JMHSE
2208s

X

40
58
60
72
81

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Table 1

PHYSICAL AND CHEMICAL CHARACTERISTICS OF PERLITE - PRODUCT ML 201

I. Screening Test

Percentage of Bulk Sample within Each Range of Sieve Sizes

Greater than 20 mesh	-	32.0%
20 to 40 mesh	-	38.2%
40 to 100 mesh	-	20.8%
100 to 200 mesh	-	7.0%
Smaller than 200 mesh	-	1.6%

II. Median Size Range of Portion Smaller than 200 Mesh: 7 microns.

III. Quartz Content of Portion Smaller than 200 Mesh: 1.0%

IV. Chemical Composition of Bulk Sample

SiO_2	75.45
Fe_2O_3	0.55
TiO_2	0.05
Al_2O_3	12.92
CaO	0.85
MnO	0.07
MgO	0.10
Na_2O	3.42
K_2O	4.81
Loss on ignition	1.51
	99.73

AA-1

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TABLE 2

VARIATION IN LEVELS OF DUSTINESS

PERLITE EXPERIMENTAL CHAMBERS

SEPTEMBER 19, 1951 - OCTOBER 29, 1953

CURRENT NUMBER	NUMBER OF SAMPLES	AVERAGE IN x 10^6/FT.^{3}	R-A-N-G-E			ABSOLUTE DISPERSION %	STANDARD DEVIATION IN x 10^6/FT.^{3}	STANDARD ERROR IN x 10^6/FT.^{3}	COEFFICIENT OF VARIATION %	YEAR
			MAXIMUM	MASS MEDIAN	MINIMUM					
I	10	554.4	690.0	587.1	335.5	81.8	146.8	46.6	26.4	1951
II	40	604.4	738.35	600.85	507.0	110.7	223.0	35.7	37.0	1952
III	30	561.0	636.56	572.35	502.55	136.8	255.9	46.9	45.5	1953
TOTAL AVERAGE IV	80	582.2	694.4	588.4	483.9	116.9	225.8	41.1	38.86	9/19/51 10/29/53
A	B	C	D	E	F	G	H	I	J	K

Saranac Laboratory Final Report to the Perlite Institute: Physical and Chemical Characteristics (1955)
ACL Doc 25505 · Page 2 of 17
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Table 3

COURSE OF R$_1$ TUBERCULOSIS IN GUINEA PIGS EXPOSED TO PERLITE DUST AND IN UNEXPOSED CONTROLS

Group A — INFECTION PLUS PERLITE — Infection at Start of Dust Exposure					Group D — INFECTION WITHOUT DUST — Controls to Group A			
Animal Number	Duration in Months		Status of Disease		Animal Number	Duration in Months		Status of Disease
	Perlite Dust	Normal Air				Perlite Dust	Normal Air	
3 K	2	0	S-1	F-0	21 K	0	2	S-1
4 K	2	0	S-2	F-0	22 K	0	2	S-1
7 K	4	0	S-1	F-0	23 K	0	4	F-0
8 K	4	0	P-1	F-0	24 K	0	4	F-0
9 K	6	0	P-3	F-1	25 K	0	6	F-0
10 K	6	0	P-2	F-0	26 K	0	6	F-0
11 K	6	3	P-4	F-1	27 K	0	9	F-0
12 K	6	3	P-3	F-0	28 K	0	9	F-0
13 K	6	6	P-4	F-3	29 K	0	12	F-0
14 K	6	6	P-3	F-3	30 K	0	12	F-0
15 K	6	9	P-1	F-3	31 K	0	15	F-0
16 K	6	9	P-2	F-3	32 K	0	15	F-0
17	6	12	P-0	F-3	34 K	0	18	F-0
18	6	12	P-0	F-4	35 K	0	18	F-0

Key: K = Killed
D = Died
S = Stabilizing
P = Progressing
F = Fibrosis (Collagen deposition)
Numbers indicate relative extent of involvement

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Table 4

COURSE OF TUBERCULOSIS IN ANIMALS
EXPOSED TO PERLITE DUST AND IN INFECTED CONTROLS

Group B — INFECTION PLUS PERLITE — Infection at End of Dust Exposure					Group E — INFECTION WITHOUT DUST — Controls to Group B			
Animal Number	Duration in Months		Status of Disease		Animal Number	Duration in Months		Status of Disease
	Perlite Dust	Normal Air				Perlite Dust	Normal Air	
57 K	6	2	P-2	F-0	76	0	2	S-1
58 K	6	2	P-2	F-0	77	0	2	S-1
60 K	6	4	P-2	F-1	78	0	4	F-0
61 K	6	4	P-2	F-1	79	0	4	F-0
63 K	6	6	P-2	F-2	80	0	6	F-0
64 K	6	6	P-1	F-0	81	0	6	F-0
67 D	6	6	P-4	F-1				
68 K	6	8	P-3	F-1	82	0	8	S-1
69 K	6	8	P-2	F-1	83	0	8	F-0
74 D	6	11	P-1	F-3				
72 K	6	12	P-1	F-2	85	0	12	F-0
73 K	6	12	P-0	F-2	86	0	12	S-1
75 K	6	12	P-0	F-2	88	0	12	F-0
					89	0	12	F-0
					90	0	12	F-0

Key: K = Killed
D = Died
S = Stabilizing
P = Progressing
F = Fibrosis (Collagen deposition)
Numbers indicate relative extent of involvement.

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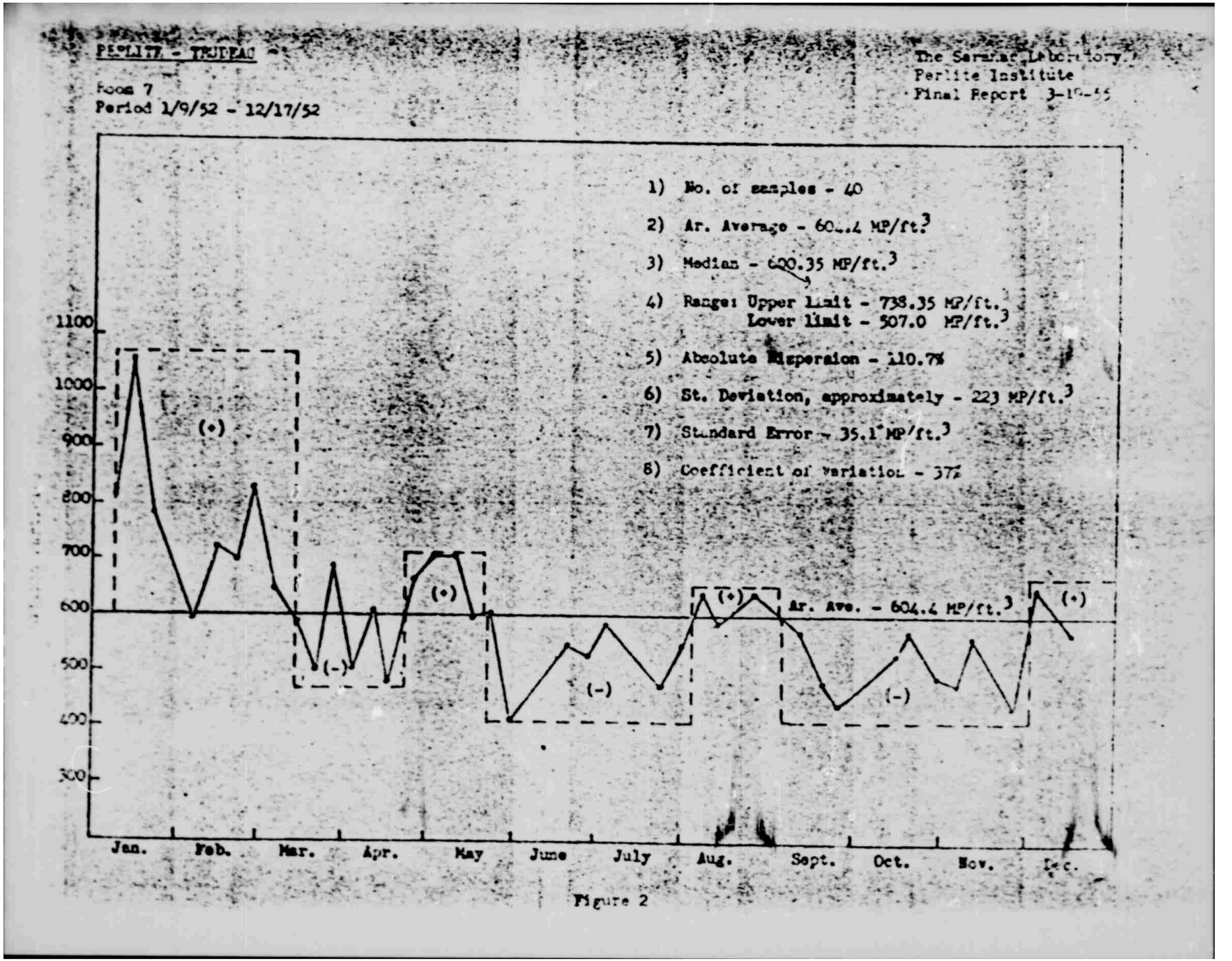
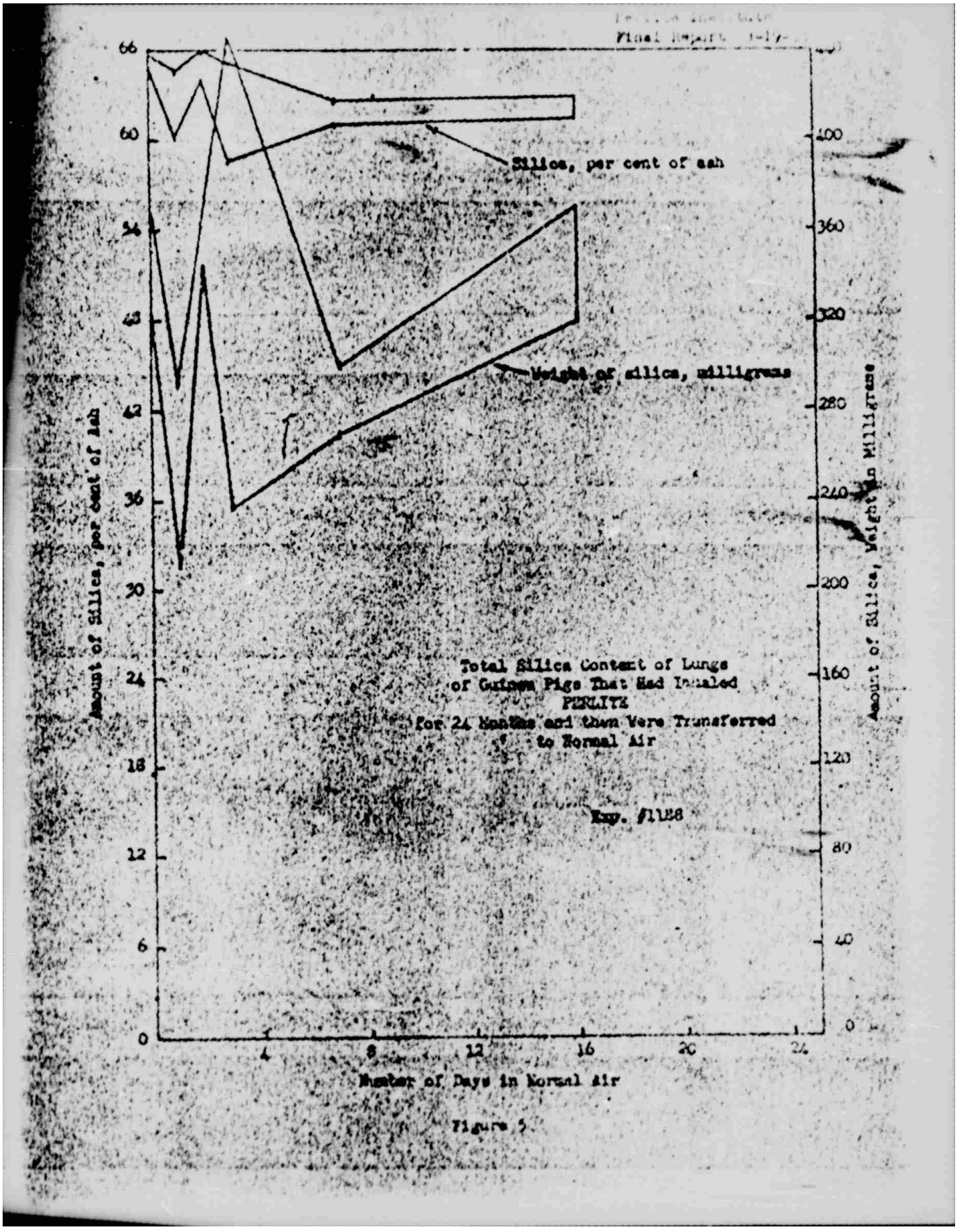


Figure 2

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Total Silica Content of Lungs of Guinea Pigs That Had Inhaled PERLITE for 24 Months and then Were Transferred to Normal Air

Exp. #1128

Figure 5

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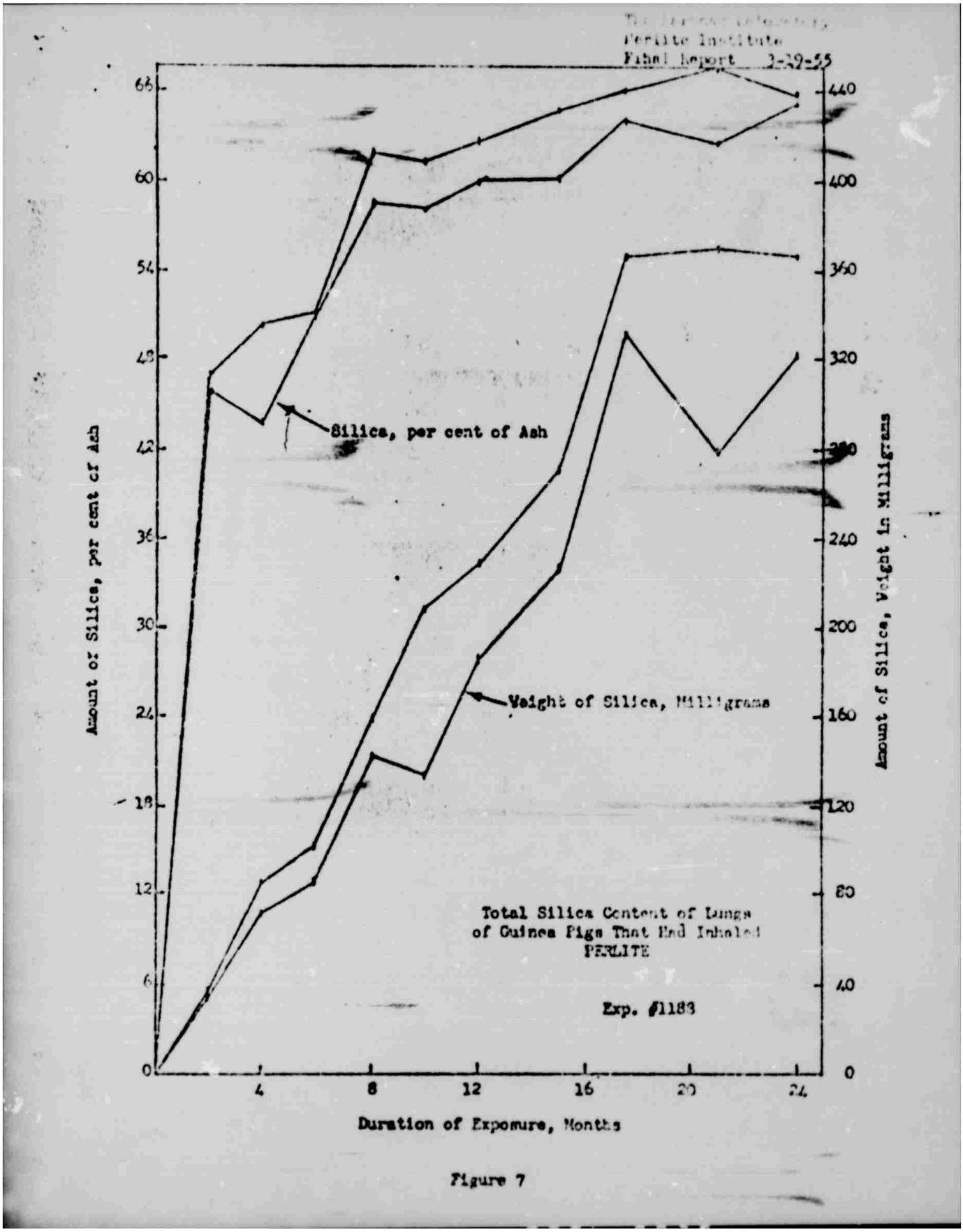


Figure 7

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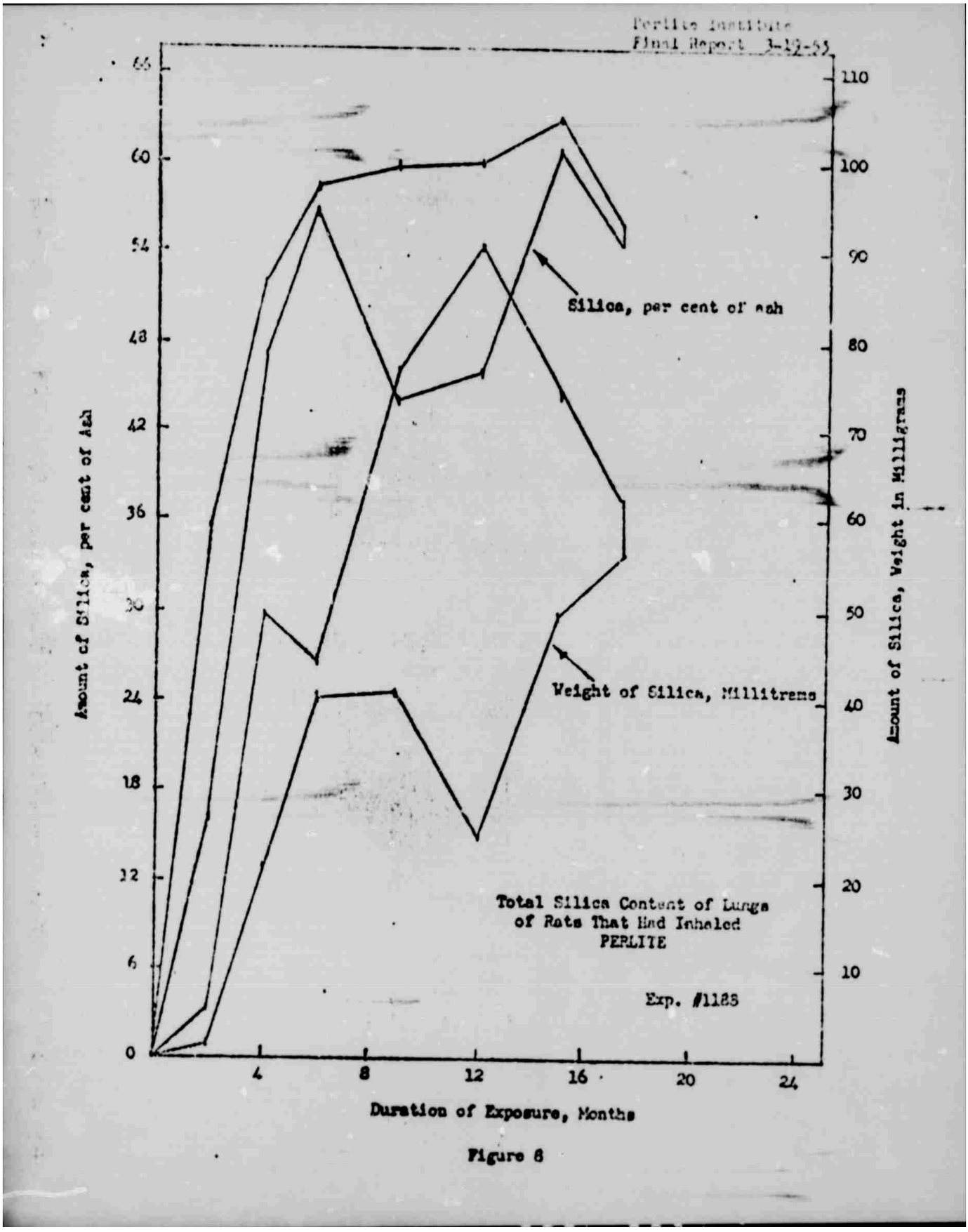


Figure 8

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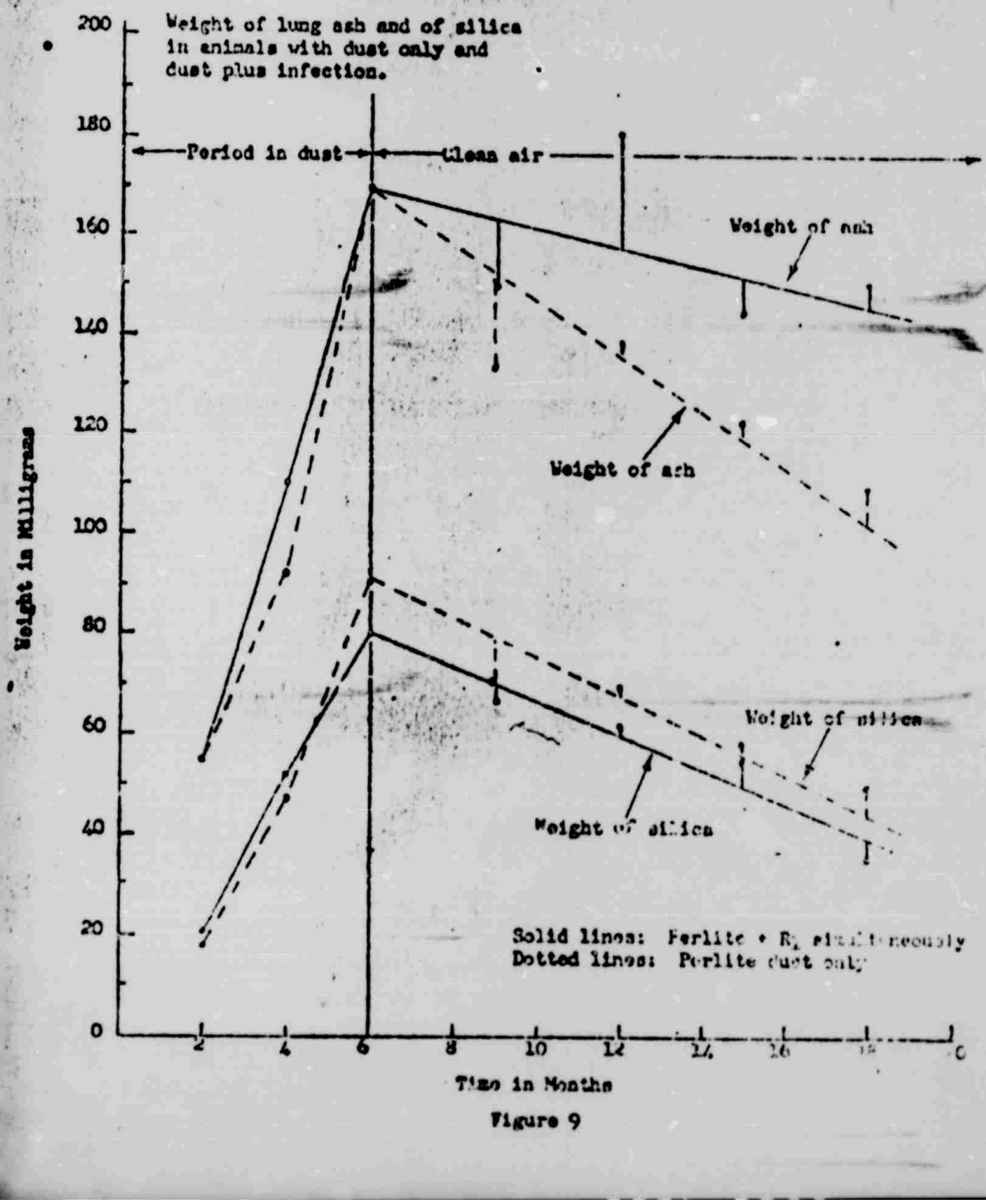


Figure 9

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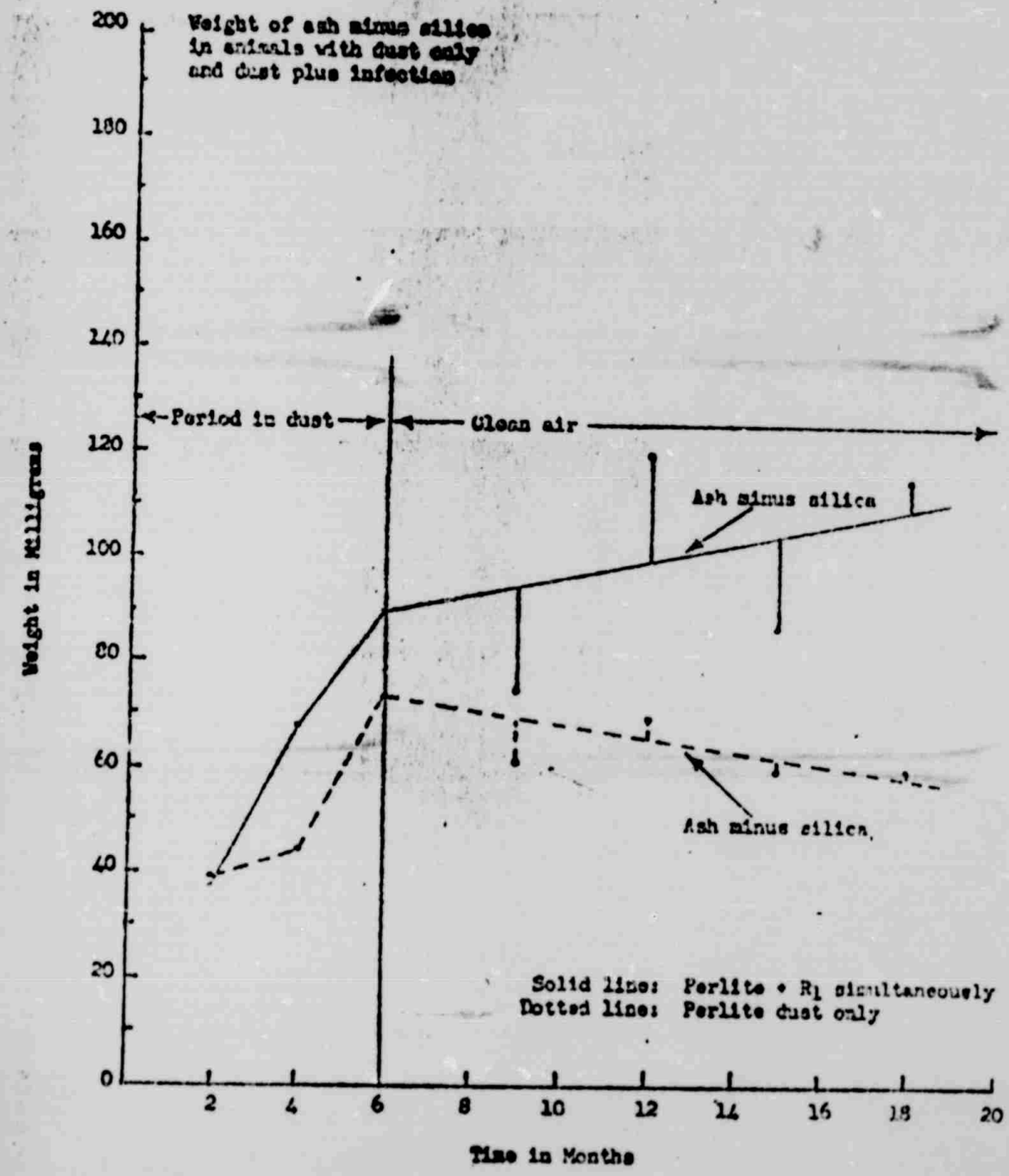
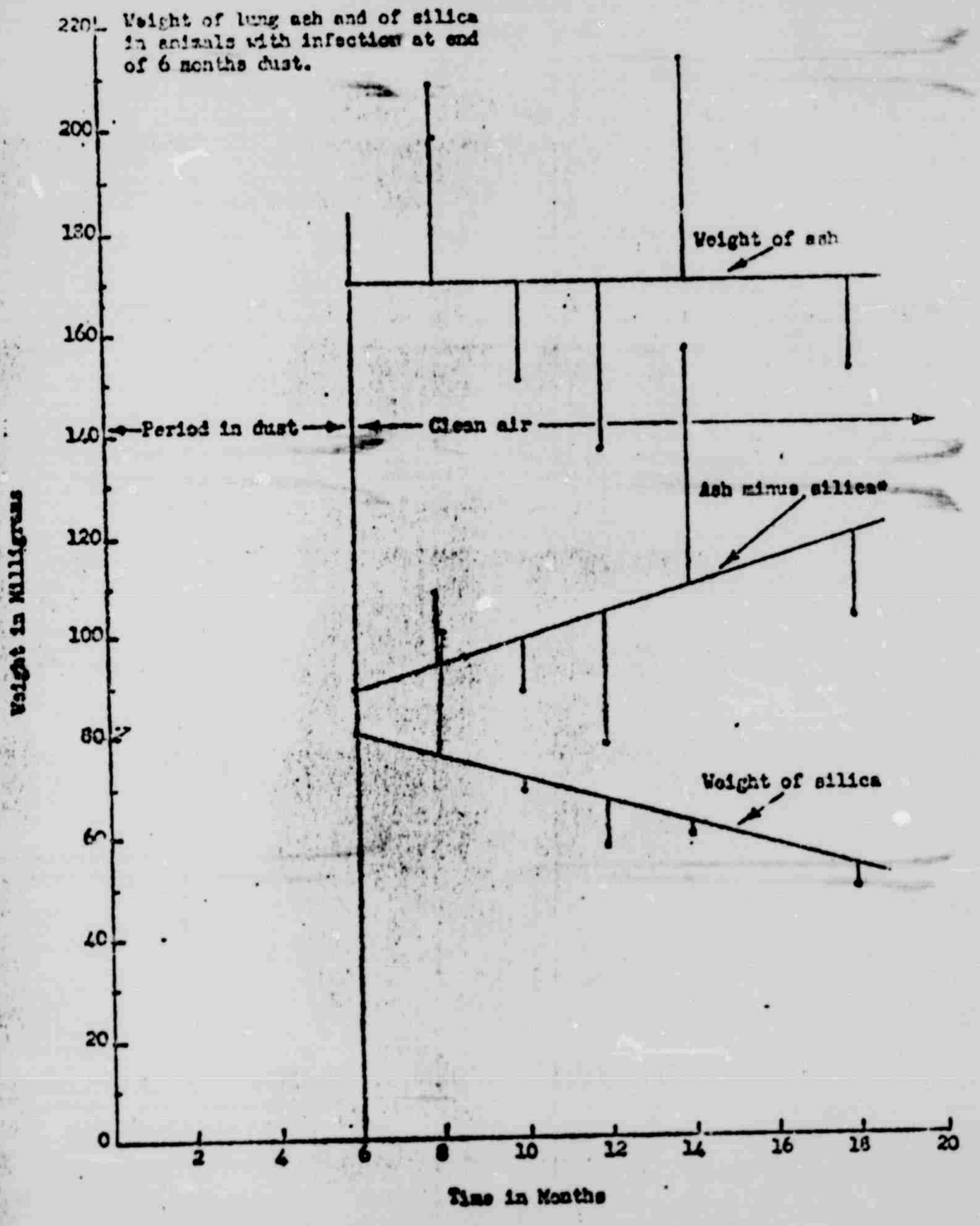


Figure 10

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*Compare this line for ash-minus-silica with the line in Chart B for ash-minus-silica in non-infected animals.

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Figure 12

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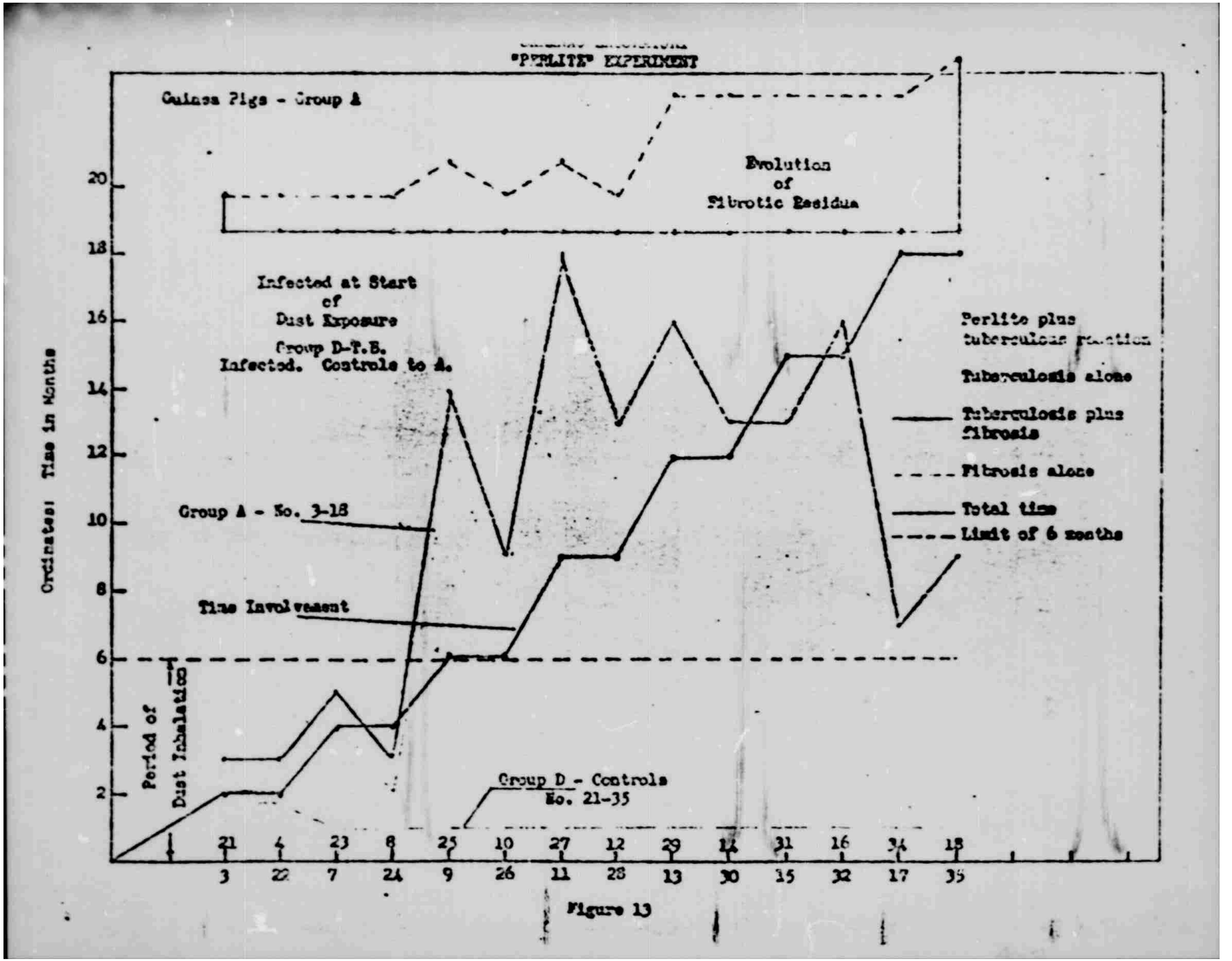


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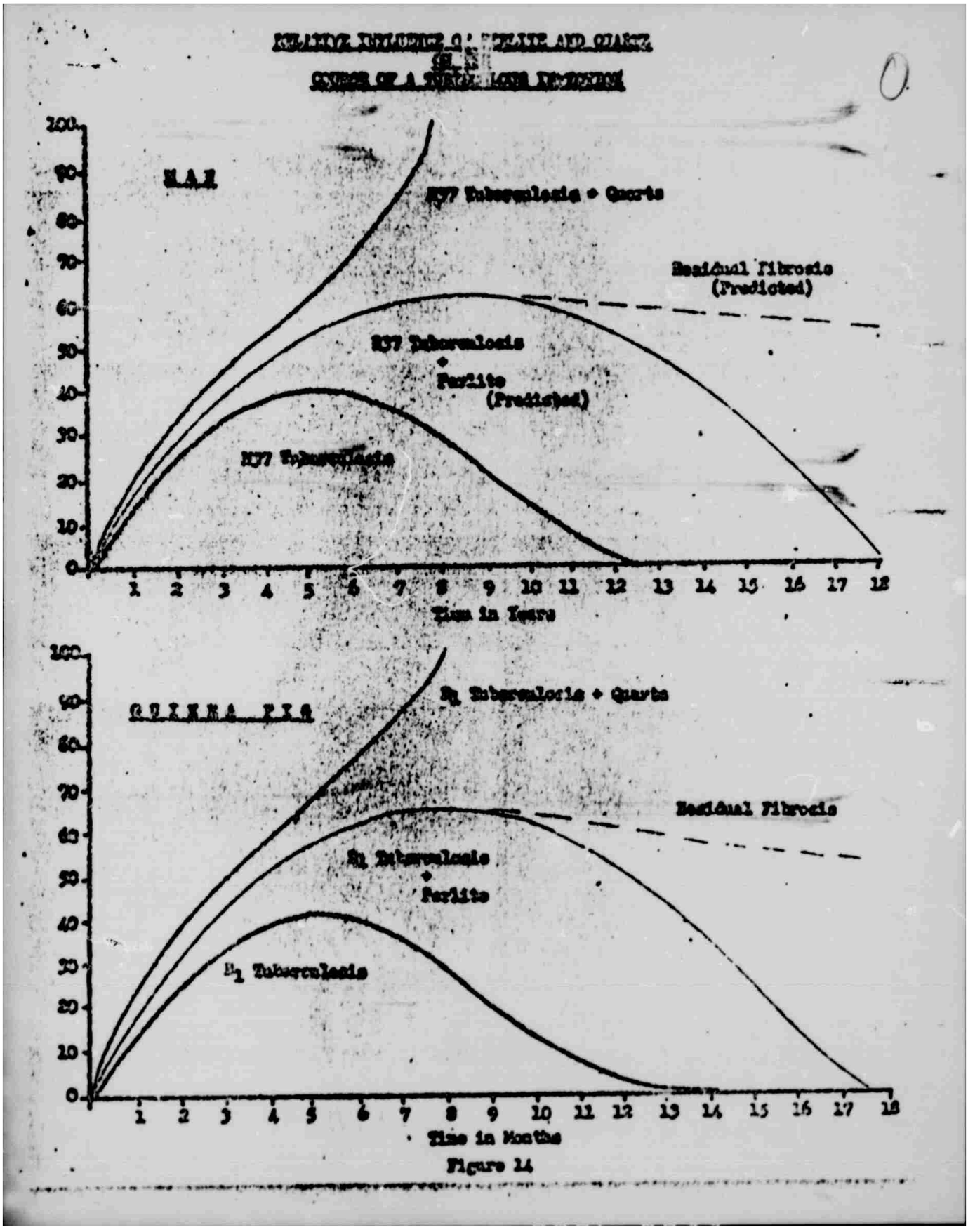


Figure 14

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