40.55 gm

47.56

~ 7 gm exp white

3M NaH_2PO_4

pH. 8.80.

+ .1 ml. pH 6.6 – 6.8

+ 2 drops 1N NaOH pH 7.1 to 7.15

+ 7 cc .4 M Na Phos buffer. pH

(when .2M diluted to .2M → pH 7.2) 7.18

37.1

35.8

1.3

Monday: by was had just filled 12 tubes: so stopped.

measurements over

Saturday. 5th Feb 55

Egg white column

decided to repeat the egg white experiment, with modifications ① to adjust pH of egg white
② to put on less, and absorb ~~to~~ for longer
③ to run more slowly.

Took ~~a~~ some egg white from an egg opened a few days ago and ~~put~~ kept in the frig. Weighed = 7 grams.
Titrated. (details opposite)
Added 7cc - 4M NaPhos. Final pH 7.18.

used the same 23½ cm column ? used before (appeared to have a flaw in it ⅓ way down). no temp. control.
~~Che~~ Head flowed quite a bit of buffer though. Checked no u.v. absorbtion in emergent buffer.
Added 2 ml of diluted (as above) egg white.
When it had gone in added ~ 1 ml of buffer to wash walls, etc.
Corked, to allow time to be absorbed. (for about ¾ hour)
Collected effluent from the moment that buffer was fully in the column. Vol. before 1st tube = 1.3 ml.
Set to 1 drop in 2 minutes started ~ 2.25 pm.
head ≈ 5 to 6 cm. ~~2~~ fraction as before (prob 4¼ ml)
1st collected ≈ 6.15 ?, so reduced head slightly (4½ cm).
Sunday 11.45 am. ~ 5⅔ fraction. drop every 6 minutes : salt crystals round tip. !!
increase pressure to ~ 5 cm : - wiped away. not clear for reason.

r.d. 281 mgs ↓ Spot lost of activity. ↓

1	1.41	Some.
2	(2.67)	~~[illegible]~~ Some more
3	1.77$_5$	ditto.
4	.78$_5$	Some
5	.63$_2$	Some
6	.22$_1$	a little
7	.129	less
8	.090	↑
9	.065	not tested.
10	.048	
11	.03$_7$	
12	.034	↓

10. disappointing:

But might be ok with

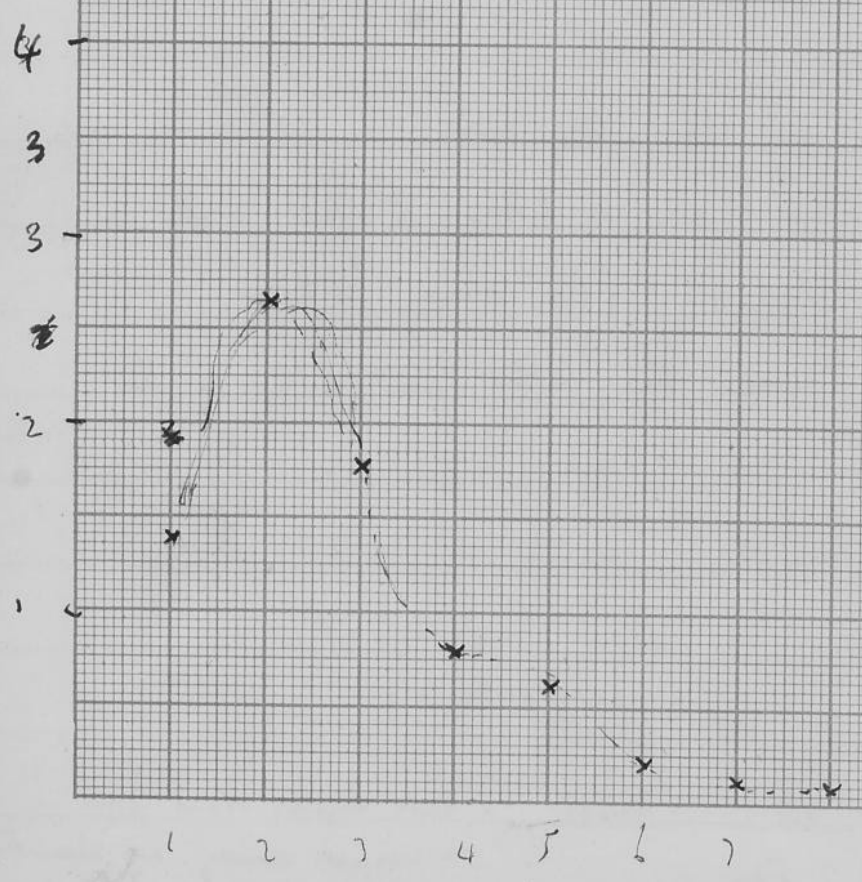
(a) smaller fractions

(b) less loading

still.

70

35-8



Monday 7th Feb '55

Tears

weight of tube + cork 2.186 gms.

+ true tears 2.206

20 mg.

make up to 1.50 ml with .2M Na Phos. buffer pH 7.2.

U.V. absorption.

300	295	290	285	280	275	270	265	260	255	250	245
.120	.161	.216	.255	.272	.268	.251	.223	.198	.175	.167	.184

281	274	290	240	235	310	320	330
.272	.268	.216	.255	.460	.074	.061	.055

222.5	277.5	282.5	287.5	292.5
.258	.269	.267	.228	.190

280

Egg white

diluted further with buffer

Started to see up ~~colum~~ column (the good one) for ~~small~~ small-amount-of egg-white test. ~~Diluted eggwhite with~~ Used eggwhite ~~with~~ ~~pH~~ pH adjusted, buffer added, left over from Saturday BUT formed a gel on top of column + would go on! Took off. Washed over the top several times + left with a swift flow of buffer overnight to clear.

clean pH 7.2

.4

.3

.2

.1

230 240 250 260 270 280 290 300 310 320

λ

nm

Tuesday 8th Feb '55

Hen Egg White

Used column flushed out overnight.

Took a new egg (from ~~out~~ original batch)

Took 0.4 ml egg white. Add 1.6 ml buffer (NaP. .2M pH 7.2)

Put 1.0 ml of this on top of column. Again wouldn't go in.

0. 12ml? Decided to use compressed air. Pushed in rapidly with this.

2. 2.30. Added a wash. (½ ml?) It sank in.

Added a second wash. Corked & allowed to stagnate to allow time for the egg-white to equilibriate. (But should have pushed in with air more slowly)

Had to apply air to force in the second wash.

Fitted up. Had to put a more pressure. Left with a head of ≃ 25cm. (Had pressure pushed the column?)

Had started to collect the moment all the egg white had sunk into the column. ~~Rate~~

Fraction had been adjusted to about 1½ ml. Rate ≃ 1 fraction in 50 min??

~~Rem~~ Cold water running : exit temperature 11.8° C

(P.S. ran at about 1 fraction per hour)

1 ml ≃ 3.3

(.2)

380
190
570
19
590

·2 ml eag white
should have ≃ 660 μ

Tallen & Stein

op. density from 0.2 ml eag.

Theory: gen peak ≃ 70 units/ml = 20 γ per ½ ml

∴ = ~~210 γ per~~ 140 γ per ml

2 ∴ o.d. ≃ ·4₂ =

Thus if one could do 0.4 ml o.d. would be o.k.

but may be background trouble.

700 γ

~~1 ml = 3 mg~~

·2 = 60

1.05 × 1.5 × 380

= 590 γ

o.d.
28 μg/ml

·38

·2

·1

antiseptic

o.d.

??

·92 γ/ml

1.05

2

antiseptic
(arb. scale)

↑2 4 6 8 10 12 14 16 18 20 22

1 = 46 γ/ml ??

		o.d. 281 [illegible]	
	Blank	·005	
51 =	1	·082 !! added 2 drops of butter to raise level: recall = ·070 ∴ level o.k.	
			Thunder Blank +·008
	2	·050	29 = 28 −·005
	3	·034	29
	4	·61₂	30
	5	(2·8)	31 −·015
	6	—	32
	7	(3·0)	33
	8	·61₂ !	34 −·018
	9	·113	35
	10	·060	36
	11	·034	37 −·020
	12	·020	38
	13	·043	39
	14	·14₄	40 −·020
	15	·21₃	41
	16	·195	42
	17	·14₂	43 −·020
	18	·10₇	44
	19	·085	45
	20	·072	46 −·015
	21	·056 Blank −·003	47
52 =	22	·034	48
4 =	23	·013	49
	24	·001	
·48	25	−·011	
·2	26	−·020 ! −·023 !	

But blanks cloudy. Hence -ve readings