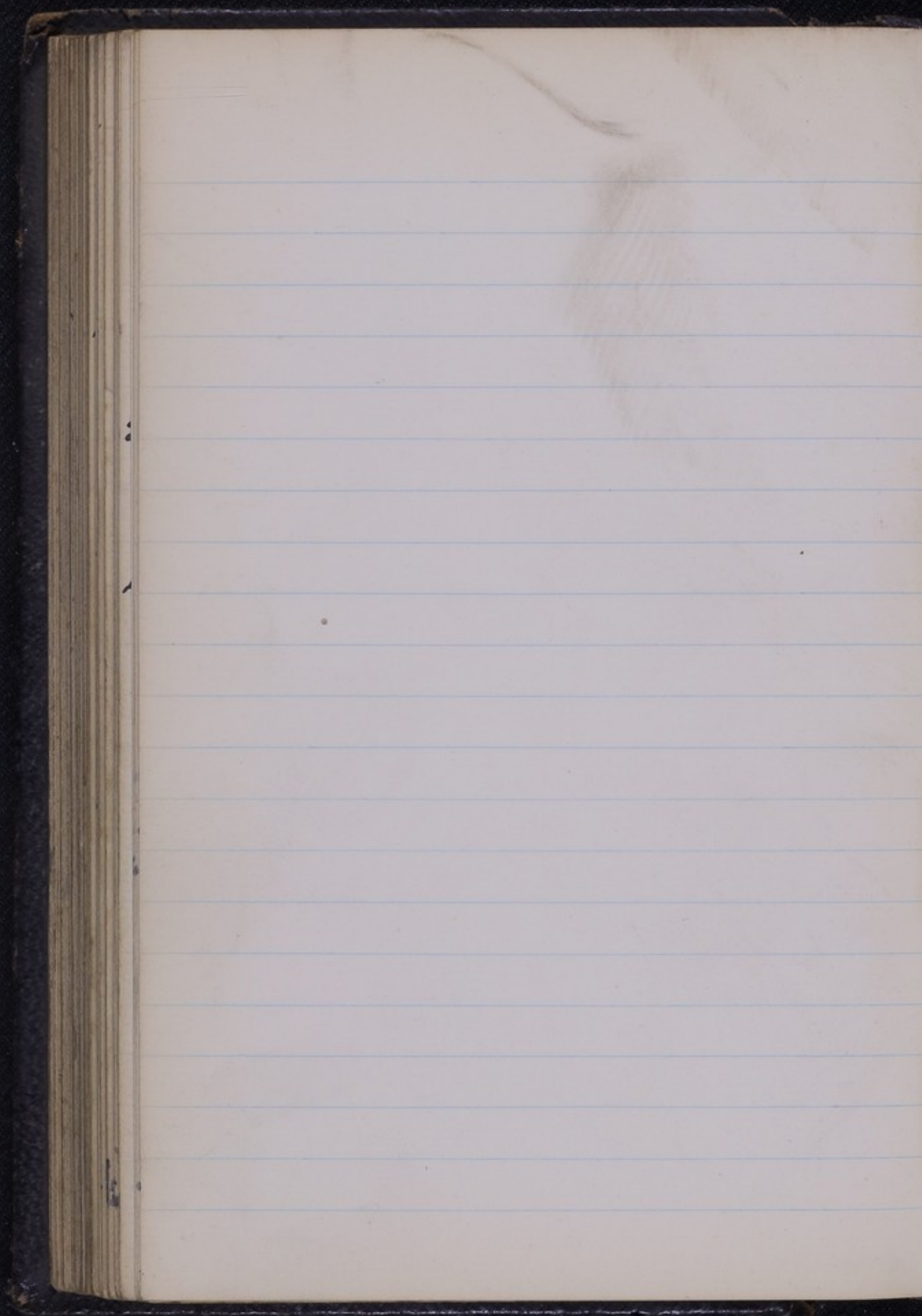
Col 2	Vacc	Sep	186	=	tulu	a	} uncaptured
Col 1	"	"	191	=	"	b	
Col 1	"	"	195	=	"	c	
Col 1	"	"	196	=	"	d	
Col 1	"	"	198	=	"	e	
Col 2	"	"	198	=	"	f	
Col 3	"	"	198	=	"	f	

26/9/21 Growth appears normal

9/11/22 Tulu all died up dried







## Vaccinia Sep 202

25/10/21. Vaccinia Jenner Inst Calf lymph 73 Church Rd Battersea (Mange 1071 Butler)

inc as two dls on Sch 927 & 928 & as two dls on

Ach 573, tubes T & U. All capped at 37°C.

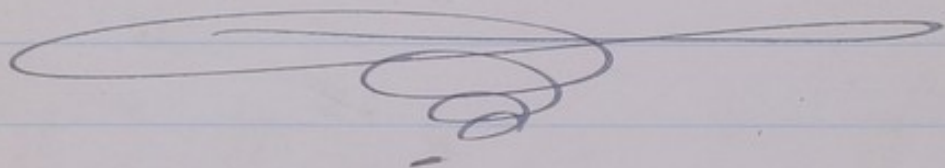
26/10/21 No definite growth on any of tubes

27/10/21 Sch 927 tube T covered growth lower  $\frac{2}{3}$

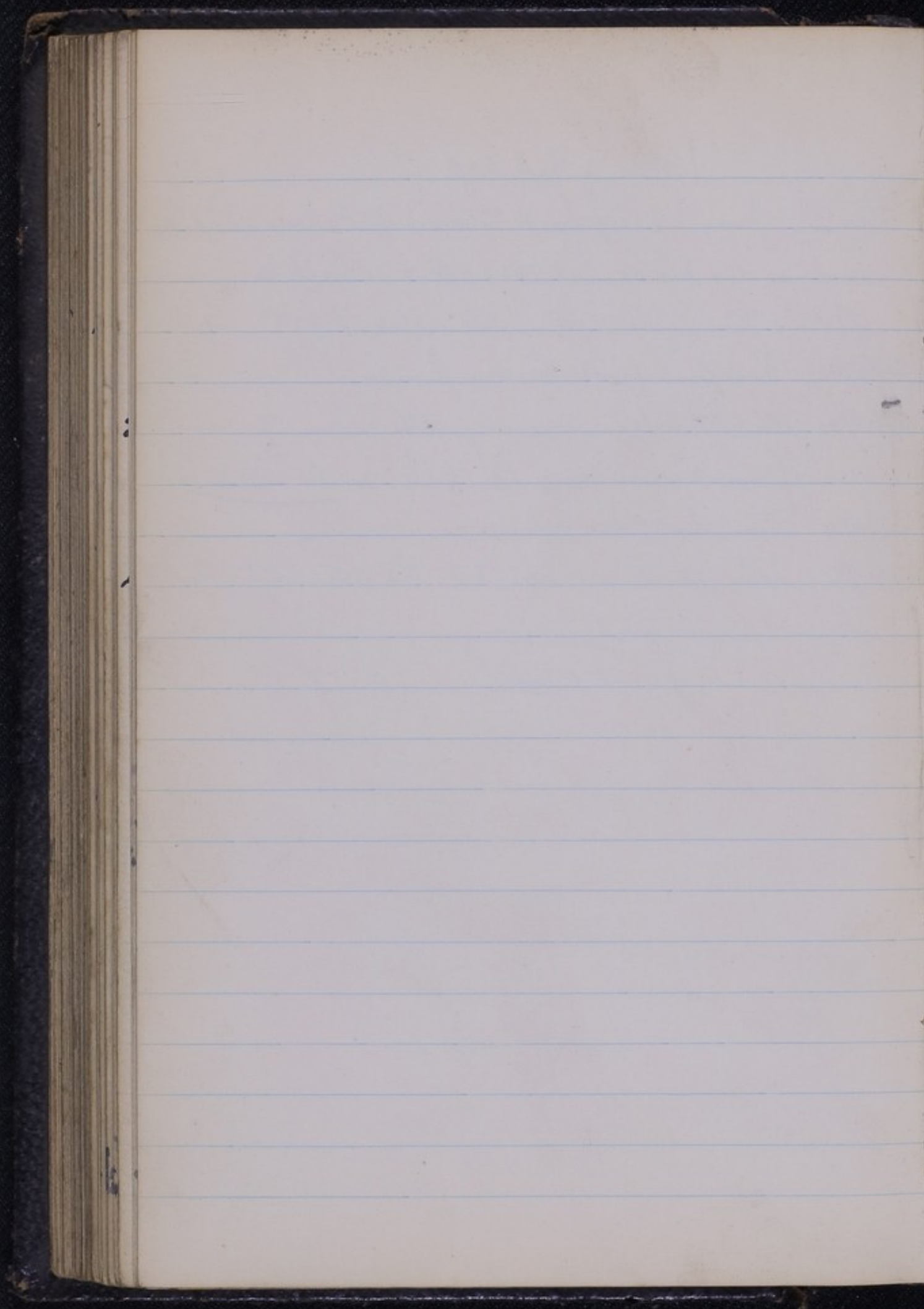
film showed large white h. so discarded

28/10/21 Tubes show no change.

4/11/21 Ach 573 tubes T & U. Sch 928 tube T and



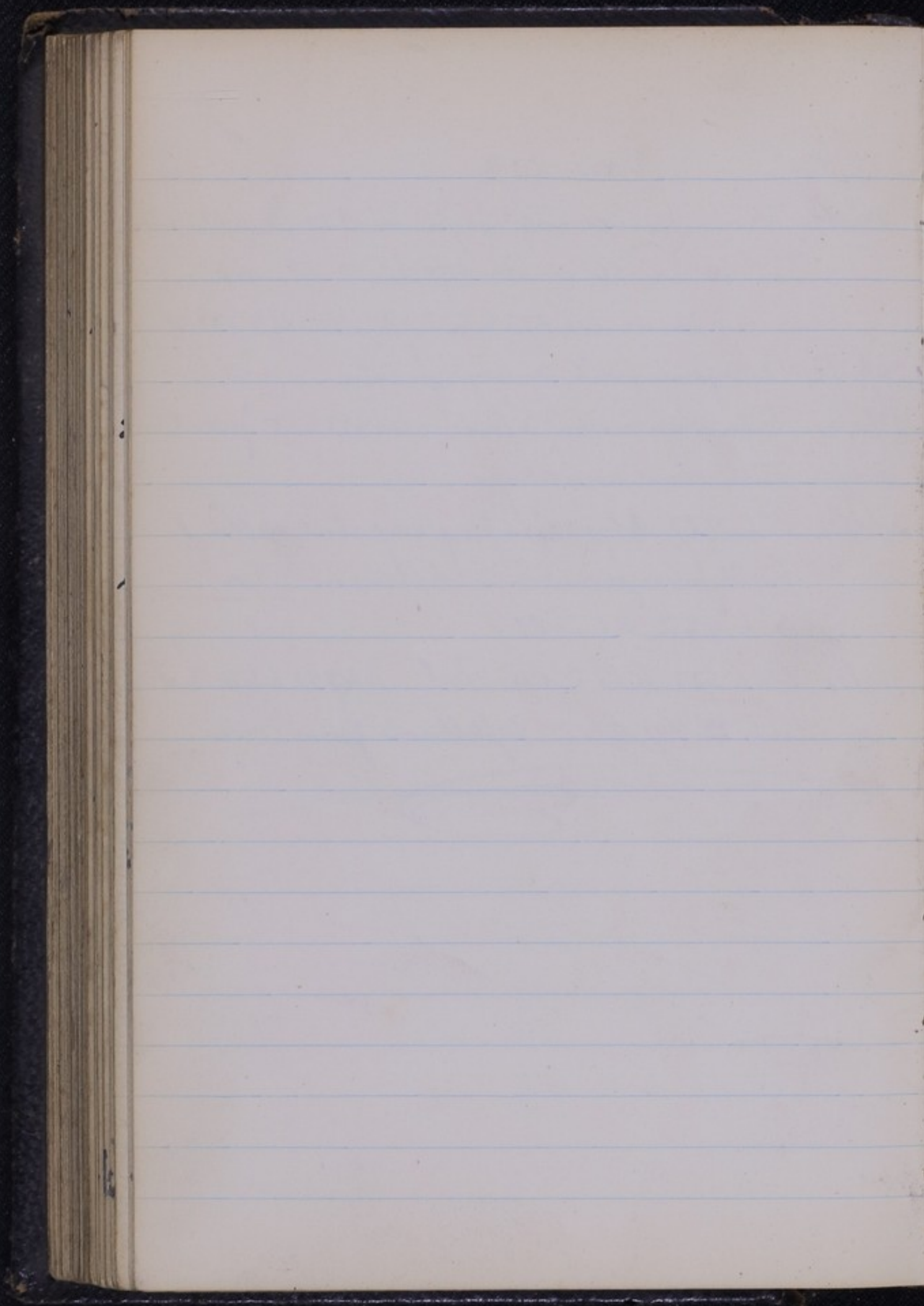




# Vacc 203

- 25/10/21 Vaccines, Arve calf lymph Nov 10<sup>th</sup> 1921 (Mingh 57.1 Bette)  
 inoc as two dots on Ech 927 tube I & II and  
 as two dots on Ach 573 tube I & II, All capped 33°C.
- 26/10/21 No definite growth on any of tubes.
- 27/10/21 Tubes show nothing definite. Ach 573 tube I? from e.c.
- 28/10/21 Tubes show no change
- 31/10/21 Ech 927 tube I faint viz very dull yellowish  
 growth below found to be diptheroid on  
 Ech 938 as call.
- 4/11/21 Ach 573 tube I & II Aut. Ech 927 tube II Aut  
 Ech 927 tube I Diptheroid from nose





## Vacc 204.

25/10/21 Vaccinia, D. Chaumieris No 765 through Roberts etc.  
 received 25/10/21 moi on two dit on Sch 924 & 927  
 and on two dit on Ach 573 tube I & II.

All capped @ 37°C.

26/10/21 Sch tube no definite growth

Ach 573 tube I dull v. film growth discarded  
 tube II growth by cond. w. only

27/10/21 Sch 927 tube I v. film growth all over discarded

Sch 204 tube I yellowish under Cal above & c  
 as Cal 1 on Ach 573, lower part of tube shows  
 film growth of large thick film so discarded

Ach 573 tube II v. growth & cond. w. also  
 several Cal on surface, one of them as  
 as Cal 2 on Ach 573 and 573 tube II discarded

28/10/21 Cal 1 & 2 grown well no evidence of disappearing

4/11/21 Cal 1 & 2 & c on Ach 573 capped.

14/7/21 Cal 1 (4/11/21) capped & room growth remains whitish  
 translucent <sup>not visible</sup> so & c on 573 @ 37°C capped

Cal 2 (4/11/21) capped & room, growth dense v. & yellowish  
 & discarded part on 573 @ 37°C capped



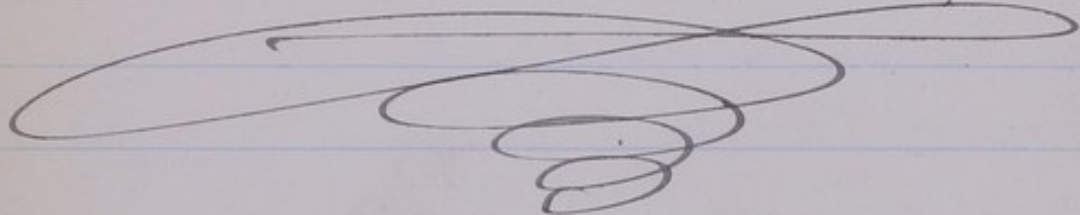
20/8/22 Col 1 proved to be dead

21/7/22 Col 2 on 592 <sup>1573</sup> now placed in dark room

4/9/22 Col 2 on 592 <sup>1573</sup> no evidence of change so

now removed for future refers

later Col 2 on 592 room is a deep aureus yellow.



Vacc 205

25/10/21 Rebmans calf lymph No 4006 (Thrygl. W. Heimermann)

dated 24/10/21 Rec 25/10/21 inoc as has del on Sch 928 & 929

& as has del on Ach 533 tubes I & II all capped at 37°C.

26/10/21 No definite growth on any.

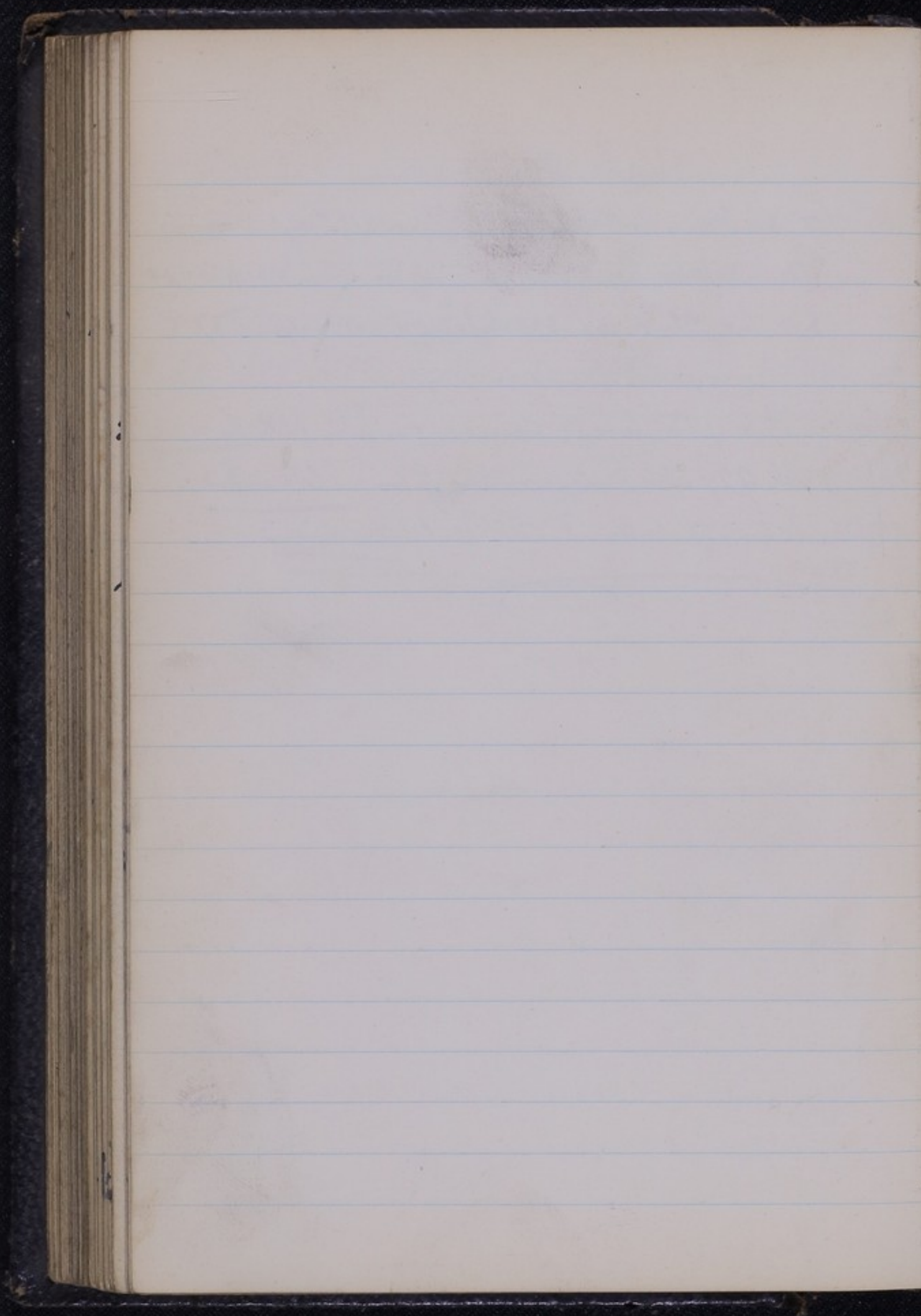
27/10/21 Sch 928 tubes I & II covered with film both discarded

28/10/21 Sch 929 tubes I & II covered with film discarded

4/11/21 Ach 533 tubes I & II Nil discarded







Vacc 206.

25/10/21 Vaccenia Lills Inst. No 241021F dated 24/10/21 (via AM)  
rec 25/10/21 no. on three dls on Sch 910 tube I II & III  
also as two dls on Ach 573 tube I & II  
all capped @ 37°C.

26/10/21 Sch 910 tube I fair number yellowish cols  
tube II two cols, tube III Nil  
Ach 573 tube I by film growth discarded  
tube II Nil.

27/10/21 Sch 910 tube III one yellowish col, tube II two cols,  
tube I many sunken yellowish cols, three sunken  
cols on Ach 573 as cols 1, 2, 3, 4 & 5,  
and four not sunken cols on Ach 573  
as cols 6, 7, 8 and 9. all capped @ 37°C.

28/10/21 Col ~~showing~~ from well show in definite lines  
of diaphanous Col 1 & 2? turning at edge near foot of 573

4/11/21 Ach 573 tube I ? some growth - C. to 10 this killed on.  
Sch 910 tube II by yellow cores growth from part  
of a big col close by as Col 10 on Sch 933  
Cols 1 to 9 on Ach 573 all capped  
@ 37°C.



- 11/11/21 Cal 129 (4/11/21) further mostly none &  
 Col 10 on Ech 933 (4/11/21) delicate growth
- 14/11/21 Ech 910 tube I yellow coating cat heavily down  
 none on a few ~~244~~ tube I (Ach 573 tube I)  
 Ech 910 tube III large yellow at lower part? tiny granules  
 lower edge 2-1 on fund 244 tube II & Ach 573 tube II  
 Ach tubes capped. all 573 etc.
- 15/11/21 Ach 573 tube I Vj & delicate growth along track  
 tube II Vj growth along track  
 Fund 244 tube I good growth plated out on  
 Ach 573 tubes III IV V capped  
 Fund 244 tube II good growth plated out on  
 Ach 573 tubes VI VII & VIII all capped
- 16/11/21 Ach 573 tubes III IV V from small bluish  
 color film showed oval cells; also from, yellowish  
 color some grey, no evidence of division  
 Ach 573 tubes VI VII & VIII from yellow cat  
 Ach 573 tube I shows yellow, tiny bluish grey  
 outgrowth from thick grey outgrowth  
 ? starting to turn brown / so plated out on  
 Ach 573 tubes IX X XI capped



17/11/21 Ach 573 tubes IX X XI show col of tray  
bluish + large greyish, remainder of the appearing

Ach 573 growth of cond. bl. of bluish and yellow  
shaken up with cond. bl. & thin flooded on surface

+ plates on Ach 573 tubes XII & XIII

21/11/21 Ach 573 tube I <sup>14/11/21 absolute 25/-</sup> discarded

Ech 910 tubes II OTIII discarded

Fluo 244 tubes I OTII discarded

Ach 573 tubes II III IV V VI, VIII, IX XII discarded

tubes VII, X, XIII discarded

Ach 573 tube XI few col? waiting to turn transp? so

one on Ach 573 tube XIV

29/11/21 Cols 3, 5 and 9 yellowish mottled look similar

so Cols 3 & 9 discarded

Col 1, 2, 4, and 6, yellowish translucent, look

similar so Cols 2, 4, and 6 discarded

Ach 573 tubes XI and XIV discarded

Ech 910 tube I discarded

Cols 1, 5, 7, 8, and 10 on Ach 574.

30/11/21 Cols 1, 5, 7, 8, ~~10~~ taken yesterday all from well

Col 10 fair growth.

All old cultures discarded



14/7/22. Pure cols left @ room <sup>cap</sup> since about 30/11/20

Col 1 shows translucent part & few dense yellow cols, both o-c on Ach 593. cap  $\overline{D3}$  T.

Col 5 shows translucent streak dense yellow at point of c.

both o-c on Ach 593 cap  $\overline{D3}$  T

Col 7 shows translucent below. in parts of streak, the part of streak shows dense yellow cols, both o-c on 593 cap

Col 8 shows translucent with yellow col along streak mixed o-c on 593 ab 182 cap  $\overline{D3}$  e

Col 10 trunk along streak with few dense & white only with each o-c on 593 cap  $\overline{D3}$  T

18/7/22 Sub-cults from hand growth show no growth

o-c from dense growths show practically normal growth

Col 8 mixed o-c shows good growth

All growths o-c on 593 & the dense growth o-c

of least col o-c on 593 the hand no growth, later.

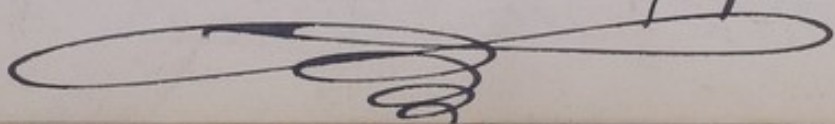
20/7/22 Dense on horizontal o-c now all grown, discarded

All dense growth o-cultures o-c on Ach 592. cap  $\overline{D3}$  e

21/7/22 Tubes placed @ room temp & dark

4/9/22 Indefinite transp. any so all discarded except

Col 10 on 592 which kept for future use





Vaccinia 207

Vaccinia tubes and - exp (202 to 206)

remained Vaccinia now into tubes of fluid 244

17/11/21 Tubes I Jen Int C. L.

II Amo C. L. (hand box quantity)

III Chaumier (large quantity)

IV Robinsons

V Little Int

21/11/21 Tubes II III V show good herb-like slight rum

Tube I & IV good growth on surface slight herb-like

All tubes shaken then on Ach 573 then:

tube I on Ach 573 tube I, tube II on II, III on III, etc

25/11/21 Ach 573 tube I II & IV overgrown dry

by frost so discarded

Fluid 244 tube I II & IV discarded

Ach 573 tube III good growth ? California.

Ach 573 tube V good growth, dense slight, light

? starting to turn brown so on 573 tube V (4)

29/11/21 Ach 573 tube V (2) grown well.

All Ach tubes discarded

Fluid tube III plated out on Ach 574 tube I II III

Fluid tube V plated out on Ach 574 tube IV V VI

all capped



Ech 958 tube I uncertain area 2-3 or

Ech 969 tube I capped 237°C

Ech 963 tube I uncertain area containing two? min.  
cels. film shows few large cocci, few small &  
few granules

Ech 958, 959, and 967 whole. Growth made  
into emulsion with about 150 cc of fluid 281  
stod 15 min then passed New Dorrin No 15  
at 300 m.m. About 40 cc passed in 10 min  
The distillate into four tubes labeled tubes  
I, II, III & IV. Tubes II, III & IV  
incubated at room - dark

Tube I 10 drops pipette on Ech 962 tube I  
& 965, 968 and 969 tube II

all then placed in CO<sub>2</sub> with 20-450 mm.  
film tube I capped 237°C

6/4/22 Ech 961 tube II slight growth, film shows  
large cocci forms.

Ech 969 tube I no visible growth.

Ech 968, 965 & 969 tube II & 962 tube I  
not viable.



7/4/22 Ech 962 tube I 965, 968, 969 tube II

no visible growth so cond. V. started over.

10/4/22 Ech 962, 965, 968 & 969 tube II and 219

definite <sup>now</sup> capped at 37°C.

Ech 965 tube II ? minute looking at near center  
skin shows out.

Ech 969 tube I fair smooth growth low part  
skin shows *invervoca*. Minute cals above = core  
discovered

Ech 961 tube II growth below now very brownish.

Minute cals above = core not discovered

11/4/22 Ech 963 tube I delicate skin spreading up from

below skin shows moderate size papule.

often covered many opening, fair size pores.

12/4/22 Ech 965, 968, & 969 tube II & 962 tube I

still show out so cond. V. again started over

Note The so-called pure cals are in streaks

are mixing into the Ech media with some leg.

24/4/22 Cals 1, 2, 3 & 4 all show very growth with breaking

thru medium. Ech 959. Cal 5 on 959 shows

very growth with slight leg medium. All cals plated

out on tubes of Ach 576 as possibly not pure.



<sup>tubes I and</sup>  
Sch 962, 965, 968 & 969 <sup>tubes II</sup> Not discarded  
25/4/22 Colony tube plates all grown and appear  
tube pure. Cols 1, 2, 3 & 4 grown on  
fair size cocci cols. Pure cultures taken  
on Act 576 from as follows Col 1 from  
single col on dil 4, Col 2 from single col on dil 4  
Col 3 from one of several cols on dil 3  
Col 4 from one of several cols on dil 4.

Note Col 5 tube plate from smaller cols  
coating on dil 1, any transp. dil 2 few very  
tiny cols, dil 3, 4 nil.

27/4/22 Agar Col plate with cols 1, 2, 3 & 4  
show from tube dense lemon yellow. All discarded  
Col 5 tube plate shows cols of a buff white colour  
dil 1 many cols. dil 2 fair number, dil 3 few, dil 4 nil  
A pure culture taken from dil 3 (Col 5 proved to be a  
micrococcus). All agar dils now discarded  
after taking one from Col 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12  
All cols on Sch 957 now discarded

15/5/22 Sch 960, 961, 963, 965 and 968 <sup>tubes I</sup>  
now overgrown & media partially liq. so made  
into emulsion with 100 cc of fluid 291. ~~This~~



Ech tube then discarded, and emulsion  
stood for about 1 hour before the  
passed through Dallis tubes No 15 & 200  
W.M. (about 20 cc passed in 15 minutes  
(10 min before starting to drop in flask)

About 12 drops pipette over one tube of  
each of Ech 960, 961, 962, 963, 964  
965, 967 and 968 all capped & 37°C

also 12 drops pipette over Ach 576 tubes

I II III IV V VI. Then after taking  
juice out of Cals 1, 2, 2a, 3, 4 & 5 over Ach 576.

These Cals were streaked down Ach 576 tubes

I to VI as follows. Cal 1 on tube I, Cal 2 on tube II  
Cal 2a on tube III, Cal 3 on tube IV Cal 4 on tube V  
+ Cal 5 on tube VI All capped & 37°C

Remnants of filtrate capped & 37°C.

13/6/22 Ech tube cultures taken 15/5/22 show no growth discarded

All Ach cultures previous to 15/5/22 dried up so discarded

Filtrate tube clear discarded

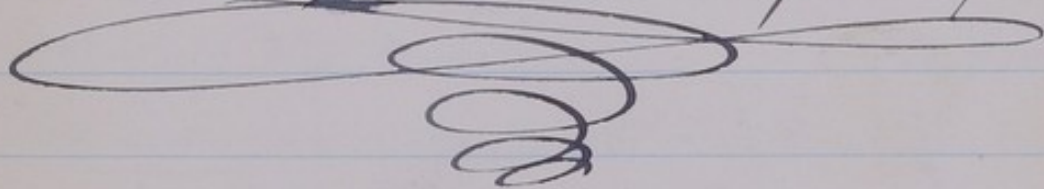
Cal growth on Ach 576 (15/5/22) all yellowish somewhat trans lucent

Cal 1 very clear with dense dots. Cal 2, 2a, 3 & 4 central line  
much more hazy than outer part. Cal 5 growth dense



12/4/22 No definite growth in any of tubes so  
condensed flooded over all. PECH 961 shows  
a little sunken groove where drop of  
filtrate ran down centre of medium.

24/4/22 tubes show no change  
little to tube <sup>11</sup> <sup>12</sup> <sup>13</sup> <sup>14</sup> thus considerable deposit sticking to side of tube.



Vaccinia Exp 210.

Vaccinia dated 15/6/22 obtained from Allen Stoneh.  
30/6/22 whole of tube made into an emulsion with a  
tube of filtrate ~~at~~ used in filler ref 175, only  
filtrate autoclaved yesterday (i.e. before Vaccinia added)  
Emulsion stored for 30 minutes then at 11.10 am  
10 drops pipetted over each of Ach 959, 964,  
967 & 969 tubes I & II, and 5 drops  
pipetted over each of Ach 582 and 583 & fluid 301  
each tubes I & II

At 1.10 PM. 5 drops of emulsion pipetted over  
Ach 584, 585, 586 and 587 tubes I & II  
Ach tubes I & Ach 582 & 583 tubes I & fluid 301 tubes I

in incubator at 30°C to sun light

Ach 584, 585, 586 & 587 tubes I unexposed

in incubator at 37°C to subdued light

Ach 969 & Ach 582 & 583 & fluid 301 tubes II in jar

with lime water below, incubated at 37°C in subdued light

Ach 959, 964 & 967 and Ach 584, 585, 586 & 587 tubes II

in jar with lime water below, incubated at 39°C in dark



3/7/22 Ach 586 & 587 tubes T Merentium type  
growing lower part so both discarded

Ach 584 tube T Nil so cordw flooded on

Ach 585 tube T ? slight frost in C.W. so this flooded  
Fluid 301 tube T remains clear

Ach 582 tube I some frost in cordw. This flooded

Ach 583 tube I S? Staphyloc. col on surface

slight frost in C.W. & a ? minute col put above

This touches cordw & r-c on Ach 588 tube I

This uncapped at 30°C to sun light as orig.

Ech 591 tube I several ? Staphyloc. on surface

Ech 964 tube T remaining C.W. milky, also some ? minute

col put above, ? col film shows several b? from medium

film from milky C.W. shows micrococci

Ech 967 shows dense white frost at old point of C.W.

put above & some ? minute col film shows few microc.

Ech 959 tube I shows several Microc. col

Ech 969 tube I ? some minute col at old point of

C.W. film shows granular bodies so r-c

on Ach 588 tube II this put at 30°C

in sun light as orig.



7/und 301 tube II clear discarded

Ich 969 tube II 2 ag minute col low fl so Cl. floated

Ach 582 tube II Int on surface, prod in Cl. discarded

Ach 583 tube II about 12 Staphylococci on surface

+ one watery minute col. film shows granules

no c on ~~Ich~~ Ach 588 tube III (this

placed in jar with lime water tube 237<sup>c</sup> in red wax light

Ach 957, 964 + 967 tube II show several col

micrococci on surface

Ach 586 <sup>tube II</sup> Vig? maintenance from low half, discarded

Ach 584 tube II Int Cl. floated on

Ach 585 + 587 tubes II prod in Cl. only

film from Cl. of 585 shows some micrococci granules

no Cl. floated on

film from Cl. of 587 tube II shows several micro

+ some granules no Cl. floated on

4/7/22 Ach 583 tube II a dry spreading col produced

to be diptheroid, Spreading watery from Cl. = microc

but the minute watery? col shows no prod

the c on Ach 588 tube III shows no prod

Ach 585 tube I now covered prod. 584 tube I Int



Ach 588 tube I some growth in Ck. only so this floated  
Ach 588 tube II flakes along inside back? growth? medium  
Ach 584 tube II? few flakes in Ck. so this floated over  
Ach 585 tube II & 587 tube II now show growth over  
surface, films show micrococci.

Ach 585 tube II n-c as Cal 1 on Ach 582

Ach 587 tube II n-c as Cal 2 on Ach 582

Ech 967 tube II white cal n-c as Cal 3 on Ach 582

Ech 964 tube II white cal n-c as Cal 4 on Ach 582

" yellow cal n-c as Cal 5 on Ach 582

Ech 959 tube II yellow cal n-c as Cal 6 on Ach 582

Ach 584 tube II replaced a jar with lime water in dark 239

Ach 585 & 587 & Ech 967, 964 & 959 tubes II discarded

All cals capped 237°C in dark.

5/7/22 Ach 583 tube II dull growth displ. hetero  
now overgrown where? delicate cal was.

A rather more translucent cal of micrococci ~~on~~ <sup>fast 582</sup>  
and 583 tube II discarded

Ech 969 tube II now shows many minute delicate cal  
proved to be kidney shaped diplococci ~~as~~  
~~a Cal 8 on Ach 591.~~ Ech 969 tube II discarded

Culture of Cal 7 & 8 capped in dark 237°C.



6/7/22 Ach 584 tube II Not discarded

Fluid 301 tube I remains clear discarded

Ech 959, 964 + 967 tubes I normal change discarded

Ach 582 tube I growth n-c on 590 tube I

Ach 588 tube I growth n-c on Ach 590 tube II

Ach 588 tube II ? growth ? flake n-c on 591 tube I

Ech 969 tube I growth n-c on 591 tube II

Ach 583 tube I growth by Clo n-c on Ach 590 tube III

white col n-c as Col 7 on Ach 590

yellowish col n-c as Col 8 on Ach 590

Col 7 + 8 capped @ 37°C.

Ach 590 tube I + II + III + 591 tube I + II placed

@ 30°C capped - over light.

Ach 582, 583, 588 + Ech 969 all tubes I discarded

Ach 588 tube II discarded.

Ach 588 tube III Not discarded

7/7/22 Col 1 + 8 show good growth without any definite  
bump change, so each one from most likely  
looking area on Ach 585 and from Clo of them  
as 2<sup>nd</sup> det on Ach 589. Clo flooded one  
all Ach 589. All tubes capped @ 37°C.



Ach 585 tube I from 2-1 on Ach 585 tube III uncapped @ 37°C in light  
 Ach 590 tube I II III from little noticed but no  
 definite band change so each 2-1 on Ach 589  
 tube I 2 I, II 2 II 5 III 2 III all capped @ 30°C in light.  
 10/7/22 Ach 590 tube I II III no material change discarded  
 Ach 589 tube II III from 2-1? slightly mottled discarded  
 Ach 589 tube I from 2-1 starting to turn brown so placed  
 out on Ach 589 tube IV & V capped @ 30°C in light  
 Ach 584 tube I but discarded  
 Ach 585 tube I unchanged discarded  
 Ach 585 tube III which from 2-1 on 589 tube VI uncapped  
 @ 37°C in light  
 Cols 1 & 6 (4/7/22) no change discarded  
 Cols 7 & 8 (6/7/22) no change discarded  
 Cols 1 & 8 on Ach 585 (7/7/22) show from 2-1 starting to turn  
 brown so each 2-1 on Ach 589 capped. 585 tube discarded  
 Cols 1 & 8 on 589 (7/7/22) Cols no definite band  
 11/7/22 Cols 1 & 8 on Ach 589 (10/7/22) show from 2-1 practically normal  
 so each 2-1 on Ach 585 & capped @ 37°C  
 Ach 589 tube IV? slight from 2-1 in C. 2-1 only tube V nil  
 C. 2-1 placed over tube IV & the 2-1 on tube VII capped in light  
 @ 30°C  
 Ach 589 tube VI from 2-1 normal so 585 tube III now 2-1  
 on 585 tube IV capped @ 37°C in light.  
 Continued exp. Sup 2124



# Vacc 211

Vaccinia dated 1/7/22 a l.t. from Allen & Dand.

3/7/22 large loopful mcs on Aeh 5876588

tubes I & 2<sup>nd</sup> 2<sup>nd</sup> mcs. on 5876588 tubes II

all places in jar with lime water below  
incubated at 37°C in subdued light

6/7/22 Aeh 588 tube I shows many yellowish cals

growth at edge lower part? starting to turn brown

no c as Cal 1 on Aeh 590 capped at 37°C

Aeh 588 tube I discarded

Aeh 588 tube II few yellowish cals discarded

Aeh 587 tube I many cocci cals.

new? hump lower part c as Cal 2 on Aeh 590

new cals? turning hump in <sup>lower third</sup> middle  
middle c as Cal 3 on Aeh 590

Pure Cal . . . middle c as Cal 4 . . .

Pure Cal . . . c as Cal 5 . . .

Pure Cal . . . c as Cal 6 . . .

all capped at 37°C

Aeh 587 tube I discarded

Aeh 587 tube II growth & condensation

no tube discarded

11/7/22 all cals c as Cal 585

13/7/22 no defensible hump on any of tubes



Vacc 212

Same vac as exp 211.

4/7/21 Minute quantity rubbed over Ach 591 tubes

I, II, III, IV, V, VI, and 589 tubes I & II

Ach 591 Tubes I II III / capped 237° = reddish light

Ach 591 Tubes IV V VI / in full jar, time well below 237° = reddish light

6/7/22 Ach 591 tube V Cal of cocci overgrown with  
a spreading veg growth so discarded

Ach 591 tube IV Cal of yellowish white cocci

? waxy growth ? flake formed around. These

places are on Ach 591 tubes VII VIII & IX

Other places in jar will time well below 237° = reddish light

white Cal as Cal 1 on Ach 590

C. w. mixed as Cal 2 on Ach 590

Ach 591 tube IV discarded

Ach 591 tube VI shows white yellowish cal

C. w. mixed as Cal 3 on Ach 590

Ach 591 tube VI discarded

Ach 589 tube II few cocci cal

lowest yellowish cal as Cal 4 on Ach 590

Ach 589 tube II discarded



Ach 587 tube I fair number even cal on surface  
also some by spreading front

a bunch of cocci cal? starting from n-c as Cal 5 on Ach 590

a coccus cal? starting from n-c as Cal 6 on Ach 590

some? from front n-c as Cal 7 on Ach 590

Ach 589 tube I discarded

Ach 591 tube I II & III show cocci cal on surface

Note all of cal capped @ 37°C.

~~Ach 588 tube I~~ 7/7/22 Ach 591 tube II a cal?

? starting from n-c as Cal 8 on

Ach 591 & the left @ 37°C - light. capped.

10/7/22 Ach 591 tube I & III no change except cells

rather more translucent - discarded

Ach 591 tube II from decay starting between

two cal so this with part of the two cal

n-c as Cal 9 on Ach 589 (two dets). capped

Cal 8 on 591 (7/7/22) good front probably starting to

from n-c at margin so n-c a lot of

on Ach 589 capped @ 37°C - light.

Ach 591 tube VII, VIII, IX but discarded

Ach 591 tube IV no change discarded



11/7/22 Cals 8 & 9 dls 1 & 2 on Act. 589 (10/7/22) normal pale  
no air turning lamp on Act. 591 tube II again  
no air as Cal 9, on Act. 585 dls 1, 2 & 3  
+ again capped 237°C in light.

12/7/22 Cal 8 on Act. 589 (10/7/22) no air on Act. 592 capped 37 light  
Cal 9 on Act. 585 (11/7/22) no air on Act. 592 capped 37 light

13/7/22 Act. 591 tube II no change discarded

All tubes of Cals 8 & 9 now discarded, except 8

Cal 8 on 589 (10/7/22) & Cal 9 on 592 (12/7/22) These  
show? Starting to turn lamp no flame with these Cals  
237°C in dark.

Cals 1, 2, 3, 4, 5 & 6 on 590 (6/7/22) practically normal

from N so all discarded Cal 7 on 590 (6/7/22) not discarded

All latest cultures of Cals no air on 592 except Cal 7

which shows not discarded capped 237°C  
<sup>on culture discarded</sup>

14/7/22 Cals on 592 show practically normal from N so all  
no air on 593 + capped 237°C - dark

17/7/22 Cultures on 592 (13/7/22) uncapped since 14/7/22 show

Cals 1, 2, 3, & 5 white, Cals 4, 6, 8, 9, yellow discarded

Cultures on 593 (14/7/22) capped show Cals 1, 2, 3, 5, white, 4, 6, 8, 9 yellow

Each Cal no air on 592 (The Cals which had been flooded one  
half hour previous) all capped 237°C - dark

Continued after Sep 2/4.



Vaccinia Sep 213

Same tube of *Vaccinia* as 211

6/7/22 Small quantity placed on act 590 tube (Penny)  
cond v. passed over, not from clo.

Now made on the Arch 59.0 inches T 171

+ Ach 591 tubes  $\overline{I}$   $\overline{571}$ , and Ach 589 tubes  $\overline{I}$   $\overline{511}$

Tubest I place in <sup>full exposure to</sup> anaerobically  $33^{\circ}\text{C}$  in liquid  
Tubest II " " " " " (with a

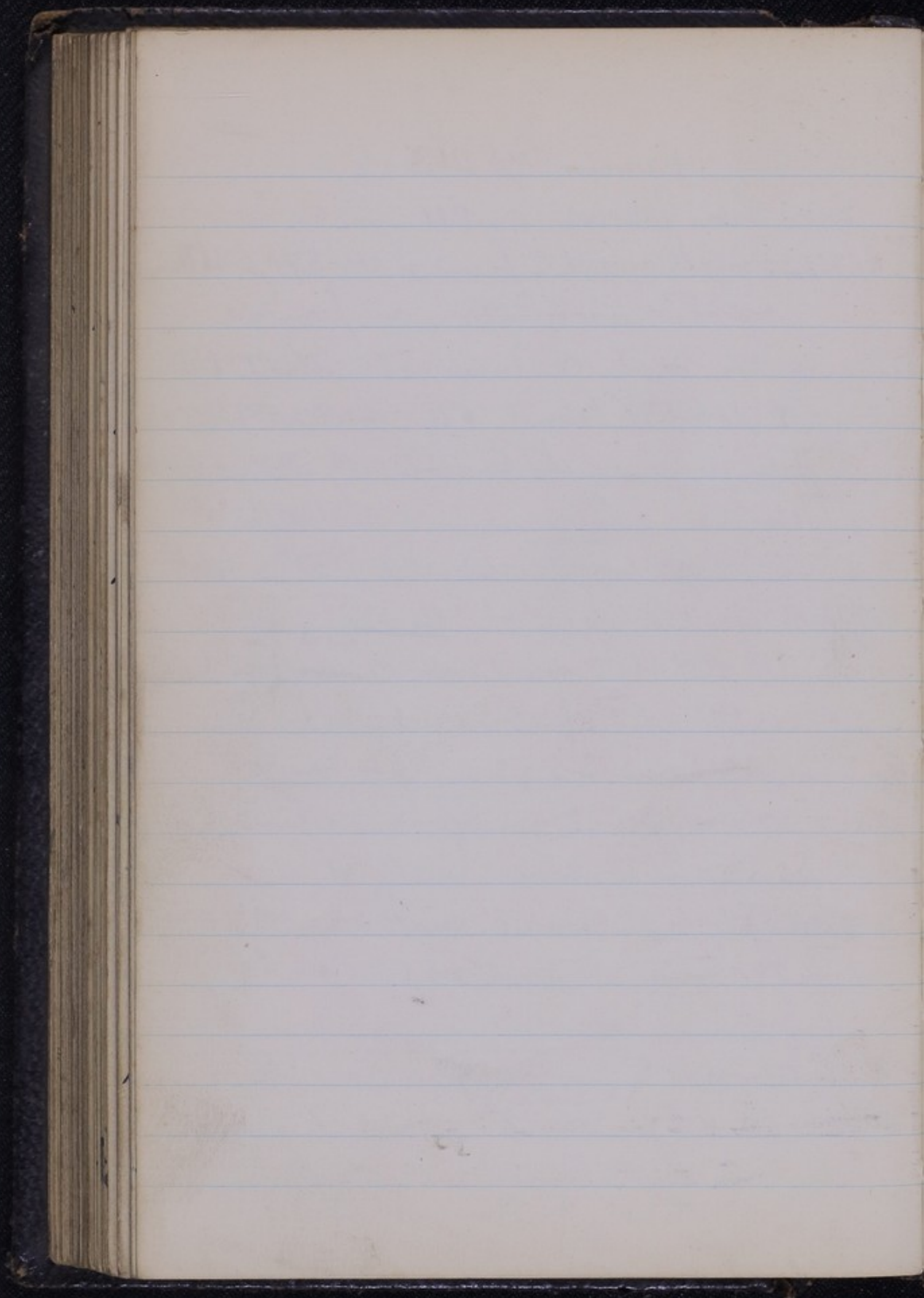
Tubes II " " " " (with d)

large tube (flame) water at 37° - light

10/7/22 Ach 590 tubes 1 ml discard

Ach 589 tube I several small (ob <sup>the large</sup> pedicell / <sup>marg the</sup> pores divided)





Exp 210 continued

12/7/22 Ach 588 tube IV o-c on 592 tube I capped 37° light

Ach 589 tube IV now shows good surface growth

o-c on 592 tube II capped 30° - light

Ach 589 tube V & VII show growth - C.W. only

tube VII o-c on 592 tube III capped 30° - light

13/7/22 Ach 589 tube I IV & VII growth appears  
normal so discarded

Ach 591 tube I & II no growth growth discarded

Ach 592 tube II & III growth appears normal discarded

Ach 589 tube V growth in C.W. only discarded

Ach 586 tube III & IV growth not good but normal discarded

Ach 589 tube VI good normal growth discarded

Ach 585 tube V & 592 tube I growth no sign of brain discarded

Other old tubes show no material change so

all discarded except Cols 1 & 7 on 585 (11/7/22)

Cats all o-c on 592 capped 37° - dark

17/7/22 Cultures 11/7/22 no change all discarded

Cultures 13/7/22 all o-c on Ach 593 capped 37°

20/7/22 Cols 1 & 7 on Ach 593 (13/7/22) uncapped 37°

since 17/7/22 show no evidence of brain all discarded



20/7/22 Culture taken on 593 (17/7/22) shown as follows  
Col 1 ? starting to turn brown - many places (growth) (watering)

Col 2 some yellow

Cols 3, 4, 5, 6, & 7 rather delicate very  
whitish like col 1 <sup>less water</sup> only no evidence of true  
brown so all discarded except 7

Cols 1 & 2 <sup>7</sup> - on ACh 593

Col 1 2<sup>nd</sup> 13<sup>th</sup> dts made on ACh 593 later  
all capped & 37<sup>th</sup>

21/7/22 All tubes placed in room - dark

4/9/22 Tubes 305 (inc col 1 & 2 18/7/22)

show faint growth discarded & from  
them on 590 (20/7/22) show with col 1 few doubtful  
brown spots & with col 2 no brown 1/2 <sup>discarded</sup>

Cols 1 & 7 on 593 (17/7/22) very? discarded

Col 2 on 593 (17/7/22) normal yellow growth discarded

Col 2 on 593 (20/7/22) normal yellow growth discarded

Cols 1 & 7 on 593 (20/7/22) very light growth discarded

Note Old cultures lying on bench the light <sup>13/7/22</sup> discarded them

Cols 1, 3, 4, 5, & 6 on 592 <sup>13/7/22</sup> white growth with

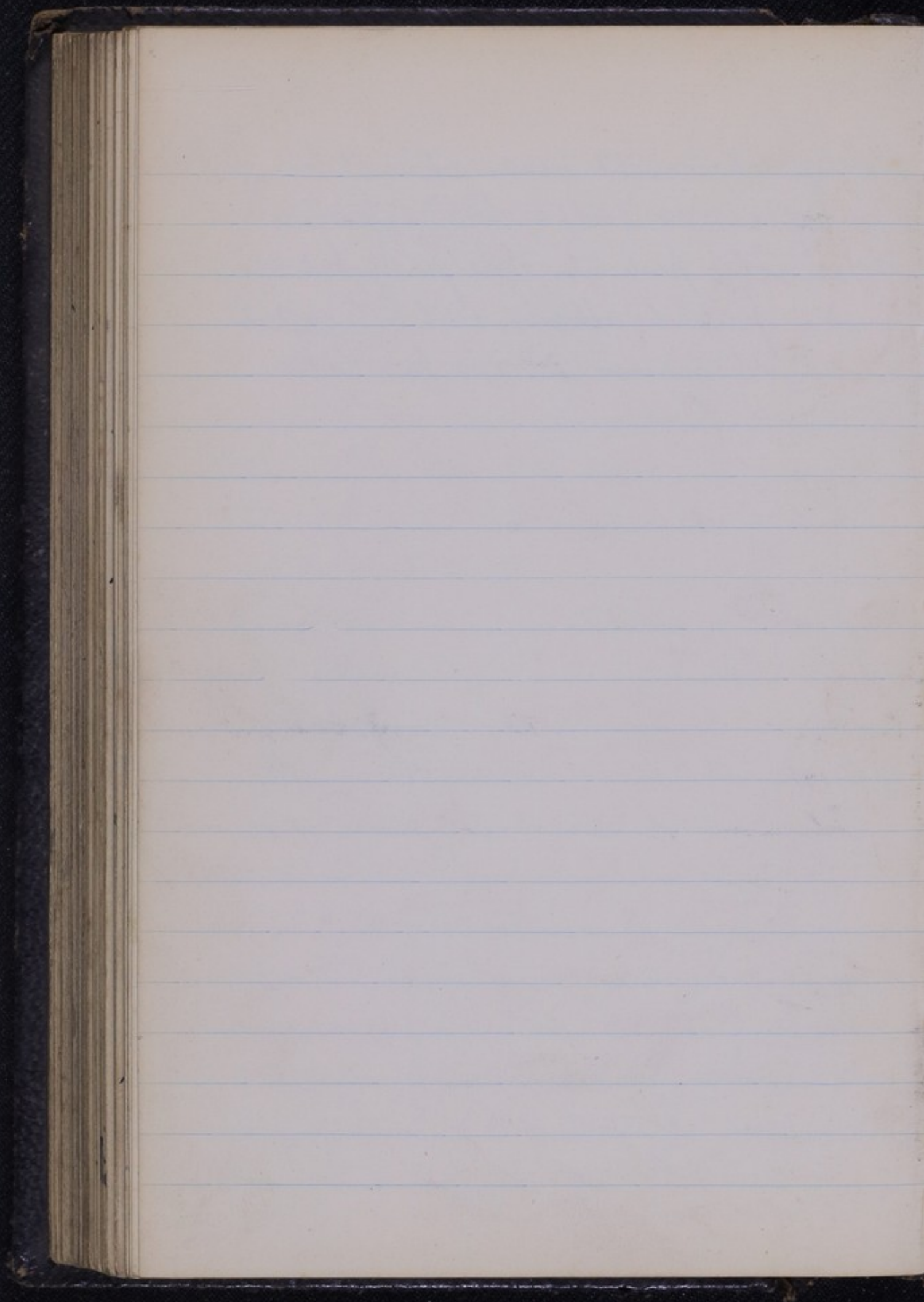
many brown spots Col 4 on 593 <sup>13/7/22</sup> shows same

white Col 6 on 593 <sup>13/7/22</sup> shows whitish growth without spots  
Col 4 recovered from this 592

5/9/22 Col 4 on 592 placed out on 3 tubes of  
Ach 592 (Det 1 as streak) capped 23/2.

7/9/22 Col 4 plate tubes show from M. but no  
part disappearing. Det 3 <sup>22</sup> decayed  
~~24~~ + placed a room for stock.





Vacc Sep 214

14/7/22 Some of fibrils of tubule of Sep Sep 122  
was fixated on seven tubes of Acc 593.

Then stood for 10 minutes and then sheathed  
down as follows with Cal of Vacc Sep 210

~~with~~ Cal 1, ~~with~~ Cal 2, ~~with~~ Cal 3,  
~~with~~ Cal 4, ~~with~~ Cal 5, ~~with~~ Cal 6, ~~with~~ Cal 7  
all capped ~~at~~ 37°C - dark

17/7/22 Cal 2 pink yellow growth, all others whitish  
some of tubes show possible start of hair change  
no & each on four tubes of Acc 593 capped 37°C

20/7/22 Cal 1 & 7 on 593 (14/7/22) uncapped since  
14/7/22 show no material change all discarded

Culture on 593 (17/7/22) Cal 1 very translucent watery  
growth? starting to turn hair, Cal 2 dense yellow  
Cal 3 to 7 whitish Cal 7? starting to turn hair  
Cal 3, 4, 5 & 6 discarded

21/7/22 all tubes placed in dark & room

4/8/22 <sup>uncapped</sup> Cal 1 on 593 (17/7/22) <sup>Cal 1</sup> very growth. Cal 7 very little? hair growth  
Cal 2 yellowish growth all discarded

Cals capped on 593 (20/7/22) show same as 17/7/22 culture.  
Cal 1 discarded



Note (old later Calson 593 (14/7/22) left on  
bench to light show whitest way growth  
with tramp spots best marked in Cal 1  
no Cal 1 recovered from this.

5/9/22 Cal 1 plates out on three tubes each 592  
(del 1 as black) Cal 2 & 3 on 592  
all capped at 37°C.

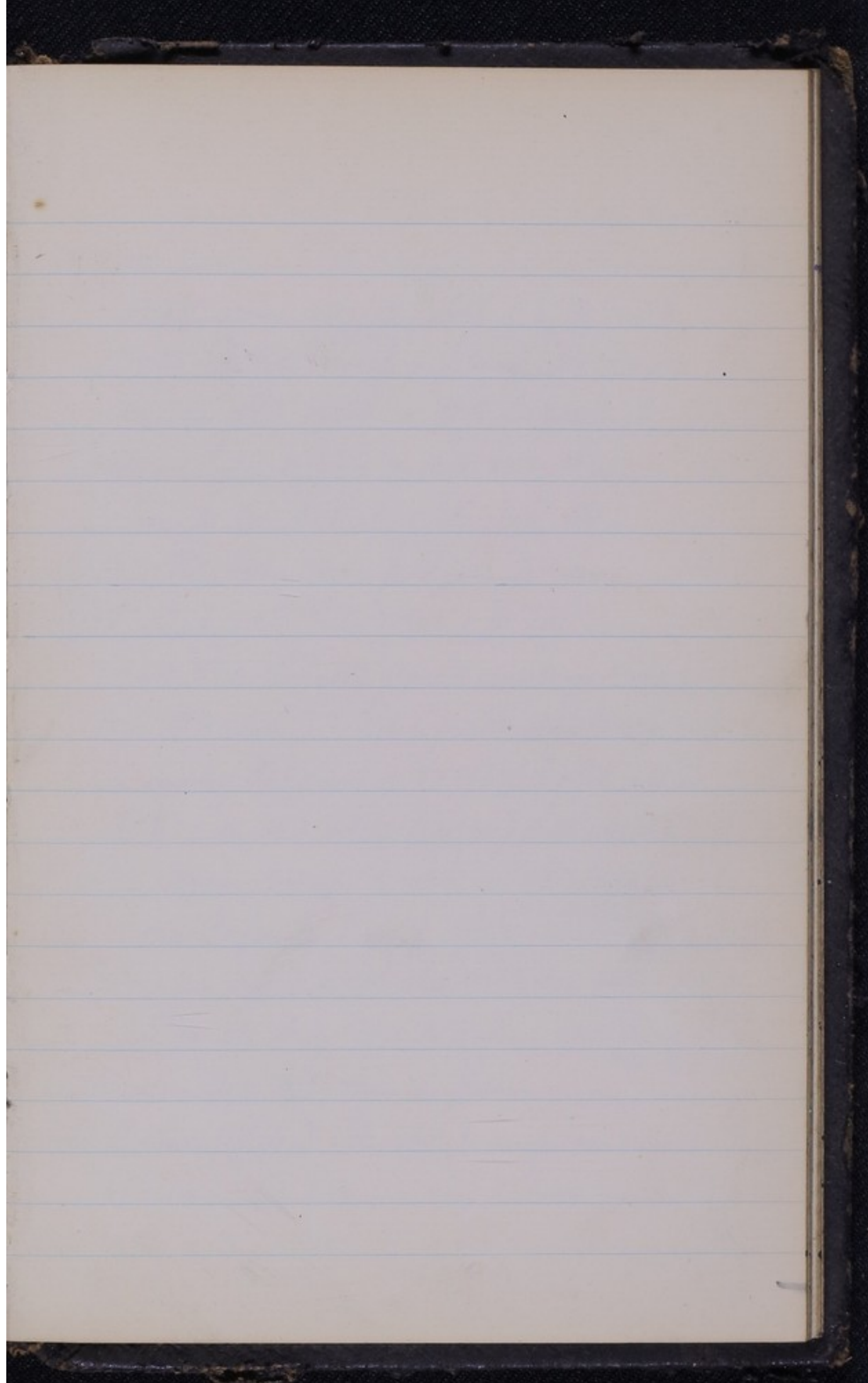
7/9/22 Cal 1 plate tubes show no disappearing growth  
no del 2 & 3 discarded

Cal 2 shows no disappearing of growth  
Cal 3 shows growth with tramp spots

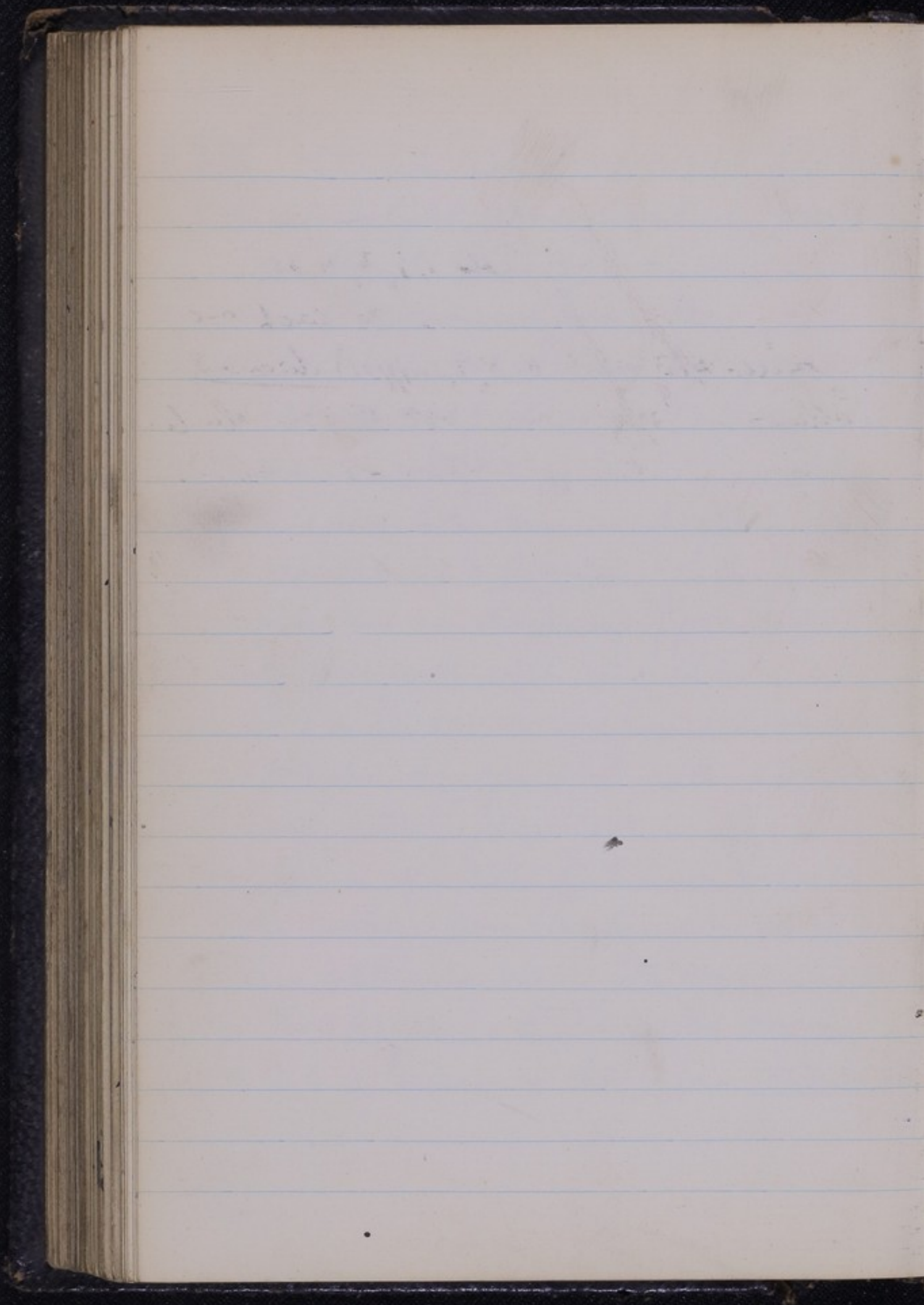
8/9/22 Cal 3 on del 593 recovered from old tube on bench  
& broken over agar plate with wide rubber  
band below. plated at 37°C

9/9/22 Cal 3 on agar rubber plate shows long growth  
over rubber than elsewhere, some at very distinct  
large white zone on 592 as Cal 3: long zone as Cal 3 (2)

18/9/22 Cal 3 (2) from as <sup>small</sup> ~~big~~ Cal 3 on del 592, from  
tube a microscopic film - faint discarded







Exp 212 continued.

20/7/22 Culture taken 14/7/22 have been uncapped

237C since 17/7/22 Cals 1, 2, 3, 4 & 5?

Waiting for twin transp. - place 10 each 7-6

on Aeth 593 & Cals 6, 8, 9, (14/7/22) discarded

Culture taken 17/7/22 on Aeth 592 show no definite

transp. so all 7-6 on Aeth 592 capped.

21/7/22 All tubes now placed in room in dark

4/9/22 Aeth 593 tubes I (9) & II (9) very light growth

Aeth 591 tube II growth unchanged discarded

Aeth 593 tube I white growth with transp. spots discarded

Tube marked Cal 2 on 590 (6/7/22) growth with transp. spots discarded

Cal 2 on 593 tube II (17/7/22) growth with transp. spots discarded

Cals 1, 2, 3, 4, 5 on 593 (14/7/22) show

no definite transp. spots discarded

Some Cals capped on 593 show Cal 4 dense yellow growth

Other Cals waxy. with Cal 5 showing some transp. spots all discarded

Culture on Aeth 592 shown as follows

uncapped Culture (17/7/22) Cals 4, 6, 8, 9 fairly dense normal discarded

Cal 1 waxy; Cals 2, 3, 5 waxy with few transp. spots discarded

Capped culture on 592 (20/7/22) Cals 4, 6, 8, 9 identical yellow growth

no Cals 6, 8, 9 discarded Cals 1 & 5 waxy discarded 3 shown.

Cals 2, 3, 4 & 3 min waxy with transp. spots discarded



Note. Cold lakey lying on bench <sup>to light</sup> of Cols 1, 2 & 3  
New white frost. with numerous small  
transp spots throughout so Col 1 recovered  
from this

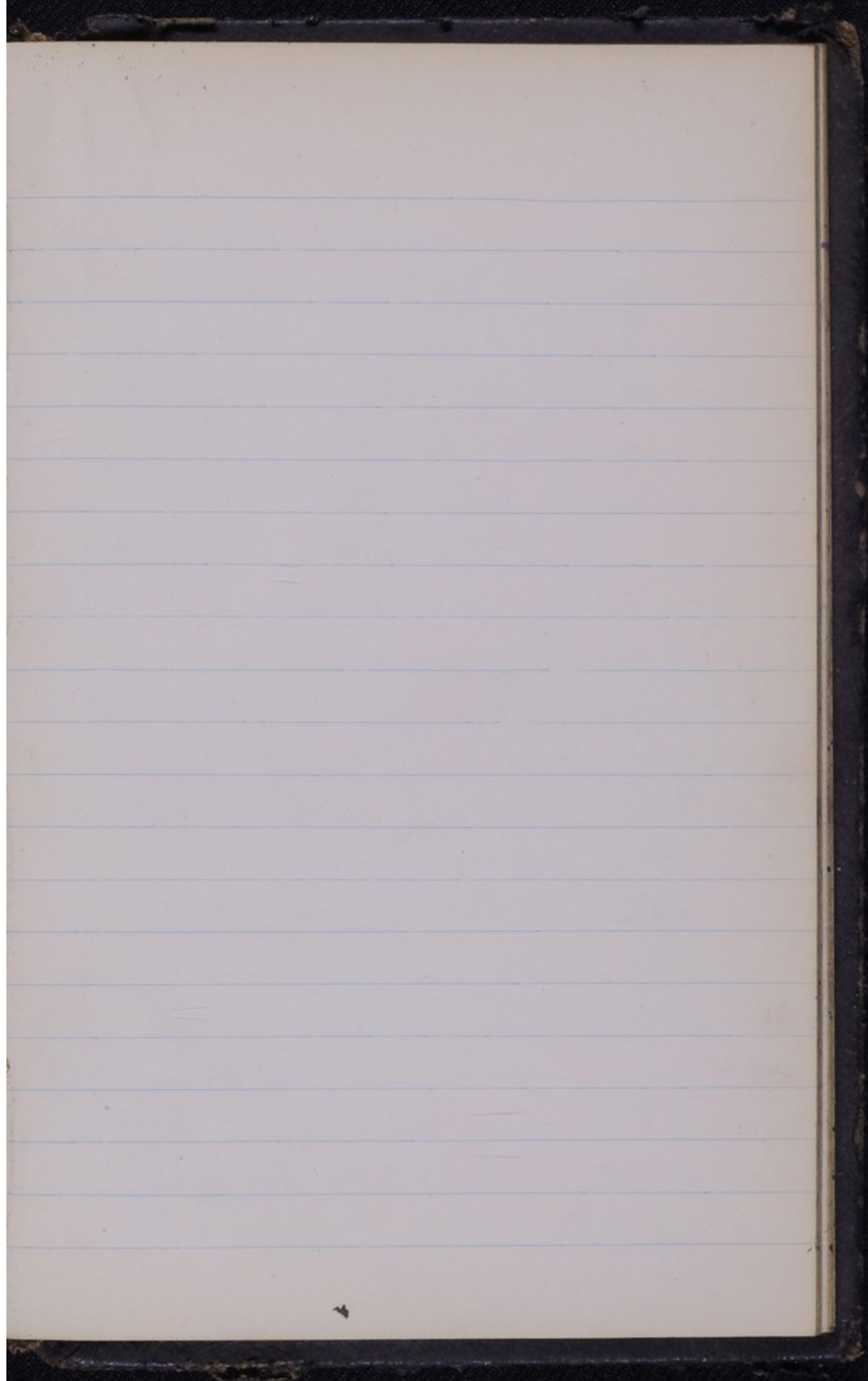
5/9/22 Col 1 placed out on three lake of Feb 592  
(del 1 as thick) Cols 465 etc on 592

all capped 237° C.

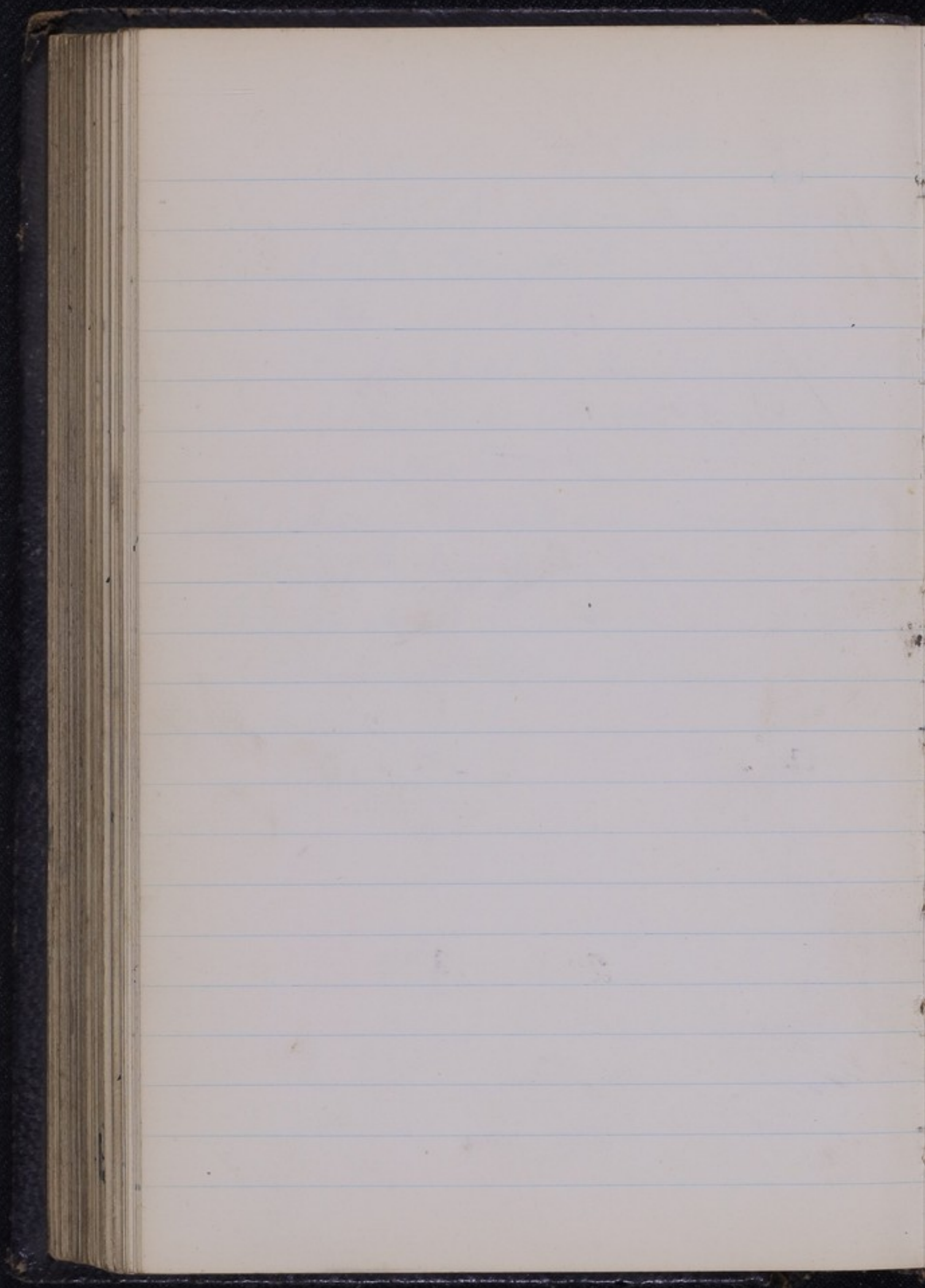
7/9/22 Col 1 shows frost with some hailment spots  
dels 2 & 3 discarded

Col 4 no drapp of frost

Col 5 frost with light spots







## Exp 215.

Same tube of Var as used in exp 211

17/7/22 One drop mixed with Clv. Each 590 tube  
and this one on one tube fresh of

Ach 584, 585, 586, 587, 588, 589, 590  
591, 592, 593. The Clv. finches had  
been floated over 15 min previously.

All capped in dark 237°C.

18/7/22 Tubes show out except 587. which shows  
one thing running Col. discovered

20/7/22 Tubes show nil. no more with  
Col of Exp 212 as follows: — from <sup>culture</sup> 14/7/22

Ach 584 Col 1 585 Col 2 "mixed"

586 Col 3 "mixed" 588 Col 4

589 Col 5 590 Col 6

591 Col 8 592 Col 9

593 Col 2 "mixed" All capped 237°C

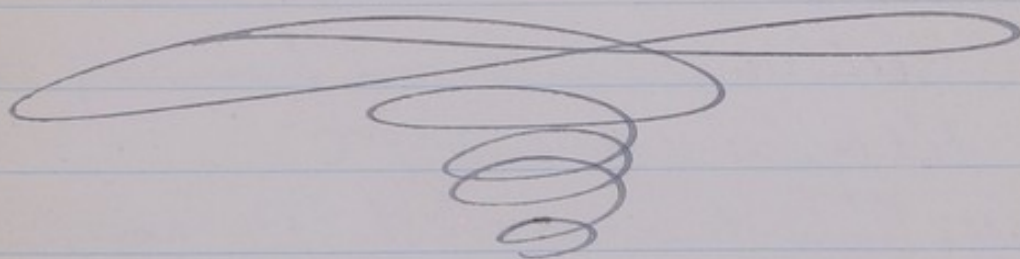
21/7/22 All tubes placed in room in dark

4/9/22 Tubes show growth normal. A. Col. more  
except 584 tube (nil) and 593 tube (I  
shows many transp. sp. all discovered  
except 593 tube (I



5/9/22 Ach 593 tube I (capped) placed on  
to Ach 592 tubes II III IV (tube II as thick)  
all capped at 37°C.

7/9/22 Ach 592 tube II growth with  
lytic spots tubes III & IV normal cal prod



Exp 216

old tube of vacuini (from Int for calf pump)

dated 9/8/21 (same as used in exp 196)

17/7/22 move on to one tube of each of ACh 590, 592, 593

The Ch. Sp. which had been flooded over 15 minute  
previous. All capped @ 37°C.

18/7/22 ACh 593 shows one delicate sprout; cat above  
ACh 592 Int

ACh 590 ? covered w/alg growth? flake of brown  
film shows some delicate & many granules  
so - on ACh 590 tube II capped @ 37°C.

20/7/22 ACh 592 tube I contain probably sprout & discarded

ACh 593 tube I contain sprout & discarded

ACh 590 tube II Int discarded

ACh 590 tube I surface unchanged? any growth =

Ch. so the one on 590 tube III

2cm from Ch. stain dense, shows many tiny granules

Tube I now stuck down Cat 2 Vac exp 204.

21/7/22 ACh 590 tube I now shows good growth core

tube III no definite growth.

all tube placed @ room - dark



4/9/22 Ach 590 tube III no definite frost discards

Ach 590 tube unchanged, frost & earliest  
line 1? may water cal on surface.

5/9/22 Ach 590 tube placed out on three  
tubes of Ach 592 tube II III IV (tubes as thick)  
all capped @ 37°C

7/9/22 Ach 592 tube II III & IV  
frost appears normal



12/10/22

late Ach 590 tube @ room is now a  
deep buff yellowish & on surface around shell frost  
is some transp? frost, film frost shows granules  
but this is not diaph occurs frost is now on c on  
605 @ 37°C - subnormal light

19/9/22 Ach 605 @ 37 light shows out de caded



Exp 217.

66 tube *fraccina* (Rebman's calf lymph)  
dated 25/7/21 (same as used in exp 194)

17/7/22 Inc on the one tube fresh of  
Ach 590, 592 & 593, the Cw. frolich  
had been floated 15 min previously. All added 3/2.

18/7/22 Ach 590 shows one watery running col  
spreading one tube. Ach 592 & 593 Nil

20/7/22 Ach 590 tube I contain spreading with discarded  
Ach 593 tube I Nil so now shaken down  
with Coll vacr exp 208

Ach 592 tube I say minute watery col on surface  
few show some minute granules some  
on Ach 592 tube II

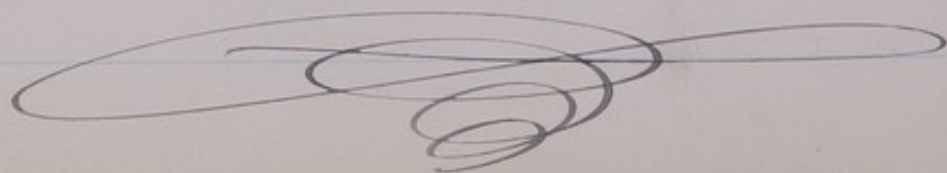
21/7/22 Ach 592 tube I & II Nil

Ach 593 tube I now good growth of cocci.

all tubes & now placed in dark

4/9/22 Ach 593 tube I yellowish growth with some  
lumpy spots discarded

Ach 592 tube I & II Nil





Exp 223 continued

18/9/22 Ach 594 tube I <sup>microsc</sup> large greyish white col below  
on 594 as Col 1. film from streak alone

On col ~~from~~ <sup>on</sup> Ach 594 tube II <sup>upper dark grey part</sup> plated out on 3 tubes Ach 594.  
19/9/22 ~~Col 4~~ <sup>Col 4</sup> faint grey now isolated from.

from old culture on agar on rubber band which  
has been on bench; called Col 4; inv. on Ach 594

20/9/22 Col 3 tube plates on Ach 594 Dil 1 general  
greyish growth discarded, dil 3 <sup>not</sup> discarded  
dil 2 some dark grey-black-yellowish col  
one of the same as Col 3 on Ach 594 1595

? any very minute col between these on Ach 594  
as Col 3(a). All uncapped @ 37°C & dark.

26/9/22 Plate of Col 3 on Ach 594 (18/9/22) no change discarded  
Ach 594 tubes I II III not much change discarded  
Col 3(a) on 594 discarded

27/9/22 Col 2 bright yellow. Col 1 & 3 dull greyish yellow  
Col 4 still colourless growth (on Ach 594)  
each Col now on Ach for uncapped @ 37°C.



Vacc Sep 218

Same tube of Vaccinia as used in exp 210

18/7/22 Inc on & a tube of Ach 592

uncapped. in lead cylinder capped lead <sup>gutter</sup> screw top.

@ 37°C.

20/7/22 Tube found contain no dis corded

Vacc exp 219

New tube of Vaccinia dated 12/5/22 obtained from

Willow Dunn & Butler (Jenny Int for Calympha Ltd)

received 20/7/22 The whole placed into

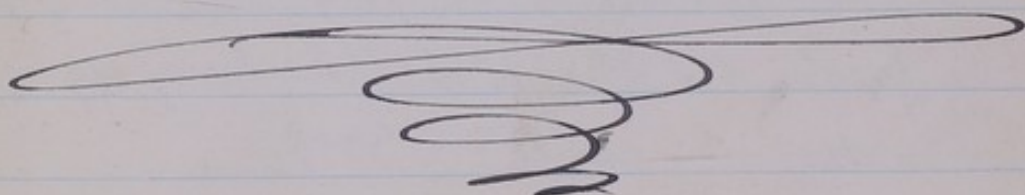
Clo of an Ach 593 tube, & later examined

then stretched down Ach 593 tube I

& placed in lead cylinder as above in exp 218

Several days later placed uncapped @ 37°C out of cylinder

4/9/22 Tube then Nil





## Exp 223

11/9/22 *Vaccinia* recovered from Allen North  
(lost int. label 8/9/22). Waspful micro  
on surface. In tube of Ach 592 & then  
n.c. on Ach 592 tubes I & II 589 tube I & II  
& Ach 588 tube I & II. All placed  
in lead vessels: tubes one in tubes filled air  
tube II anaerob.

12/9/22 In *Vaccinia* streaked down Ach 594 tube I  
(probably capped aerob.)

13/9/22 In *Vaccinia* streaked down Ach 594 tube II  
(probably anaerob.)

15/9/22 Ach 588, 589 & 592 tubes I & II then  
used contain col only discarded

Ach 594 shows one fair size col from part I

? any thing else along middle track, n.c. 594 tube III  
capped aerob.

Ach 594 tube II shows small grey growth upper  $\frac{2}{3}$  which

? any growth from  $\frac{1}{3}$ , but there n.c. on 589 tube IV

594 tube II now uncapped & 37°C.

18/9/22 Ach 589 tube IV very yellowish white growth discarded

Continued after Exp 217



Exp 220

20/7/22 Same tube of Vaerini as used in exp 219  
from Cl. emulsion of primary Sch 593  
on 593 tubes I II & III

Tube I capped & primary tube capped  
tube III & IV uncapped.

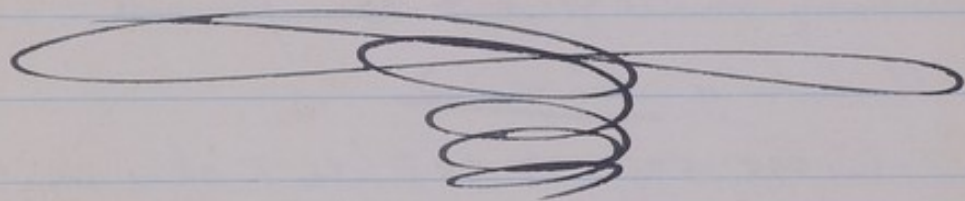
2/7/22 Primary tube shows? growth: Cl. only  
Other tubes Nil.

All plates @ room in dark

4/9/22 Ach 593 tubes I II III but devoid

Primary culture on 593 covered tiny cols

5/9/22 Primary culture tiny cols pronounced  
note large pleomorphic bacilli





Vacc Sept 224

18/9/22 Same tube of vac as used in exp 223

Some inoc on Ach 595 two tubes of from  
then one is shut down Ach 596, 597 & 598

tubes I & II. Tube I uncapped @ 37°C in  
subdued light. Tube II in Bell jar <sup>(anacardi)</sup> filled  
expired air, & reduced or that set on 20.  
= 300 Wm. (Bell jar had Pyrex. A. short below)

Bell jar placed @ 37°C in subdued light.

20/9/22 Tube II now removed from bell jar shows  
few contents cat of prob cocci, ? but on Ach 596  
Ach 597 shows a few ? cats between the cats  
film shows several cocci, few tapering oval forms  
probably small yeast & some granules

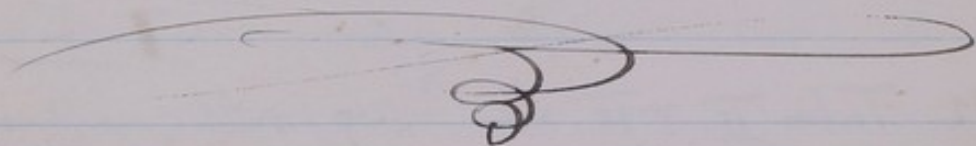
All tube II discarded

25/9/22 Ach 595, 596, 597, 598 tube I shows usual  
contents only so all discarded

Exp 221

20/7/22 *Chaetomium Vaseum* occurs today  
A large loopful m.c. on Ach 593 tube I  
+ W. flooded on from the 2nd 11  
m.c. on A Ach 593 tube II  
with capped 23, C.

20/6/23 Tube I shows some growth of *Cocc.*  
Tube II shows *Tril*





Vacc Sep 225

27/9/22 Same Vacc as used in Sep 223

One drop rubbed on Aeth 600 & from the 2<sup>nd</sup>  
it made our Aeth 600 tube II

both appeared 237° & dark in lead tubes.

28/9/22 Aeth 600 tube I shows growth lower part. film

shows fairly large. ? growth upper part film

shows some debris & spores only so no on for tube III

The plant - lead tube as before. Tube I discarded

29/9/22 Tube II & III show ? any growth, films  
show little debris only.

2/10/22 Tube III No definite growth.

Exp 222

Letr Det Vacuum at 12 from Allen Park  
received 20/7/22

20/7/22 Letr 959 tube T & II had room

Clw. of det 393 pipette on, tube I  
The most complete of Vacuum & Clw. station

Also the one on tube II Clw. station

At capillary 537°C.



# Vacc Exp 226

29/9/22 Same Vacc as used in exp 223 <sup>inc</sup>  
on At Arch 595 tube I II <sup>each</sup> and placed



in <sup>an</sup> apparatus consisting of a 7x1 tube inside  
an 8 x 1/2 tube, to which dist H<sub>2</sub>O +  
1cc of fresh rabbit blood solution tubes  
so that light has to pass hemoglobin.

both apparatus placed to submerge light  
at 37°C, on <sup>tube I</sup> aerol & on <sup>tube II</sup> far  
aerol with I reduced so that E.P.  
on 20 = 300 mm.

2/10/22 Tubes grew nil so both discarded &  
experiment repeated with fresh tube of vacuum  
dated 29/9/22 (L.H. 2nd) from Allen O'Hanlon.

5/10/22 Tube I grew many cocci & some sporey growth  
formed to be large.

Tube II grew many cocci & two fluffy cols grown  
to be large. looked like B. aerog. caps.





## Vacuaria Exp 227

5/10/22 Tube Vac. dated 29/9/22 (Set Inst.) from Allen (Haul).

half of tube mixed with Clo. of each 601 tube  
& the other as sheet down one tube from  
of each 601, 602, 603, 604, 605 placed  
uncapped in light  $23^{\circ}\text{C}$ .

also on each 970, 971, 972, 973, 974

and 975 tubes I, capped in dark  $23^{\circ}\text{C}$

also on each 972 tubes II III both these

placed in apparatus as used in Exp 226, tube II aerob.  
tube III anaerob. (both placed  $23^{\circ}\text{C}$  to saturated light.)

Tryng 100% tubes, for filter  $\text{CO}_2$  the 20 reduced to that 20  
on 20 = 450 mm.

6/10/22 ~~each 972 tube I~~ All tubes show many cals of cocci.

each 972 tube I - ? minute cals alone. film shows  
few ? large cocci & granules

each 601 tube I shows cals of cocci. there is one tiny  
modest col touching two cocci cals. film shows cocci  
& some curious clumps of granular debris so the plates  
out on each 601 tubes II III IV V uncapped  $37^{\circ}\text{C}$  under light.

each 972 tube II upper uncertain pt on 972 tube IV & this  
now placed in thermophilic apparatus instead of tube II



10/10/22 Ach 601 tubes II III & IV show cats

of cocci only tube V out, tubes discarded

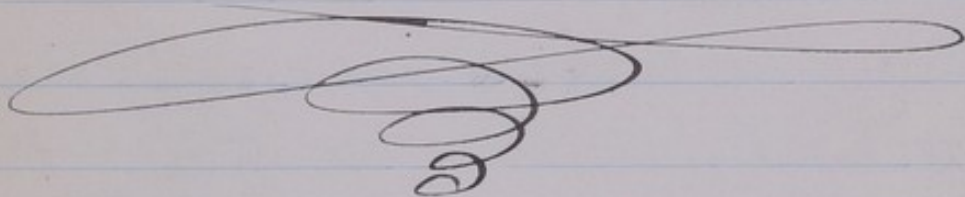
Ech 972 tube II III cats of cocci only seen discarded

Ech 972 tube IV nothing definite, Ch. floated over.

Ach 601, 602, 603, 604 & 605 all show cats  
look like micrococci. All discarded

11/10/22 Ech 972 tube IV out discarded

6 Mar Ech tubes show growth of cocci only.



Vacc Sep 228

27/10/22 Same tube of Vacc as above - Sep 223

note on the one tube from Sch 970, 971, 972

973, 974 all placed in blue tube to subvent light  
237°C. capped.

1/11/22 Sch 970 + 972 Vg reddish brownish growth over

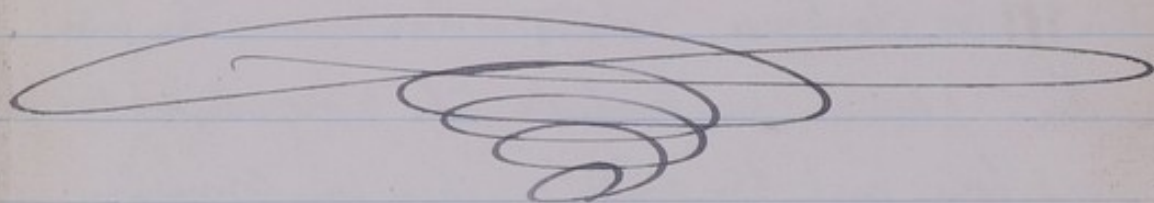
most surface discarded

Sch 973 + 974 faint Vg growth over lower half of  
tube, discarded

Sch 971 ? any growth. film showed from inside only

no growth on Sch 971 tube II capped in blue glass to sub-light  
37°C

16/11/22 Sch 971 tube I & II no change discarded





Vacc 229.

Vacc obt from Dokin.

? 15/1/23 Small portion placed on an agar tube & from the culture made with platinum loop on P.

Ach 614 tubes I II III & Sch 1008 & 1010, tubes I II III

all capped @ 37°C & light, Tubes I & Mannu tubes

Tubes II & yellow green tubes & Tubes III & Amber tubes

19/1/23 Tubes show Nil. Ach tubes dis carded

Sch tubes C.V. flooded on all

A first portion of the Vaccinia placed on surface for agar tubes & from the culture made on A & Sch 1014 tubes I II III IV  
all capped @ 37°C. Tubes I & Mannu tubes, II & yellow green III & Amber

Tube III in darkness. Tube IV - darkness. The tube

has platinum wire sealed & tube & property into medium at lower part & in middle. then was connected to three & 4 clench cells

Tubes I II III @ 37°C. Tube IV @ 39°C.

22/1/23 Sch 1008 & 1010 tubes I II III No change dis carded

Sch 1014 tubes I II III & IV Nil C.V. flooded on

tube IV now disconnected from cells & connected copper tank of

incubator @ 37°C

23/1/23 Fatura I Seh 1014 kulu I II III IV In change

20 C.W. again floated on

29/1/23 Sch 1014 Inter T OTI Mit dis-arded

Exp 230

Same Voc as ind - Inf 229

1/2/23 Proc on Ach 670 dates I II & III completed

Tub<sup>I</sup> = brown like, tub<sup>II</sup> = yellow green, tub<sup>III</sup> like  
all 377 & 378.

8/2/23 Take down no profit.



Vacc Sep 23

Same tube Vacc as used in Sep 229

29/1/23 Small portion vis on Sch 1013 tube I & from this drop on Sch 1013 tube II III IV

All uncapped tubes I & II like, tube III is Amber like tube IV is yellow green, tube IV is blue like

All placed in jar, filled  $\text{CO}_2$ , then reduced to  $\frac{1}{2}$  vol

30/1/23 Sch 1013 P = 450 mm. placed in jar & light. ~~with  $\text{CO}_2$  & reduced P placed in jar as before~~

31/1/23 Sch 1013 tube III contains viz from discarded

tubes I II & IV nothing definite, tube IV

still shows fine granules so do on

Sch 1012 & Ach 616 each tube I

Sch 1012 placed - yellow green like, Ach 616 - blue green.

All placed again in jar with  $\text{CO}_2$  & reduced P.

except Ach Sch 1013 tube IV discarded

1/2/23 Tube shows no growth, so now placed uncapped & air is same colored tube.

2/2/23 Ach 616 tube I? long vegetative col so do on 616 tube II & III tube II capped in blue green tube to light, tube III uncapped in  $\text{CO}_2$  & reduced P in tube tube blue green tube to light.

Sch 1013 tube II so do on Ach 616 capped in blue like & light.

6/2/23 Tubes all show Nil





### Vacc 232

Same tube (Vacc) as used in Exp 229

29/1/23 Small portion inoc on 2 Sch 1011 & 1012 tubes

Sch 1011 plain - yellow green tube; 1012 - Maure tube

A  $6 \times \frac{7}{8}$  test tube now filled moist sand on soil (raining)

All these tubes placed in Jar. filled  $\text{CO}_2$  & then

Reduced so that S.P. on D.P. - 450 W.M. Jar placed

in incubator at  $37^\circ\text{C}$  to light

1/2/23 Tubes show no growth, so now placed unwrapped in

same coloured tube

6/2/23 Tubes show nil



### Vacc Sep 232

Same tube of Vacc as used in Exp 229. On 1/2/23

inoc on 2 Sch 1014 tube I & Port platinum growth inc. on

2 Sch 1014 tube II (platinum sealed in with tube above & below)

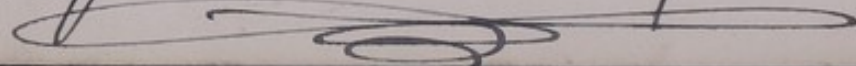
platinums joined up & tops of tube connected with glass

tube & rubber bags, incubator - dark at  $37^\circ\text{C}$

6/3/23. Tube II Vig growth. Tube I? minute growth. film shows

definite fine granules so should be

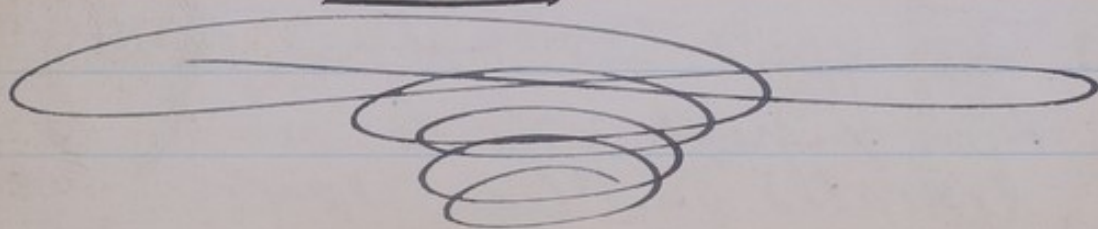
repeated on Clear agar.





Vacc Sup 234

- 1/2/23 Take 4 tubes of Ach 619. moi one slope with  
Vacc & other slope with soil used = ref 231  
Connect tubular with rubber tube & cap ends, 23/02
- 2/2/23 Soil arm shows veg growth. Vacc arm very delicate showing  
up from c.w.
- 6/2/23 Soil arm by various growth including bright red  
Bright red plated out on Ach 616 tubes I II III IV  
Vacc arm. Veg growth with gas evidently come from other arm  
And the tube of Ach 619 taken & inoc & treated as tube I.
- 23/2/23 Various attempts to isolate the red b. failed, but on an Ach 611  
dil 3 of red "mixed" shows no definite col but many <sup>tiny</sup> "flakes" on surface  
This 7-1 on Ach 624 capped & all old 611 discarded
- Some Sch 1022 (14/2/23) Sch 182 shows strong growth with red lines below  
dil 2 plates on Ach 624 tubes I II III & all old Sch discarded
- 28/2/23 Ach 624 tubes I II III show veg growth also running down by gravity.  
Large Col = Col 1. Small = Col 2
- 1/3/23 Cols 1 & 2 show dense growth  
All tubes discarded





Vacc 235.

Van oth from Allen & Hanb (Hide Inst lymph) dated 2/2/23

6/2/23 Small portion more on 3 Sch 983 tubes & Ach 595 tubes

Then 2<sup>nd</sup> 3<sup>rd</sup> & 4<sup>th</sup> made by rather deep vacuuming on

Ach 595 tubes II III IV. All capped - dark at 37°C.

8/2/23 Tubes show many cols of cocci - even tube IV then fair number from tube IV few very col isolated as Cols T, 2, 3, tiny cols isolated as Cols 4, 5, 6.

Ach 595 tube I shows several places growth appears turning transp so on of the 2 on Ach 595 tube V and plated out on Ach 611 tubes I II III IV

Sch 983 growth appears turning transp so on Ach 595 tube VI

9/2/23 Ach 611 tube I grown with hamp change marked so on 611 tubes V VI VII (from 3 different places)

Ach 611 tube II slight hamp change. Tubes III & IV show cocci cols but hamp change not yet started.

Pure cols show normal cocci growth

Ach 595 tube V cocci with sparsely growth but contain bacilli

Ach 595 tube VI cocci growth probably starting transp change

12/2/23 Cols 1, 4, 5, 6 poor growth of white micrococci

Cols 2 & 3 yellowish micrococci, 2 more yellow than 3



Ach 595 tubes I II III IV no material change discarded  
 Ach 595 tube V contain. strong more discarded  
 Ach 595 tube VI no material change discarded  
 Ach 611 tubes II, III & IV no material change discarded  
 tube V VI VII from M9 cocci with some transp. change discarded  
 Ach 611 tube I strong good transp. change, from M shaken up  
 with 200 cc dist H<sub>2</sub>O passed through double bolus & 200 cc  
 About 80 cc passed. This - some pupillae - lost tube I II III  
 Tube I 10 drops pupillae on each of Ach 611 tubes  
VIII, IX X XI XII XIII, XIV XV XVI stand 2 hours  
 then tube VIII & XIII checked Cals 1 & 6 & capped & 3) °C  
 13/2/23. Ach 611 tubes XIV XV XVI but discarded  
 tube VIII & XIII all show growth of cocci with fair  
 transp. change, tube XI XII XIII discarded  
 Cals. 4, 5, 6 discarded  
 Tube VIII no con tube XVII, IX no con XVIII, X no con XIX  
 14/2/23. Tubes XVII, XVIII, XIX all show growth with some transp.  
 Tube VIII C. by no con 611 tube XX capped as usual  
 16/2/23. Tubes VIII, IX X given to Charles, also from tube Cals  
 Previous tube VIII no con tube XXI, XXII, XXIII XXIV XXV  
XXVI, XXVII, all capped. XXI - dark, XXII - light  
XXIII - mauve like XXIV - amber, XXV - yellow green, XXVI - blue green  
XXVII - Blue: (F) light



Tube xx shows growth with fair hump change

on isolated col having hump r.c on 611 tube xxviii

General growth r.c on Sch 1022 tube — capped

20/2/23 Tubes xxi & xxviii shows growth with some hump.

Tube xxviii r.c on tube xxix

Sch 1022 tube — prob having hump r.c on Ach 611 tube xxx

Sch 983 tube — r.c on Ach 611 tube xxxi

21/2/23 Ach 611 tubes xxii to xxvii - light all show some

hump change, tubes xxiii & xxiv from now translucent with semi-hump change in center of throat.

tubes xxii, xxv, xxvi and xxvii no hump change but in xxv when growth is white then translucent. In xxvi

growth is Vig but little translucent. Tube r.c on Ach 624.

xxii on I, xxiii on II, xxiv on III, xxv on IV, xxvi on V, xxvii on VI

and tubes placed from light as original, Orig & tubes uncapped

Ach 611 tubes xviii & xxix growth generally humped with hpl discarded

tube xvii while growth with hump hpl tubes r.c on 624 tube vii

Ach 611 tubes xxi, xx and xxviii no malic acid change discarded

Ach 611 tube xxix fair growth some hump r.c on 624 tube viii

26/2/23 Ach 611 tubes xxii to xxvii no malic acid change discarded

Ach 624 tube I to VI show but slight evidence of hump in places



26/2/23 Ach 611 tube xxx growth yellowish rather bland  
8 mm or so in place

Ach 611 tube xxxi yellowish growth slight bland - places

Ach 624 tube vii whitish growth no blood bland (broad)

no r-c on Ach 624 tube ix capped

Ach 624 tube viii dense white growth with hump line running  
up from r-c on 624 tube x capped.

27/2/23 Ach 624 tube ix white growth <sup>(len than x)</sup> no blood bland

Ach 624 tube x white growth few hump lines <sup>xxxix</sup> to centre.

Ach 983 tube i, 1022 tube i and Ach 611 tube xxx & xxxi discarded

Ach 624 tube vii and viii discarded. Tube i & vi also discarded

Ach 624 tube ix r-c on 624 tubes xi and xii, C. by fleas on  
xi & xii about 5 mm before rise: capped

28/2/23 Ach 624 tube xi & xii white growth with little hump change

Ach 624 tube ix a very hump of area above r-c on 624 tube xiii

1/3/23 Ach 624 tube x no change discarded

Ach 624 tube ix an isolated Cal starting to turn quite bland

no r-c on 624 tube xiv capped

Ach 624 tube xv white growth with but little hump change

Ach 624 tube xi & xvi hump change much more marked

tube xii r-c on tube xv & xvii, xv capped xvii uncapped.  
Large quantity r-c on tube xviii



2/3/23 Ach 624 tubes IX XI XII XIII tramp change  
somewhat increased - all discarded

tube XVIII white growth with little tramp change

tube XIV white growth with marked tramp change.

tubes XV XVI XVII only several white cat, red streak no growth.

Ach 624 tube XIV large quantity r-c on 624 tube XIX

non tramp part r-c on 624 tube XX

tube XVI cat turning tramp r-c on 624 tube XXI

tube XVII cat turning tramp r-c on 624 tube XXII

tube XIV tramp very white r-c on 625 6626 tubes I capped

6/3/23 Ach 624 tubes <sup>XVIII</sup> XIX and XX growth turned very discolored

Ach 624 tube XIV now uncapable dense white growth very discolored

Ach 624 tubes XV, XVI XVII few white cat growing strong &  
showing tramp change discarded

Ach 624 tubes XXI & XXII shows only several white cat  
turning tramp. & several small round. very bristly cat

one of these on XXII r-c on 625 tube II & 624 tube XXIII

white growth turning tramp r-c on 624 tube XXIV all capped.

Ach 625 and 626 tubes I show white growth with tramp change

but in 625 no this tube r-c on 625 tube III



7/3/23 Ach 624 tube XXIII & 625 tube II No growth.

Ach 624 tube XXIV white growth with fair transp change

Ach 625 tube III white growth with very marked transp change

Ach 624 tube XXII white growth (having transp. some part

gone on 624 tube XXV ~~called~~ and XXVI ~~called~~

8/3/23 Ach 624 tube XXIII & 625 tube II still no growth discarded

Ach 624 tubes XXI & XXII & 625 <sup>626</sup> tube I no change discarded

Ach 624 tubes XXV & XXVI white growth but little transp change

Ach 624 tube XXIV white growth, good transp change in

upper third so this gone on 624 tube XXVII & XXVIII

tube XXIV used for exp 238

9/3/23 Ach 624 tubes XXV, XXVI, ~~XXVII~~ show but little transp change

C.W. Hatched one tube XXV

Ach 624 tubes XXVII and XXVIII white growth with but little transp change.

12/3/23 Ach 624 tube XXV growth now mostly all over.

& mostly very transp; tube XXVI fairly marked transp.

tube XXVII transp change now more marked.

14/3/23 Ach 625 tube III white cat now showing over transp discarded

Ach 624 tube XXVIII rather translucent growth discarded

Ach 624 tube XXVII growth rather transp with transp change discarded

Ach 624 tubes XXV and XXVI white growth, fair transp. change, XXVI discarded



ach 624 tube xxv r-c on 629 & 630 tube T capped.

9/5/23 ach 624 tube xxv now dried discarded

ach 629 tube T shows white frost, discarded

ach 630 tube T shows frost turned brown with white

secondary spulka of frost so r-c on 630 tube II capped

note difference in 629 & 630 probably due to frost in 629

1/9/23 ach 630 tube T dried discarded

ach 630 tube T white frost with heavy change

now placed @ room temp - dark





