PLAINTIFF'S EXHIBIT

GP-1459

CHICAGO JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: April 28 1977

Georgia-Pacific

intracompany memo

to	Mr. M. A. Palmowski	location	Chicago
from	Mr. G. W. Green	location	Tigard
subject	Airborne Asbestos Dust Survey	date	June 29, 1977

On May 28, 1977, George Fowler, for the last time, monitored three production workers at the Chicago Joint Cement Plant for airborne asbestos fibers. The samples were sent to the Tigard Lab, where they were counted by Ann Veverka.

As can be seen by the attached data, all of the counts were well below the maximum of 2 fibers/ml. The average count is .59, about equal to the last survey.

Since asbestos is no longer used, no more surveys need to be taken.

G.W.G.

GWG:jr
Enclosures

cc: Messrs. J. R. Hurd - Portland
T. W. Richards - Tigard
G. F. Fowler - Marietta

CHICAGO JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: April 28, 1977

Name	Location or Job Title	Time Weighted Average fiber/ml	Filter No.	Elapsed Time mins.	Individual Coun fiber/ml
Environmental	Wet mixer		471	115	0.26
	Packer		495	121	0.10
	Warehouse #2		490	109	0.27
	Dry Blend				
	Dump Area		486	70	0.20
	Warehouse #1		479	60	0.08
Rafael Rodriguel	Wet mixer	0.52	466	107	0.40
			464	15	1.01
			468	127	0.30
			497	71	0.75
			491	75	0.37
			492	57	1.00
Bennie Bailey	Packer/ Stacker	0.46	469	115	0.22
			463	110	0.42
			496	15	1.88
			487	75	0.53
			485	74	0.34
			489	51	0.71
Sylvester Tate	Dry Mixer	0.80	470	122	0.50
			494	101	0.61
			493	15	1.40
			488	81	0.79
			484	73	1.40
			481	58	0.84

SGP 0021577

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Chicago

Date 4-28-77

Name Environmental

Pump Serial No. B-06-0288

Title

Sampled by George Fowler

Signature [signature]

LOCATION	Wet Mixer	Packer	Wharehouse #2	Dry Blend Dump Area	Wharehouse #1
FILTER NO.	471	495	490	486	479
FLOW: Pump Setting	6	6	6	6	6
Liter/min (R)	1.7	1.7	1.7	1.7	1.7
TIME: On	7:20	9:15	11:16	1:05	2:15
Off	9:15	11:16	1:05	2:15	3:15
ELAPSED TIME (min) (t)	115	121	109	70	60
VOLUME, Liters (t x r)	195.5	205.7	185.3	119	102
REMARKS					Wharehouse #1 is the area you first enter. with mixers. etc
CONCENTRATION (F) fibers/ml	0.26	0.10	0.27	0.20	0.08

Total Sample Time (T) 475 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$$29.9 + 12.1 + 32.7 + 14 + 6 = \frac{94.7}{475} = 0.2$$

SGP 0021578

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Chicago
Name Rafael Rodriguel
Title Wet Mixer

Date 4-28-77
Pump Serial No. B-06-0422
Sampled by George Fowler
Signature [signature]

LOCATION	wet Mixer	—	—	~	-	-			
FILTER NO.	466	464	468	497	491	492			
FLOW: Pump Setting	6	6	6	6	6	6			
Liter/min (R)	1.7	1.7	1.7	1.7	1.7	1.7			
TIME: On	7:05	8:52	9:07	11:14	12:55	2:10			
Off	8:52	9:07	11:14	12:55	2:10	3:07			
ELAPSED TIME (min) (t)	107	15	127	71	75	57			
VOLUME, Liters (t x r)	181.9	25.5	215.9	120.7	127.5	96.9			
REMARKS				off 30 min. Lunch					
CONCENTRATION (F) fibers/ml	0.40	1.01	0.30	0.75	.37	1.00			

Total Sample Time (T) 452 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2F_2) + (t_3F_3) + \ldots}{T}$$

$$42.8 + 15.15 + 38.1 + 53.25 + 27.15 + 57 = \frac{234.05}{452} = 0.52$$

SGP 0021579

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Chicago

Name Bennie Bailey

Title Packer/stacker

Date 4-28-77

Pump Serial No. B-06-0444

Sampled by George Fowler

Signature [signature]

LOCATION	DRY Packer	—	—	—	—	—			
FILTER NO.	469	463	496	487	485	489			
FLOW: Pump Setting	6	6	6	6	6	6			
Liter/min (R)	1.75	1.75	1.75	1.75	1.75	1.75			
TIME: On	7:15	9:10	11:00	11:15	1:00	2:14			
Off	9:10	11:00	11:15	1:00	2:14	3:05			
ELAPSED TIME (min) (t)	115	110	15	75	74	51			
VOLUME, Liters (t x r)	201.25	192.5	26.25	131.25	129.5	89.25			
REMARKS				off for lunch 30 min.					
CONCENTRATION (F) fibers/ml	0.22	0.42	1.88	0.53	0.34	0.71			

Total Sample Time (T) 440 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$$25.3 + 46.2 + 28.2 + 39.75 + 25.16 + 36.21 = \frac{200.8}{440} = .46$$

SGP 0021580

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Chicago
Name Sylvester Tate
Title Dry mixer man

Date 4-28-77
Pump Serial No. B-08-0490
Sampled by George Fowler
Signature

LOCATION	Dry mix area	—	—	—	—	—			
FILTER NO.	470	494	493	488	484	481			
FLOW: Pump Setting	6	6	6	6	6	6			
Liter/min (R)	1.7	1.7	1.7	1.7	1.7	1.7			
TIME: On	7:10	9:12	10:53	11:08	12:59	2:12			
Off	9:12	10:53	11:08	12:59	2:12	3:10			
ELAPSED TIME (min) (t)	122	101	15	81	73	58			
VOLUME, Liters (t x r)	207.4	171.7	25.5	137.7	74.7	98.6			
REMARKS				Off for 30 min Lunch					
CONCENTRATION (F) fibers/ml	0.50	0.61	1.40	.79	1.40	0.84			

Total Sample Time (T) 450 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$61 + 61.6 + 21 + 64.0 + 102.2 + 48.7 = 358.5 \div 450 = 0.80$

SGP 0021581

dusty

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 471

ELAPSED TIME (t) 115 mins.

FLOW RATE 1.7 l/min

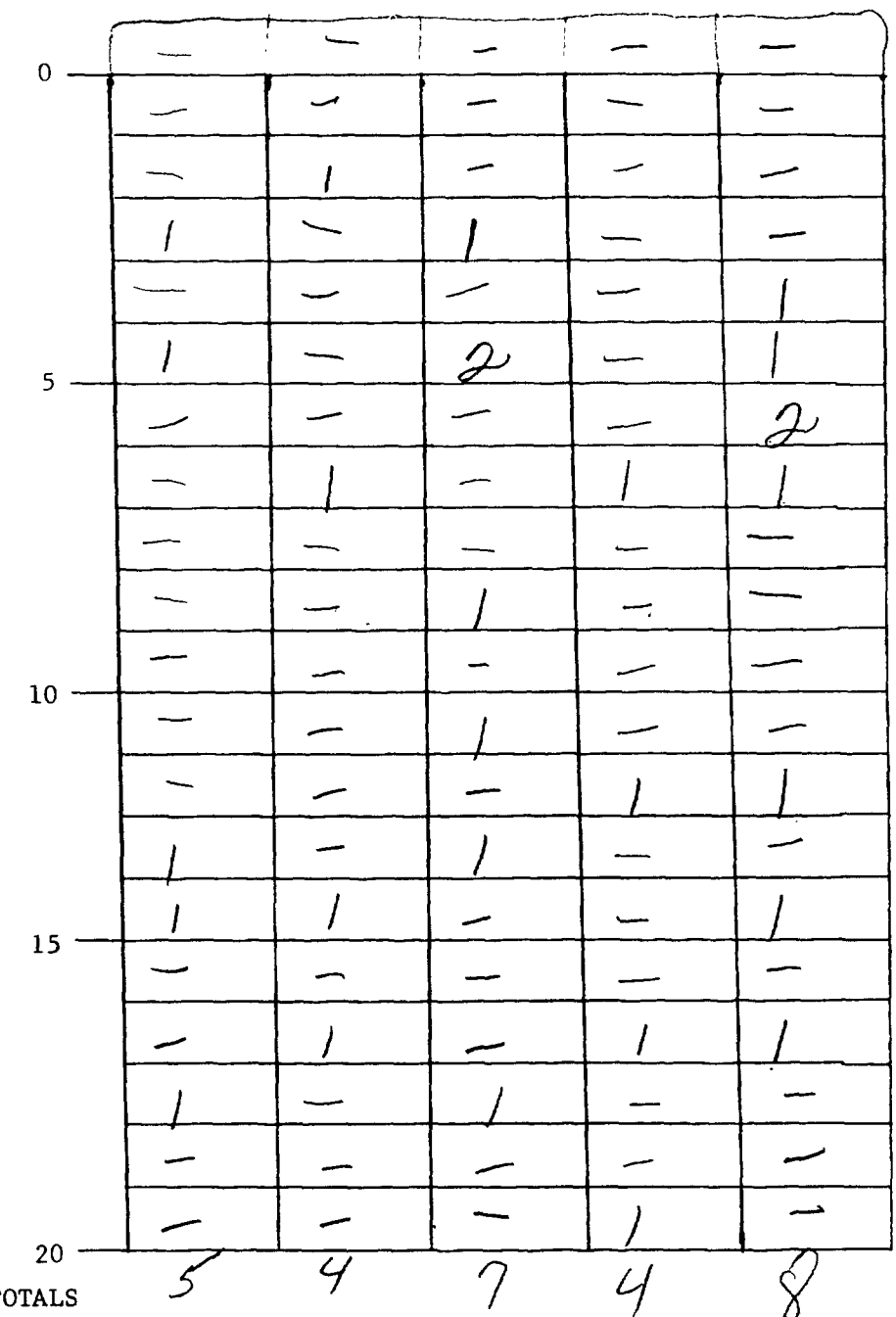
VOLUME (V) 195.5 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.28 fibers/field



SUBTOTALS	5	4	7	4	8

TOTAL 28

Constant $k = \frac{A}{1000\ a} = 1.98$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.26$

SGP 0021582

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 495

ELAPSED TIME (t) 121 mins.

FLOW RATE 1.7 l/min

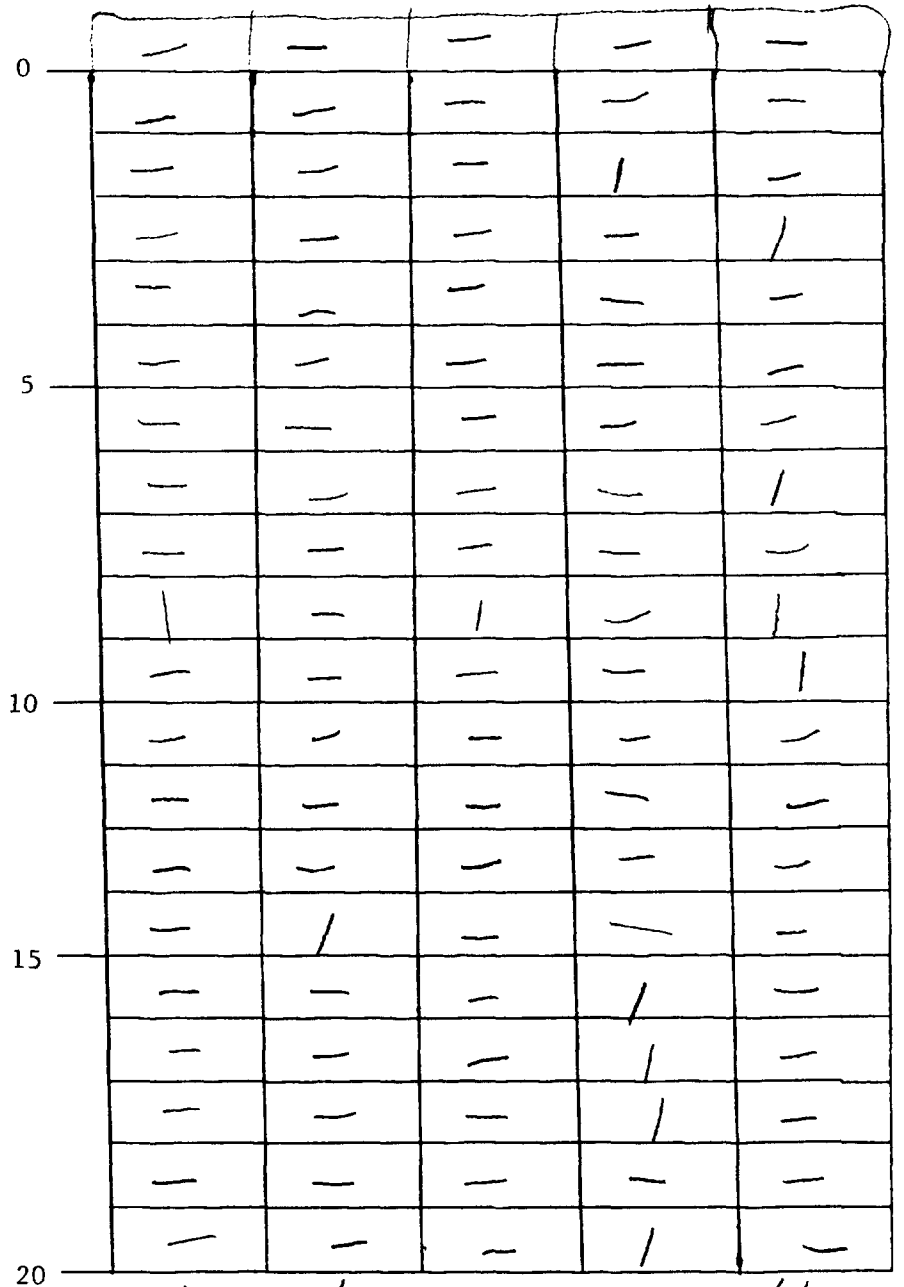
VOLUME (V) 205.7 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.12 fibers/field



SUBTOTALS	1	1	1	5	4	TOTAL 12

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ 0.10

SGP 0021583

Date: 6/22/77

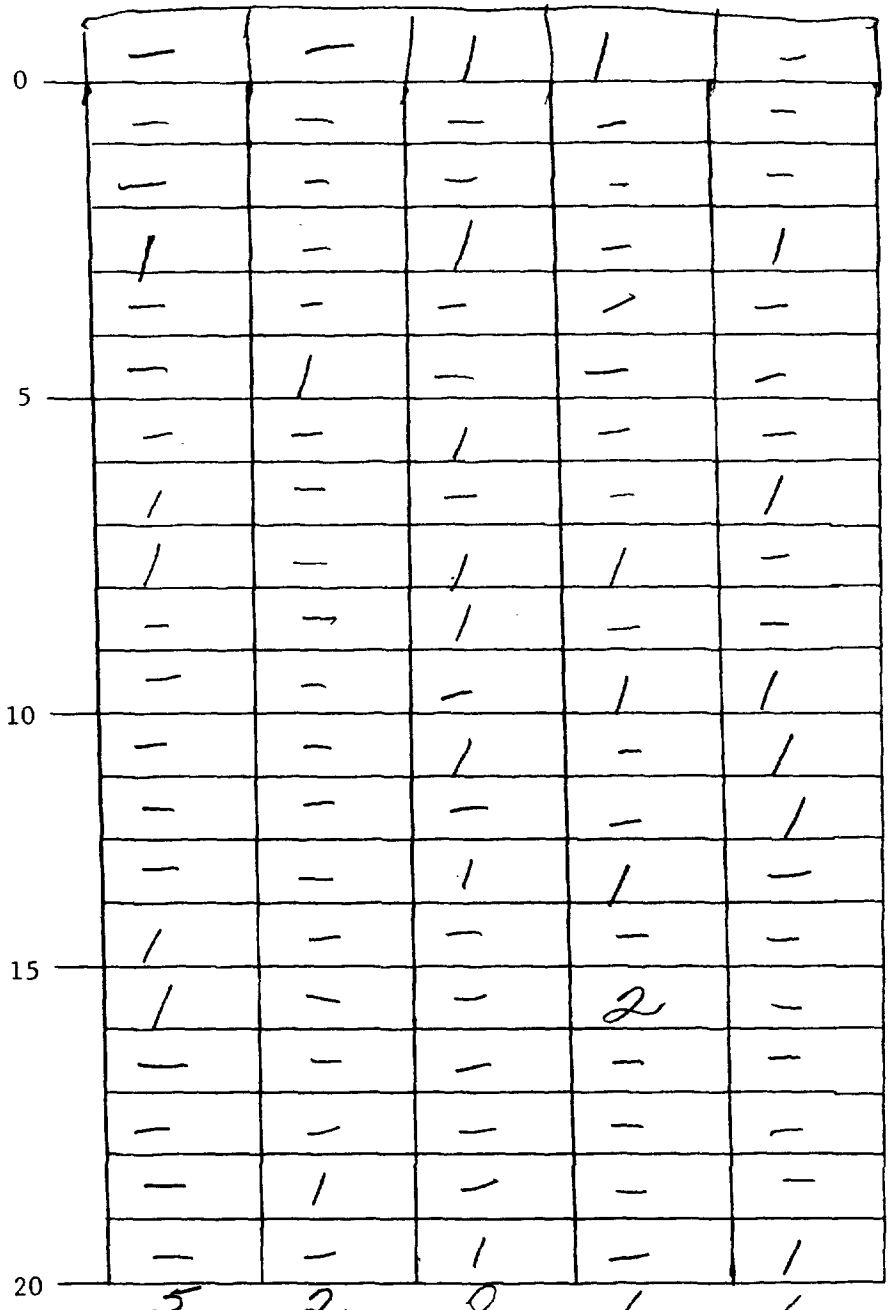
ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 490 | ELAPSED TIME (t) 109 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 185.3 liters

FIELD AREA (a) 0.00432 mm^2 | BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 027 fibers/field



SUBTOTALS	5	2	8	6	6	TOTAL 27

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.27$

SGP 0021584

Date: 6-12-77

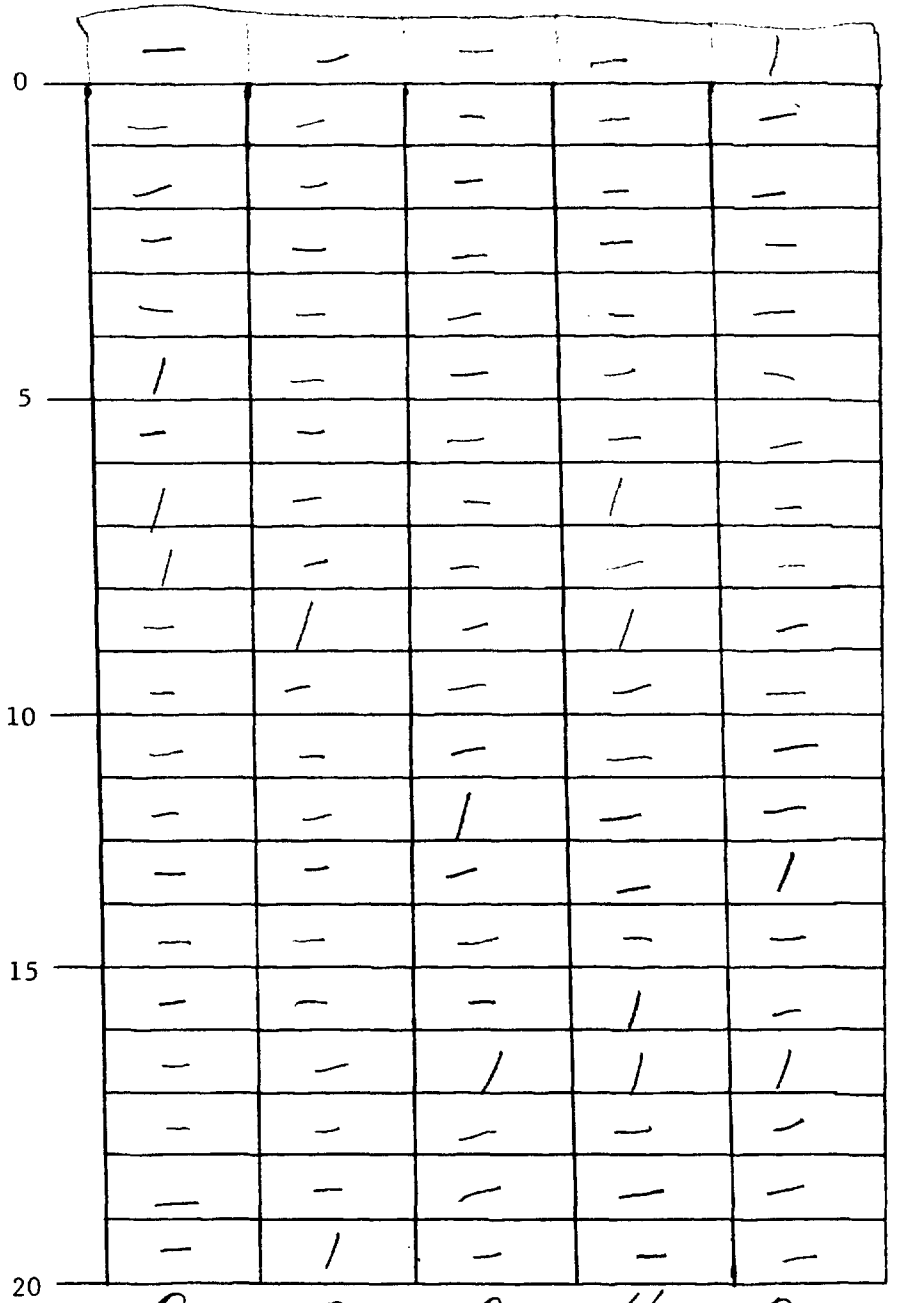
ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 486 ELAPSED TIME (t) 70 mins.

FLOW RATE 1.7 l/min VOLUME (V) 119 liters

FIELD AREA (a) 0.00432 mm^2 BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 AV. FIBER COUNT (f) 0.14 fibers/field



SUBTOTALS	3	2	2	4	3

TOTAL 14

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = 0.20

SGP 0021585

Date: 6/22/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 479

ELAPSED TIME (t) 60 mins.

FLOW RATE 1.7 l/min

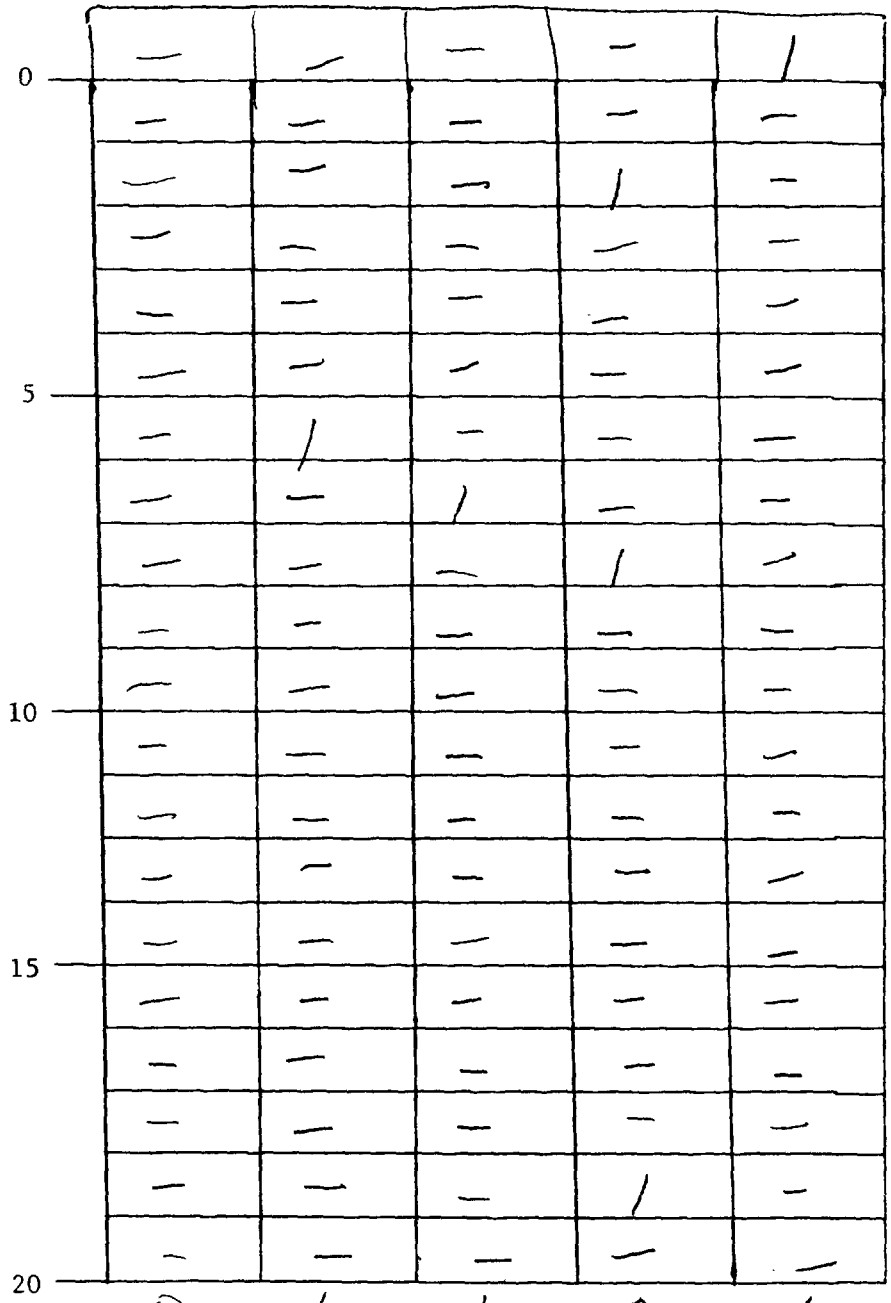
VOLUME (V) 102 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.06 fibers/field



SUBTOTALS	0	1	1	3	1	TOTAL 6

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.08$

SGP 0021586

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 466

ELAPSED TIME (t) 107 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 181.9 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.40 fibers/field

	–	–	1	–	1
0	–	2	–	–	–
	1	–	–	1	–
	1	–	–	–	–
	–	–	1	–	–
	–	2	1	1	–
5	–	–	–	–	1
	1	–	1	1	1
	–	–	–	–	1
	–	1	1	–	–
	1	–	–	1	–
10	1	1	1	–	1
	–	1	–	–	–
	2	–	1	–	2
	1	–	–	–	1
15	–	1	–	–	–
	–	–	1	–	–
	–	–	–	1	–
	–	1	–	1	–
20	1	–	–	–	–
SUBTOTALS	9	9	8	6	8

TOTAL 40

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.41$

SGP 0021587

Date: 6/15/77

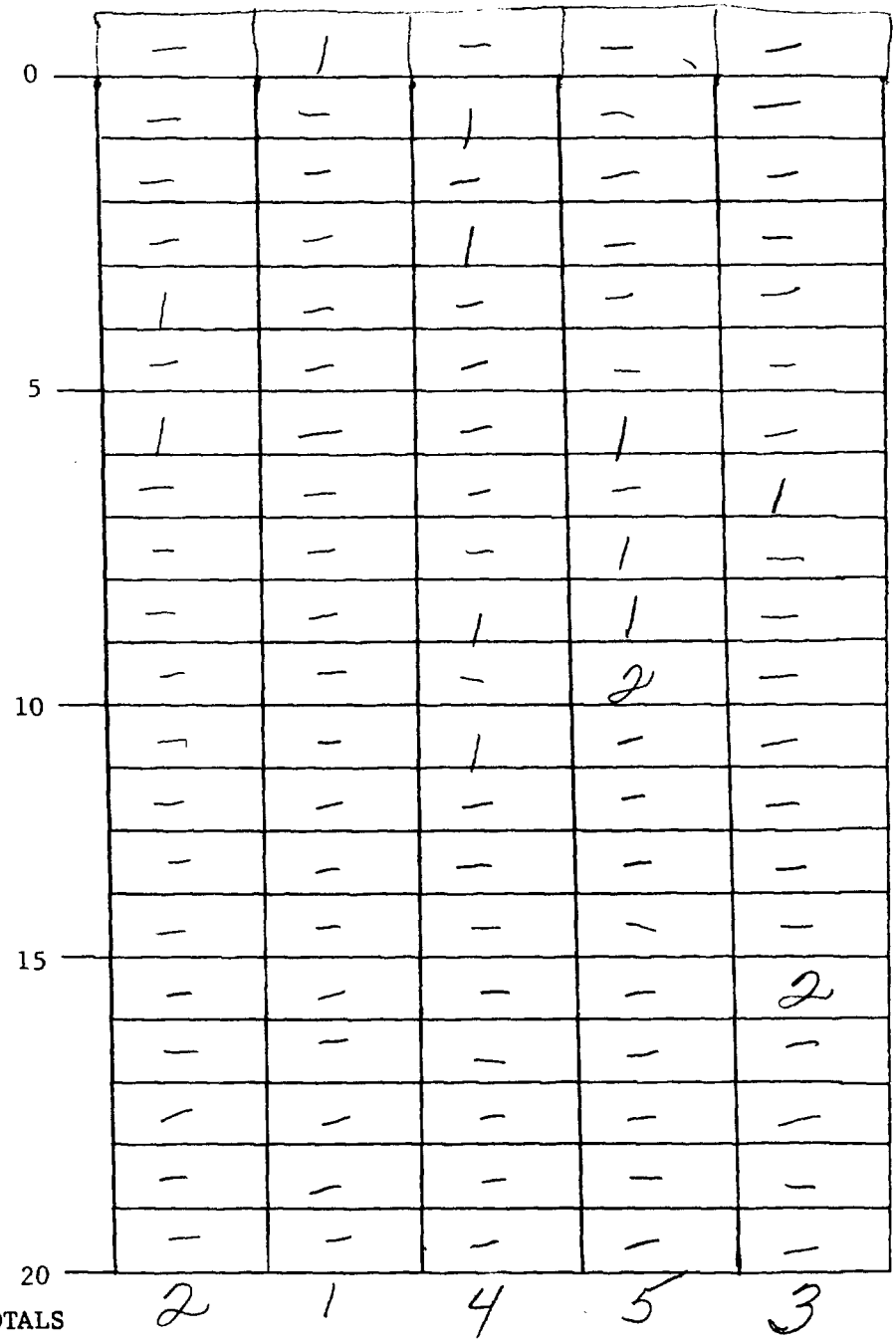
ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 464 ELAPSED TIME (t) 15 mins.

FLOW RATE 1.7 l/min VOLUME (V) 25.5 liters

FIELD AREA (a) 0.00432 mm^2 BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 AV. FIBER COUNT (f) 0.15 fibers/field



SUBTOTALS	2	1	4	5	3

TOTAL 15

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 1.01$

SGP 0021588

Date: 6/10/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. L-5

ELAPSED TIME (t) 127 mins.

FLOW RATE 1.7 1/min

VOLUME (V) 215.9 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.35 fibers/field

0	1	–	–	–	–
	–	–	–	–	–
	–	1	–	–	–
	1	1	1	1	1
	–	–	–	–	1
5	2	–	–	1	–
	–	–	–	–	–
	1	1	–	–	–
	–	1	1	–	–
	1	–	1	–	–
10	–	1	–	–	–
	–	–	–	–	–
	–	1	–	–	–
	–	2	–	1	1
15	1	1	1	1	–
	–	–	–	–	–
	–	–	1	–	2
	–	–	–	–	1
20	–	–	1	1	
SUBTOTALS	7	9	6	5	8

TOTAL 35

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.30$

SGP 0021589

Date: 6/12/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 497 — ELAPSED TIME (t) 71 mins.

FLOW RATE 1.7 l/min — VOLUME (V) 120.7 liters

FIELD AREA (a) 0.00432 mm^2 — BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 — AV. FIBER COUNT (f) 0.48 fibers/field

0	–	–	1	–	1
	–	–	–	1	1
	1	1	1	–	1
	1	–	–	1	1
	–	–	–	1	1
5	1	1	2	–	–
	–	–	1	–	–
	2	–	–	1	–
	1	1	–	1	–
	–	–	1	–	–
10	–	1	–	1	–
	–	–	–	–	1
	–	1	–	–	–
	–	1	1	–	1
	1	–	–	–	–
15	–	–	1	1	–
	1	–	2	1	1
	2	–	1	–	–
	2	1	–	–	1
20	–	–	–	1	–
SUBTOTALS	12	7	11	9	9

TOTAL 48

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ 0.75

SGP 0021590

Date: 1/11

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. [illegible]

ELAPSED TIME (t) 75 mins.

FLOW RATE 1.7 l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) .02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .026 fibers/field

	—	1		—	—
0		—		1	—
	—	1	—	1	—
		—	—	—	1
	—	1	2	—	1
		—	—	—	—
5	—	—	—	1	—
	—	—	—	—	—
	—	—	1	1	1
	1	1	—	—	—
	—	—	1	—	—
10	—	1	—	—	—
	—	—	—	—	1
	—	—	—	—	—
	—	1	—	—	—
15	2	—	—	1	1
	—	—	—	—	—
	—	—	—	—	1
	—	—	—	—	—
20	—	1	—	—	—
SUBTOTALS	3	7	5	5	6

TOTAL 26

Constant k = $\frac{A}{1000\ a}$ = .198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ .37

SGP 0021591

Date: 6/12/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 492 ELAPSED TIME (t) ' mins.

FLOW RATE ' l/min VOLUME (V) . liters

FIELD AREA (a) 0.00432 mm^2 BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 AV. FIBER COUNT (f) 0.49 fibers/field

	–	–	1	1	1
0	2	1	1	–	–
	1	–	–	1	1
	–	2	2	–	–
	–	1	–	1	–
	–	1	–	–	1
5	–	–	–	–	1
	–	–	2	–	
	–	–	–	–	–
	1	1	–	–	–
	–	–	–	–	1
10	1	–	–	–	–
	–	–	–	2	–
	1	1	1	1	2
	1	1	–	–	–
15	1	1	–	1	–
	–	1	–	1	1
	–	–	2	–	–
	–	1	1	1	–
20	–	1	1	–	–
SUBTOTALS	8	12	11	9	9

TOTAL 49

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = 1.00

SGP 0021592

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 469 | ELAPSED TIME (t) 115 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 201.25 liters

FIELD AREA (a) 0.00432 mm^2 | BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 0.24 fibers/field

0	–	–	–	–	–
	–	/	–	–	–
	/	–	–	–	–
	–	–	–	–	–
	–	–	–	/	–
5	2	–	–	–	–
	/	/	2	/	–
	–	–	/	–	–
	/	–	/	–	–
	–	–	/	–	–
10	–	–	–	/	/
	–	–	–	–	–
	–	–	–	2	/
	–	–	–	–	–
15	–	–	–	–	–
	–	/	–	–	/
	/	/	–	–	–
	–	–	–	–	–
20	–	–	–	–	–
	–	–	–	–	/
SUBTOTALS	6	4	5	5	4

TOTAL 24

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.22$

SGP 0021593

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 463 — ELAPSED TIME (t) 110 mins.

FLOW RATE 1.75 l/min — VOLUME (V) 192.5 liters

FIELD AREA (a) 0.00432 mm^2 — BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 — AV. FIBER COUNT (f) 0.43 fibers/field

0	–	–	–	–	1
	–	2	–	–	–
	–	–	2	–	–
	–	–	1	1	–
	1	1	–	–	–
	–	–	1	–	–
5	–	–	1	–	–
	–	–	–	1	1
	–	1	–	–	1
	–	1	–	2	–
	–	2	–	–	1
10	1	–	–	1	–
	–	–	1	1	1
	–	1	–	1	–
	–	–	2	1	–
15	2	1	1	–	1
	–	–	2	1	–
	1	–	–	–	1
	–	–	1	–	1
20	–	–	–	–	–
SUBTOTALS	5	9	12	9	8

TOTAL 43

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.42$

SGP 0021594

Date: 6/17/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 496 | ELAPSED TIME (t) 15 mins.

FLOW RATE 1.5 l/min | VOLUME (V) 22.5 liters

FIELD AREA (a) 0.00432 mm^2 | BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 0.27 fibers/field

	–	1	1	1	–
0	–	–	–	–	1
	–	–	1	–	–
	–	–	–	–	–
	–	–	–	–	1
	1	1	–	2	–
5	1	–	–	1	–
	–	–	–	–	–
	1	–	–	1	–
	–	–	–	–	–
	–	–	2	–	1
10	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	1	–	–	–	1
15	–	–	1	–	–
	–	–	–	–	–
	–	–	1	1	1
	1	1	–	–	–
20	–	1	–	1	–
SUBTOTALS	5	4	6	7	5

TOTAL 27

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ 1.88

SGP 0021595

Date: 6/17/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 487

ELAPSED TIME (t) [illegible] mins.

FLOW RATE 1.5 l/min

VOLUME (V) 12.75 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.37 fibers/field

0	—	2	—	—	—
	—	—	—	1	—
	1	—	1	—	—
	1	—	—	—	—
	—	—	—	—	—
5	—	—	—	—	1
	—	—	—	—	—
	—	—	—	—	1
	1	1	1	—	1
	1	2	—	—	—
10	—	—	1	1	1
	—	—	—	1	—
	1	2	—	—	1
	1	1	—	—	2
	—	—	—	—	—
15	—	1	1	1	—
	—	1	1	1	—
	1	—	1	1	—
	—	—	—	—	—
20	—	—	—	1	—
SUBTOTALS	7	10	6	7	7

TOTAL 37

Constant $k = \frac{A}{1000\ a}$ = 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ .053

SGP 0021596

Date: 6/17/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 485

ELAPSED TIME (t) [illegible] mins.

FLOW RATE 1.5 l/min

VOLUME (V) 1.125 liters

FIELD AREA (a) .000432 mm^2

BLANK COUNT (b) .002 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.24 fibers/field

0					
	1				
			1		
5					
			1		
			1		
10	1		1	2	
	1				
					1
			1	1	
15				1	2
					1
	1		1	1	
	1				1
20		1		1	
SUBTOTALS	5	1	6	6	6

TOTAL 24

Constant k = $\frac{A}{1000\ a}$ = 1.98

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = 0.24

SGP 0021597

Date: 6/17/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 489 — ELAPSED TIME (t) 5 mins.

FLOW RATE [illegible] l/min — VOLUME (V) [illegible] liters

FIELD AREA (a) 0.00[illegible] mm^2 — BLANK COUNT (b) 0.[illegible] fibers/field

FILTER AREA (A) 855 mm^2 — AV. FIBER COUNT (f) 0.34 fibers/field

0	–	–	–	–	–
	–	–	1	1	–
	–	–	–	–	–
	–	1	1	–	–
	–	–	–	–	1
	–	1	1	–	–
5	–	–	–	1	2
	–	–	–	–	–
	1	2	–	–	–
	1	1	–	–	–
	2	–	1	–	–
10	–	1	–	1	1
	–	–	–	–	–
	–	1	–	1	1
	1	–	–	–	–
15	1	–	2	1	–
	–	1	–	–	–
	–	–	–	1	–
	–	–	1	1	–
20	–	–	–	–	1
SUBTOTALS	6	5	7	7	6

TOTAL 3[illegible]

Constant $k = \frac{A}{1000\ a}$ = [illegible]

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ = [illegible] / l

SGP 0021598

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 470 | ELAPSED TIME (t) 122 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 202.4 liters

FIELD AREA (a) 0.00432 mm^2 | BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 0.54 fibers/field

0	—	—	1	—	1
	—	—	2	—	—
	1	—	1	—	—
	2	1	—	1	—
	—	—	1	2	1
5	1	1	1	1	1
	1	—	—	—	—
	—	1	—	—	—
	—	1	—	1	—
	1	1	1	—	—
10	—	1	—	1	1
	—	—	—	1	1
	2	1	—	—	—
	—	1	—	2	—
15	—	—	1	1	—
	1	1	1	1	2
	1	1	—	1	—
	2	—	—	—	—
	1	—	—	1	1
20	—	1	—	—	—
SUBTOTALS	13	11	9	13	8

TOTAL 54

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = 0.50

SGP 0021599

Date: 6/15/79

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 494 | ELAPSED TIME (t) 101 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 171.7 liters

FIELD AREA (a) 0.00432 mm^2 | BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 0.55 fibers/field

0	2	1	2	1	1
	–	1	–	–	–
	1	–	–	1	1
	1	–	–	–	–
	–	1	1	–	2
5	1	1	–	1	1
	–	1	2	1	–
	–	–	–	1	–
	–	–	1	1	2
	1	–	–	–	1
10	–	–	1	–	1
	1	–	1	–	–
	–	1	–	1	–
	–	2	–	1	1
15	1	1	1	–	1
	–	1	–	–	1
	–	–	–	–	1
	–	2	–	1	–
	1	–	2	1	–
20	–	–	–	–	–
SUBTOTALS	9	12	11	10	13

TOTAL 55

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = 0.61

SGP 0021600

Date: 6/10/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 493

ELAPSED TIME (t) 15 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 25.5 liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.20 fibers/field

0	–	–	–	–	1
	1	–	–	–	–
	–	1	–	–	1
	–	–	–	–	–
	–	1	–	–	–
5	1	–	–	–	–
	1	–	–	–	–
	–	–	–	–	–
	–	–	–	–	1
	1	–	–	–	–
10	1	–	–	1	–
	–	–	–	–	–
	–	2	–	1	1
	–	1	– !	–	–
15	–	–	2	–	–
	–	–	–	–	–
	–	–	1	–	–
	–	–	–	–	–
20	1	–	–	–	–
SUBTOTALS	6	5	3	2	4

TOTAL 20

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 1.40$

SGP 0021601

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 88 | ELAPSED TIME (t) 5 mins.

FLOW RATE 1.7 l/min | VOLUME (V) _____ liters

FIELD AREA (a) _____ mm^2 | BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) _____ fibers/field

0	2	1	2	1	—
	—	—	—	—	1
	—	—	2	—	2
	1	1	1	2	1
	—	—	1	—	1
5	1	—	—	2	—
	1	1	1	—	—
	—	1	1	1	1
	—	—	—	1	1
	—	1	—	1	—
10	2	—	1	—	1
	—	2	2	—	—
	—	1	1	—	1
	—	—	—	—	—
15	1	—	—	—	—
	—	1	—	1	—
	1	—	—	2	—
	1	—	—	—	1
20	1	—	1	1	1
SUBTOTALS	13	8	13	12	11

TOTAL 57

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ .79

SGP 0021602

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 484

ELAPSED TIME (t) 73 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 74.7 liters

FIELD AREA (a) 0.00437 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.55 fibers/field

0	1	1	–	1	–
	–	2	–	–	–
	–	1	2	2	1
	–	–	1	–	–
	1	1	–	–	1
5	–	–	1	–	1
	–	1	2	–	–
	1	–	–	1	1
	1	1	–	–	–
	1	1	–	1	1
10	–	2	1	1	–
	–	–	1	–	1
	1	1	1	1	1
	1	1	–	–	–
15	–	–	–	1	2
	–	–	–	–	–
	1	1	2	–	–
	2	–	–	–	–
	–	–	1	2	–
20	1	–	–	–	–
SUBTOTALS	11	13	12	10	9

TOTAL 55

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 1.40$

SGP 0021603

Date: 6/15/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 481

ELAPSED TIME (t) 58 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 98.6 liters

FIELD AREA (a) 0.00437 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 0.44 fibers/field

0	1	–	–	–	–
	–	2	–	–	1
	–	1	–	–	1
	–	–	1	–	–
	–	–	–	1	1
5	–	–	1	–	1
	–	–	–	1	1
	2	1	–	–	–
	2	–	1	–	–
	1	1	–	–	–
10	–	1	1	2	–
	1	–	–	–	2
	–	–	–	1	–
	–	–	1	–	–
15	1	–	1	–	1
	–	1	1	–	–
	–	1	–	2	–
	1	1	–	–	1
	1	–	–	1	–
20	–	1	–	–	–
SUBTOTALS	10	10	7	8	9

TOTAL 44

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = 0.84$

SGP 0021604

Date: 6/10/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 452

ELAPSED TIME (t) _____ mins.

FLOW RATE _____ 1/min

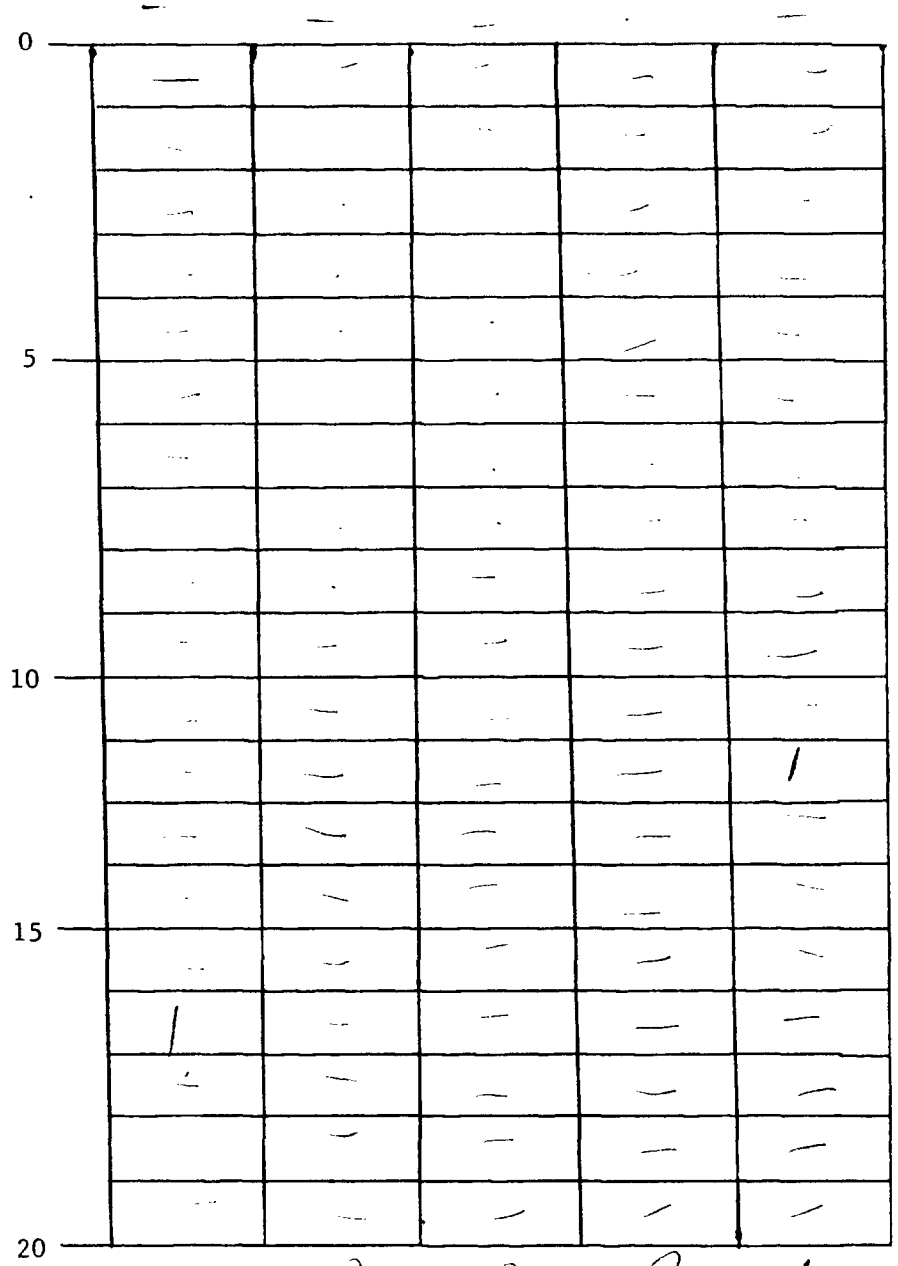
VOLUME (V) _____ liters

FIELD AREA (a) 0.00432 mm^2

BLANK COUNT (b) 0.02 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) _____ fibers/field



SUBTOTALS	1	0	0	0	1	TOTAL 2

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ - Blank

SGP 0021605