MIL-STD-795
23 February 1962

SUPPLEMENTING
FED-STD-595
1 March 1956

MILITARY STANDARD

COLORS

FSC 8010

ARMED FORCES SUPPLY SUPPORT CENTER

Washington, D.C.

MIL-STD-795
Colors

1. This standard supplementing Federal Standard FED-STD-595 dated 1 March 1956, has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.

2. In accordance with established procedure, the Corps of Engineers, Bureau of Ships and the Aeronautical Systems Division, respectively, have been designated as Army, Navy and Air Force custodians of this standard.

3. This standard is mandatory for use effective on date of issue by the Departments of the Army, the Navy, and the Air Force.

4. Recommended corrections, additions, or deletions should be addressed to the Standardization Division, Armed Forces Supply Support Center, Washington 25, D. C.

INTRODUCTION

The intent of this standard is to provide standard colors for use by the Departments of the Army, the Navy, and the Air Force.

CONTENTS

1. SCOPE

1.1 This standard established colors used by the Departments of the Army, the Navy, and the Air Force in further limitation of, but otherwise based on, the colors available in Standard FED-STD-595. Standardization is based on spectrophotometric data. Procedure is established for use of this standard in specifications for, and the procurement of, paint and related products. In some instances data for certain specific colors is not complete. When available a change notice will be issued to list the data.

2. REFERENCED DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids, form a part of this standard to the extent specified herein:

STANDARDS

FEDERAL

FED-STD-141 - Paint, Varnish, Lacquer, and Related Materials; Methods of Inspection, Sampling, and Testing.
FED-STD-595 - Colors.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications.- The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

AMERICAN SOCIETY FOR TESTING AND MATERIALS

D1482-57T - Method of Test for Color Difference Using the General Electric Spectrophotometer.
D1495-60T - Method of Test for Color Difference Using the Color Eye.
D1536-58T - Method of Test for Color Difference Using the Colormaster Differential Colorimeter.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia 2, Pa.)

3. REQUIREMENTS

3.1 For Color reference purposes the five digit system and number of Standard FED-STD-595 shall be used.

3.2 The colors of Standard FED-STD-595 used by the Departments of the Army, Navy, and Air Force listed in table I, are standardized by the spectrophotometric curves and the derived chromaticity coordinates of Appendix I based on the original color sources used in establishing Standard FED-STD-595 and obtained in accordance with method 4251 of Standard FED-STD-141.

3.3 For color matching purposes, individual color cards shall be provided by requirements of the detail document. Where exact or close match is required, individual cards shall be maintained by laboratory check against the appropriate spectrophotometric curve to within one half the color match tolerance required of the product. Requirements for special properties such as gloss, texture, fluorescence, and metamerism shall be specified in the detail document. Where close match is not required the individual color cards of Standard FED-STD-595 may be used.

3.4 Unless otherwise specified by detail document, color match of paints and related products shall be exact or within one National Bureau of Standards (NBS) unit for finish coats and three NBS units for primers in the direction of minus ΔL, Δa and Δb as determined by ASTM Method D1482-57T, D1536-58T, D1495-60T or similar procedure using an instrument of equal sensitivity.

4. GENERAL NOTES

4.1 The colors of this standard were adopted originally and are used for the following purposes:

(a) Camouflage.
(b) Habitability - decoration of living spaces.
(c) Marking and identification.
(d) Safety.
(e) Visibility - working spaces.
(f) Natural color of formulations such as primers.

4.2 Originally, most, if not all, of the colors were identified by color cards subject to more or less color drift over a period of years. The only control exercised in some instances was a requirement for a specific directional reflectance. Experience has shown that it is impracticable to maintain color standards by use of color cards alone. Limited spectrophotometric and trichromatic coefficient control without control of color drift of stocked color cards or control after distribution (present status of Standard FED-STD-595) also is unsatisfactory for close color matching purposes. Even standardization by spectrophotometric methods with control of color drift and distribution of color cards has not been entirely satisfactory. In addition to control of color drift, distribution of color cards with each contract and restrictions on color matching tolerances must be observed to obtain stocks of paint of reasonably uniform color.

4.3 The Federal standard color cards have not been reproduced or maintained with sufficient accuracy for exact or close color control, however, the colors are suitable for desk reference and use where exact or close match is not required. For the Departments of the Army, Navy, and Air Force, limited quantities of color cards standardized against the appropriate spectrophotometric standard will be available for color matching purposes for use by Government testing laboratories, inspectors, suppliers with contracts involving color matching and others who can justify need for a more exact color card than that available under the Federal standard. Unless otherwise specified by reference document or furnished with contract or order, these special color cards may be obtained from the Chemical Laboratory, Norfolk Naval Shipyard, Portsmouth, Virginia upon proof of need.

4.4 Although most of the colors of this standard have had long usage, color in general has more of a psychological and subjective aspect than most items standardized and is therefore much more apt to be changed. Accordingly, Appendix I has been established on a loose leaf basis to more readily permit amendment, revision, deletion, or addition upon presentation of adequate justification.

4.5 Spectrophotometric curves which are available are included in this standard. Additional curves will be added when available. Military activities requiring additions or deletions of colors should submit their requirement to the Bureau of Ships for standardization consideration.

4.6 The prefix "X" specified in table I indicates an interim number either of a color not in Standard FED-STD-595 at the time of issuance of this standard or a revised color for Department of Defense use.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.

Copies of this standard for Military use may be obtained as indicated in the foreword to the Index of Military Specifications and Standards.

The title and identifying symbol should be stipulated when requesting copies of military standards.)

Custodians:
Army - CE
Navy - Ships
Air Force - AMC

Preparing activity:
Navy - Ships
(Project 8010-0028)

Table I - Colors

GLOSS COLOR	x	y	Y	SEMI-GLOSS COLOR	x	y	Y	LUSTRE-LESS COLOR	x	y	Y
10032	.4044	.3333	.0122								
10045				20045				30045	.3590	.3379	.0598
10049	.4718	.3251	.0211								
				20059	.3862	.3526	.0536				
				20061	.4325	.3282	.0554				
10075	.3991	.3581	.0632								
10076	.5264	.3503	.0551								
10080	.3977	.3625	.0629								
10091	.5122	.3783	.0667								
								30099	.3803	.3627	.0800
				20109				30109	.4566	.3486	.1021
								30111	.3861	.3335	.1054
								30117	.4310	.3743	.1017
								30118			
10219				20219				30219	.3769	.3582	.2114
				20227				30227	.3745	.3552	.2433
10233				20233				30233	.3948	.3440	.2349
				20252				30252	.4278	.3579	.2390
								30257	.4321	.4024	.2499
10266								30266	.4173	.4120	.2529
								30277	.3591	.3645	.2843
								30279	.3749	.3505	.2681
								30313			
10324								30324	.3586	.3463	.3371
10371	.4254	.3972	.3332								
11105	.6414	.3151	.0771	21105							
11136	.6298	.3201	.0682	21136				31136			
				21575				31575	.3640	.3417	.5374
11670				21670				31670	.3513	.3378	.6641
								32169	.5032	.3711	.1606
12197				X22197	.5750	.3457	.1810				
12246	.6018	.3860	.2122	22246				32246			
				22276				32276	.4691	.3650	.2679
								32356			
				22519	.3676	.3496	.4965				
				22563	.3598	.3547	.5394				
				22630				32630	.3555	.3452	.6534
12648				22648				32648	.3655	.3543	.6332
								33434	.4457	.4250	.4210
								33481	.4274	.4519	.4791
13522				23522	.3413	.3472	.5190				
13523	.3842	.3807	.4887								
13531				23531				33531	.3455	.3494	.5405
13538	.5070	.4613	.5047	23538				33538			
13578				23578				33578	.3499	.3561	.5762
13594	.3944	.3977	.5544	23594				X33594			
13613				23613				33613	.3599	.3638	.6495
				23617				33617	.3393	.3432	.6051
13618	.4191	.4208	.5858								
13655	.4843	.4813	.5904	23655							

Table I (Cont'd.)

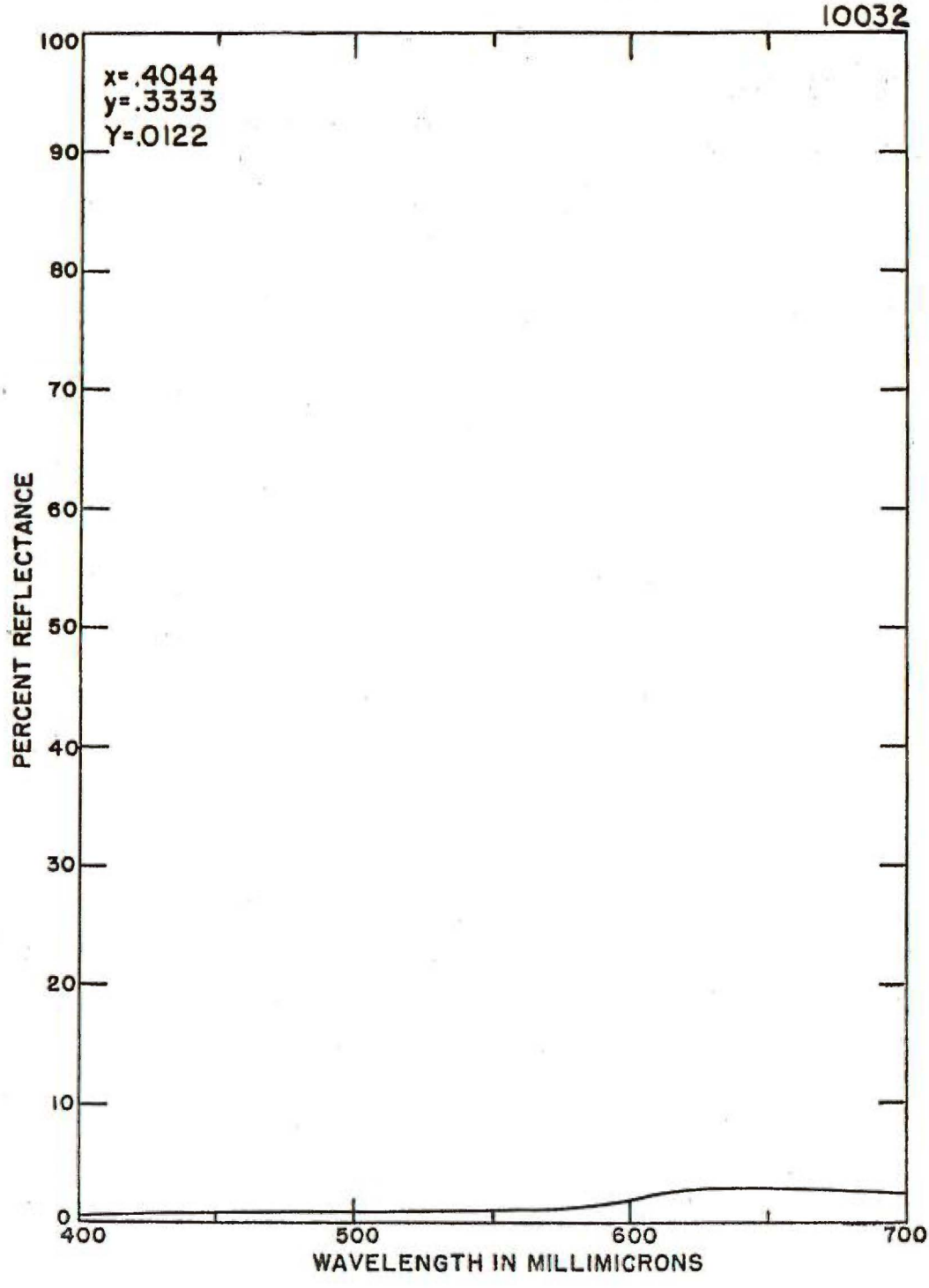
GLOSS COLOR	X	y	Y	SEMI-GLOSS COLOR	x	y	Y	LUSTRE-LESS COLOR	x	y	Y
13690				23690				33690	.3475	.3586	.6958
13695				23695				33695	.3914	.4002	.6615
13711				23711				33711	.3567	.3581	.6866
X14050											
14052				24052				34052	.3274	.3602	.0406
14062	.2361	.4376	.0413								
14064				24064	.3440	.3567	.0567				
14077	.3039	.3466	.0584								
								34079			
								34086	.3305	.3432	.0809
X14087				X24087				X34087			
				24091	.3187	.3252	.0900				
								34092	.2903	.3348	.0850
								34096	.3286	.3644	.0885
								34102			
				24108				34108			
14110	.2716	.4847	.0885								
								34127			
								34128	.3163	.3611	.1218
								34151	.3611	.4210	.1530
14158				24158				34158	.2867	.3200	.1548
14159				24159				34159	.3168	.3531	.1545
				24172	.3066	.3651	.1604				
14187	.3304	.3231	.1634								
				24201	.3577	.3759	.1832				
14223	.2883	.3911	.2024								
				24226				34226	.3168	.3537	.2209
				24227				34227			
14241				24241				34241			
								34258	.3594	.4263	.2556
14260				24260	.2799	.3777	.2518				
14272				24272	.2933	.3838	.2493				
14277				24277				34277	.2915	.3256	.2775
				24300				34300	.2941	.3398	.3080
14325				24325				34325	.2830	.3415	.3045
				24410				34410	.3261	.3542	.4076
				24417	.3164	.3448	.4035				
				24424				34424	.3268	.3522	.4350
				24441				34441	.3128	.3521	.4502
14449				24449				34449	.3170	.3586	.4925
				24466	.3103	.3518	.4533				
14491				24491				34491	.2998	.3371	.4981
14516				24516	.3058	.3373	.4969	34516			
				24525	.3142	.3508	.5042				
14533				24533				34533	.3225	.3695	.5281
				24554				34554			
X14583											
				24664	.3069	.3455	.6429				
X14672											
15042	.2561	.2835	.0248	25042				35042			
15044	.2130	.2045	.0113	X25044				35044			
15045	.2180	.2354	.0217	25053	.2251	.2343	.0505				

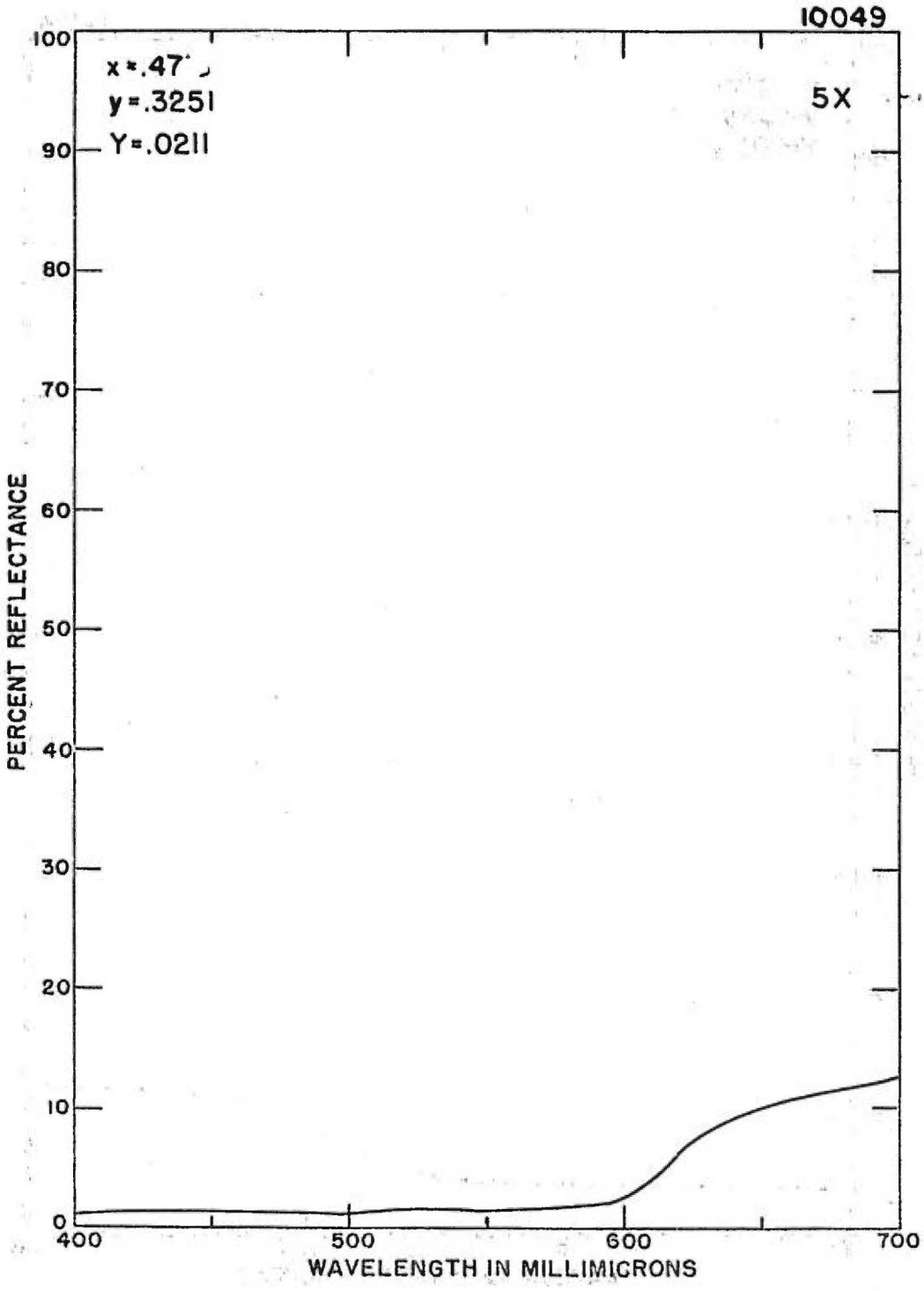
Table I-Colors (Cont'd.)

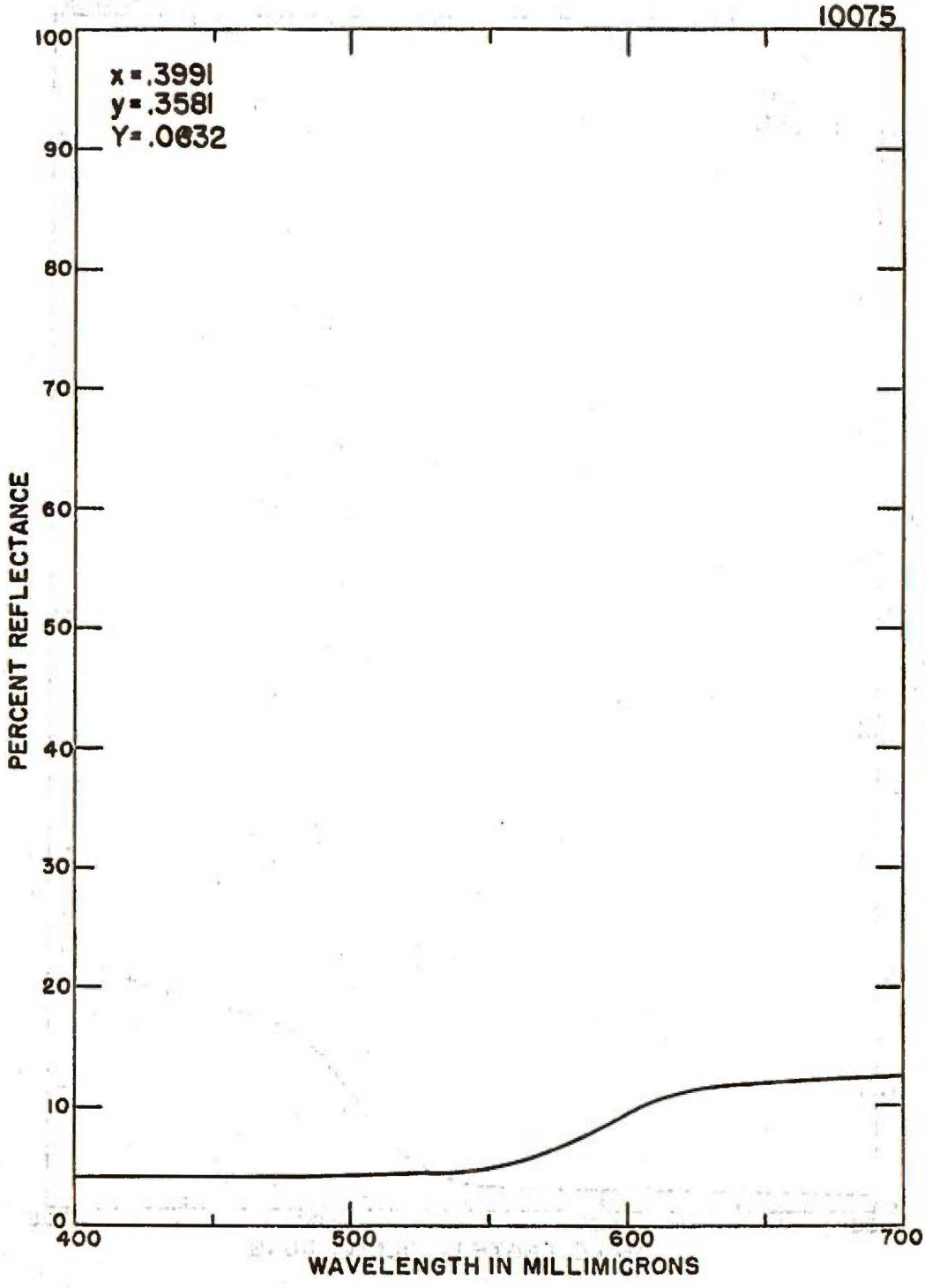
GLOSS COLOR	x	y	Y	SEMI-GLOSS COLOR	x	y	Y	LUSTRE-LESS COLOR	x	y	Y
15080	.1900	.2128	.0607								
15102	.1900	.1877	.0879	25102							
				25109	.2203	.2439	.0898	35109			
15123	.1922	.1673	.1124								
								35164	.2685	.2764	.1591
15177				25177				35177			
				25184	.2219	.2565	.1776				
15193				25193	.2263	.2940	.1767	35193			
								35231	.2429	.2363	.2321
				25352				35352	.2917	.3193	.3514
								35414			
15526				25526				35526			
				25622				35622			
								36076	.2919	.2935	.0730
16081				26081				36081	.3038	.3152	.0844
								36118	.2917	.2972	.1179
				26132	.3053	.3163	.1093	X36132			
16165	.3329	.3469	.1488								
				26173				36173	.2936	.2995	.1728
				26176	.2777	.2902	.1561	36176			
16187				26187							
				26231				36231	.3060	.3153	.2278
16251				26251				36251	.3082	.3181	.2507
				X26270				36270	.2961	.3021	.2692
				26293				36293	.3082	.3145	.2891
				26306				36306	.3[illegible]1	.3332	.3025
16307				26307	.3162	.3291	.3055	36307			
16357				26357				36357	.3270	.3401	.3574
				26373				36373	.3006	.3080	.3773
16376	.3119	.3253	.3490								
16440				26440				36440	.3119	.3204	.4442
								36463	.3048	.3124	.4669
16473	.3011	.3124	.3837								
16492				26492				36492			
				26496	.3194	.3332	.4926				
				26521				36521	.3317	.3350	.5186
16555				26555				36555	.3372	.3487	.5519
				26586				36586			
				26595				36595	.3178	.3299	.5646
17038	.3151	.3425	.0025	27038				37038			
17043											
								37056	.3417	.3363	.0461
17142	.3699	.2375	.1732	27142							
				27144	.2884	.2213	.1295	37144			
17178	.3096	.3173	.4998								
17778				27778				37778	.3238	.3298	.7764
17855				27855				37855			
17875				27875				37875			
17886	.3137	.3222	.8749	27886				37886			

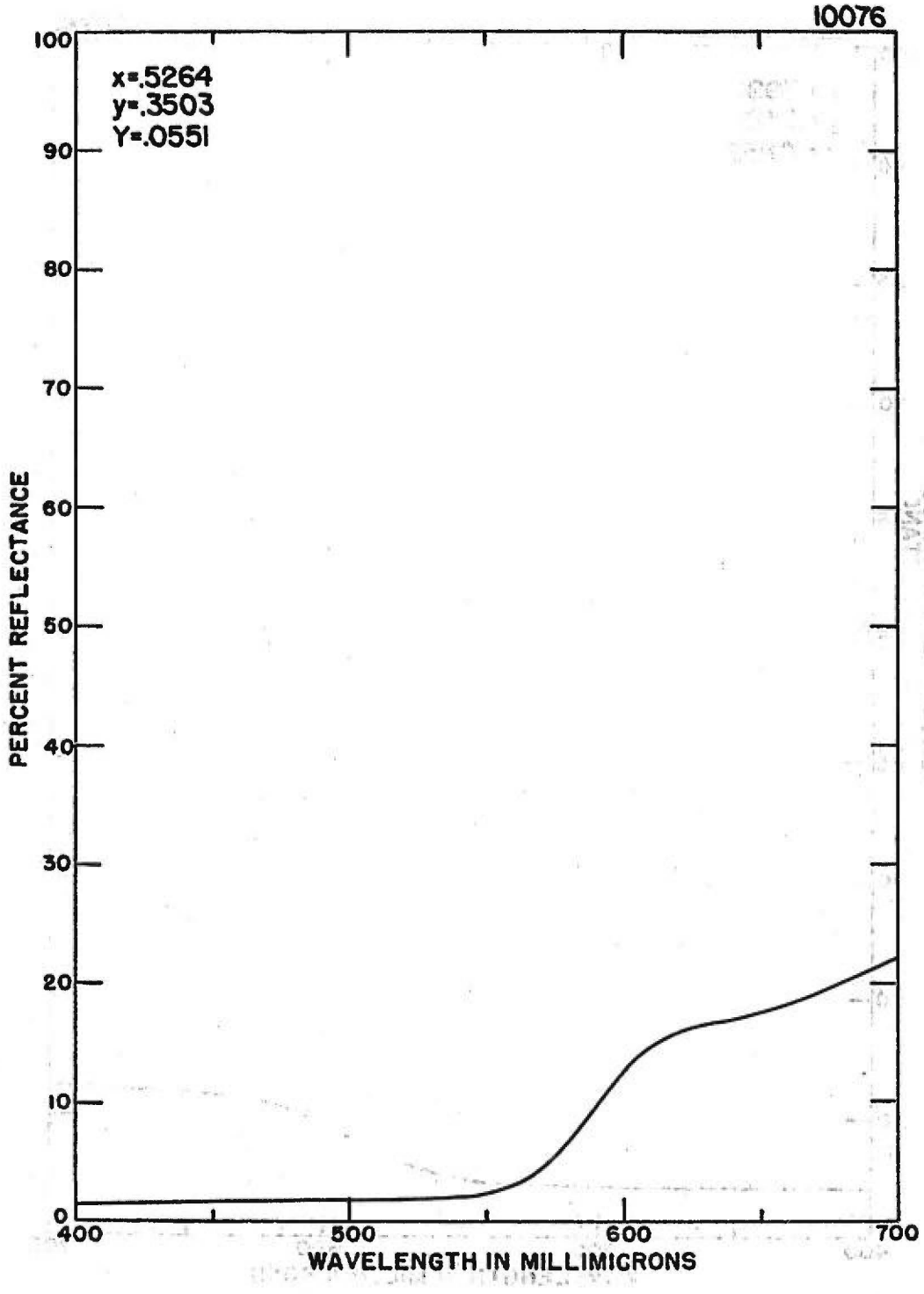
X = New number.

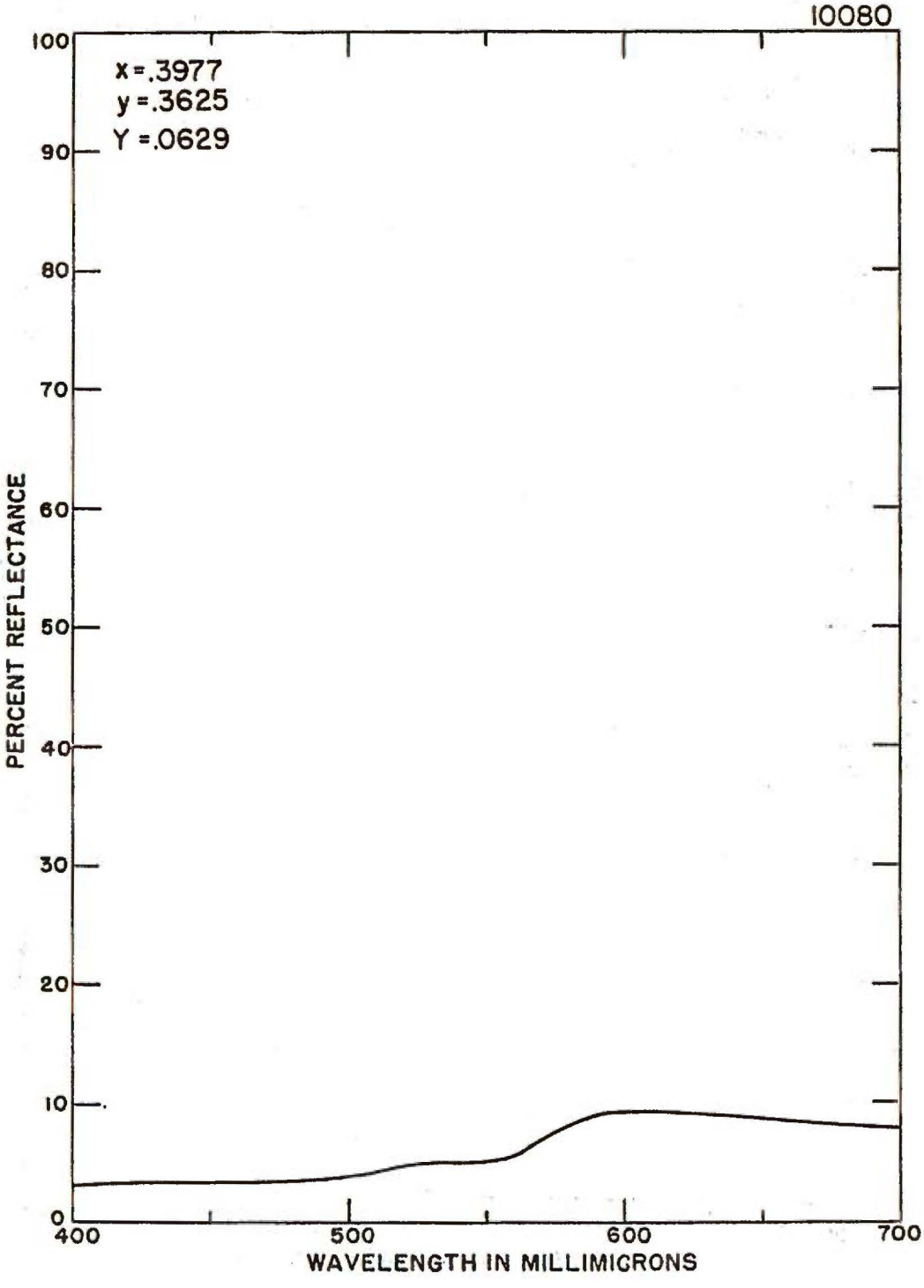
APPENDIX

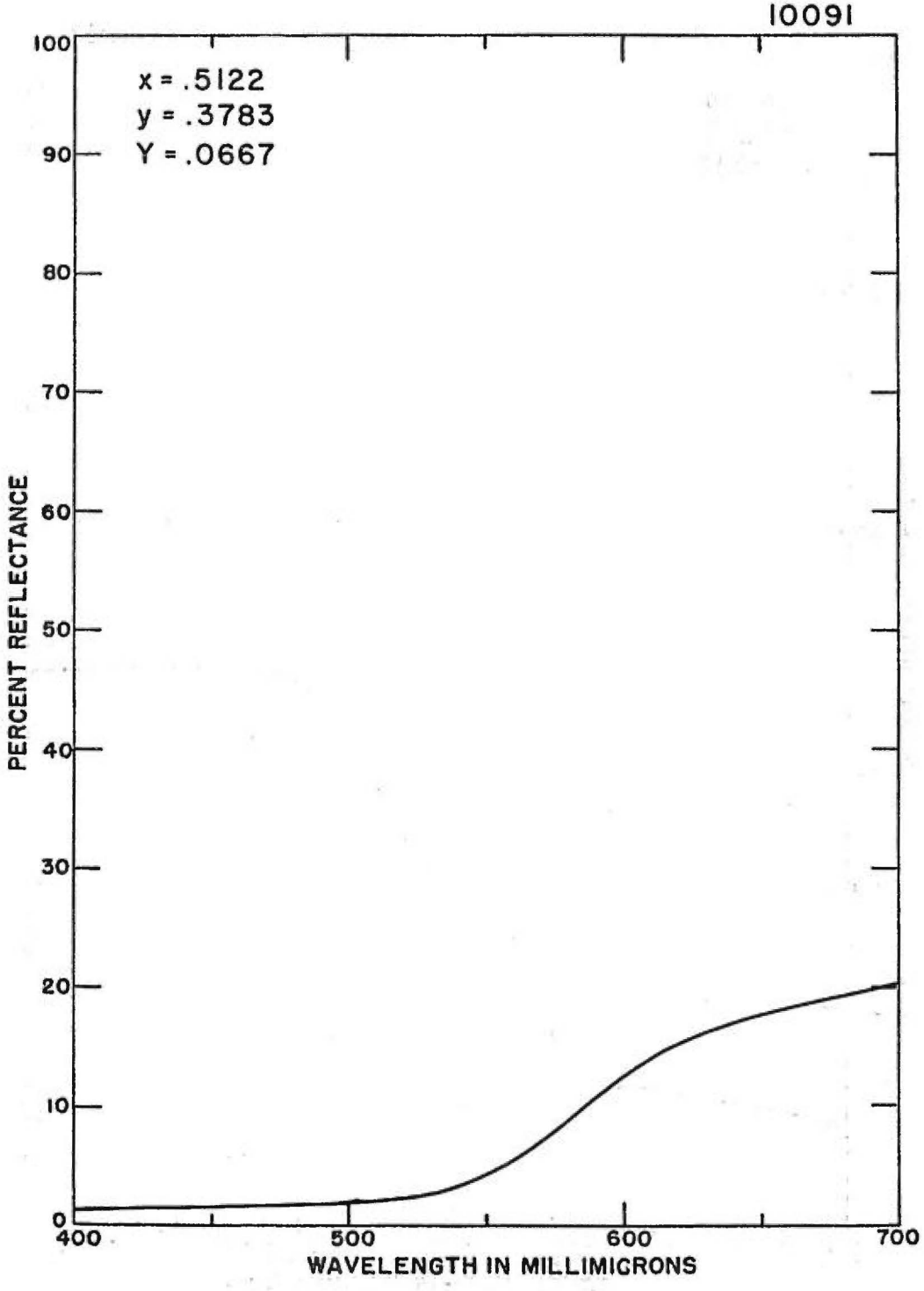

10032
x=.4044
y=.3333
Y=.0122
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

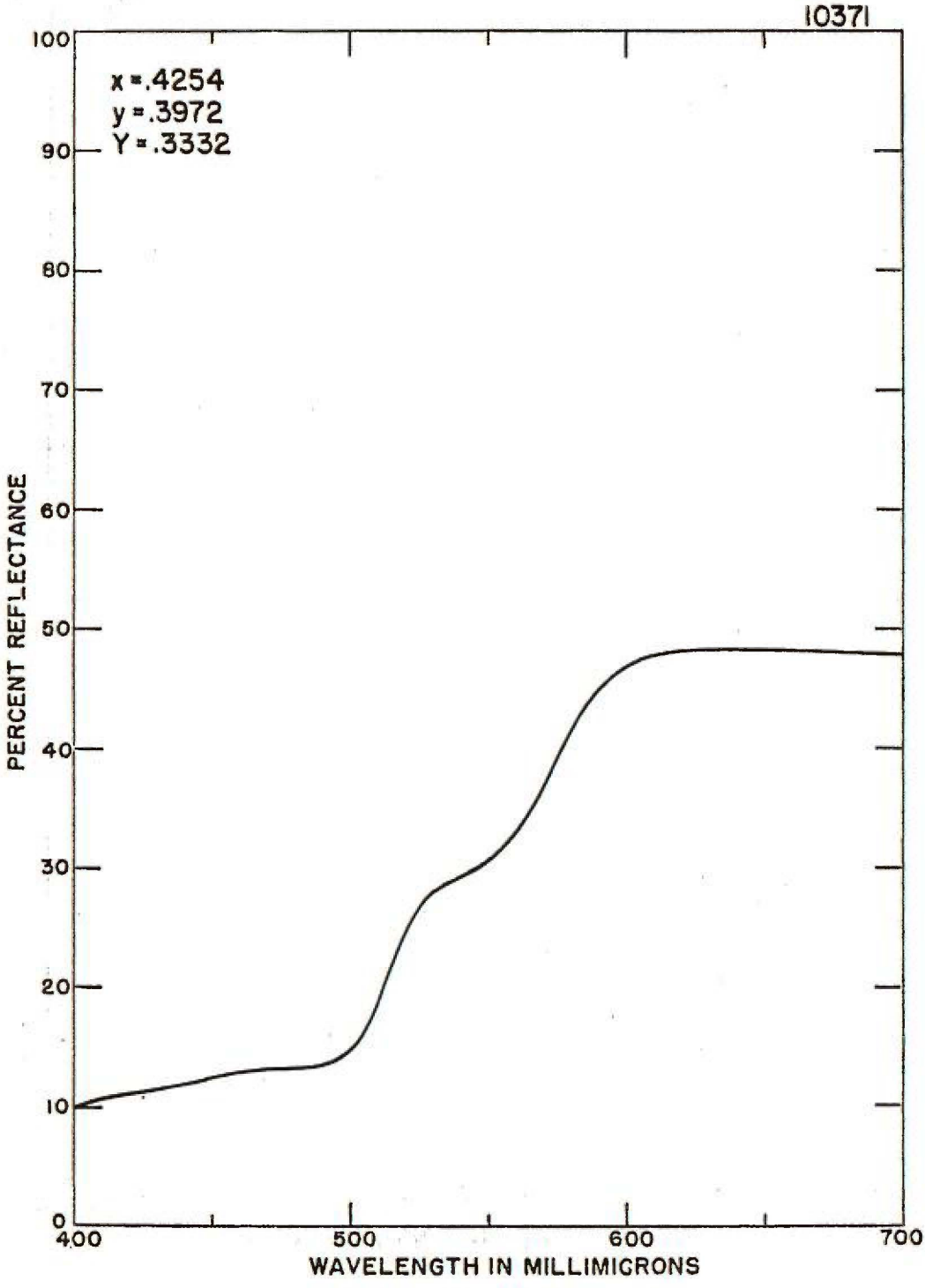

10049
x=.47
y=.3251
Y=.0211
5X
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

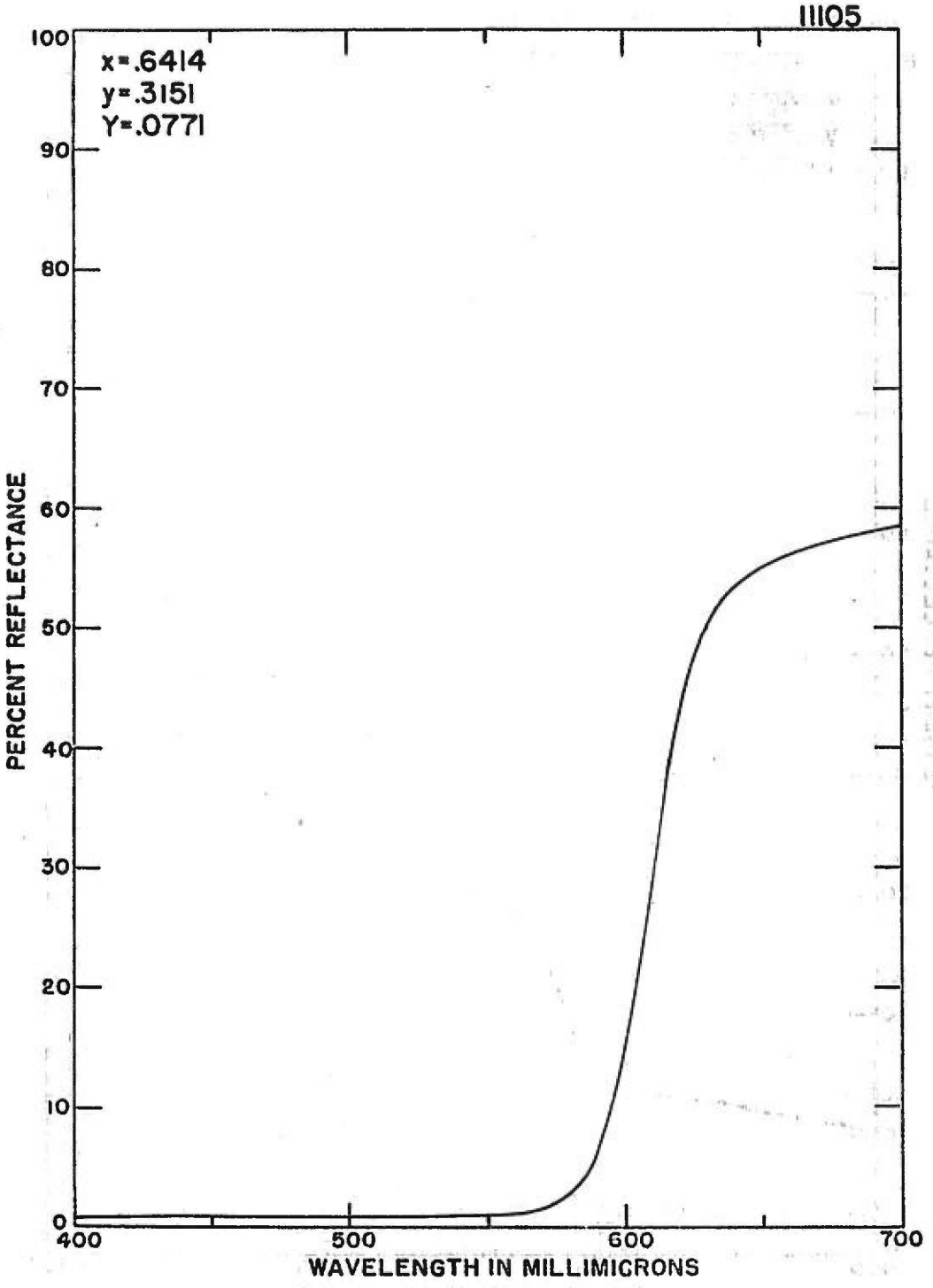

10075
x = .3991
y = .3581
Y = .0632
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

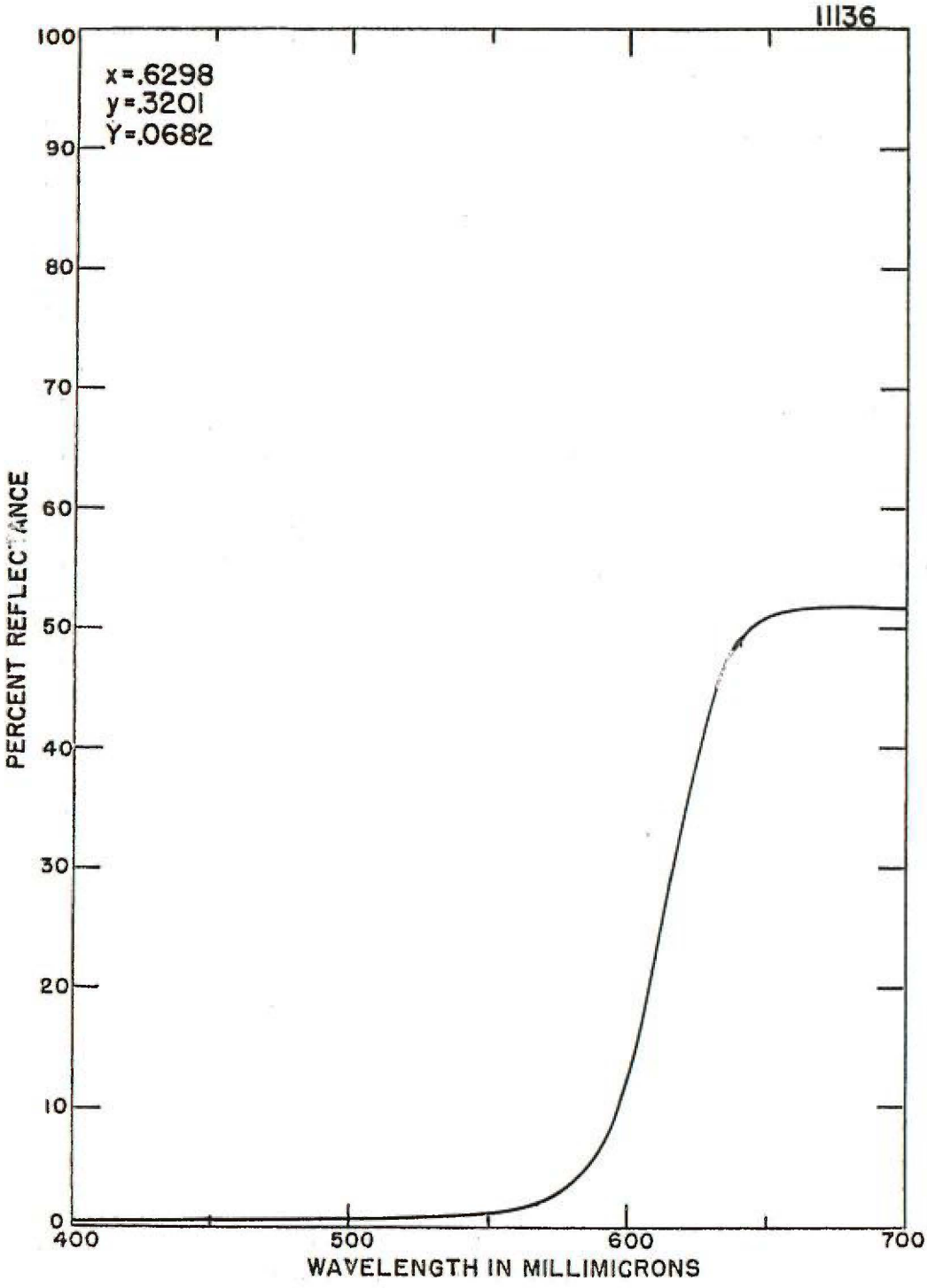

10076
x=.5264
y=.3503
Y=.0551
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

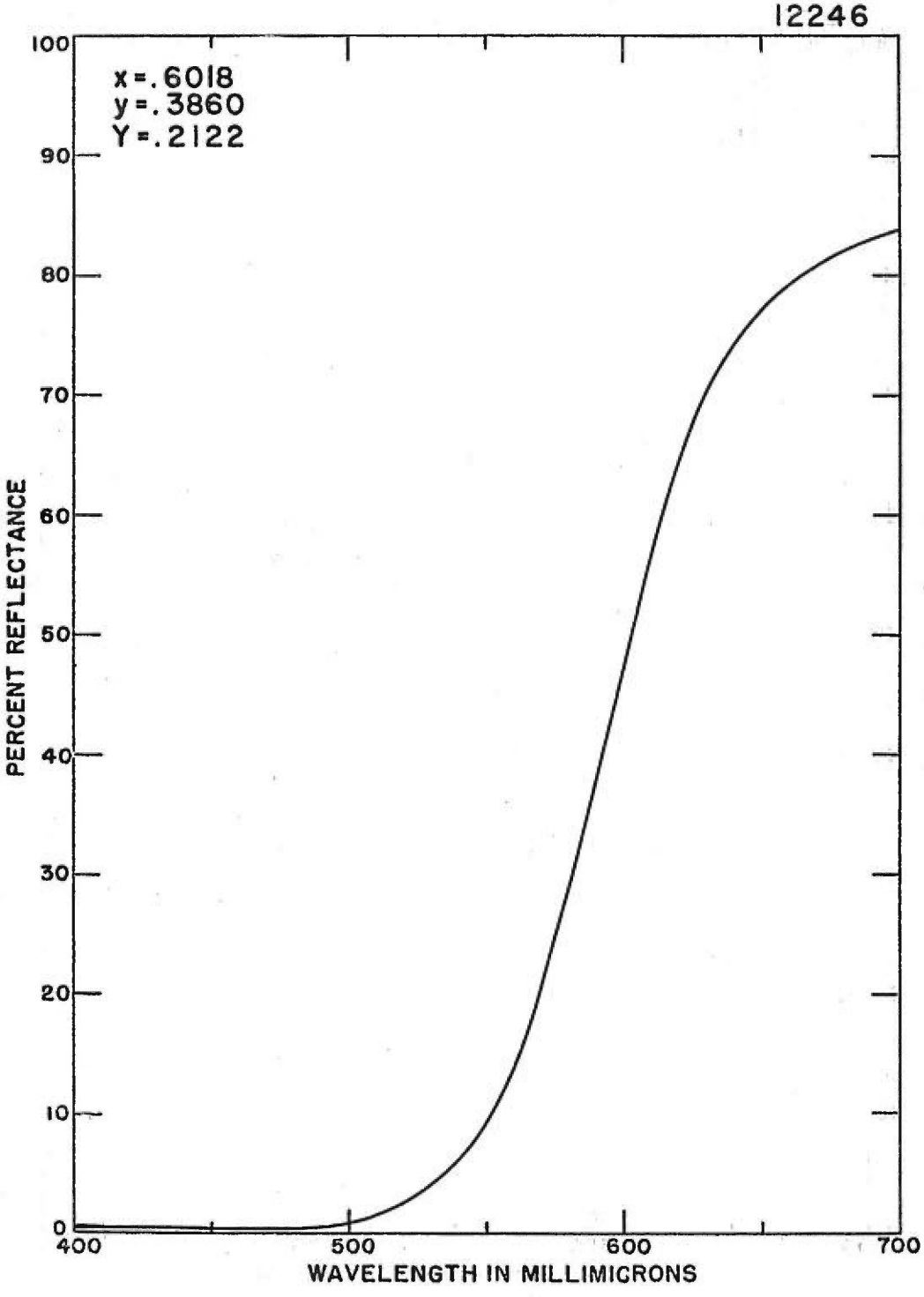

10080
x=.3977
y=.3625
Y=.0629
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

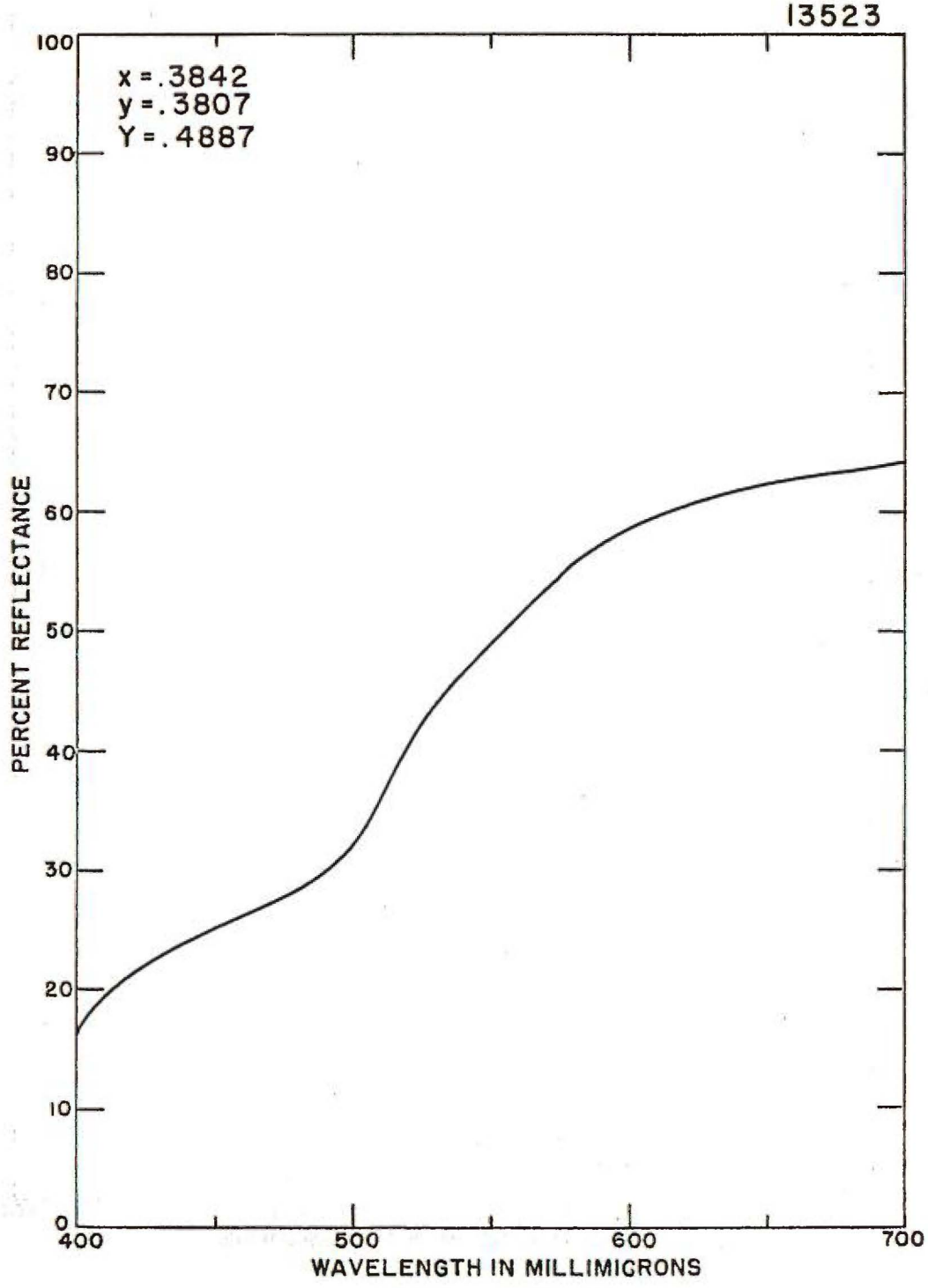

10091
x = .5122
y = .3783
Y = .0667
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

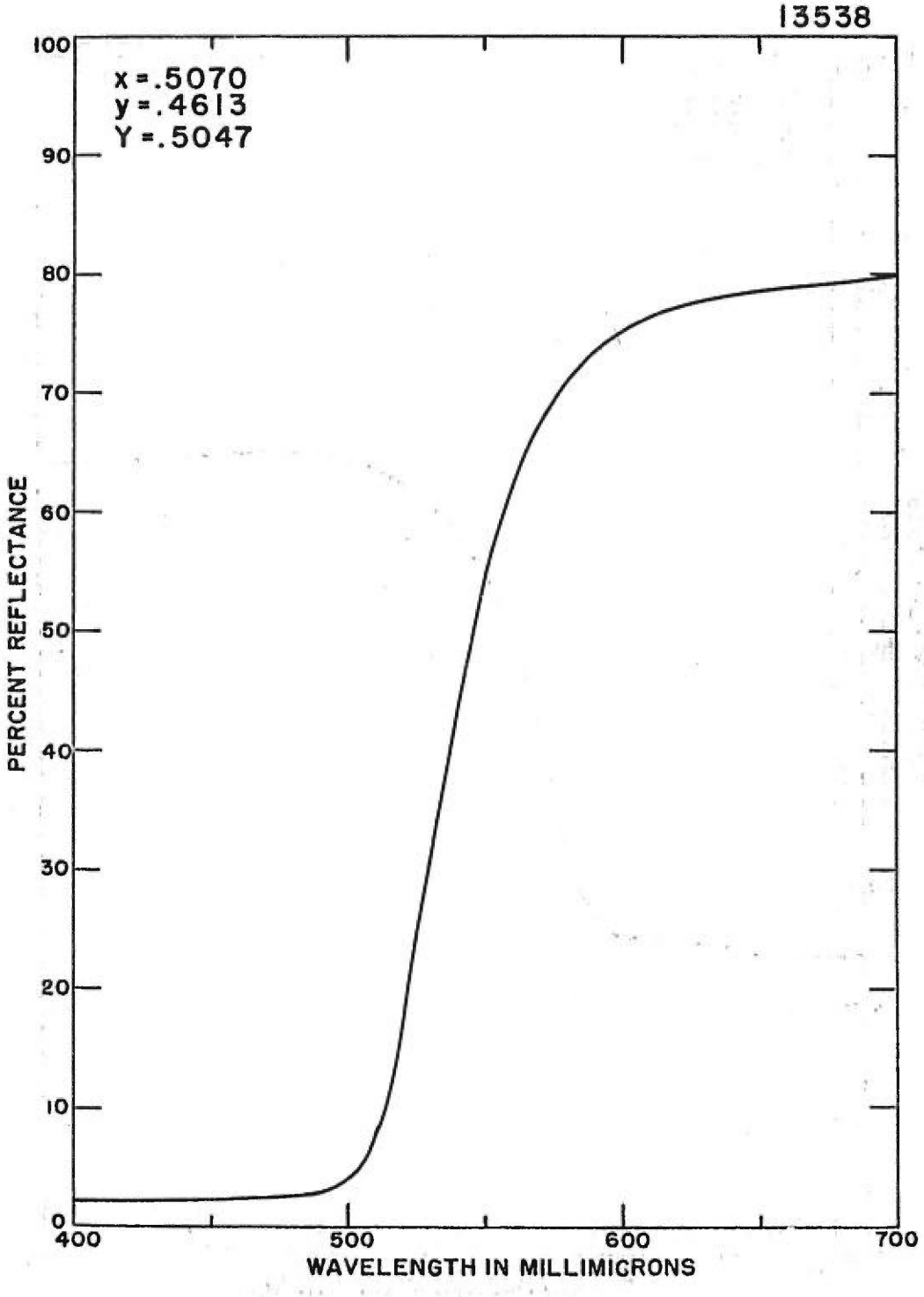

10371
x = .4254
y = .3972
Y = .3332
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

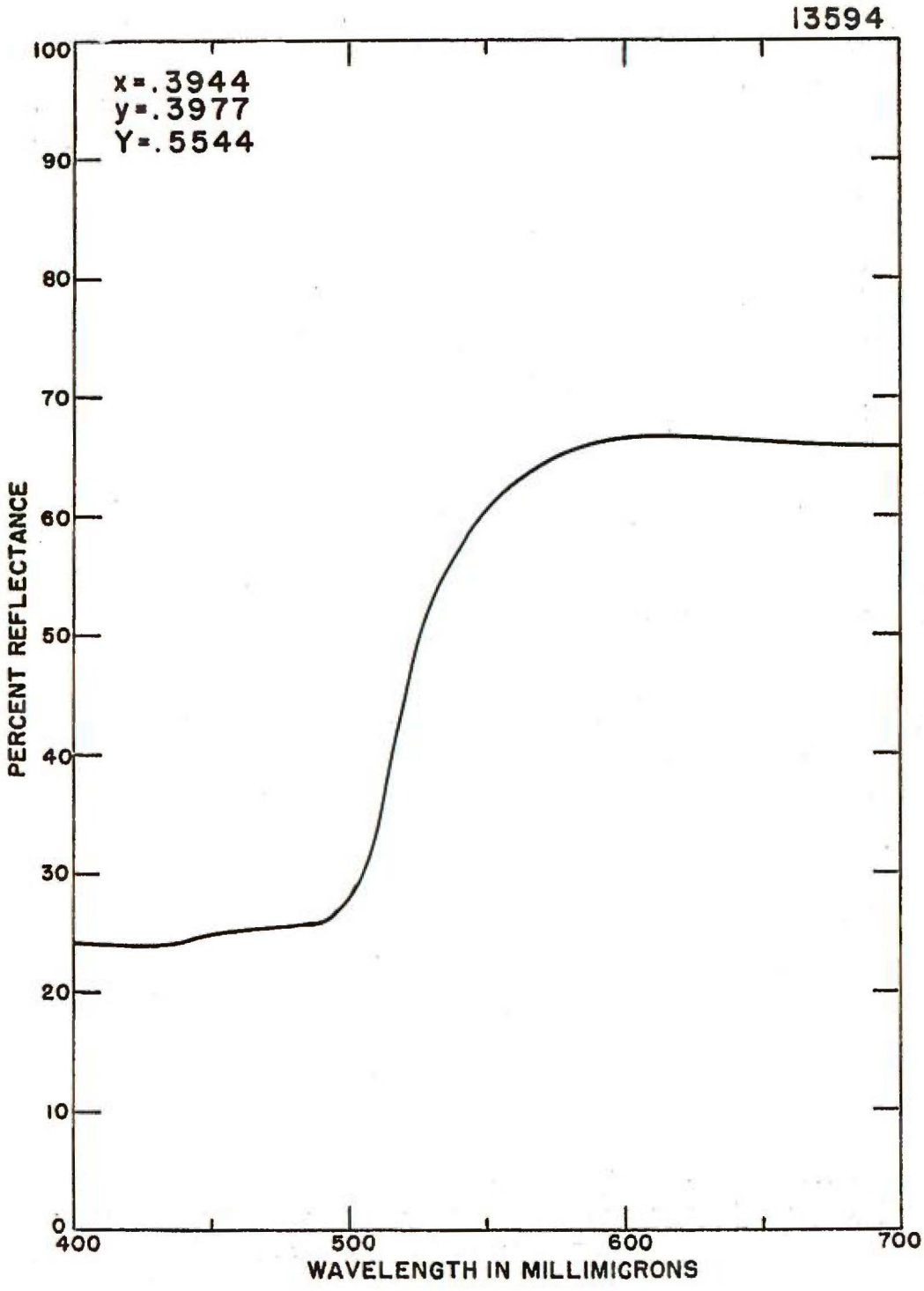

11105
x=.6414
y=.3151
Y=.0771
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

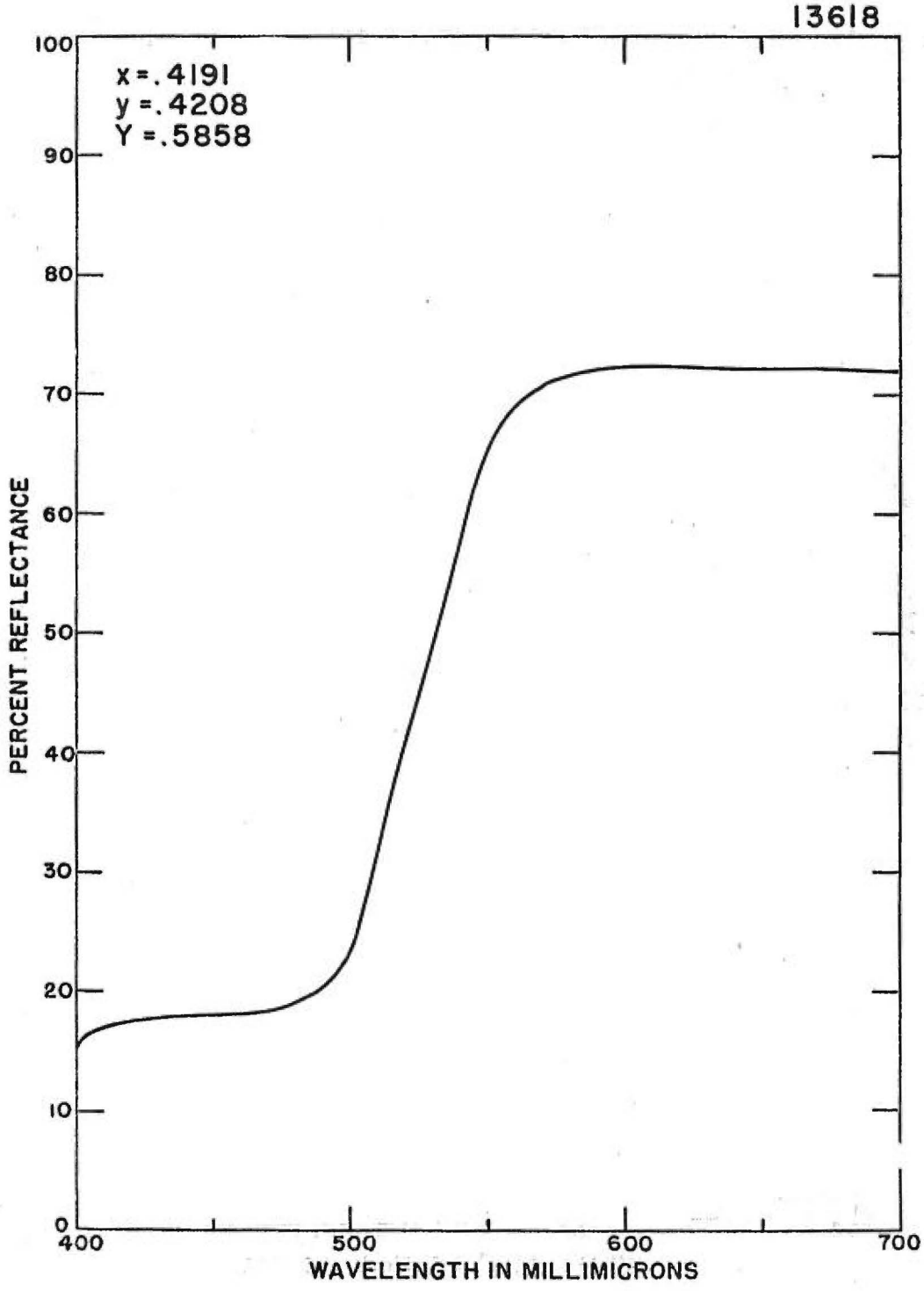

11136
x=.6298
y=.3201
Y=.0682
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

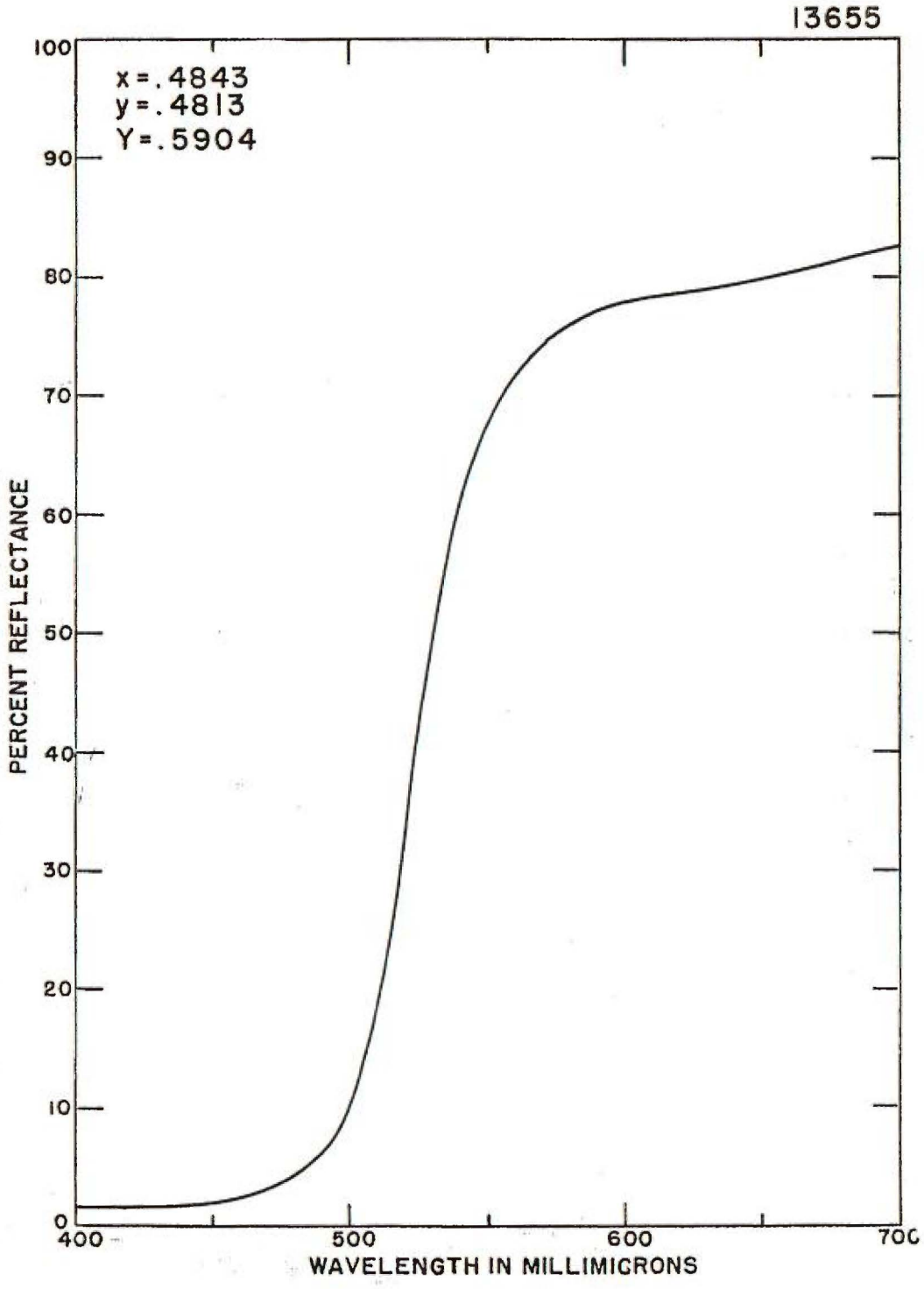

12246
x=.6018
y=.3860
Y=.2122
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

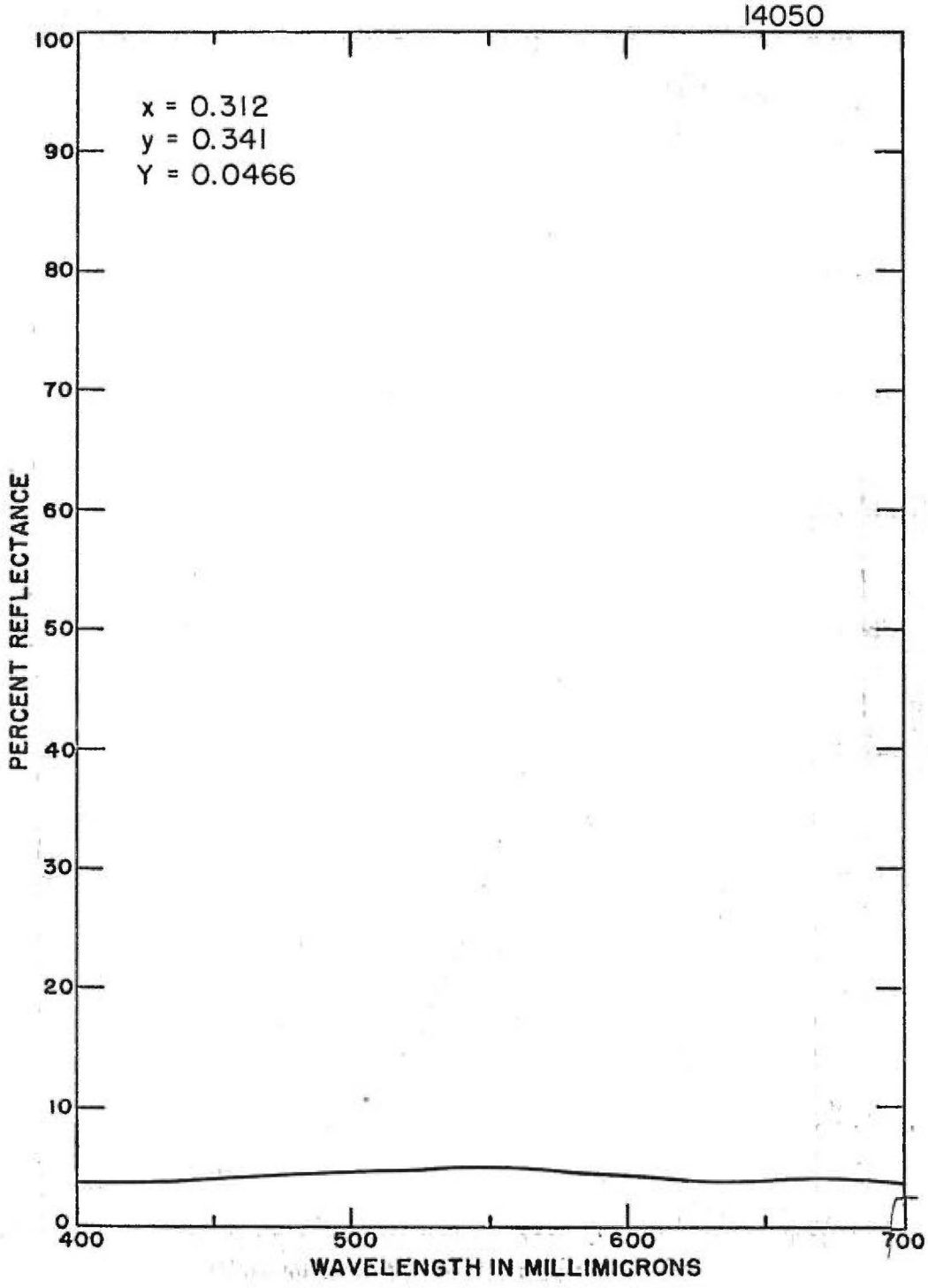

13523
x = .3842
y = .3807
Y = .4887
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

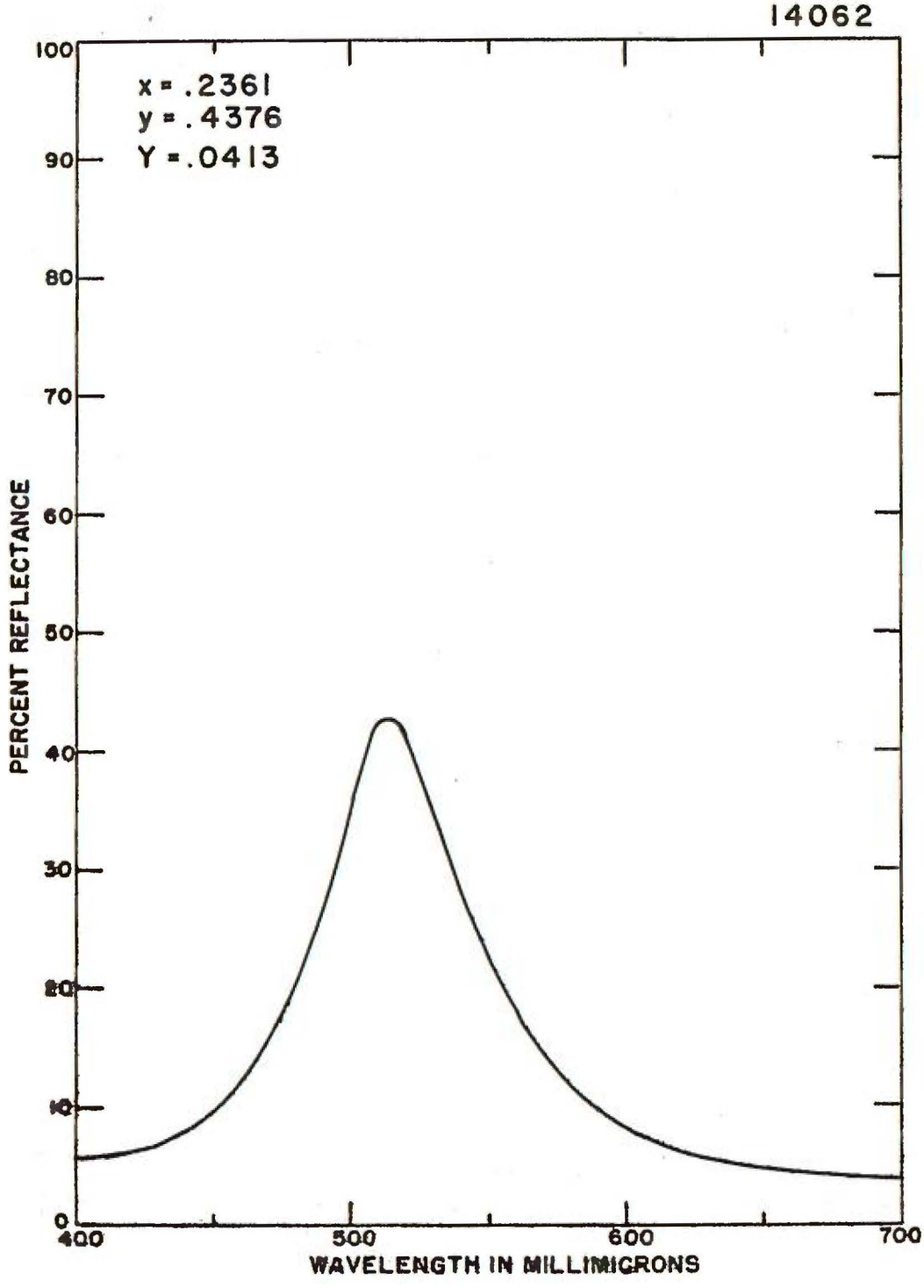

13538
x = .5070
y = .4613
Y = .5047
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

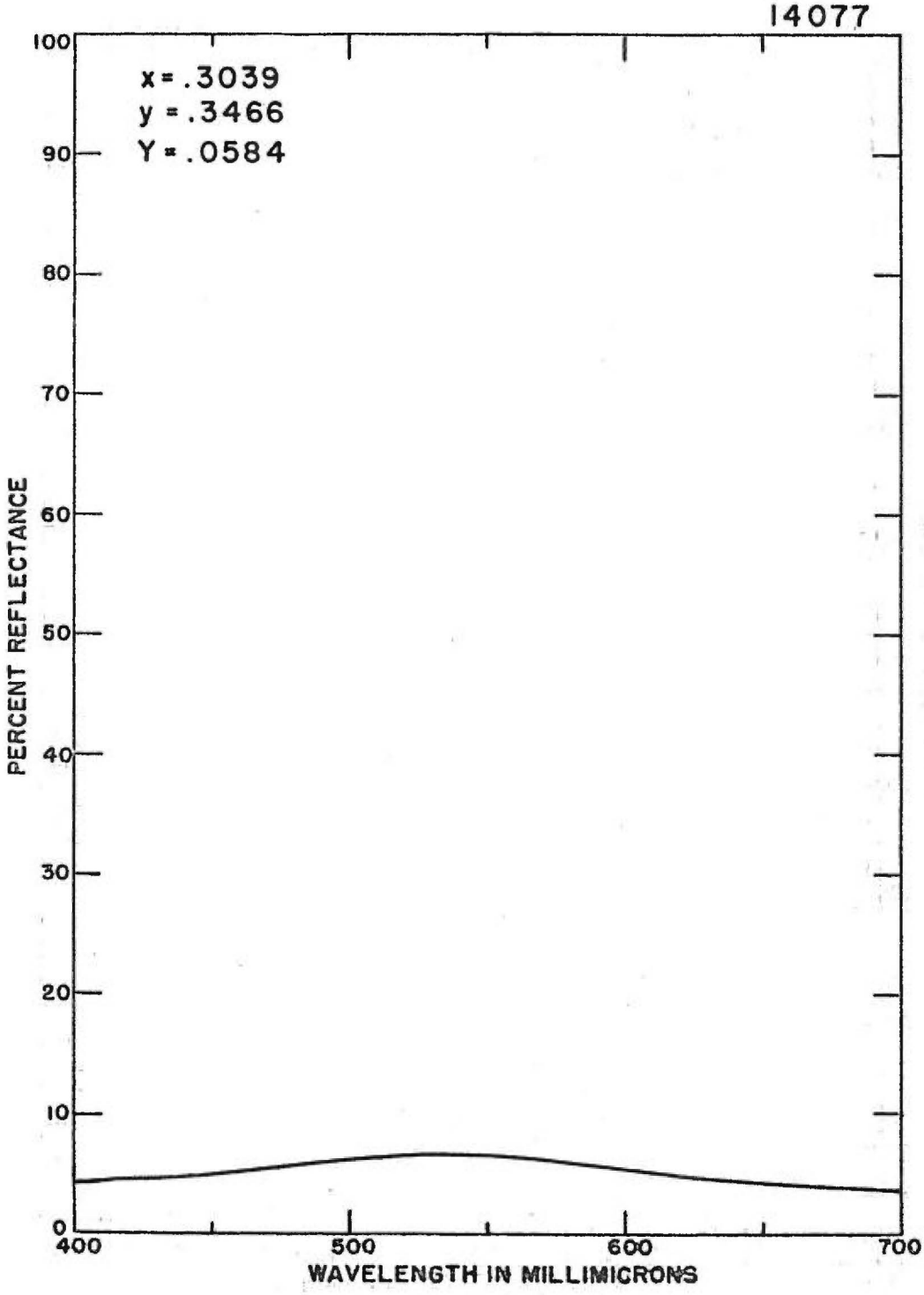

13594
x=.3944
y=.3977
Y=.5544
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

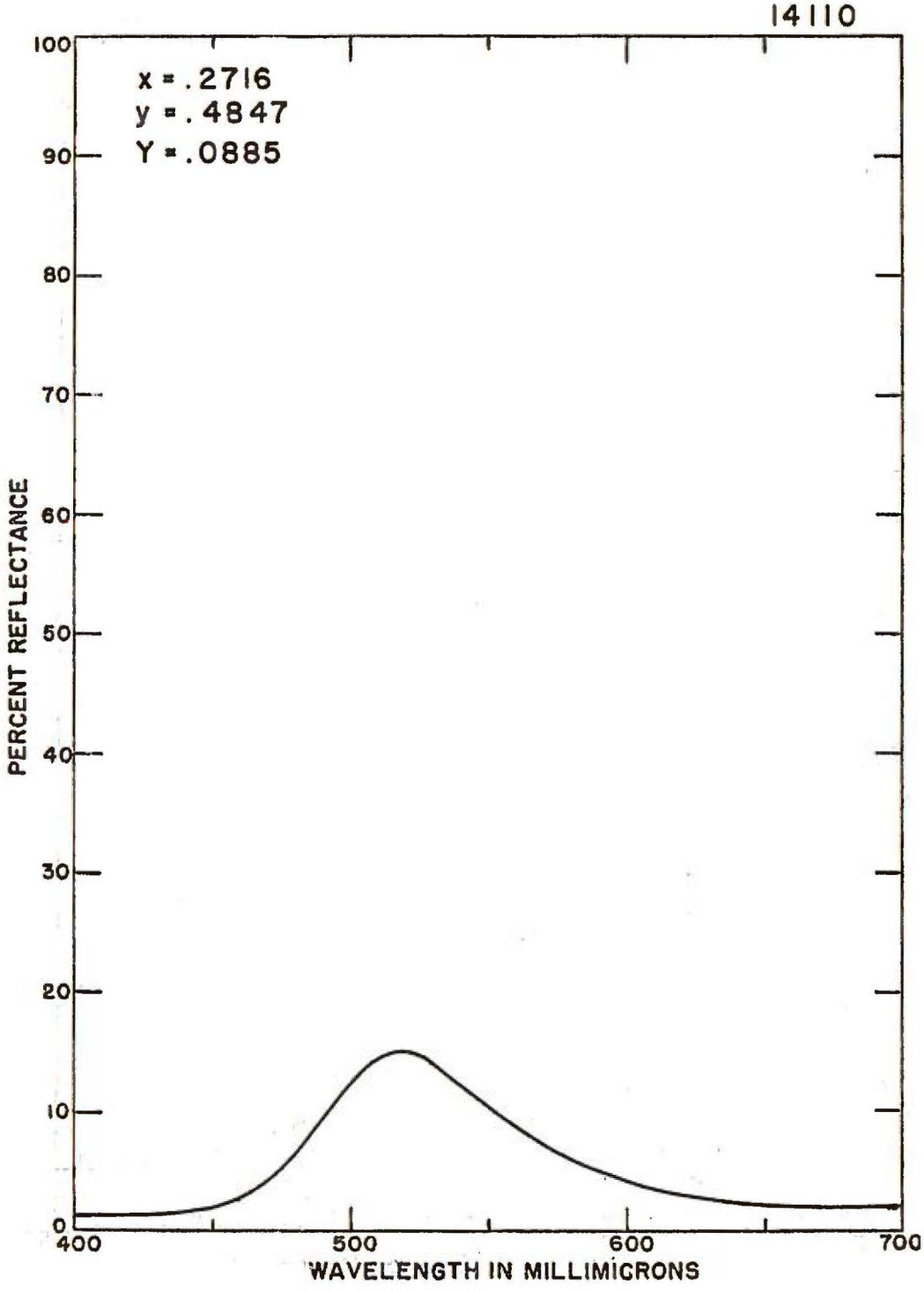

13618
x = .4191
y = .4208
Y = .5858
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

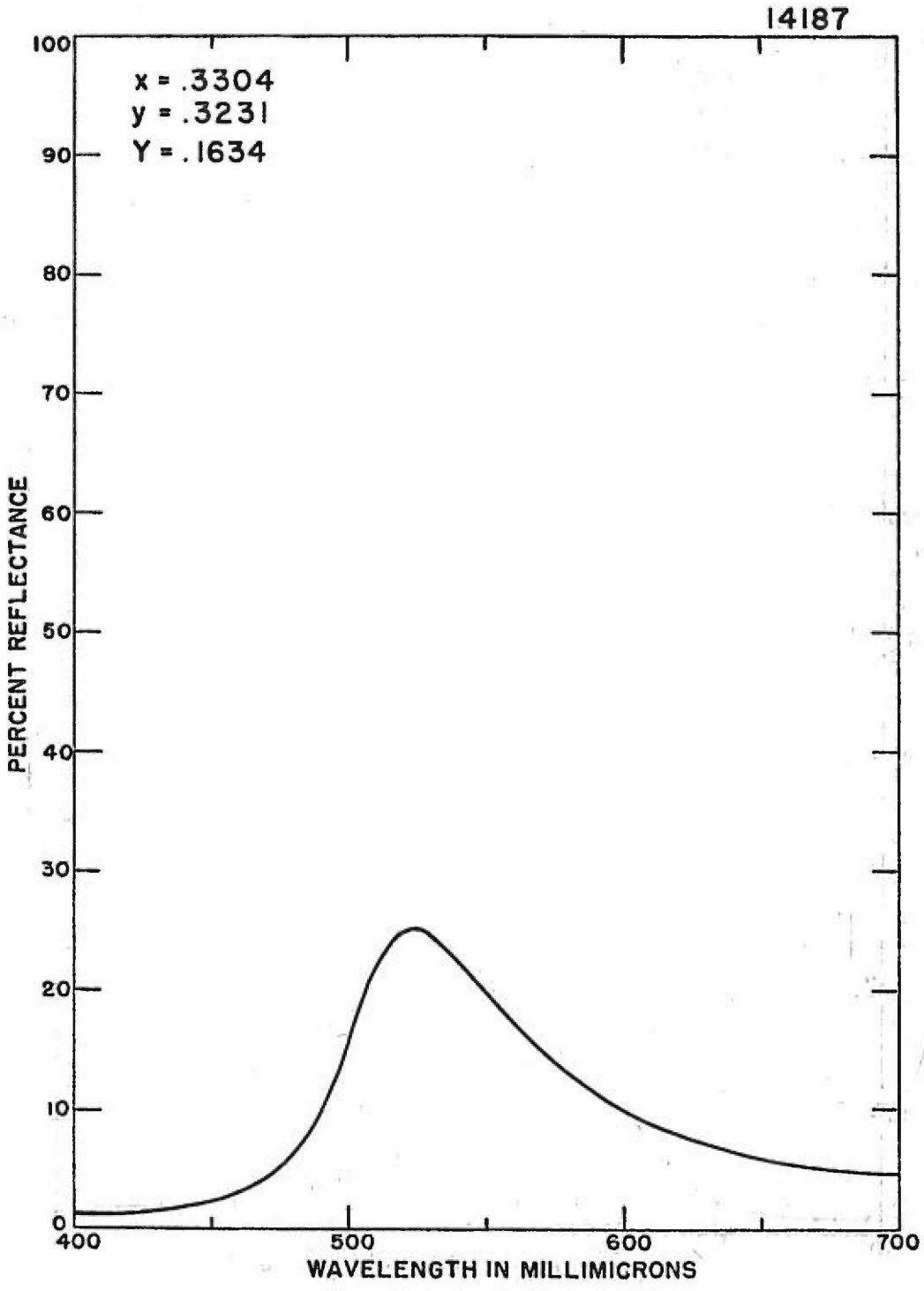

13655
x=.4843
y=.4813
Y=.5904
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

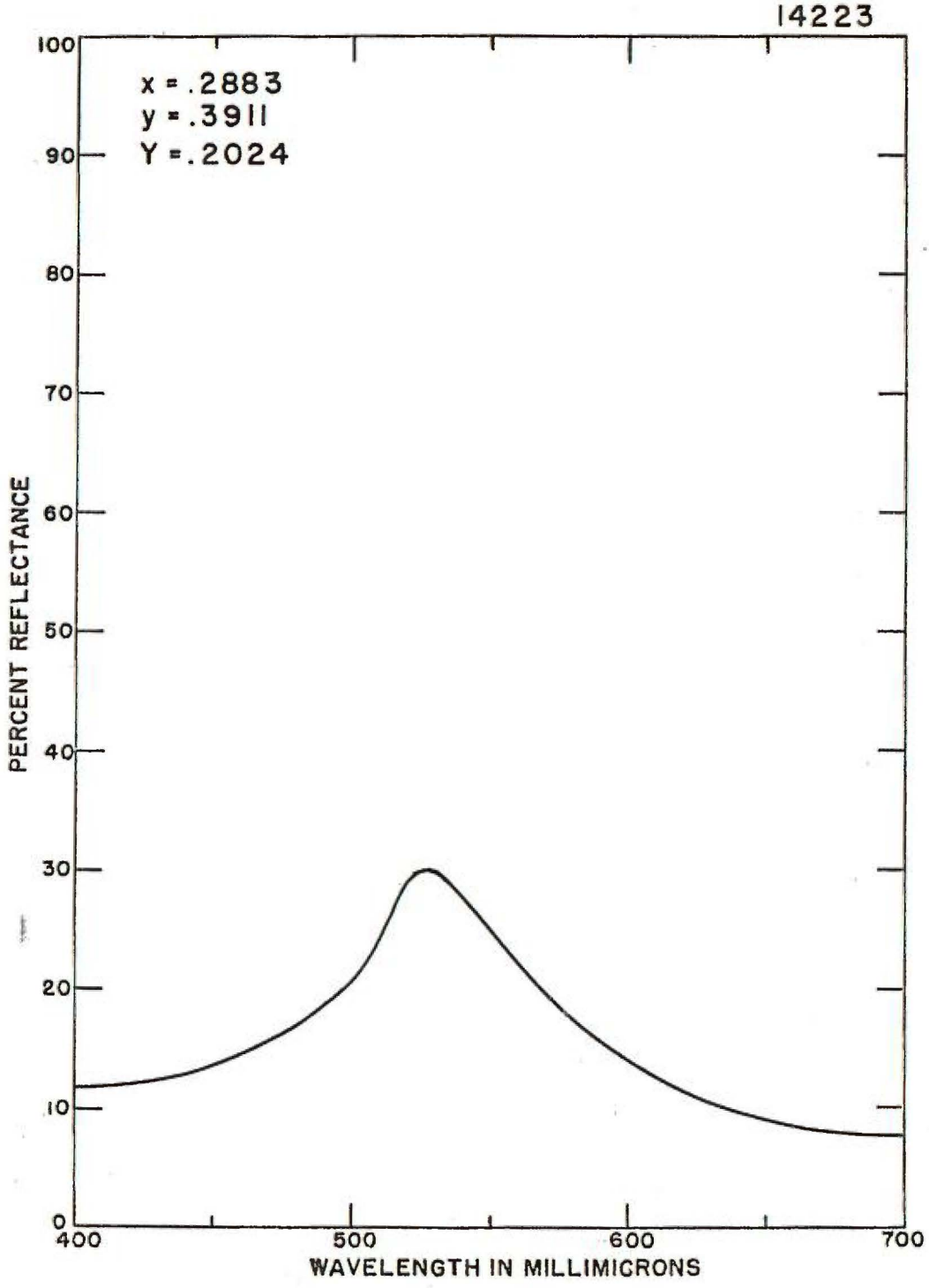

14050
x = 0.312
y = 0.341
Y = 0.0466
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

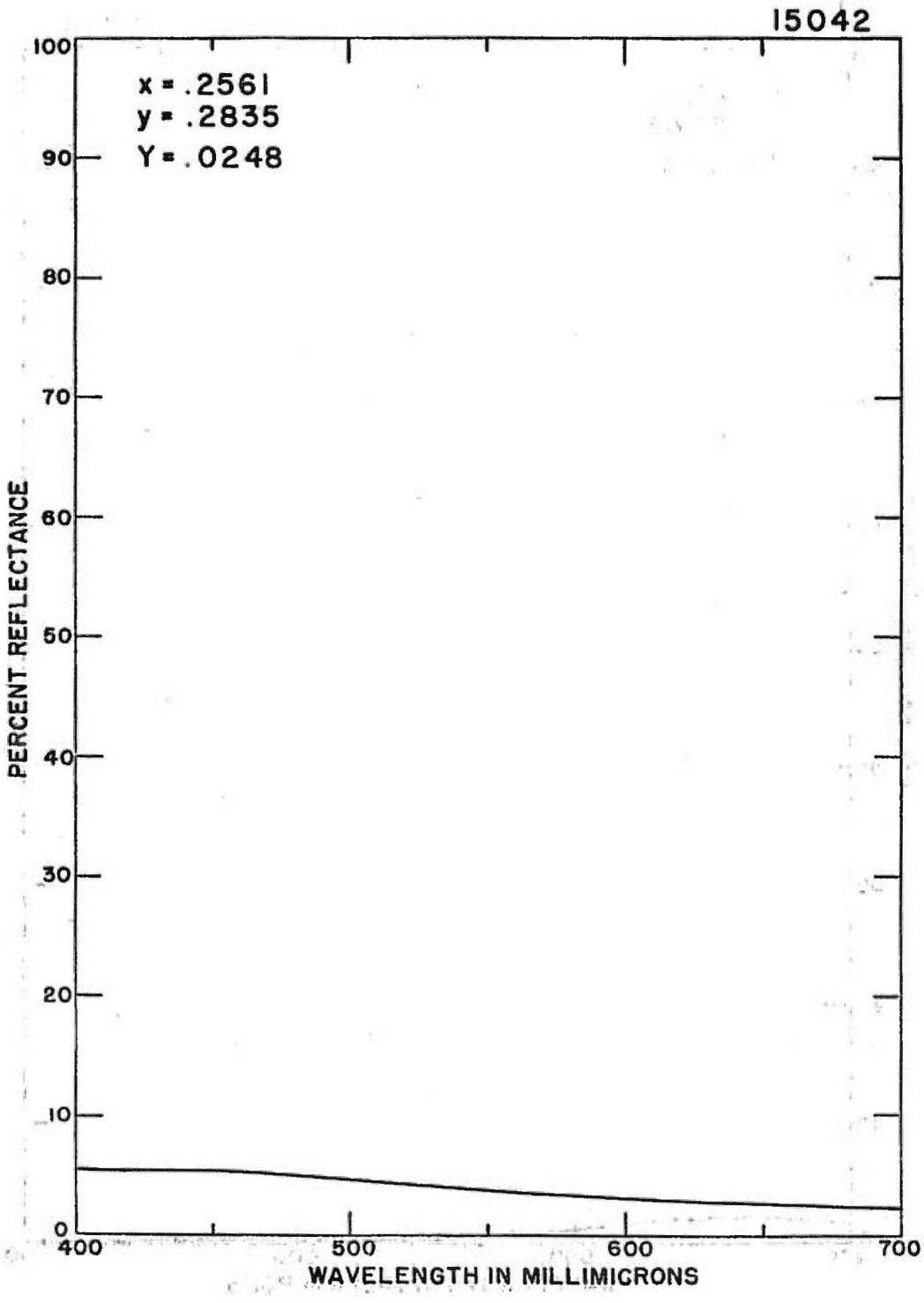

14062
x = .2361
y = .4376
Y = .0413
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

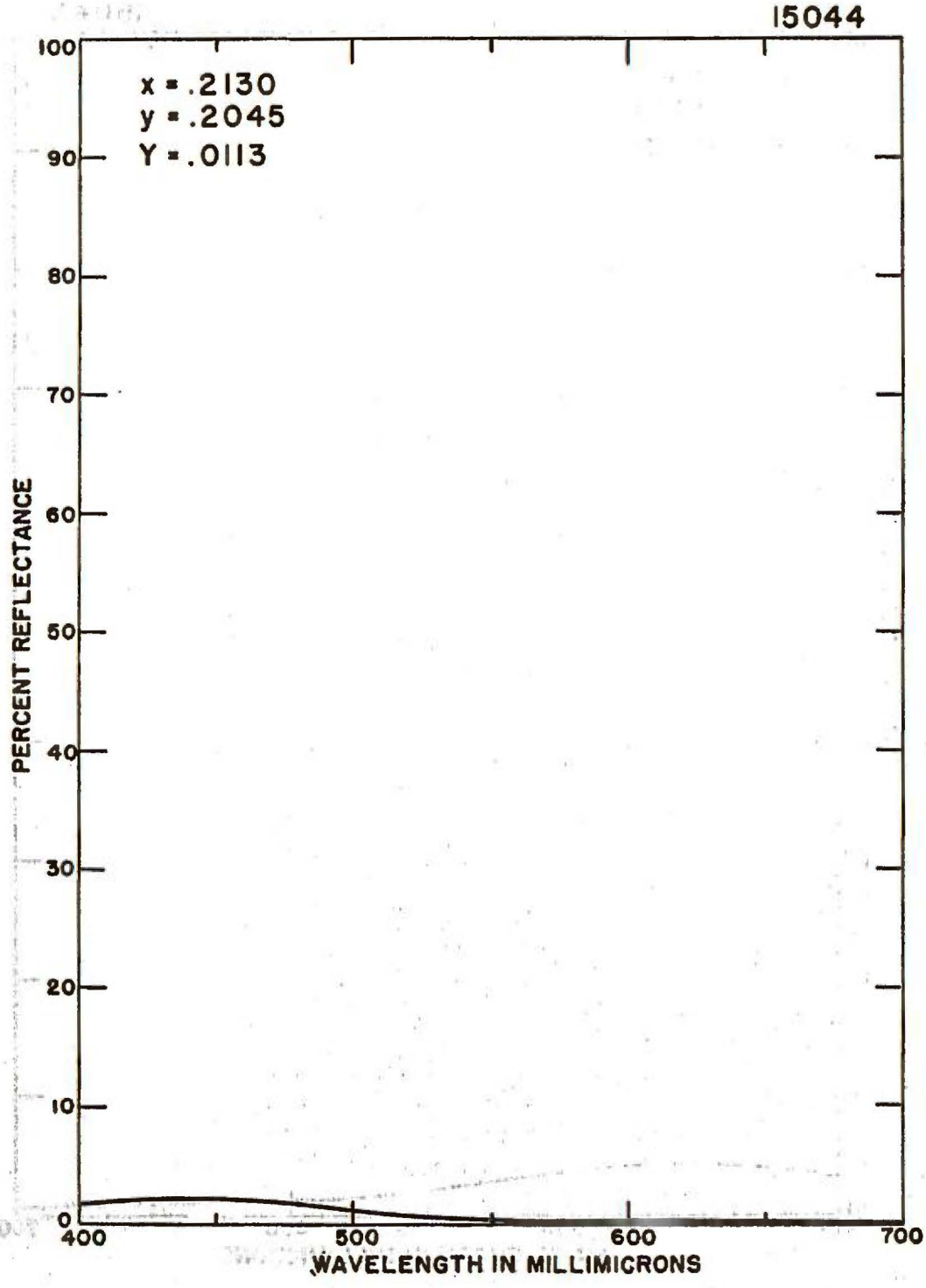

14077
x = .3039
y = .3466
Y = .0584
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

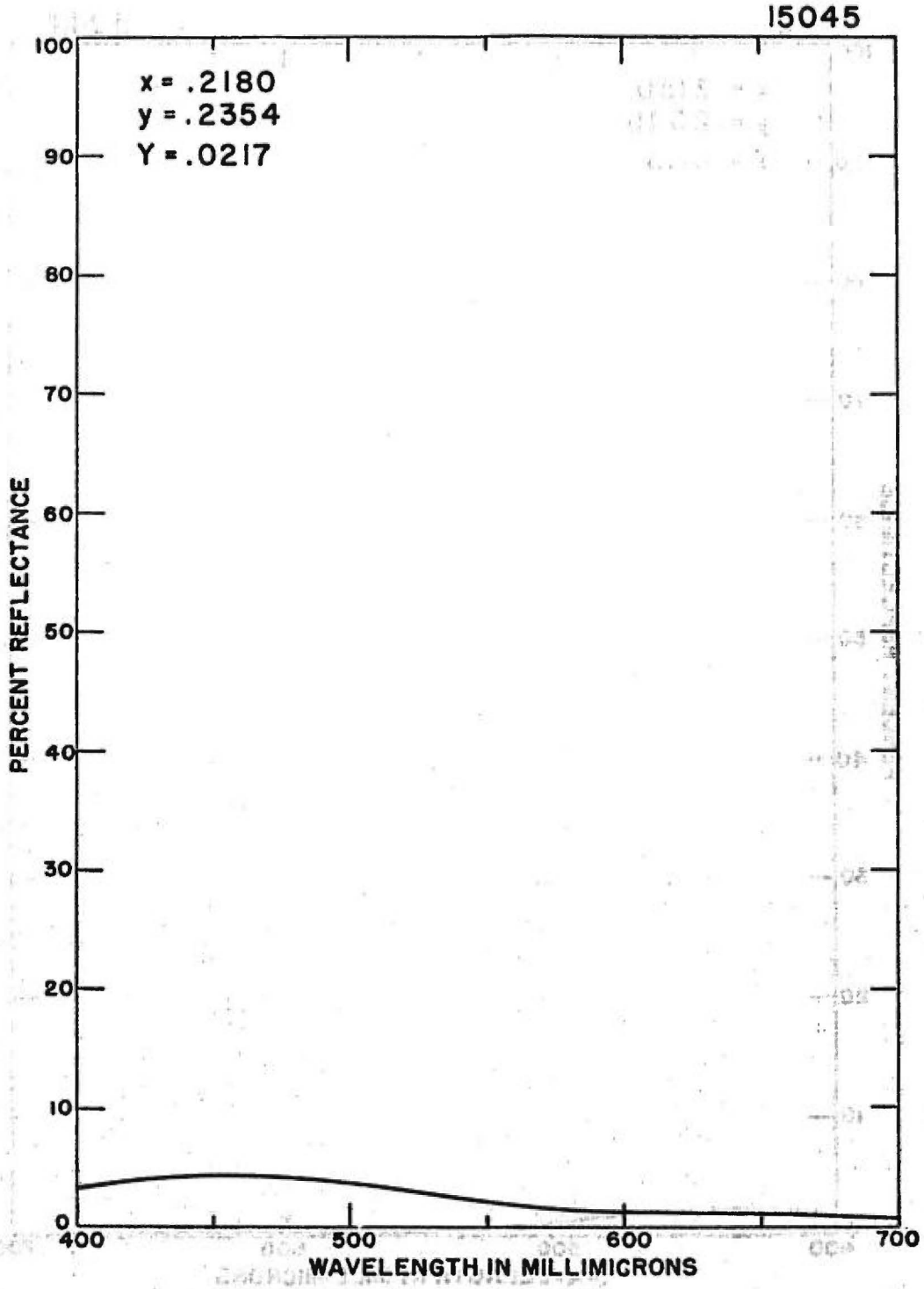

14110
x = .2716
y = .4847
Y = .0885
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

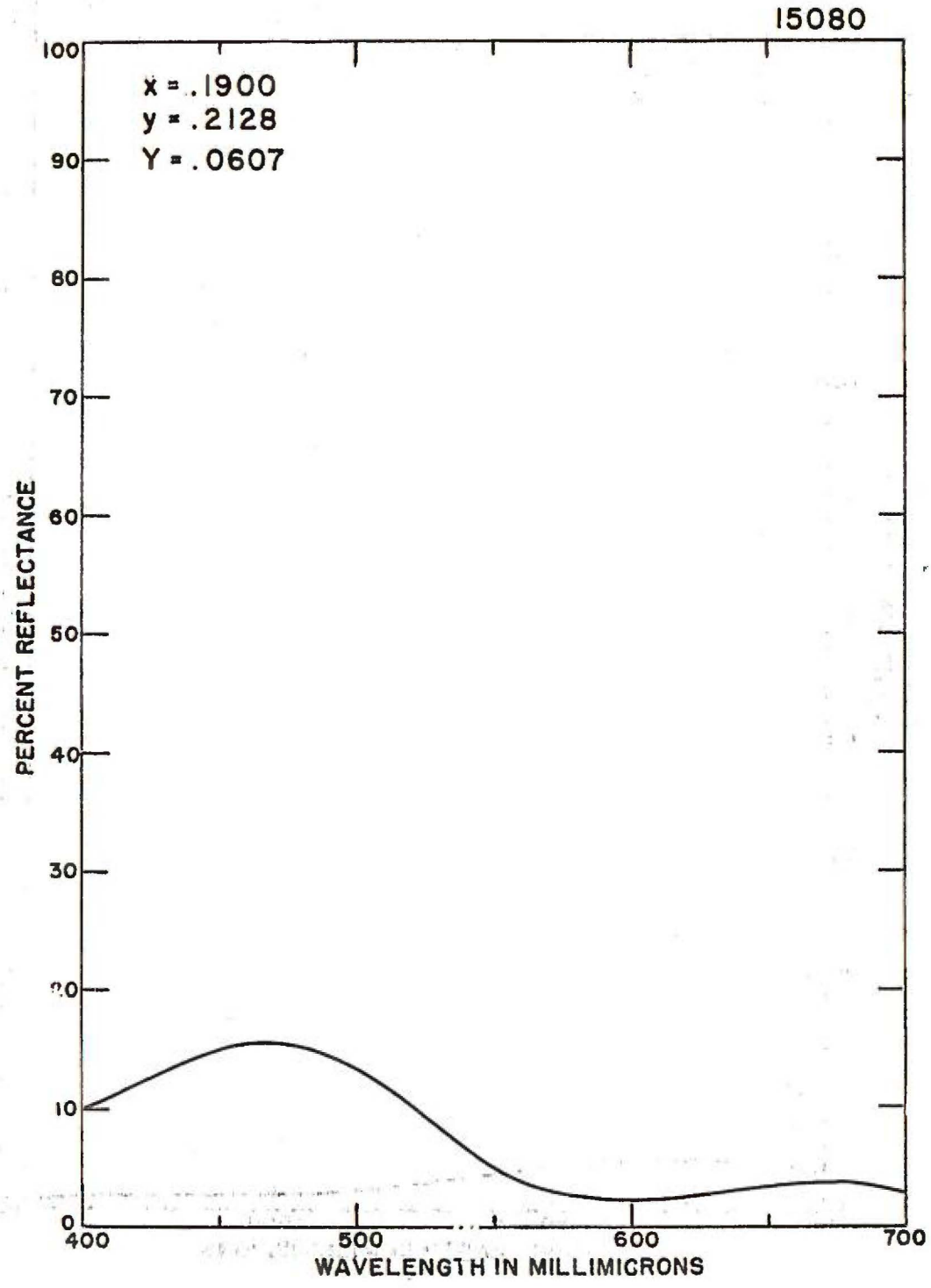

14187
x = .3304
y = .3231
Y = .1634
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

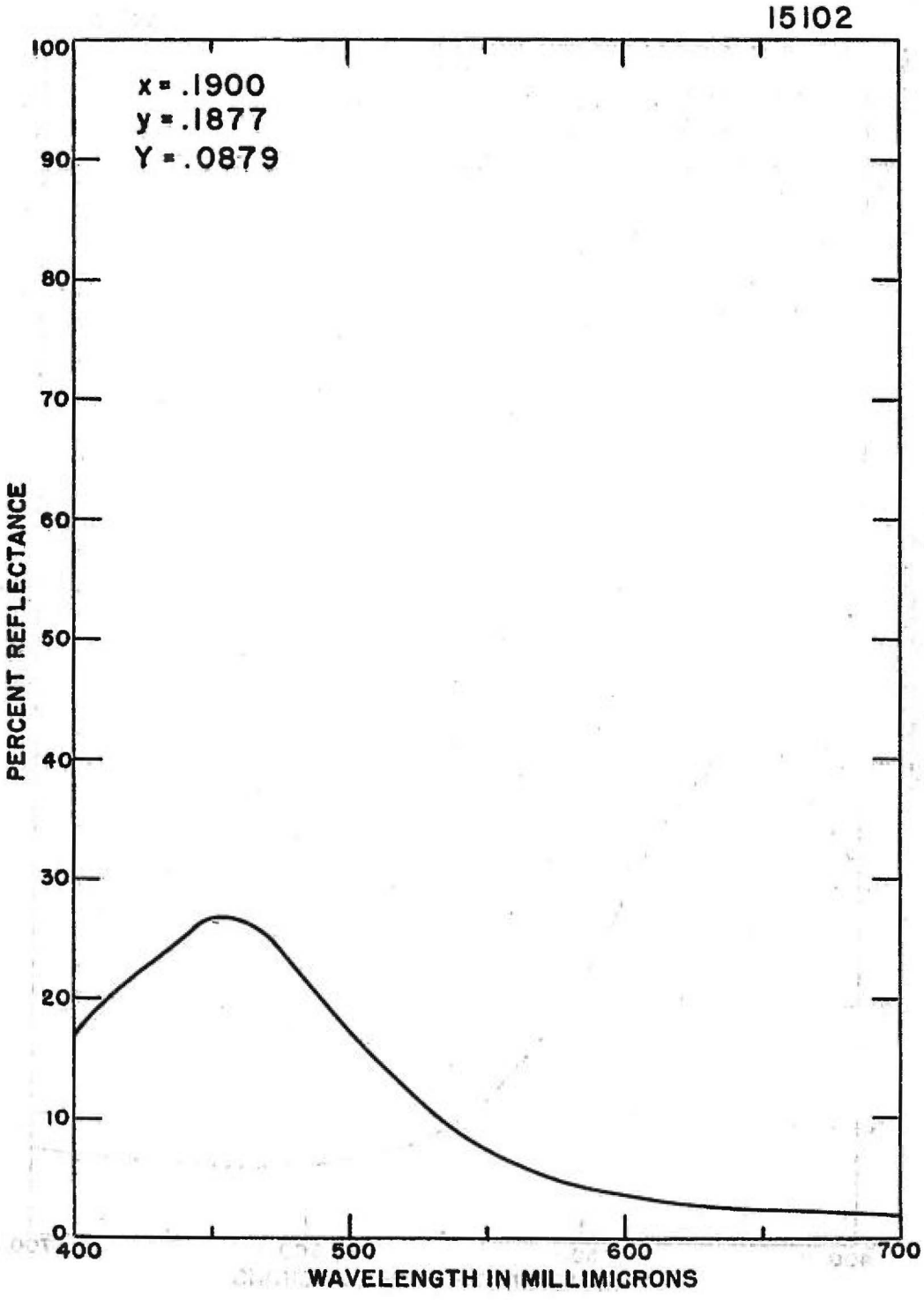

14223
x = .2883
y = .3911
Y = .2024
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

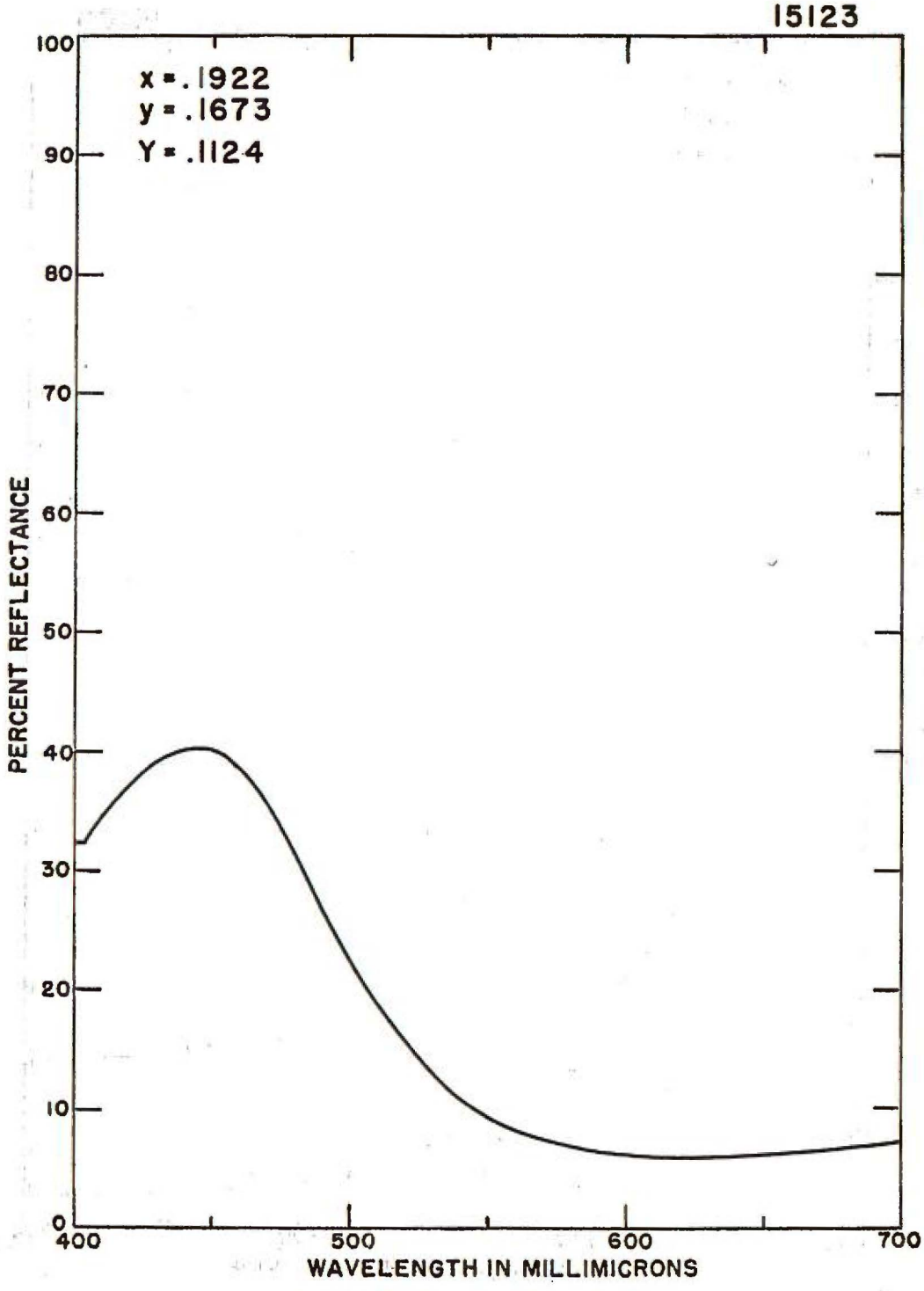

15042
x = .2561
y = .2835
Y = .0248
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

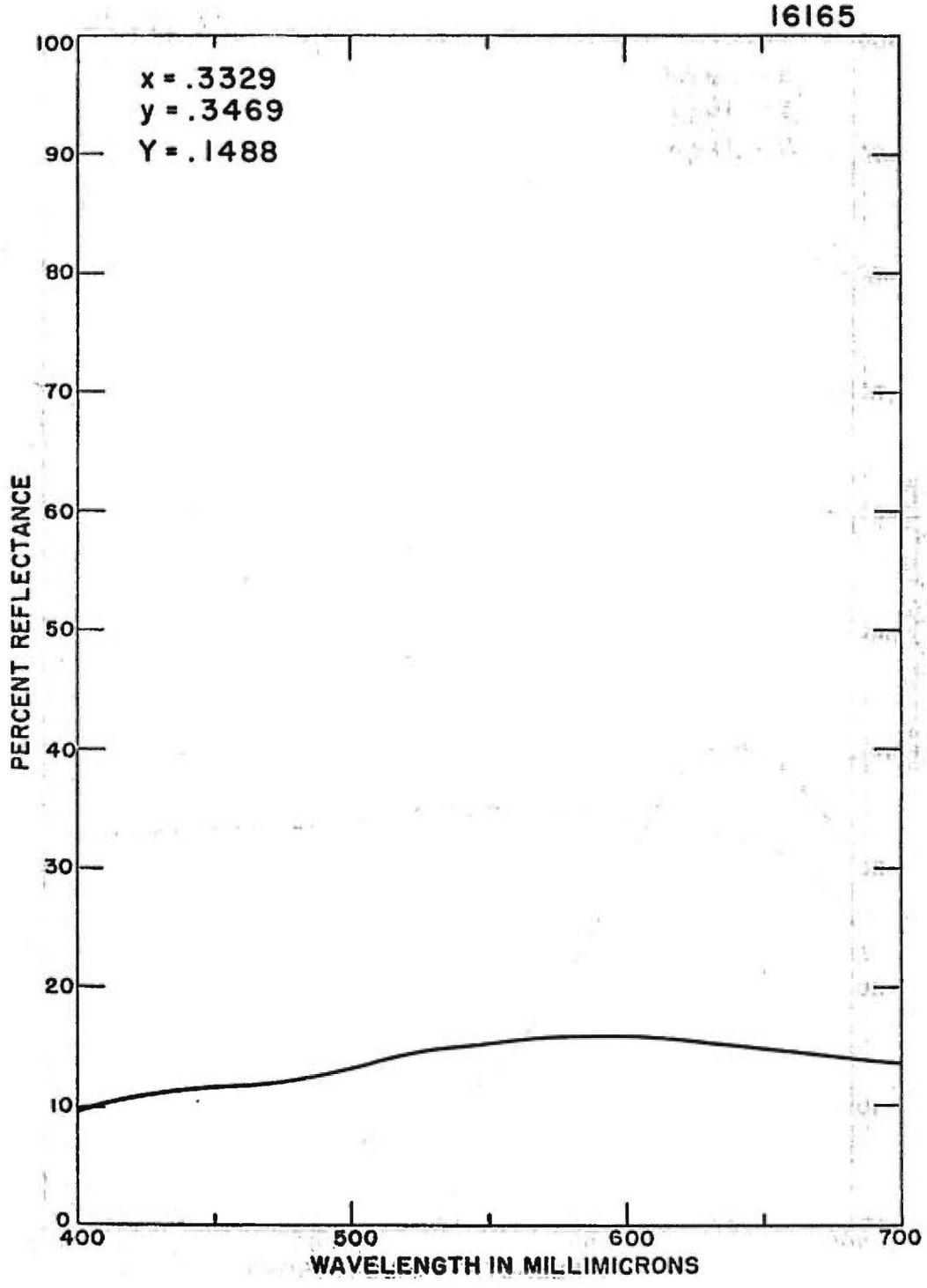

15044
x = .2130
y = .2045
Y = .0113
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

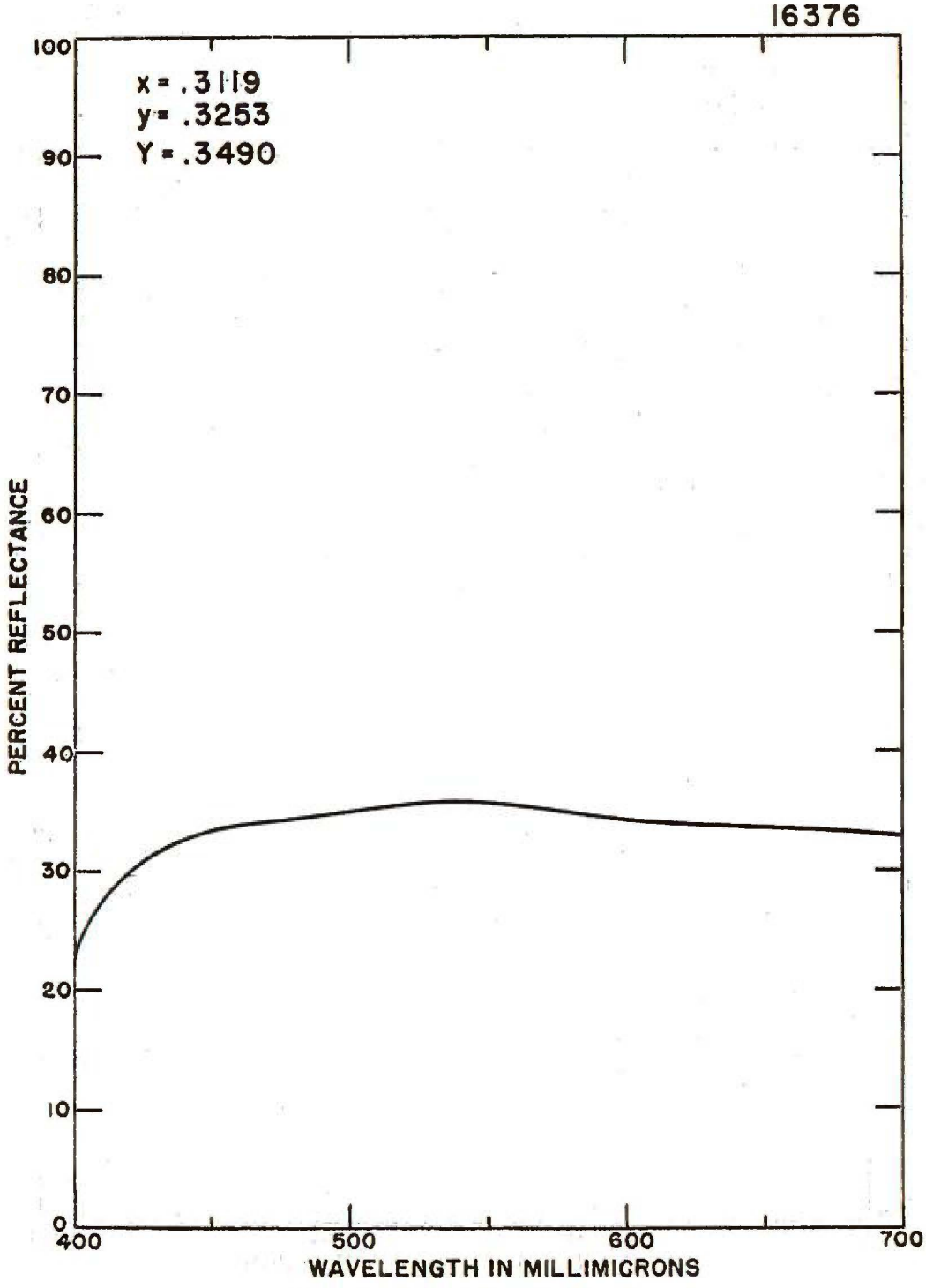

15045
x = .2180
y = .2354
Y = .0217
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

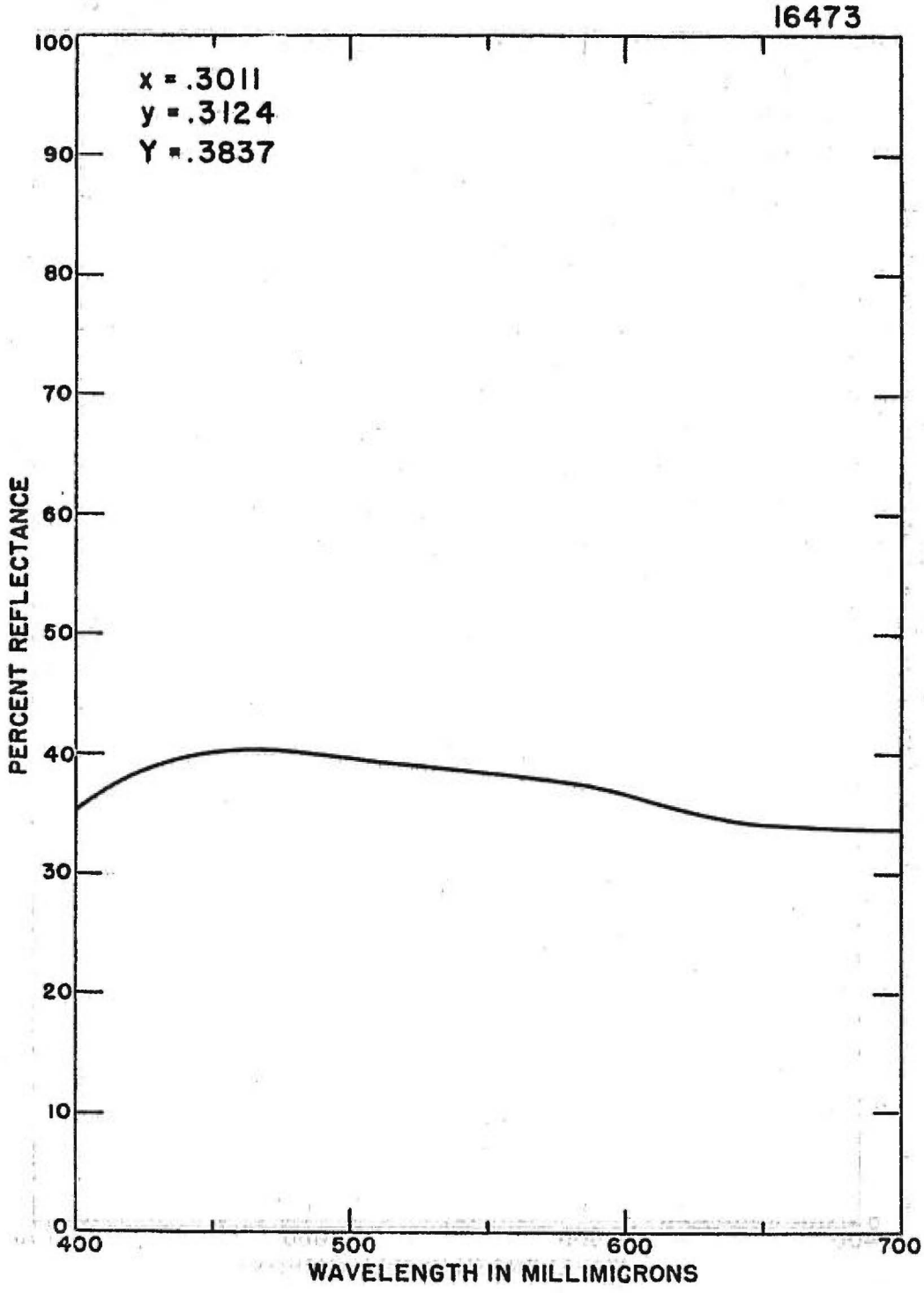

15080
x = .1900
y = .2128
Y = .0607
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

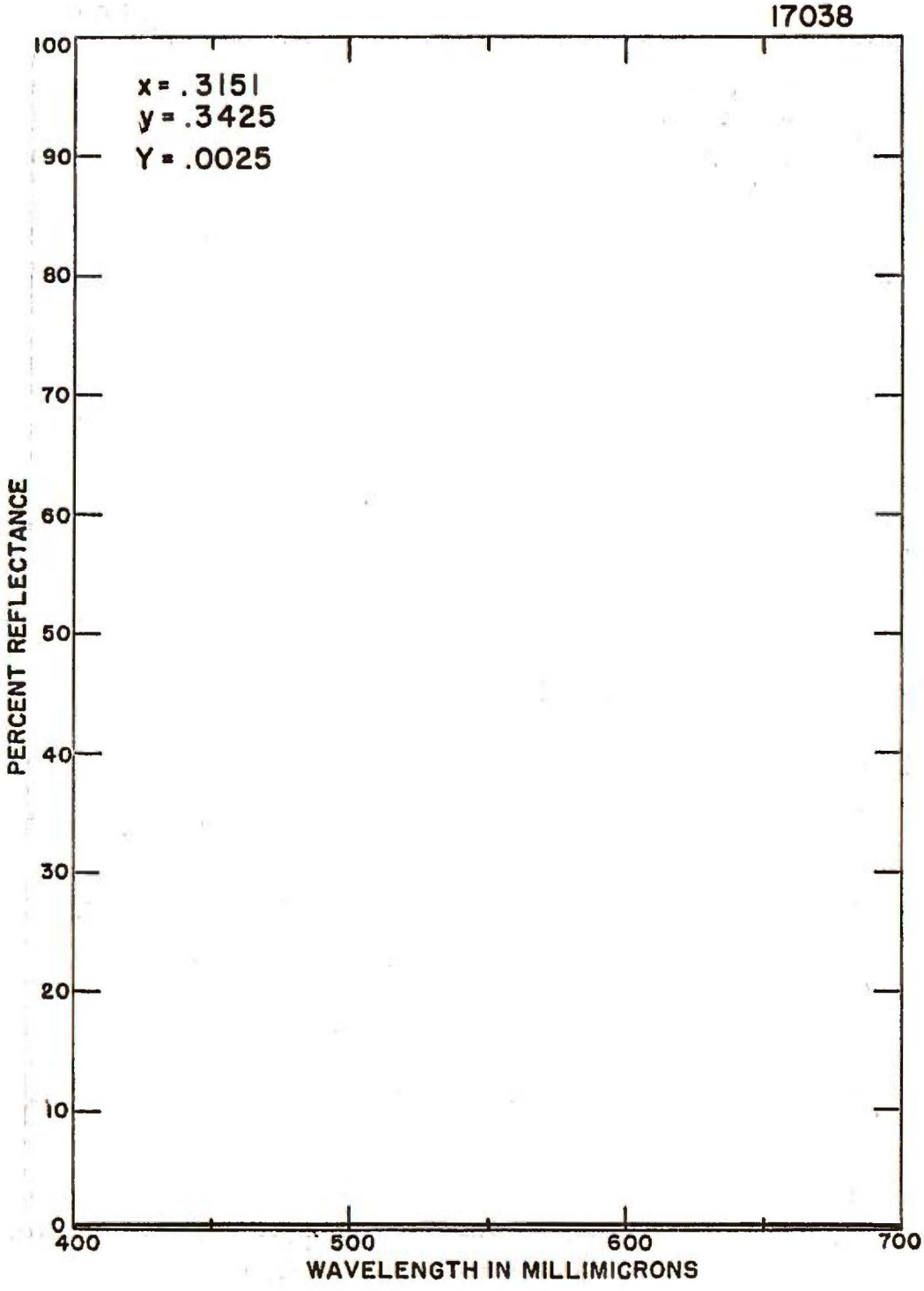

15102
x = .1900
y = .1877
Y = .0879
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

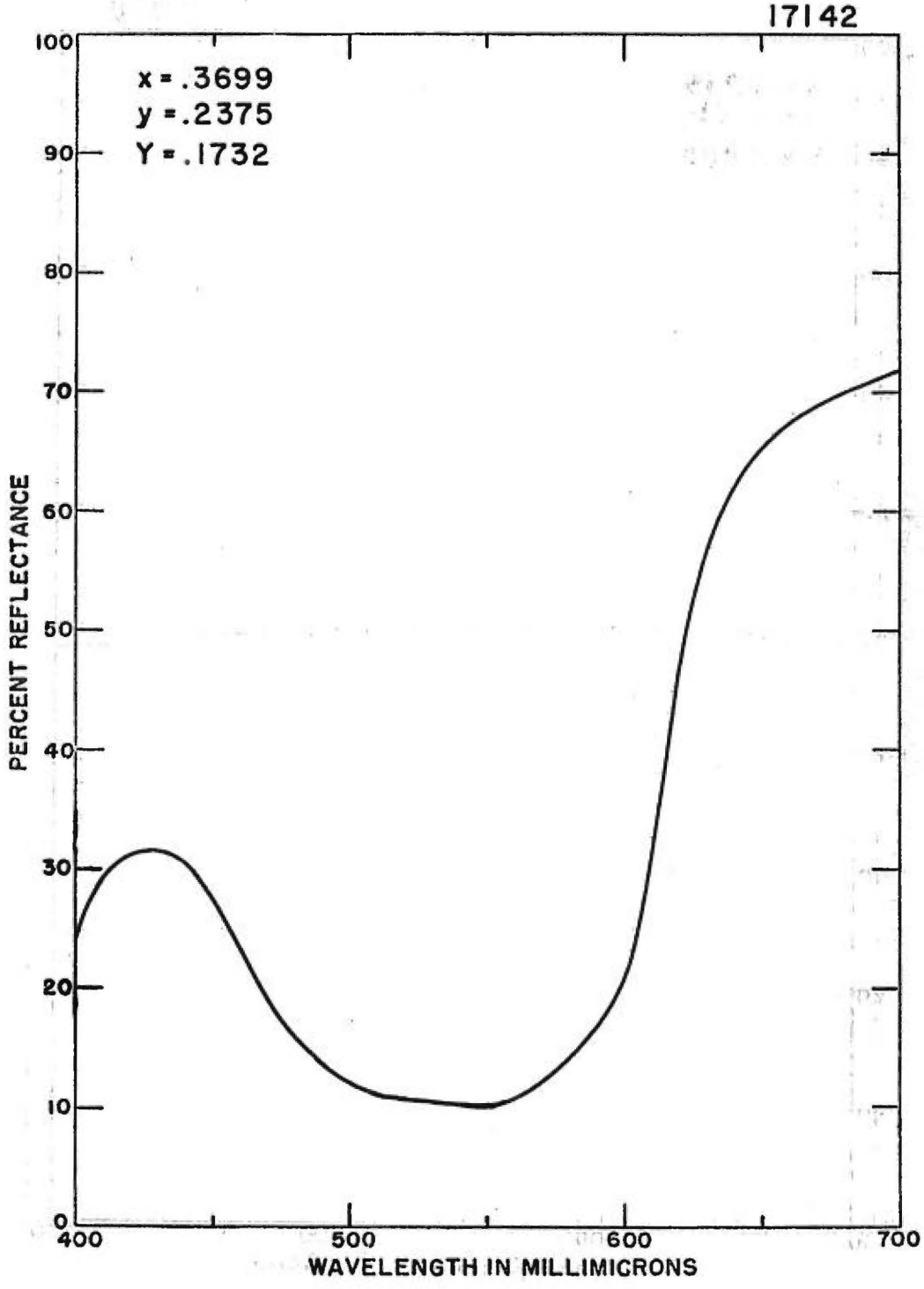

15123
x = .1922
y = .1673
Y = .1124
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

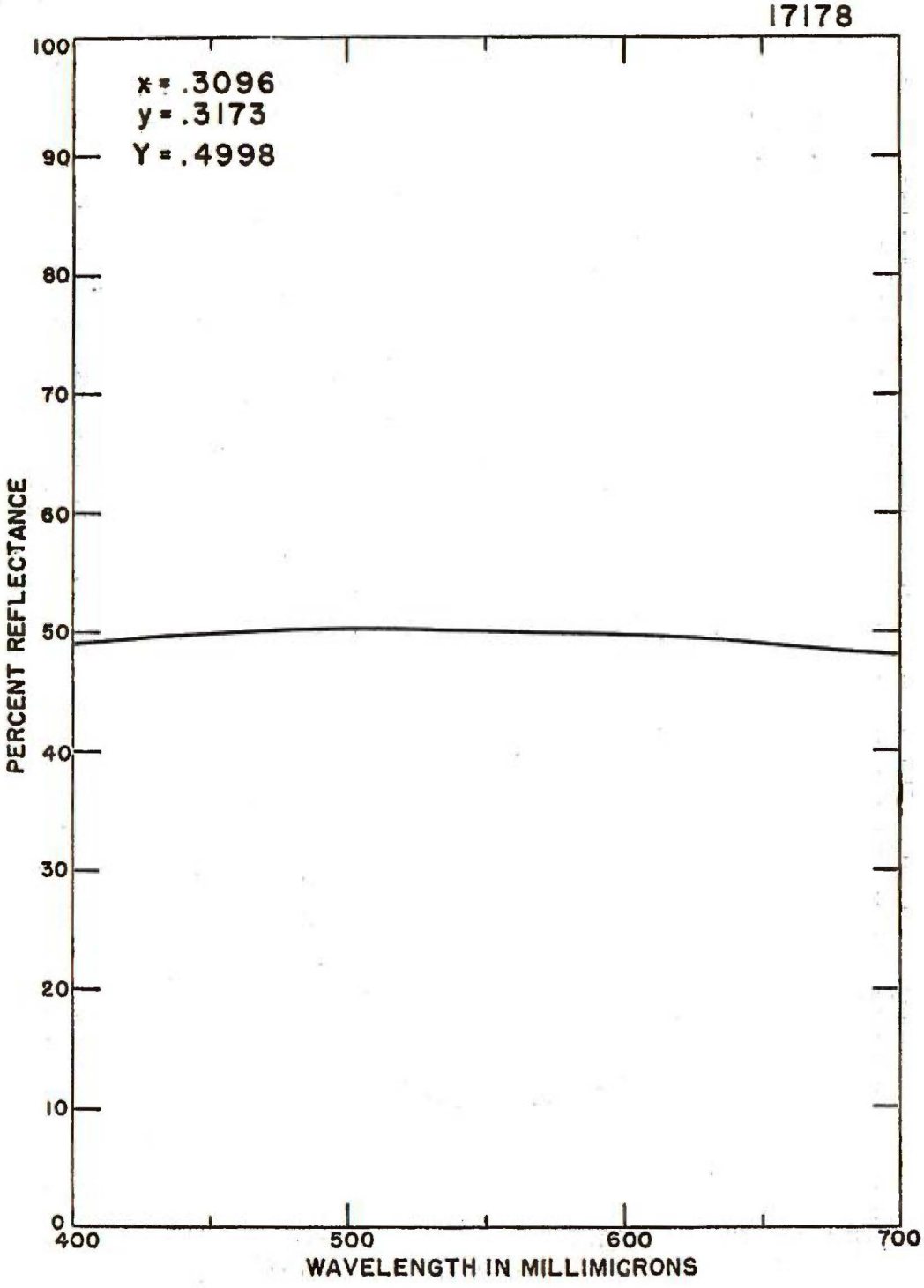

16165
x = .3329
y = .3469
Y = .1488
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

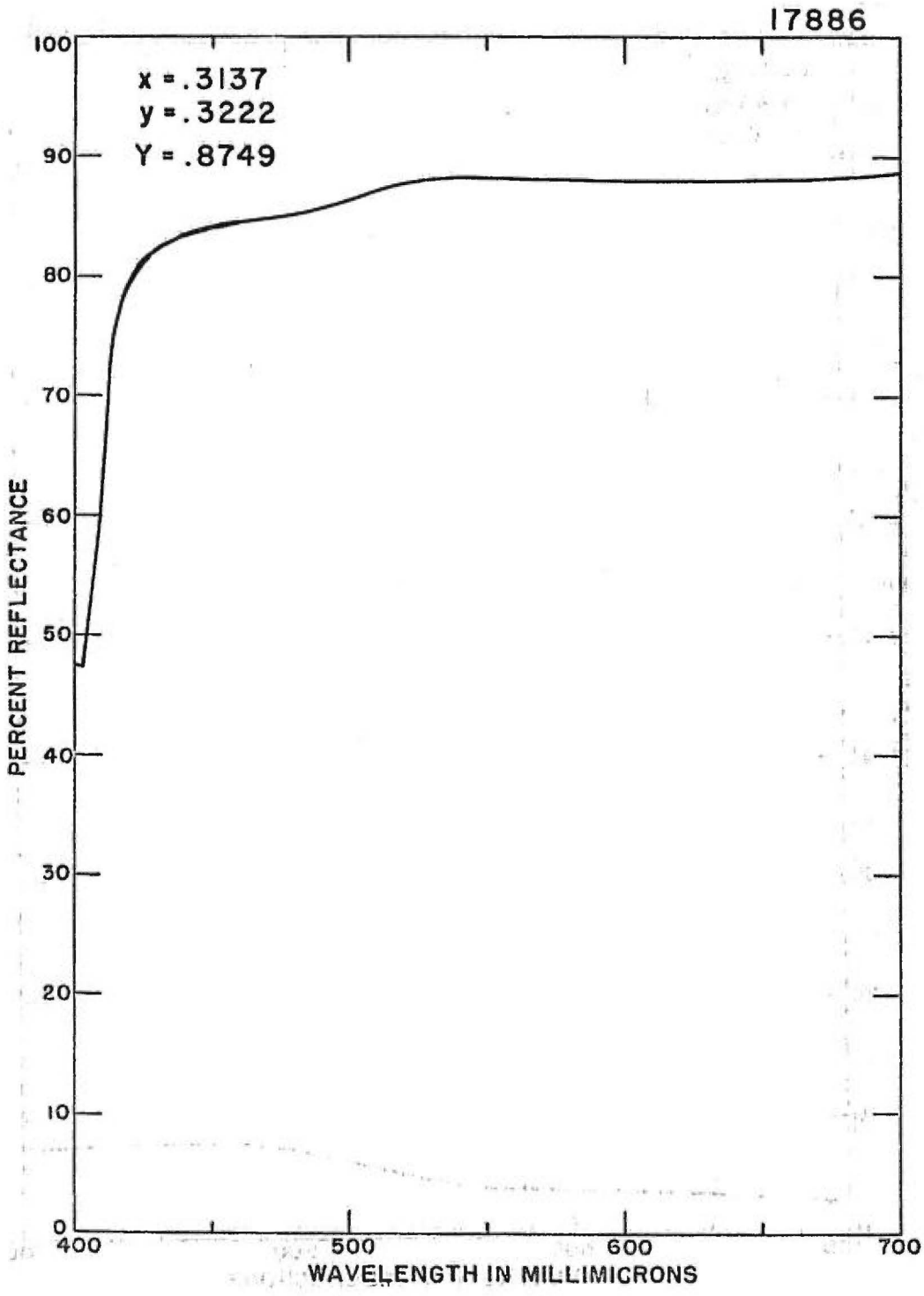

16376
x = .3119
y = .3253
Y = .3490
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

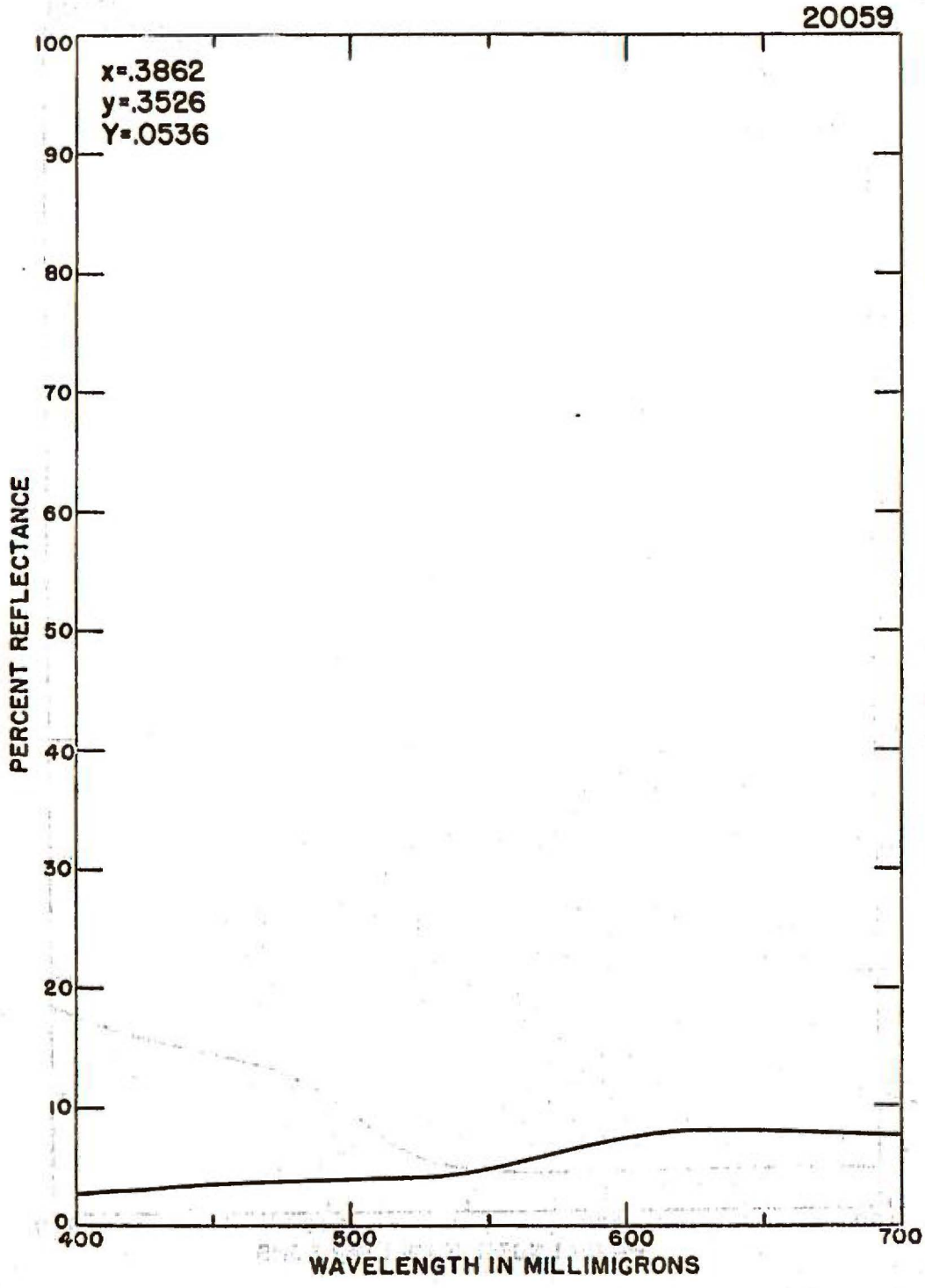

16473
x = .3011
y = .3124
Y = .3837
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

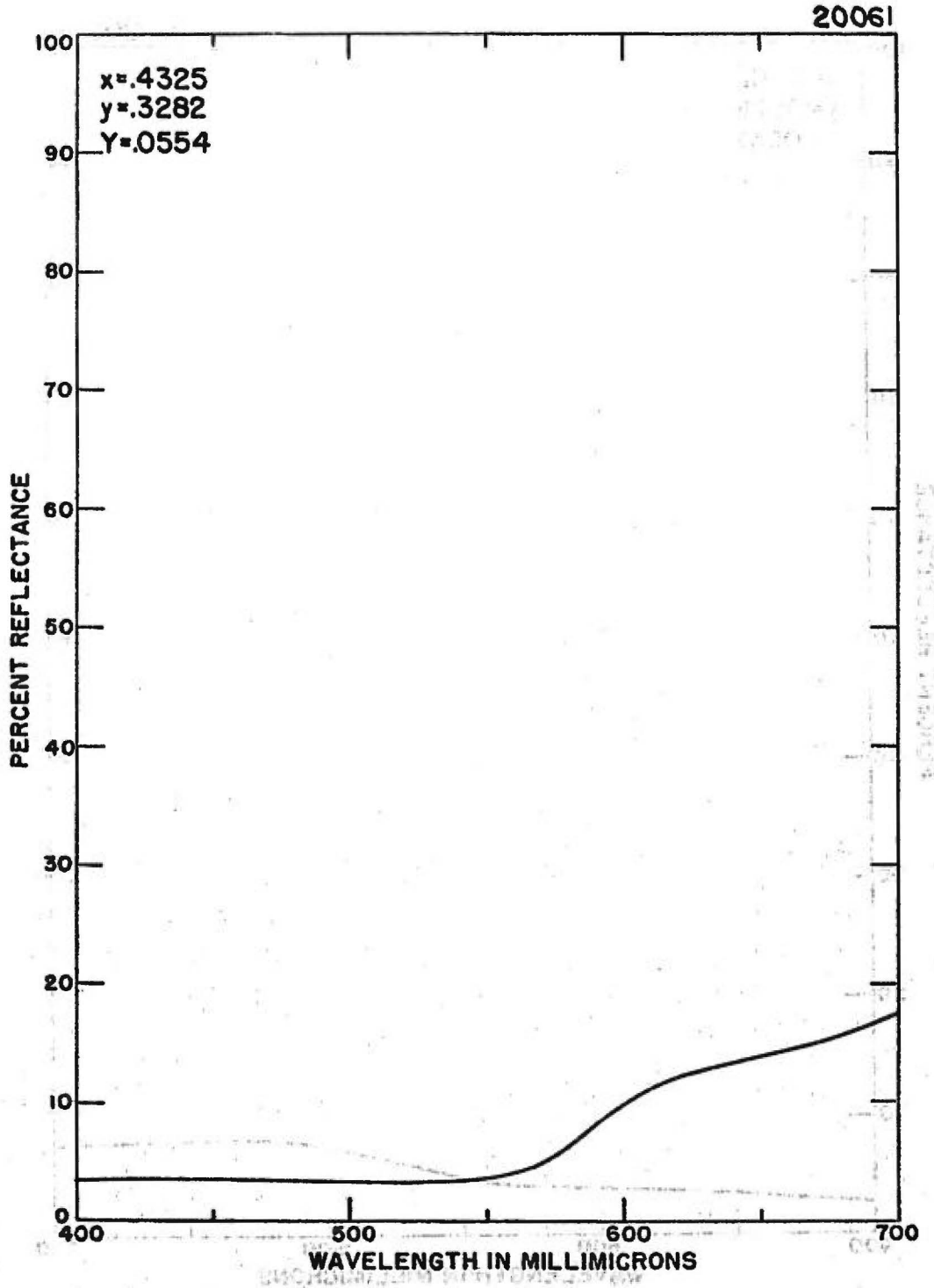

17038
x = .3151
y = .3425
Y = .0025
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

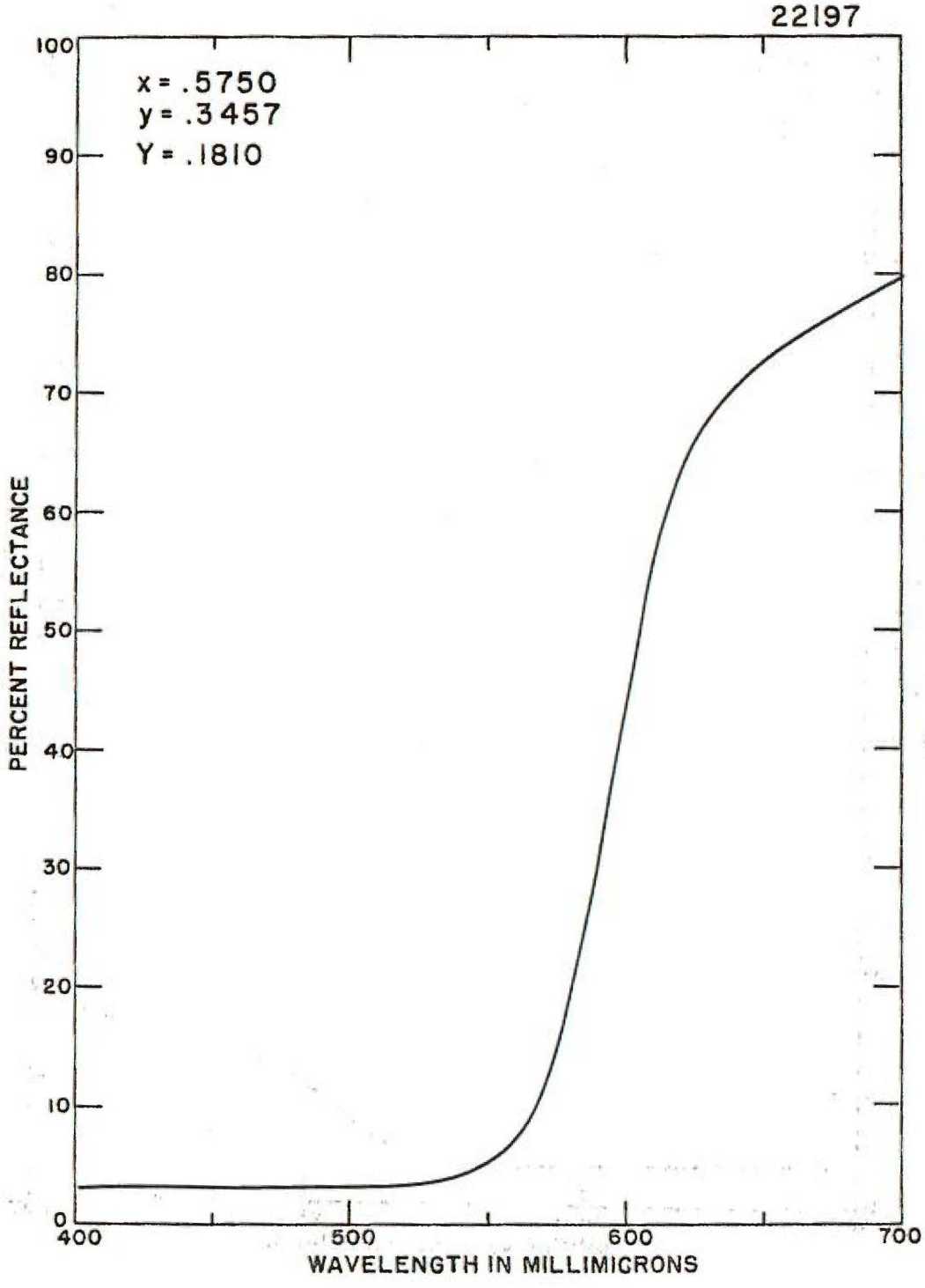

17142
x = .3699
y = .2375
Y = .1732
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

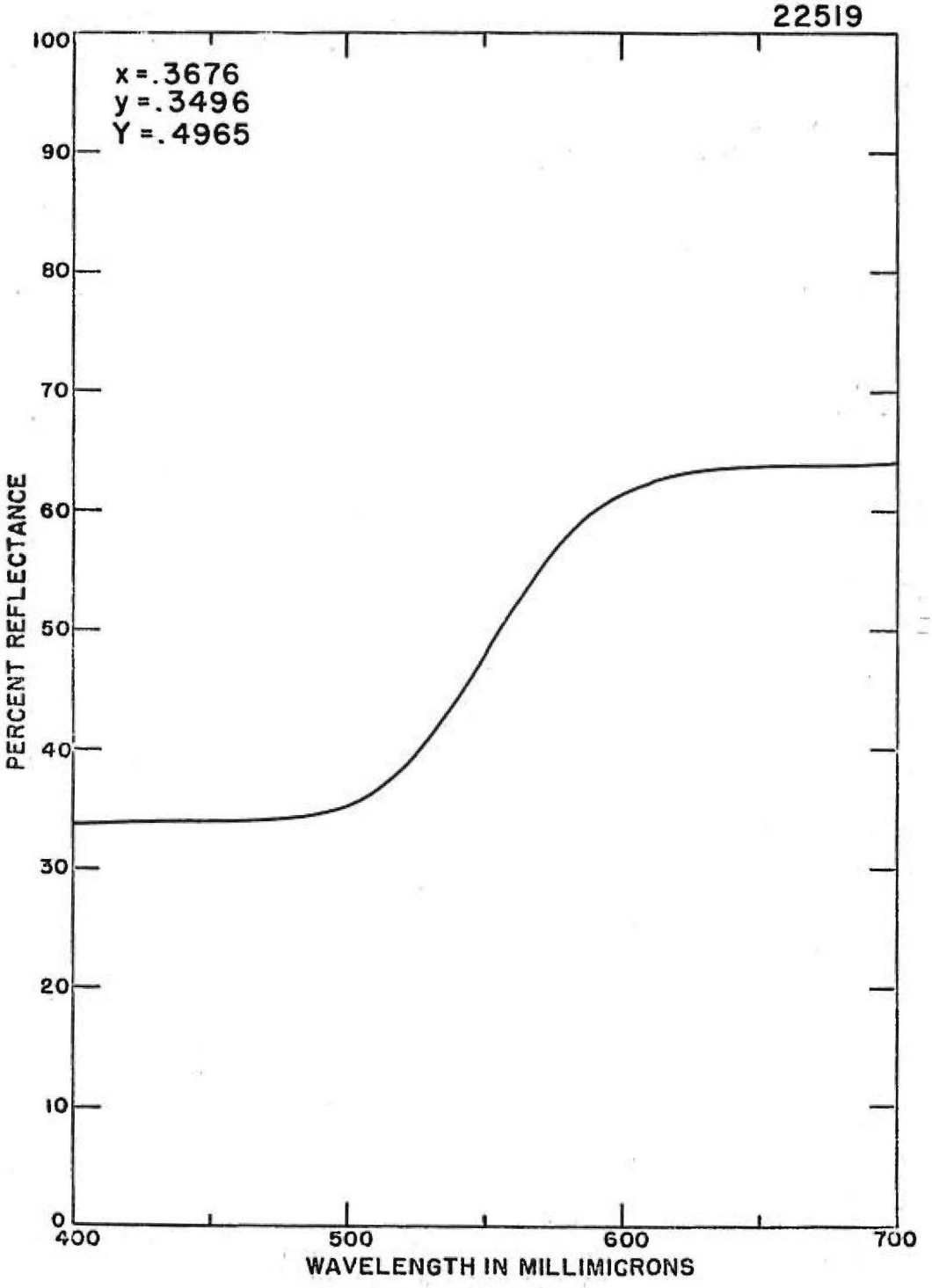

17178
x = .3096
y = .3173
Y = .4998
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

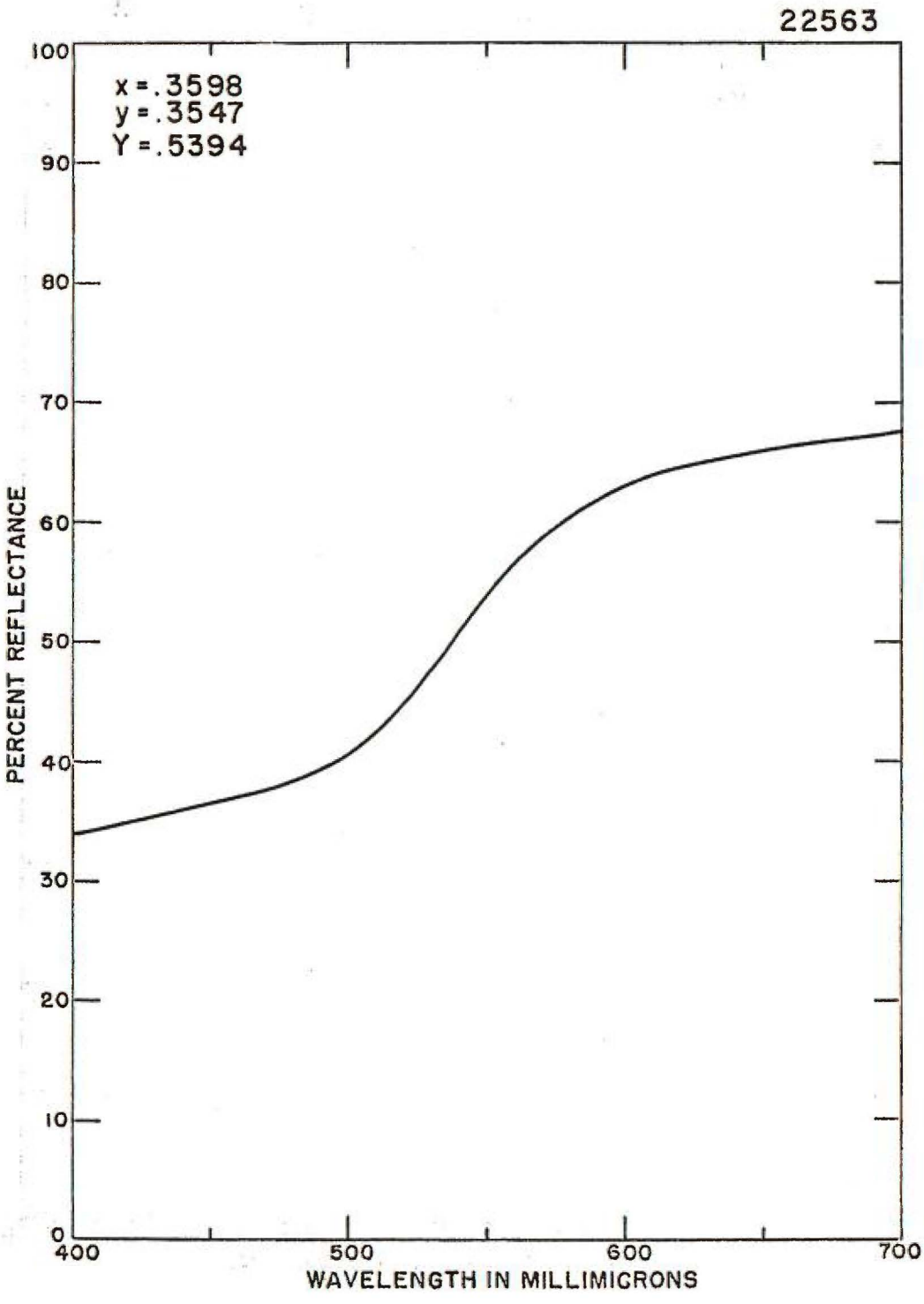

17886
x = .3137
y = .3222
Y = .8749
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

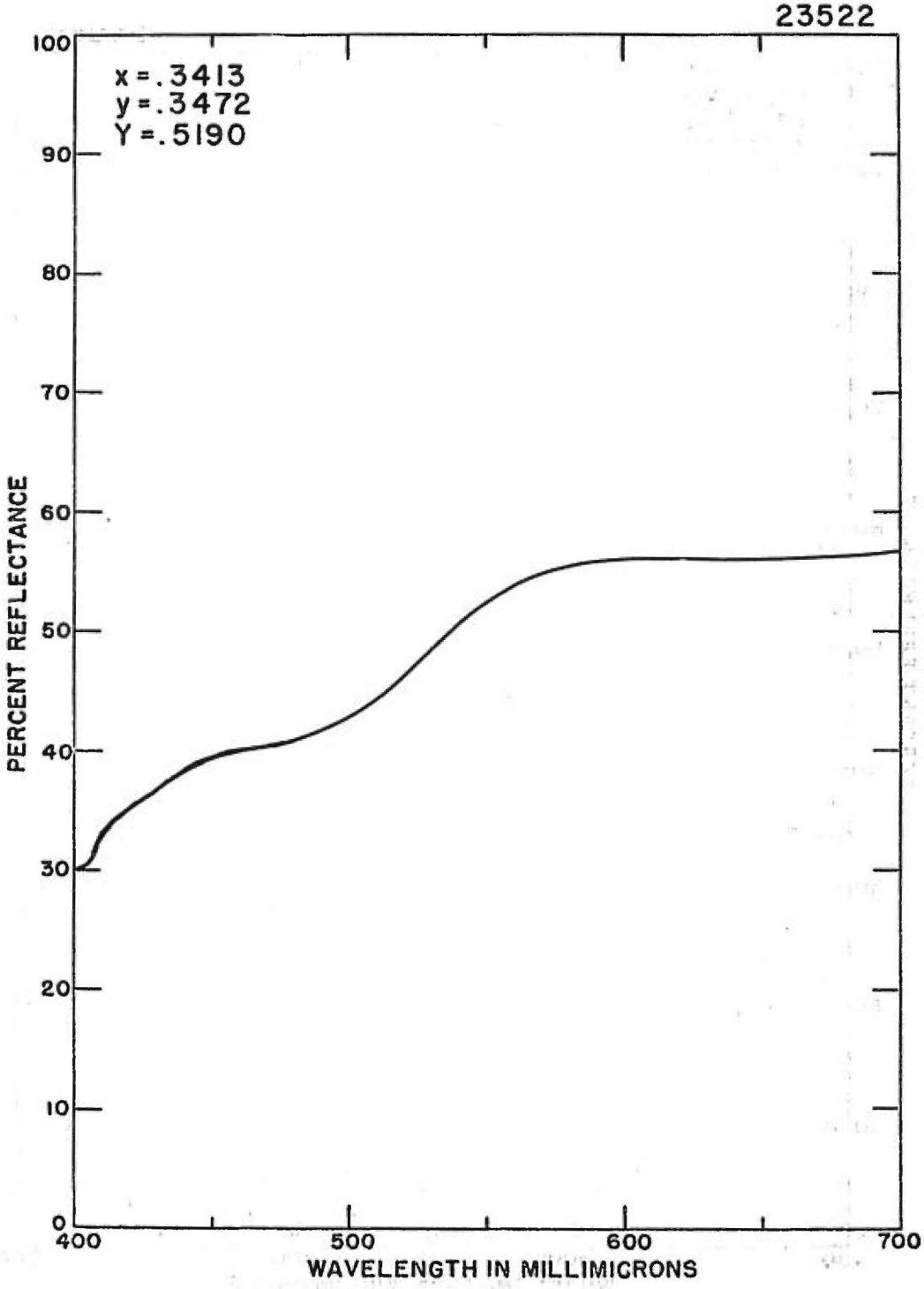

20059
x=.3862
y=.3526
Y=.0536
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

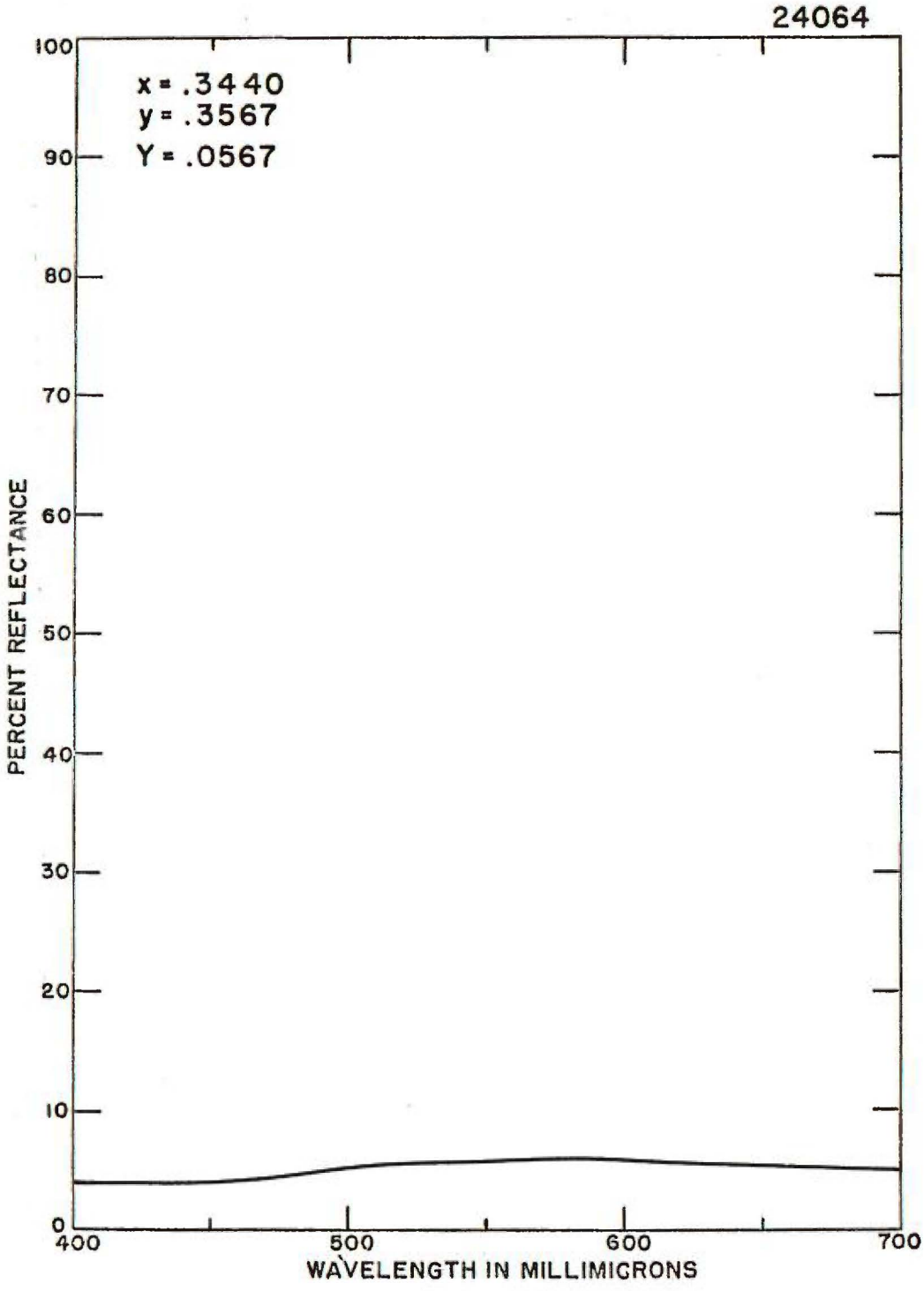

20061
x=.4325
y=.3282
Y=.0554
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

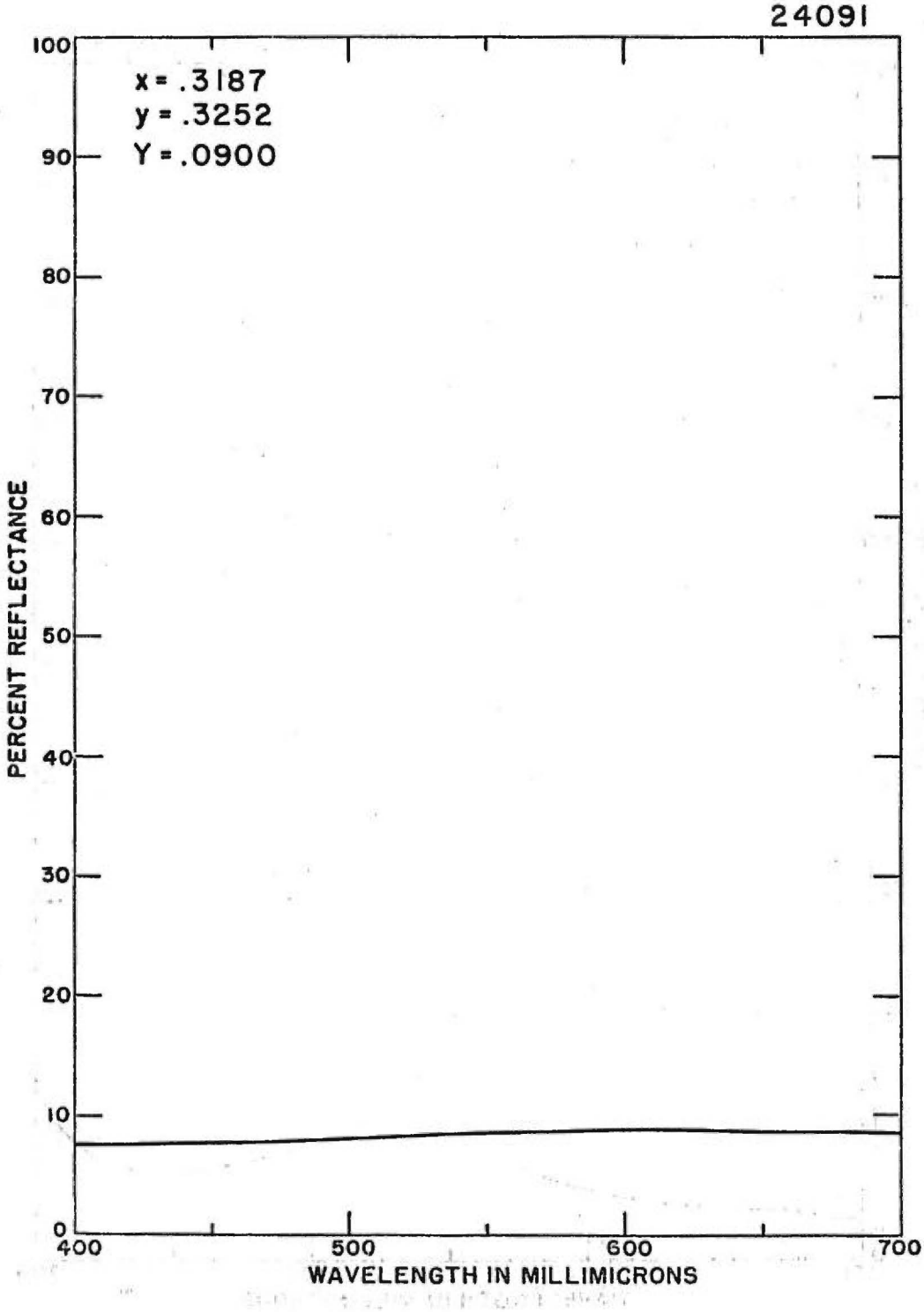

22197
x = .5750
y = .3457
Y = .1810
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

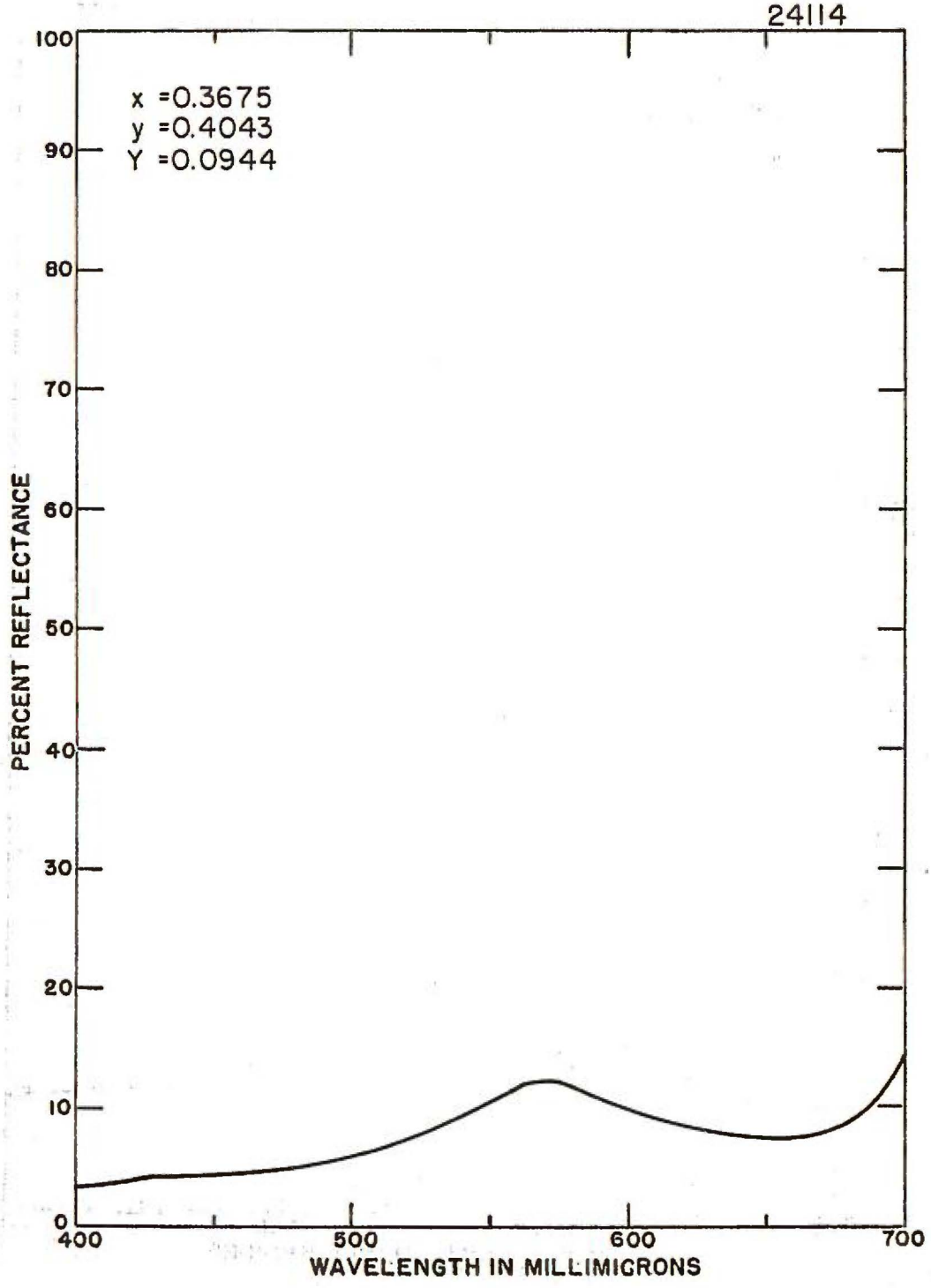

22519
x = .3676
y = .3496
Y = .4965
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

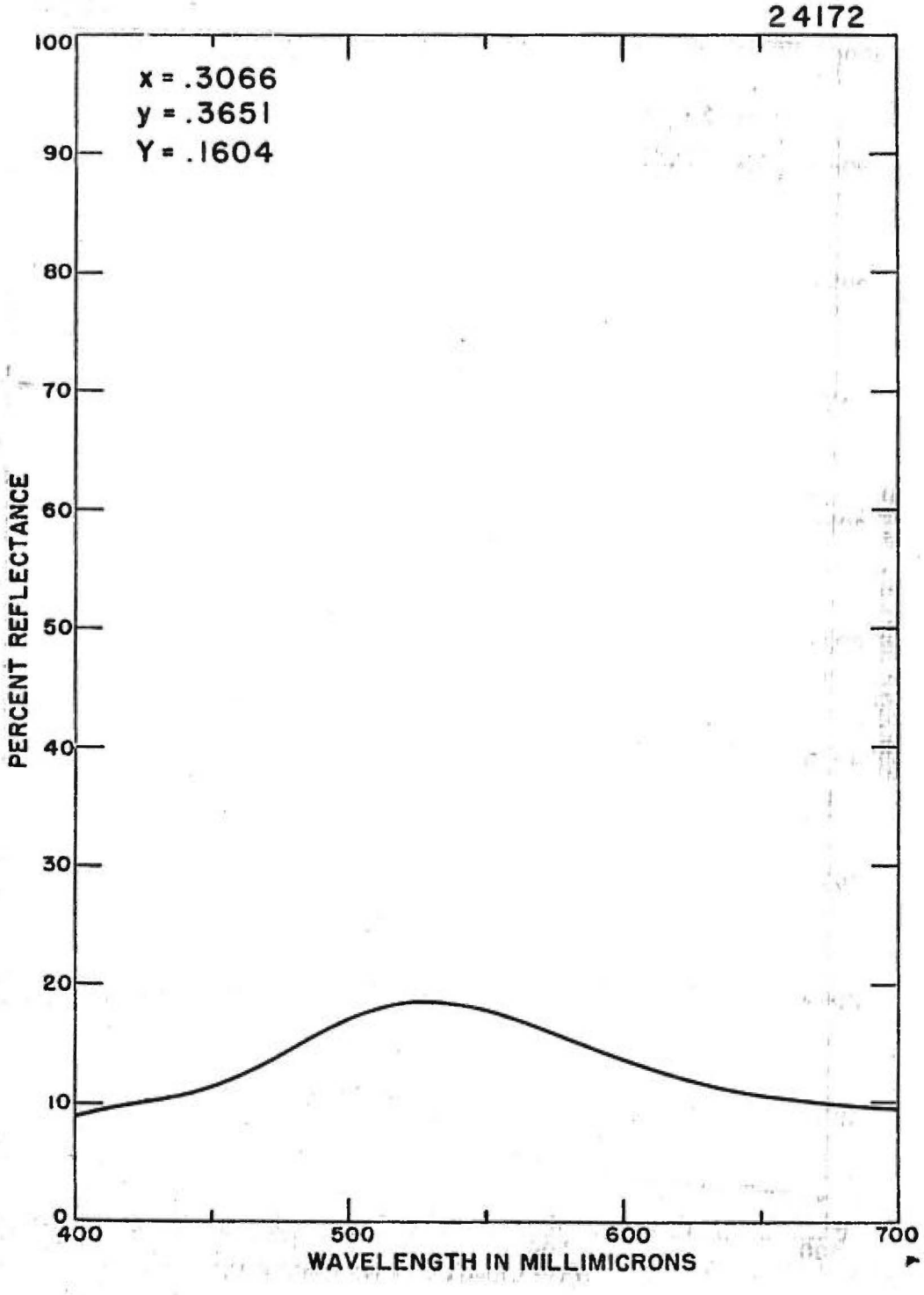

22563
x = .3598
y = .3547
Y = .5394
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

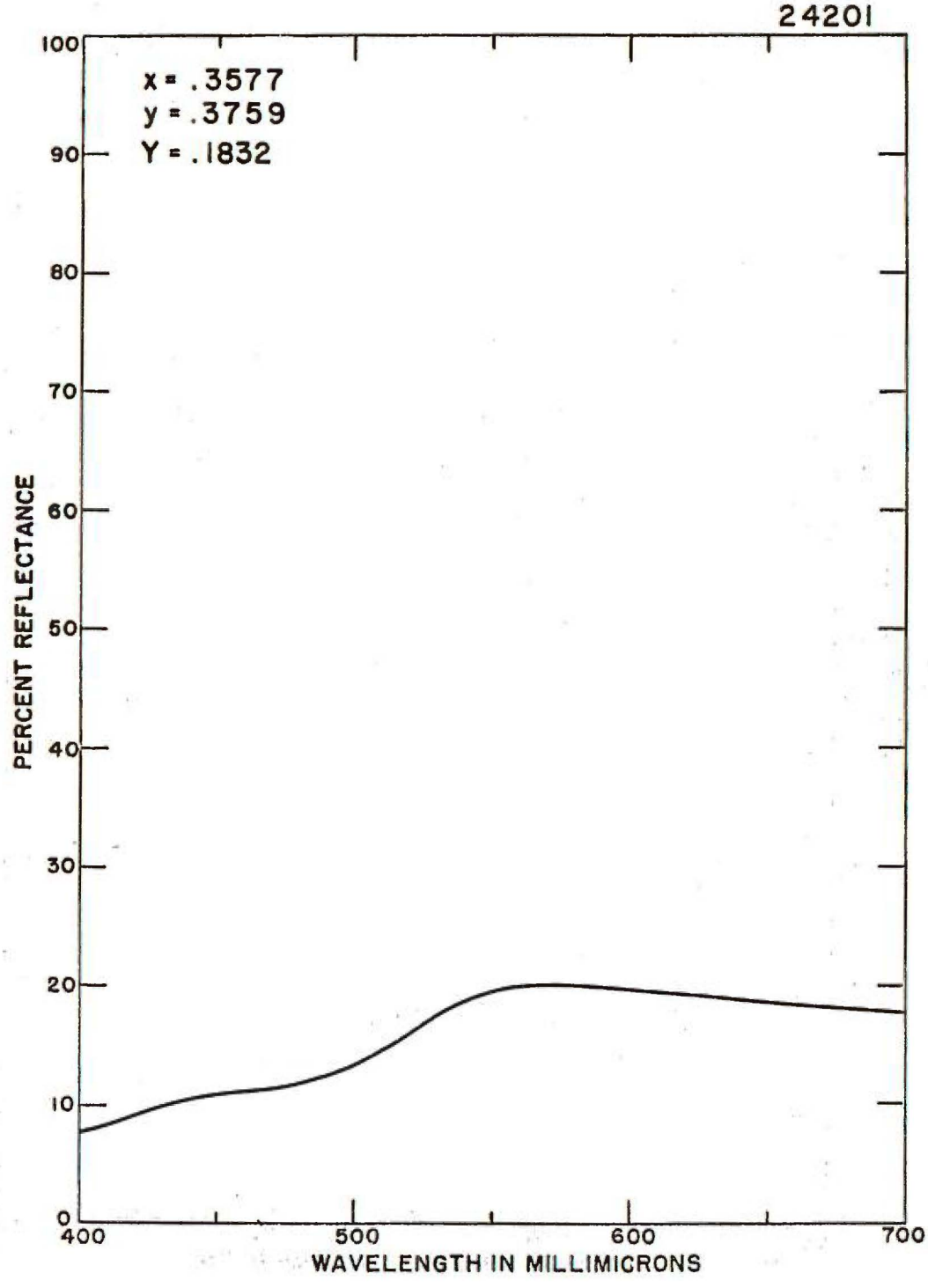

23522
x = .3413
y = .3472
Y = .5190
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

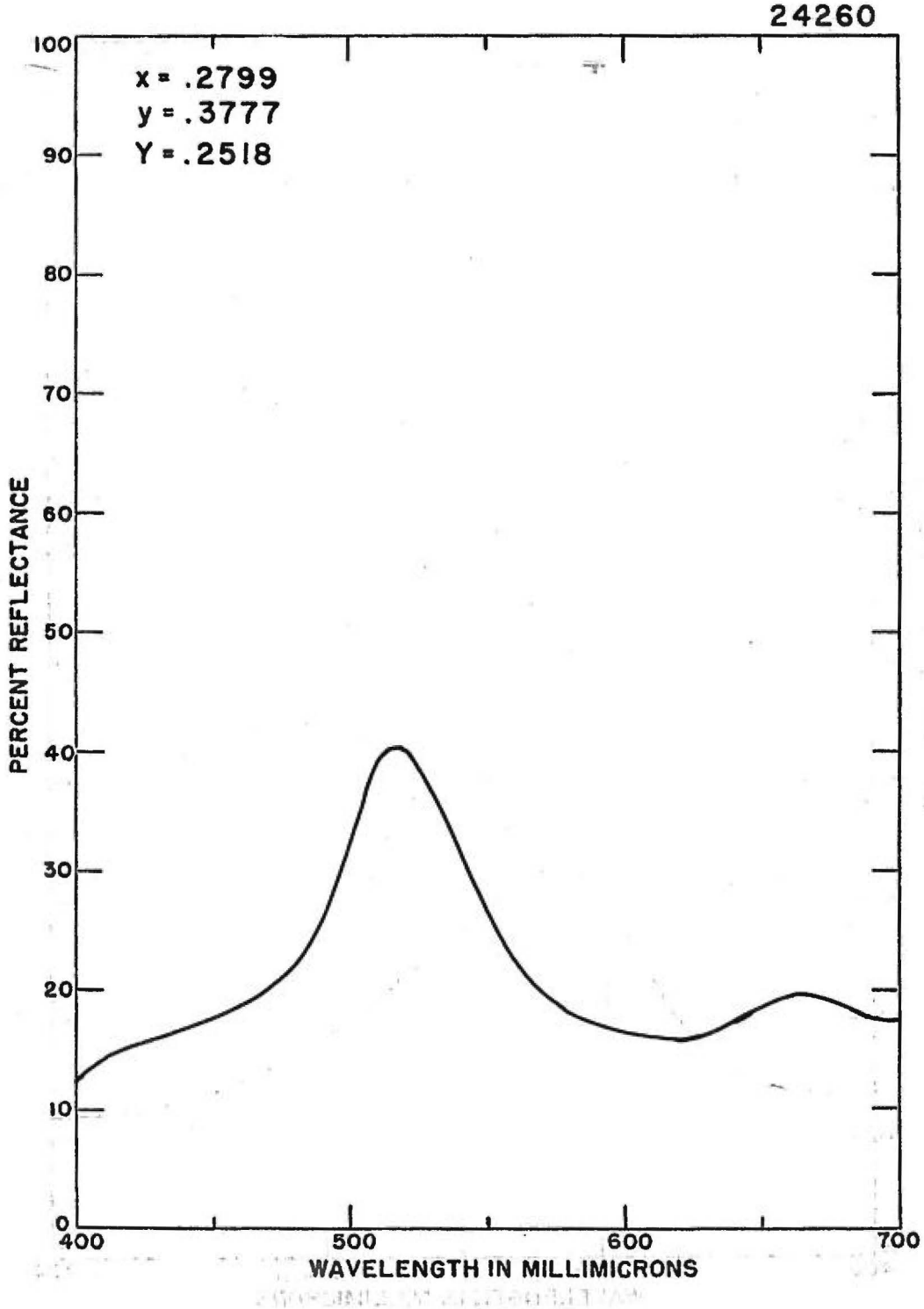

24064
x = .3440
y = .3567
Y = .0567
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

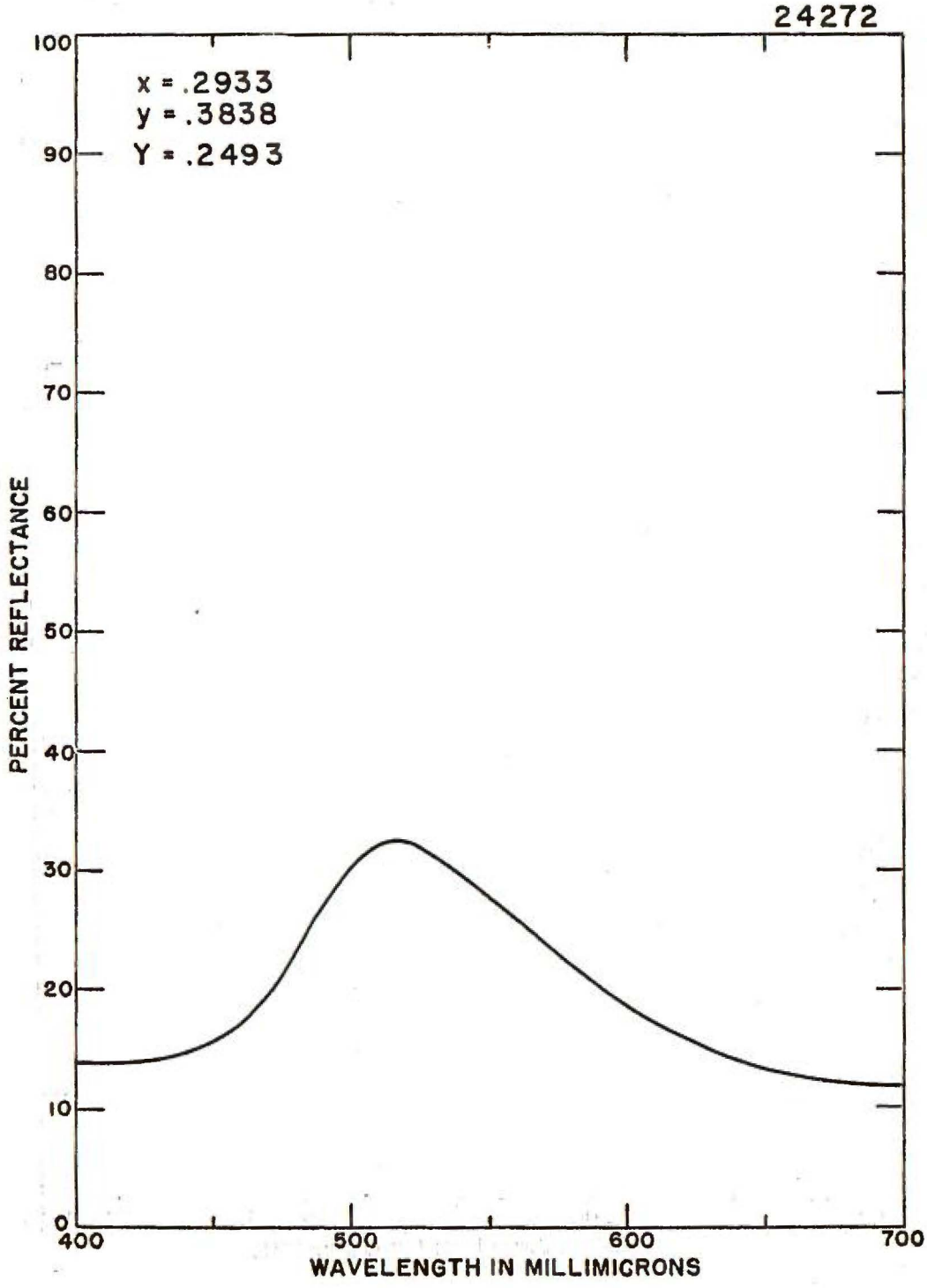

24091
x = .3187
y = .3252
Y = .0900
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

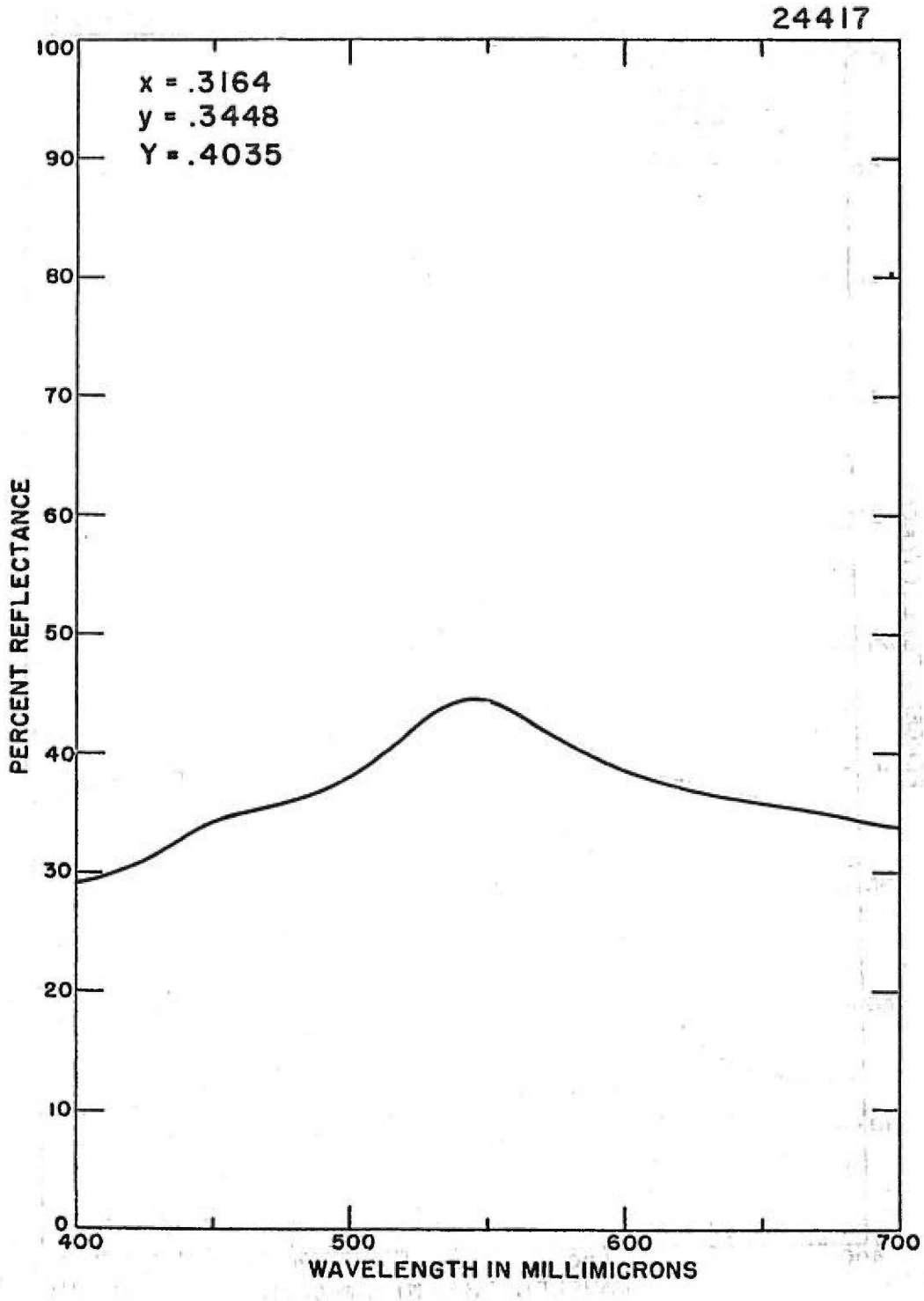

24114
x =0.3675
y =0.4043
Y =0.0944
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

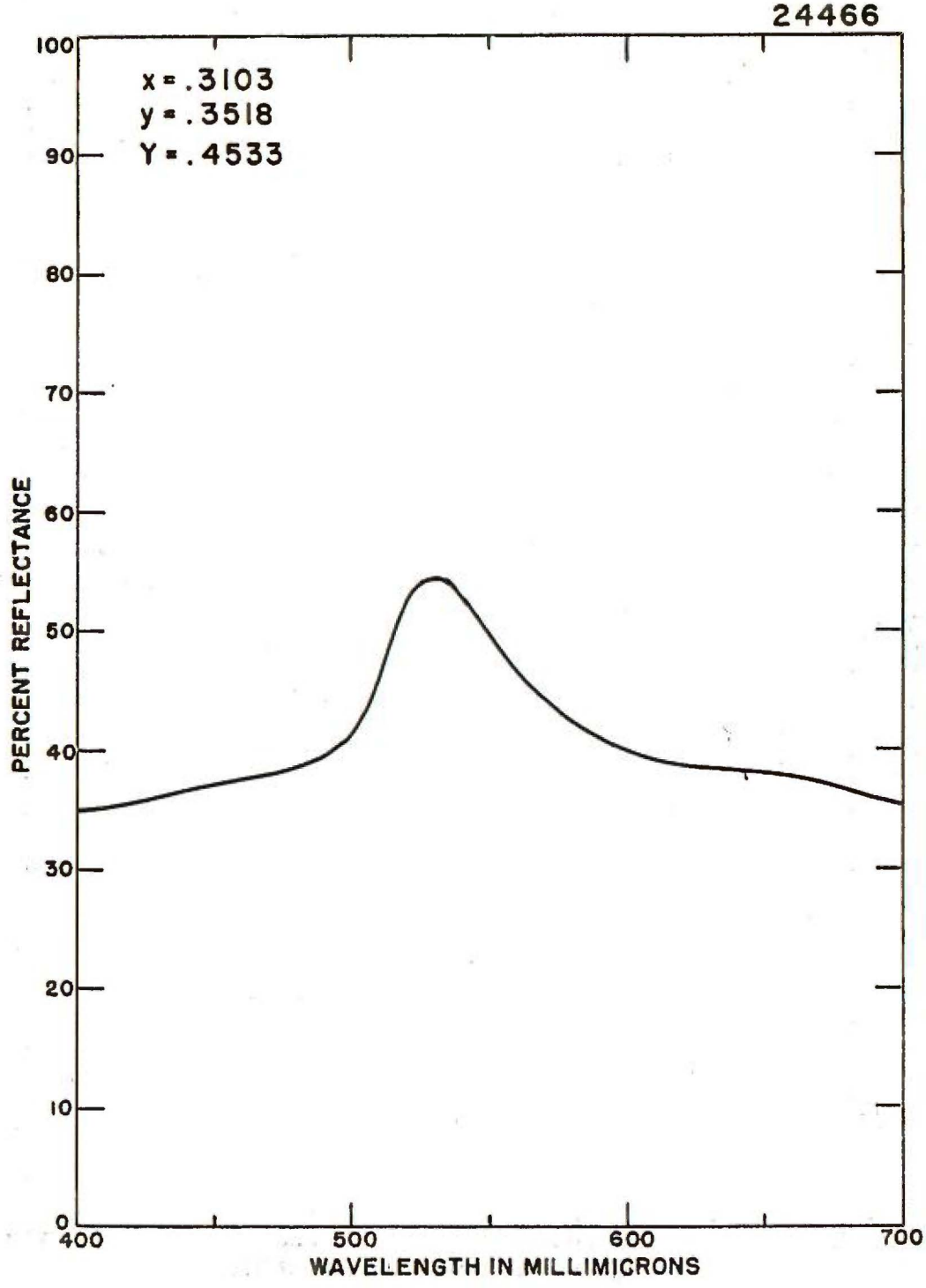

24172
x = .3066
y = .3651
Y = .1604
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

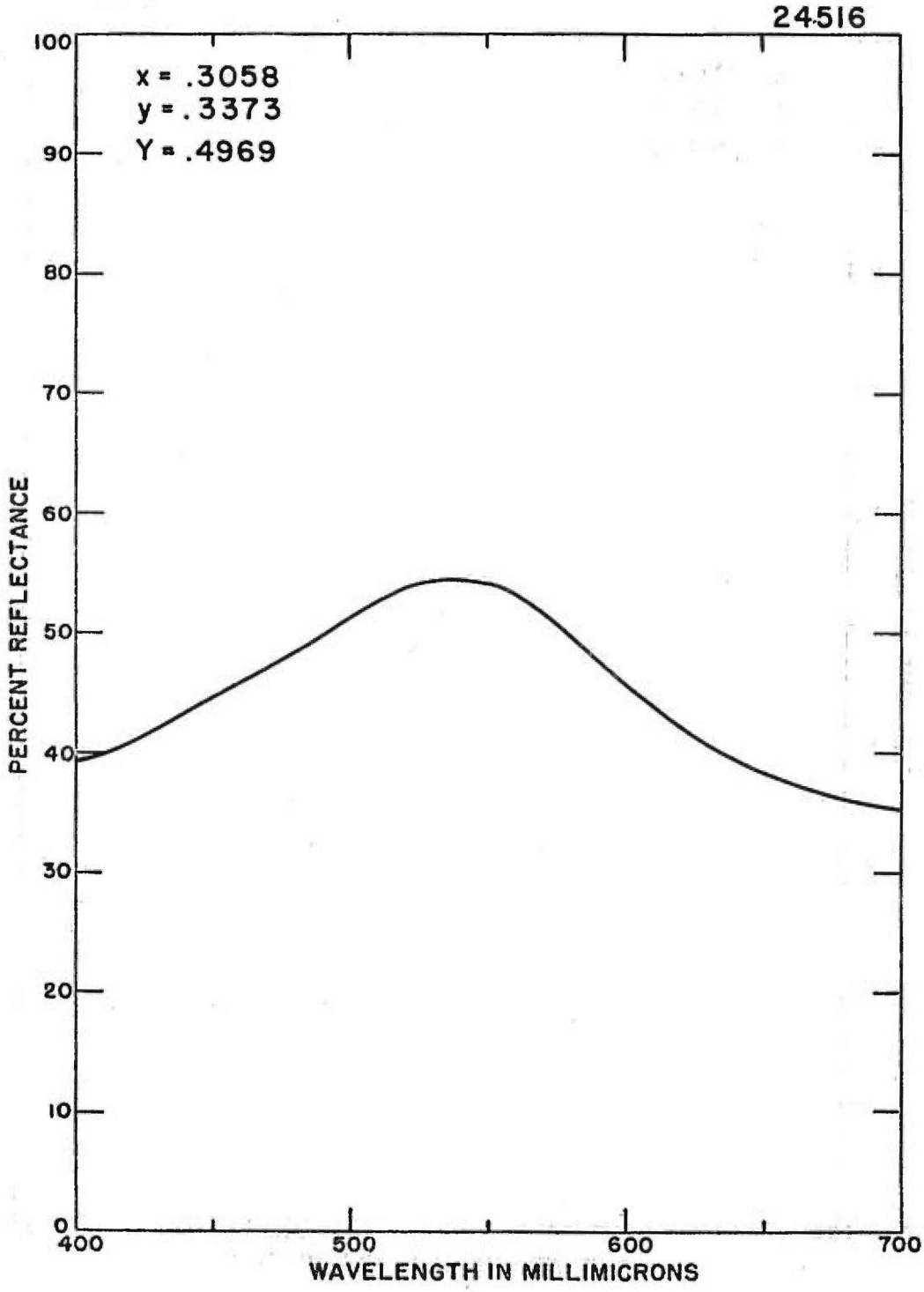

24201
x = .3577
y = .3759
Y = .1832
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

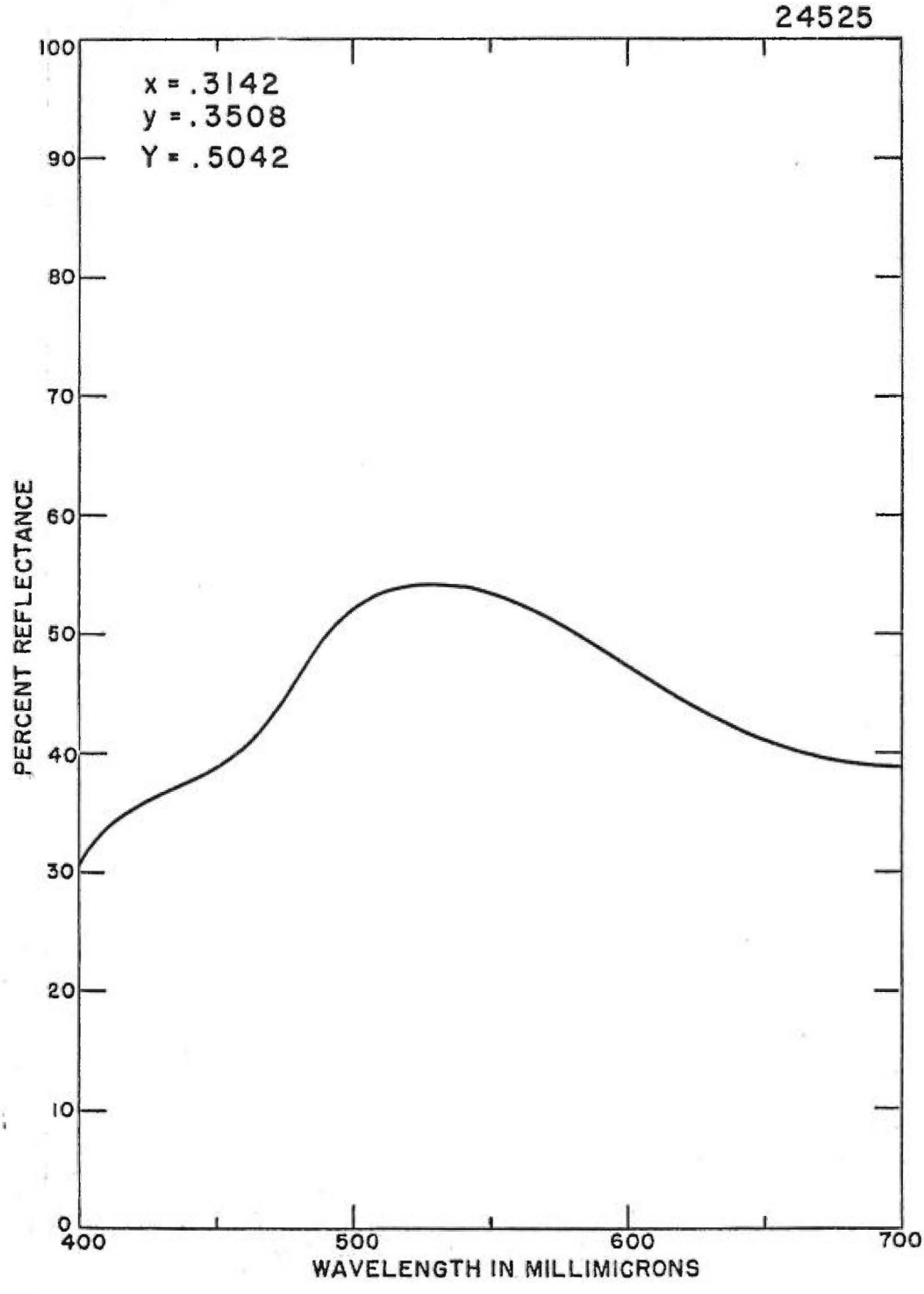

24260
x = .2799
y = .3777
Y = .2518
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

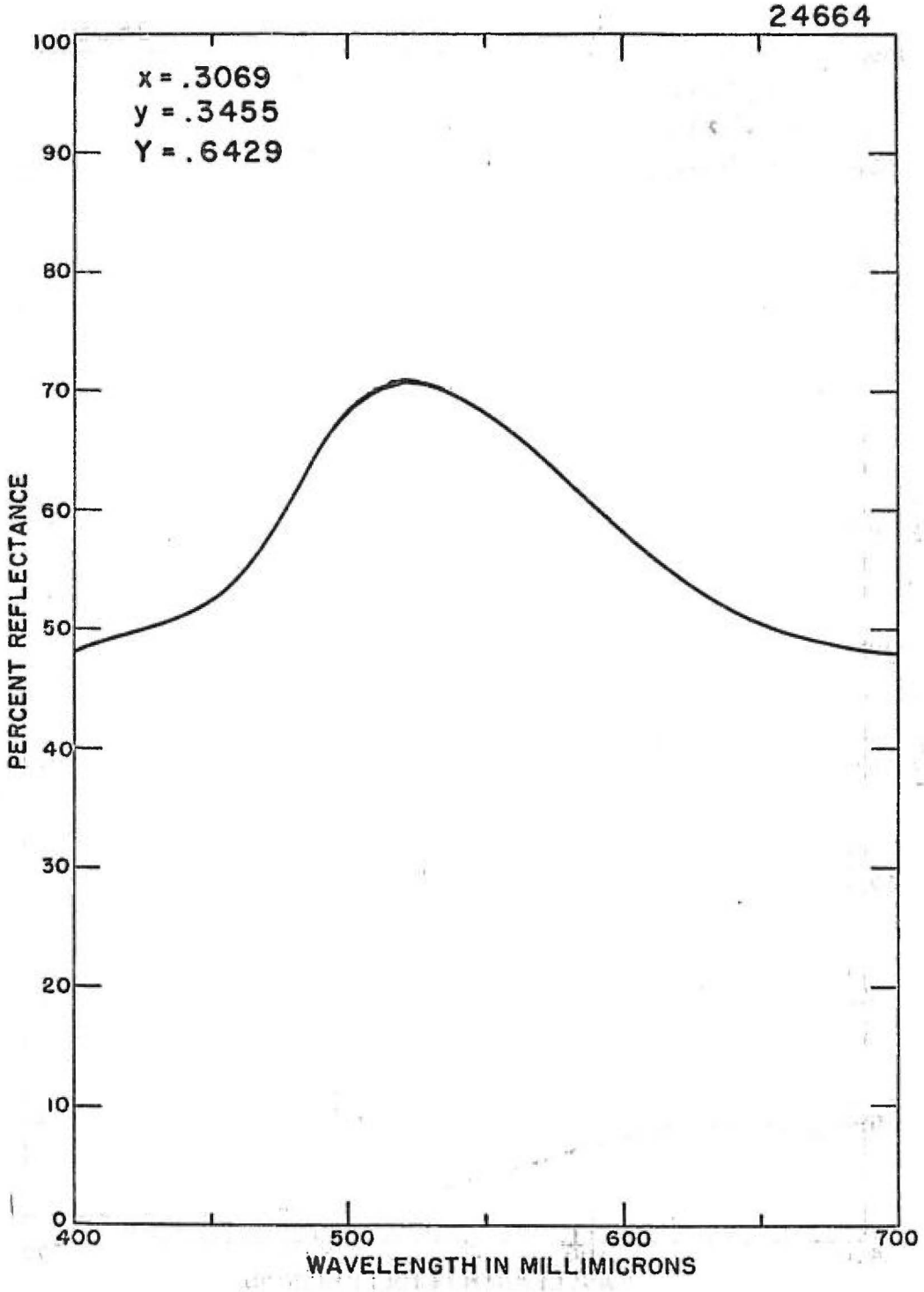

24272
x = .2933
y = .3838
Y = .2493
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

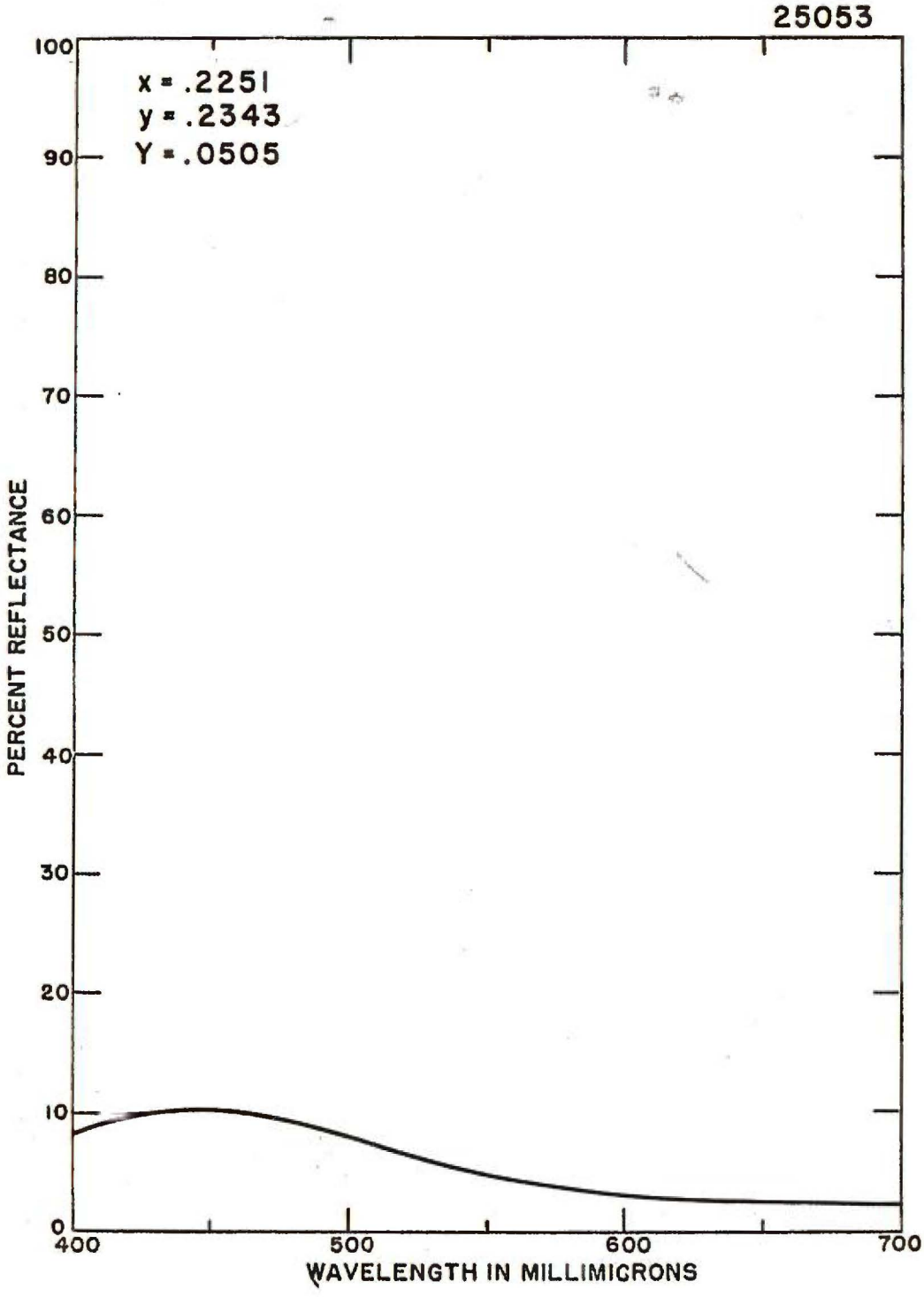

24417
x = .3164
y = .3448
Y = .4035
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

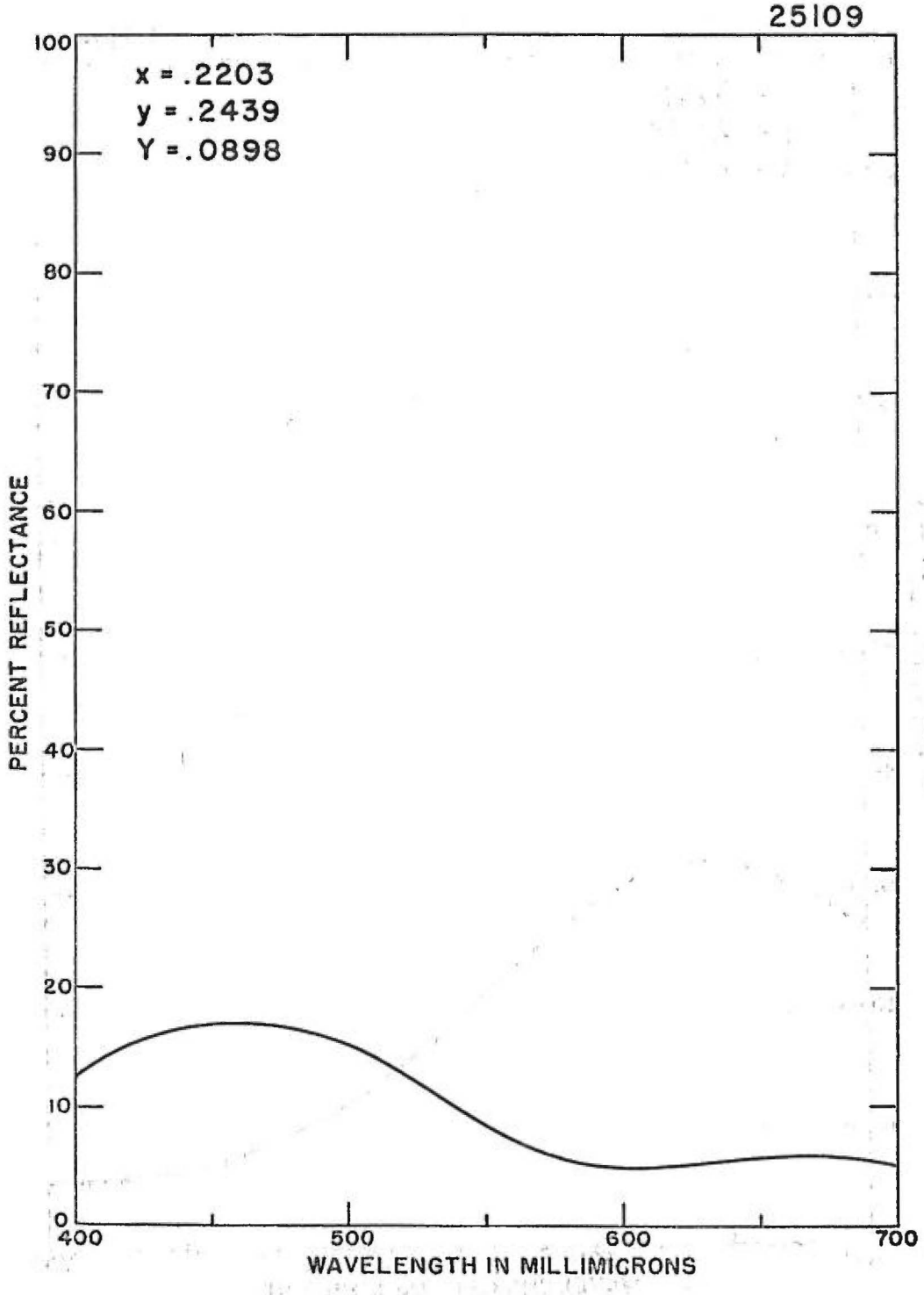

24466
x = .3103
y = .3518
Y = .4533
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

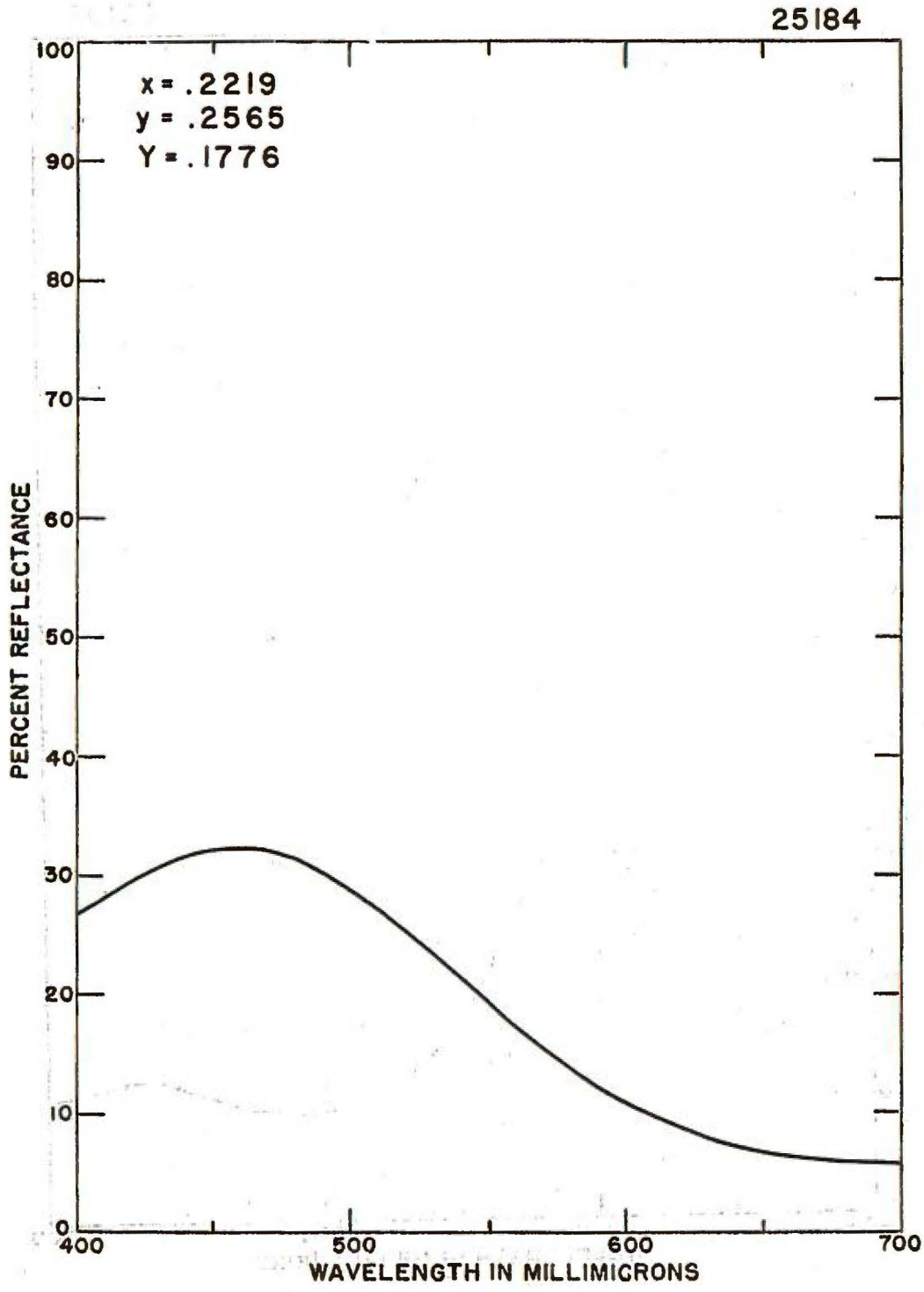

24516
x = .3058
y = .3373
Y = .4969
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

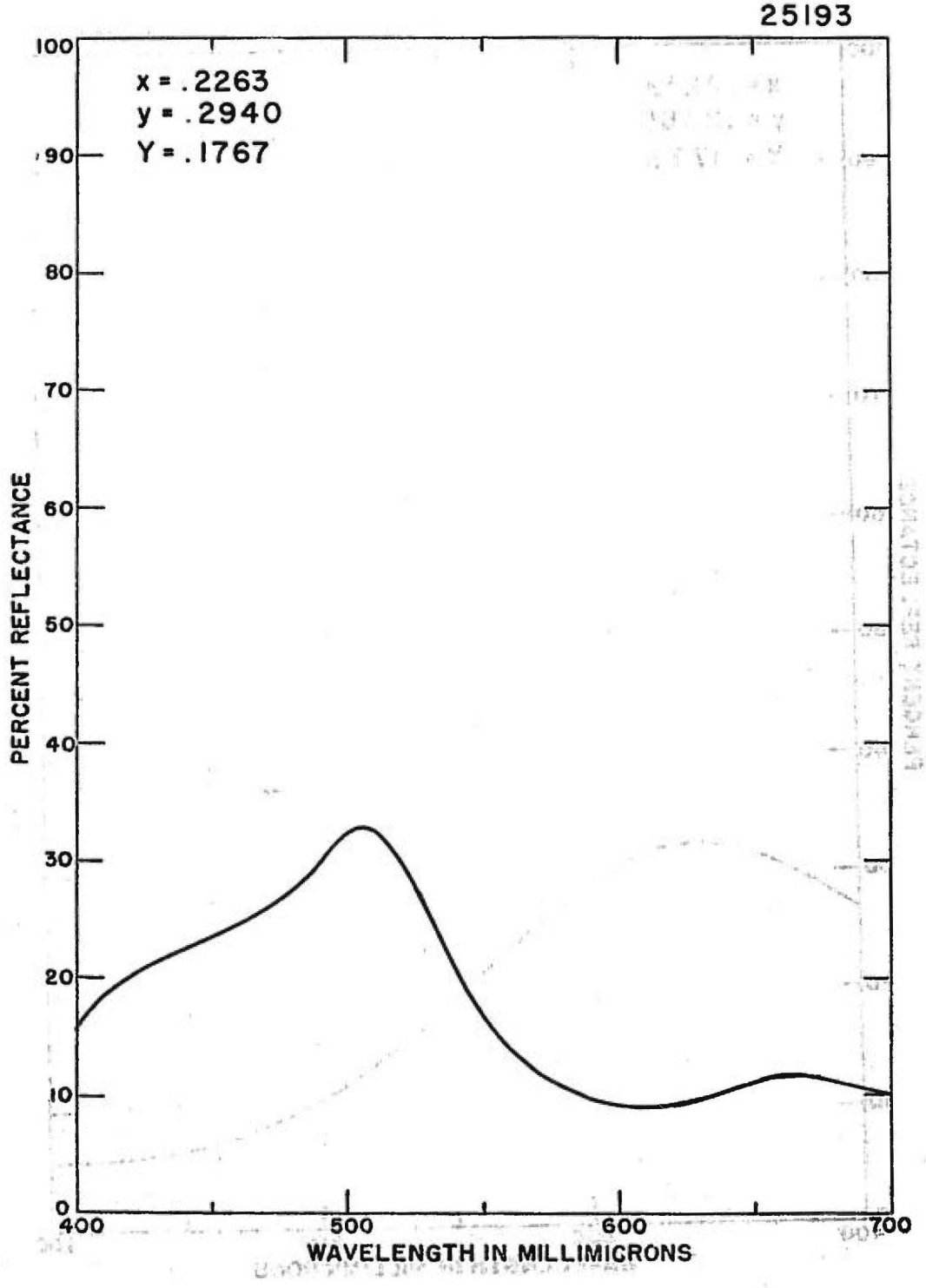

24525
x = .3142
y = .3508
Y = .5042
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

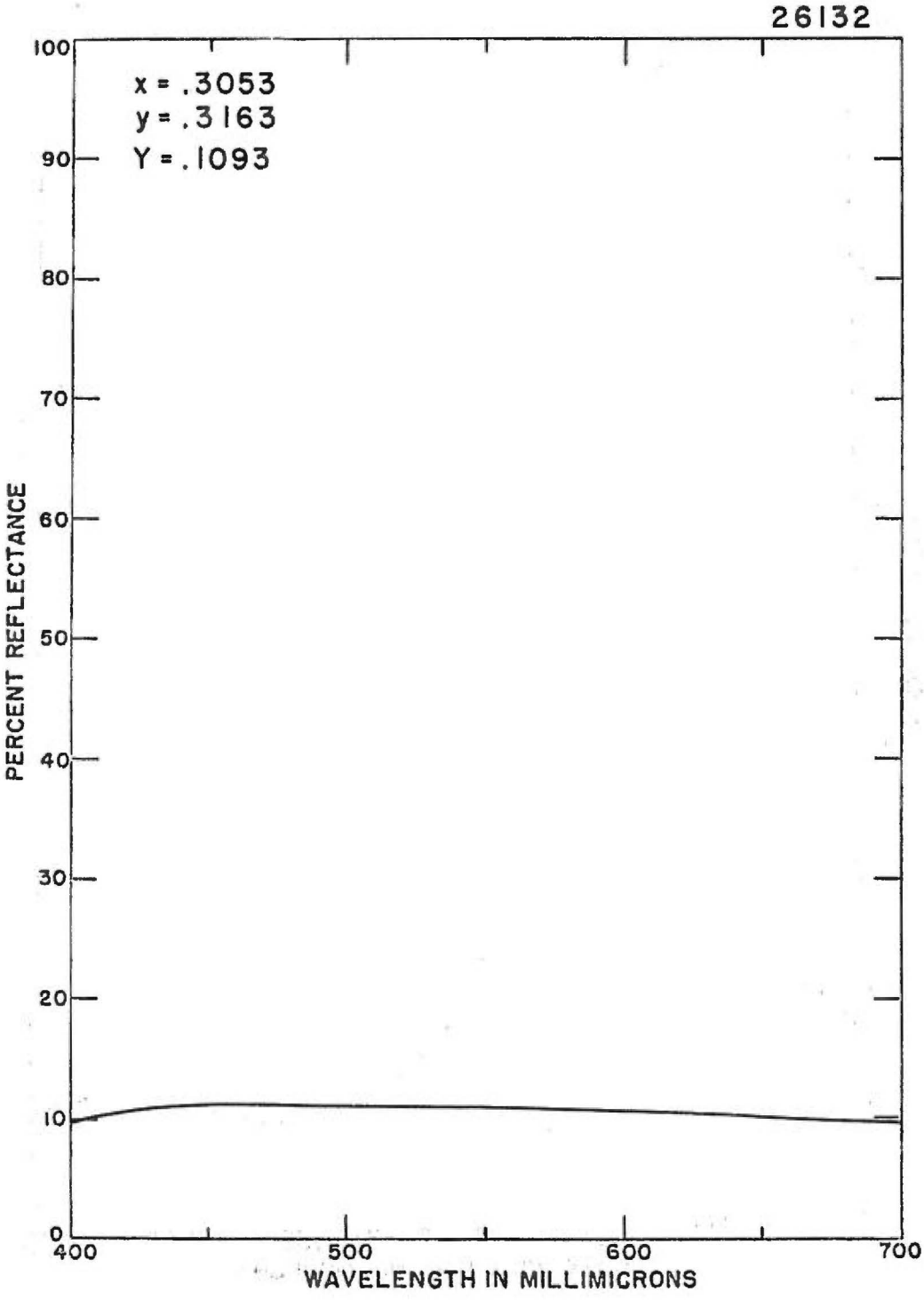

24664
x = .3069
y = .3455
Y = .6429
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

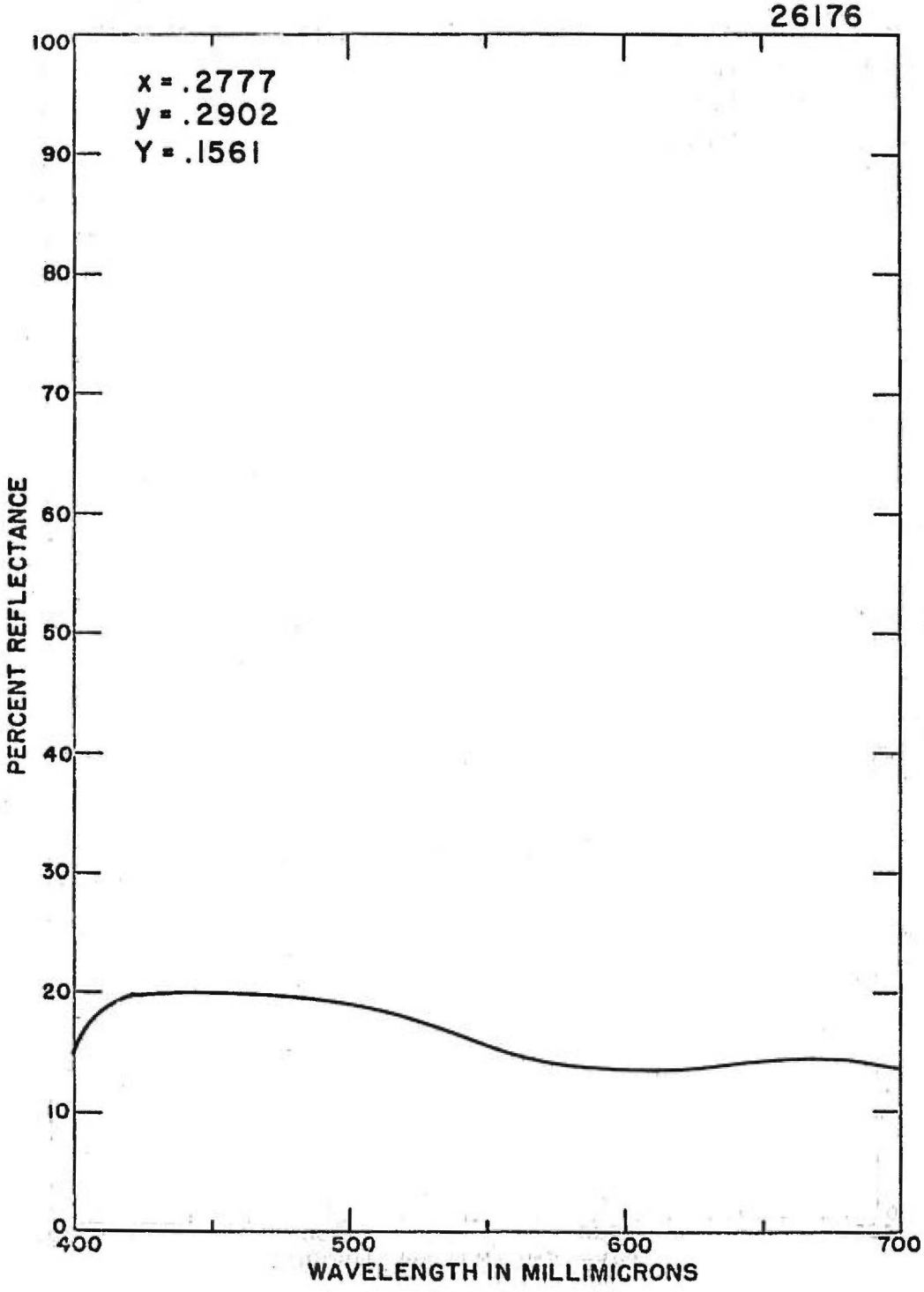

25053
x = .2251
y = .2343
Y = .0505
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

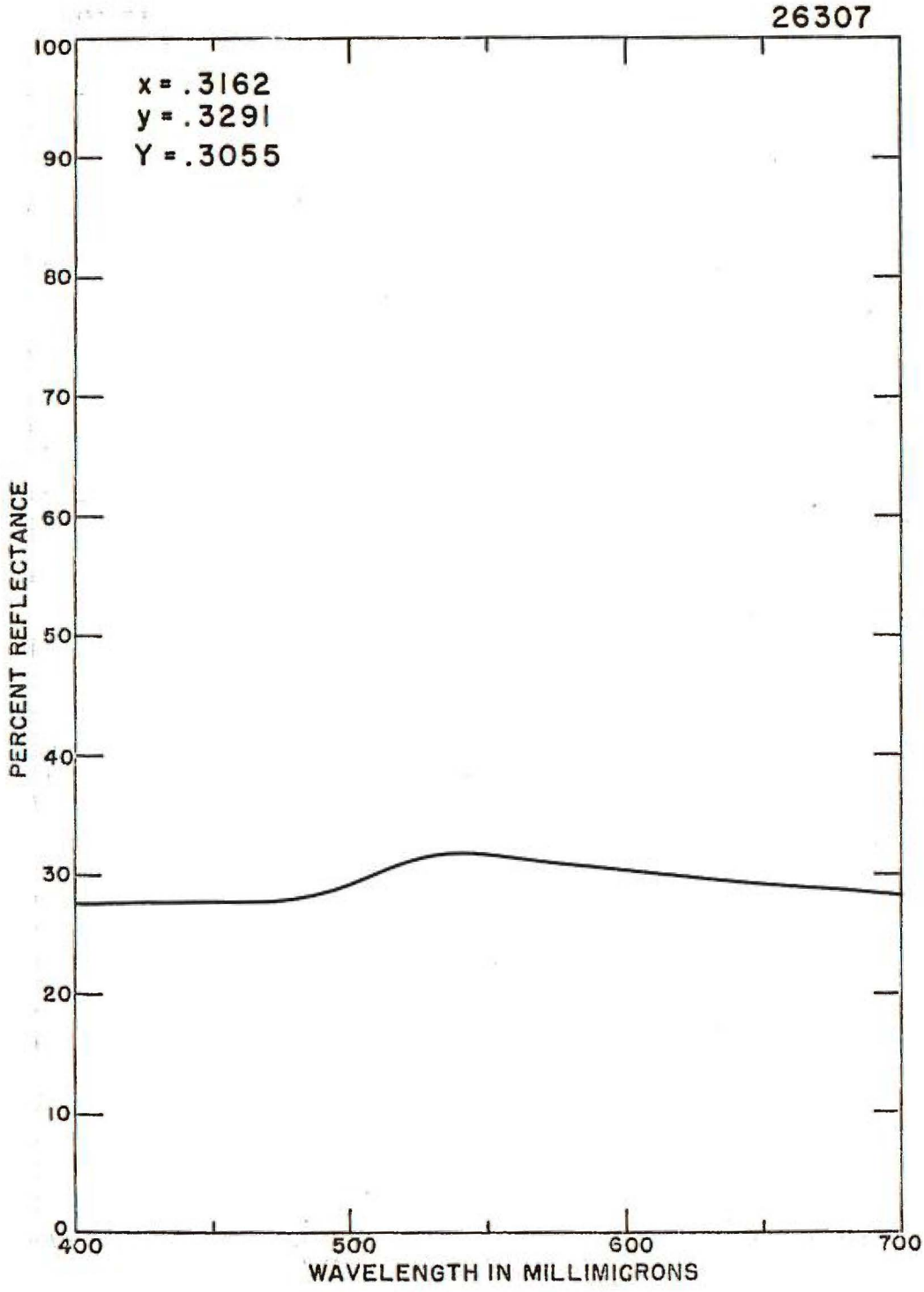

25109
x = .2203
y = .2439
Y = .0898
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

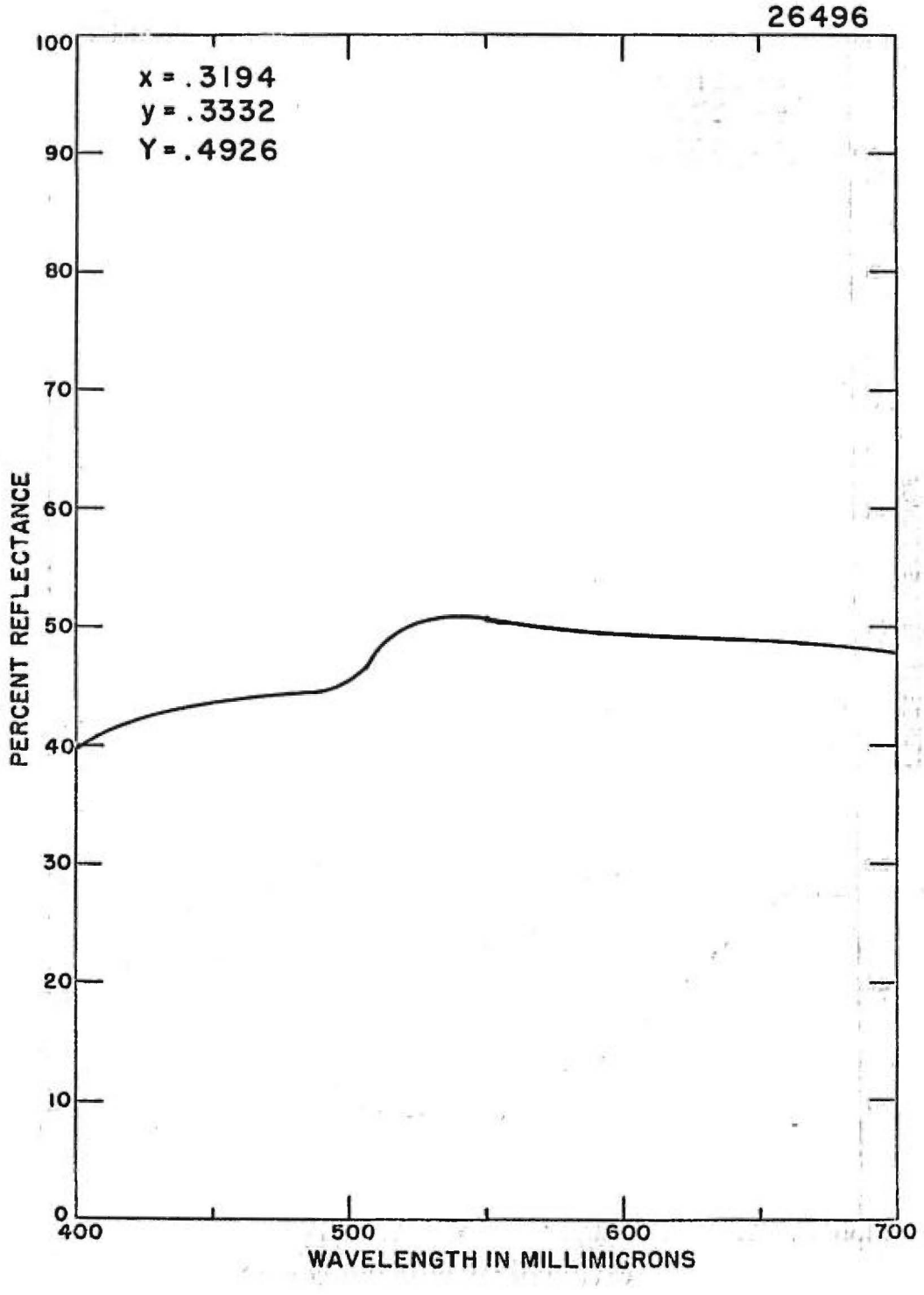

25184
x = .2219
y = .2565
Y = .1776
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

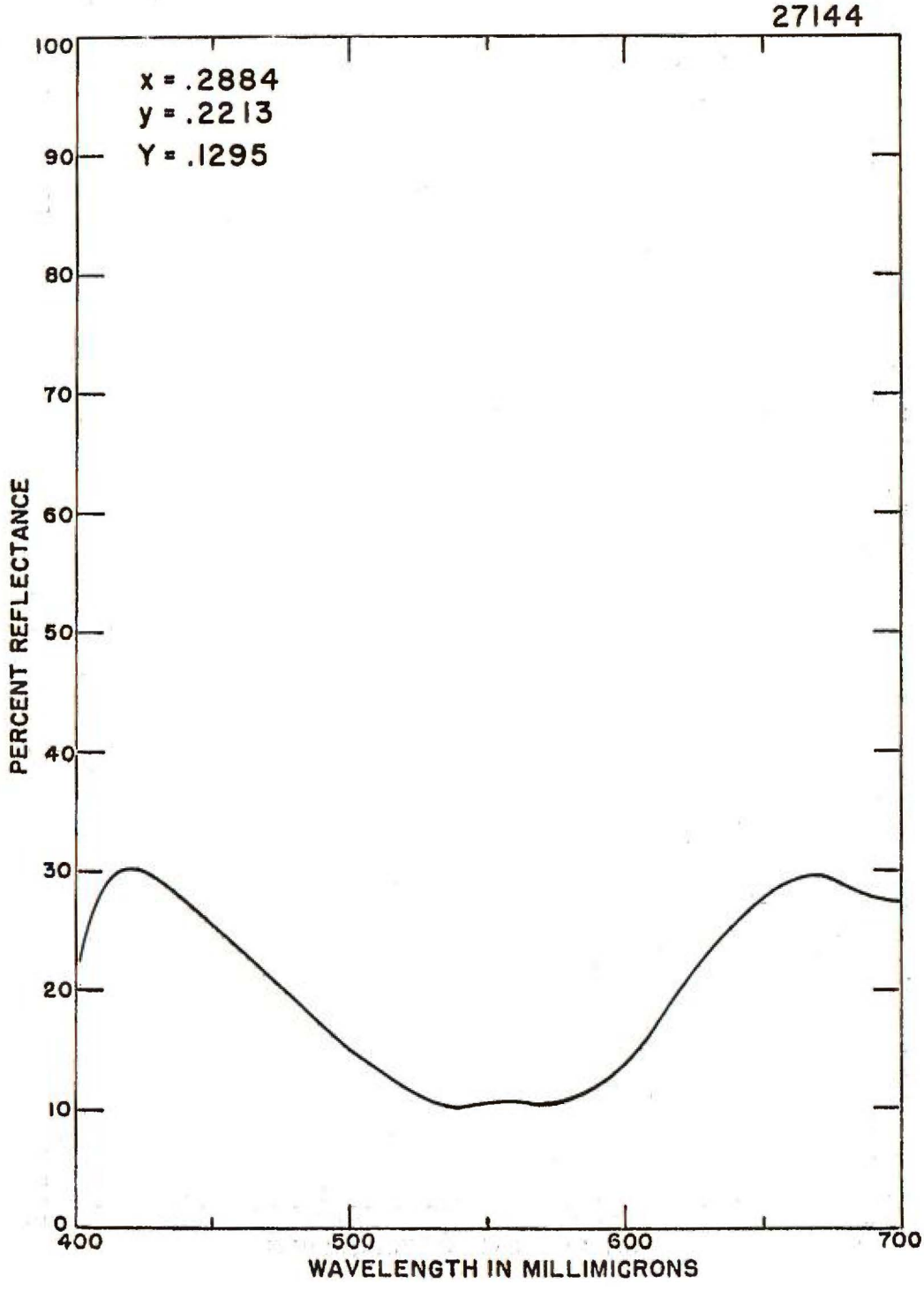

25193
x = .2263
y = .2940
Y = .1767
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

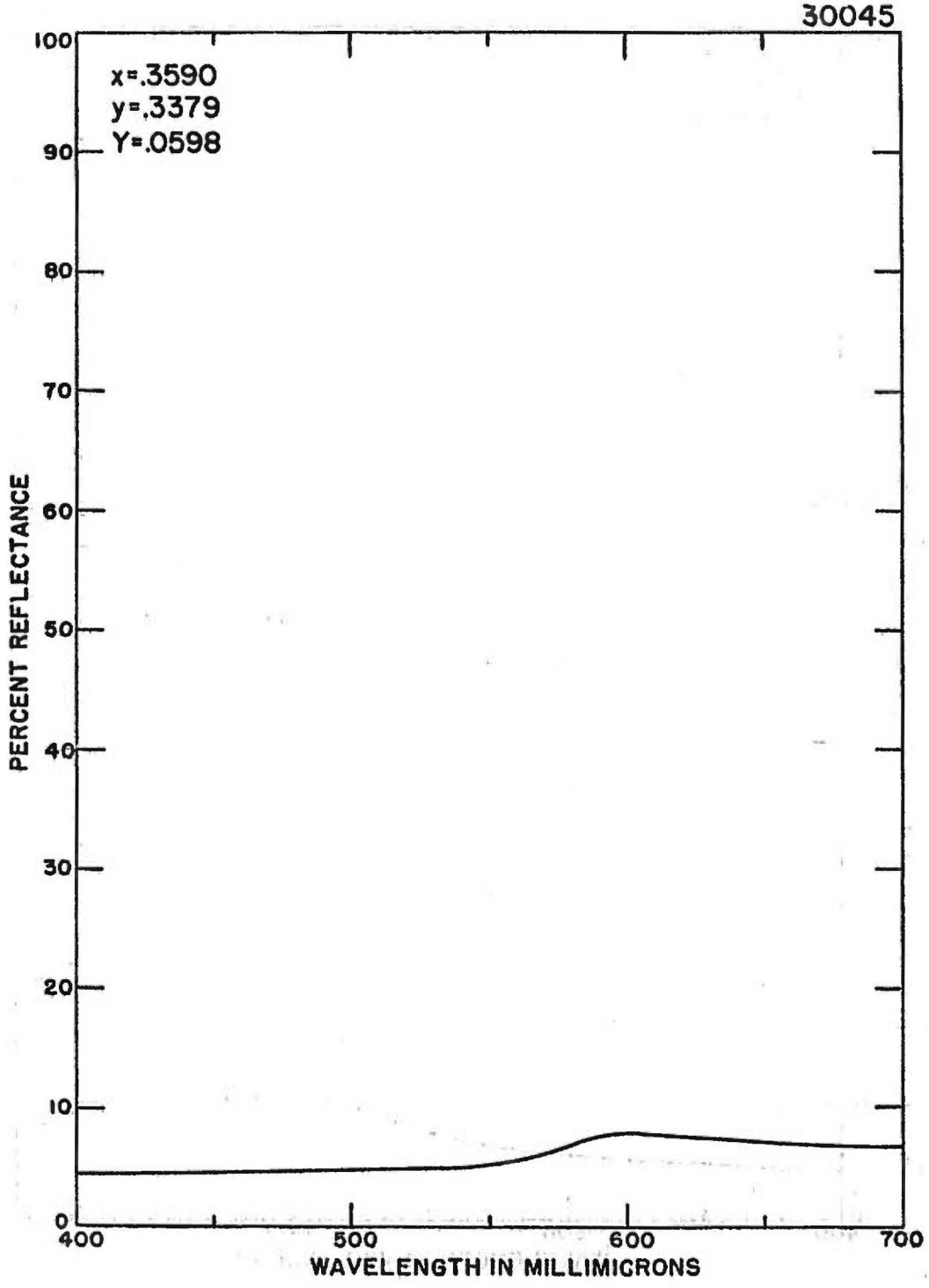

26132
x = .3053
y = .3163
Y = .1093
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

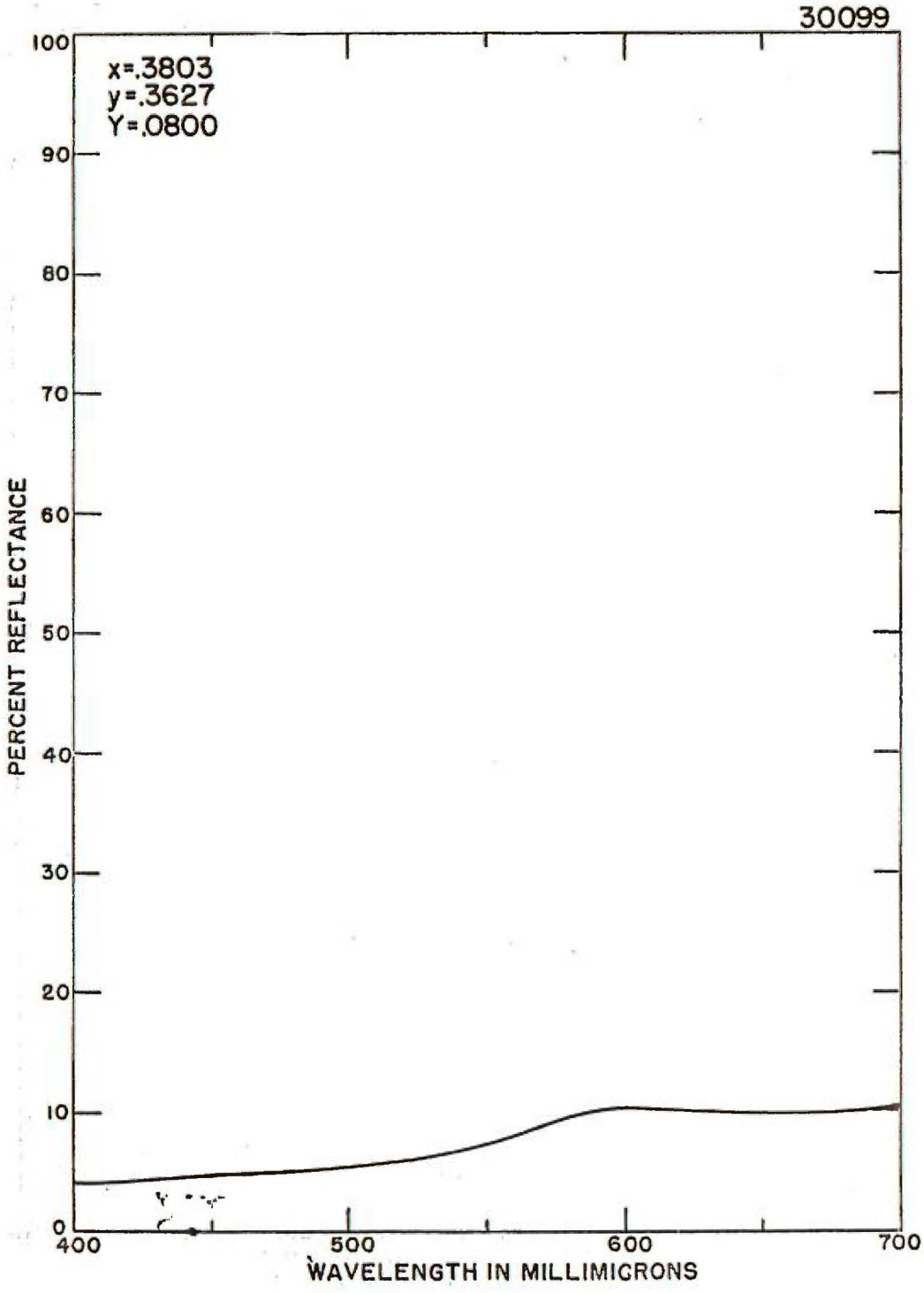

26176
x = .2777
y = .2902
Y = .1561
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

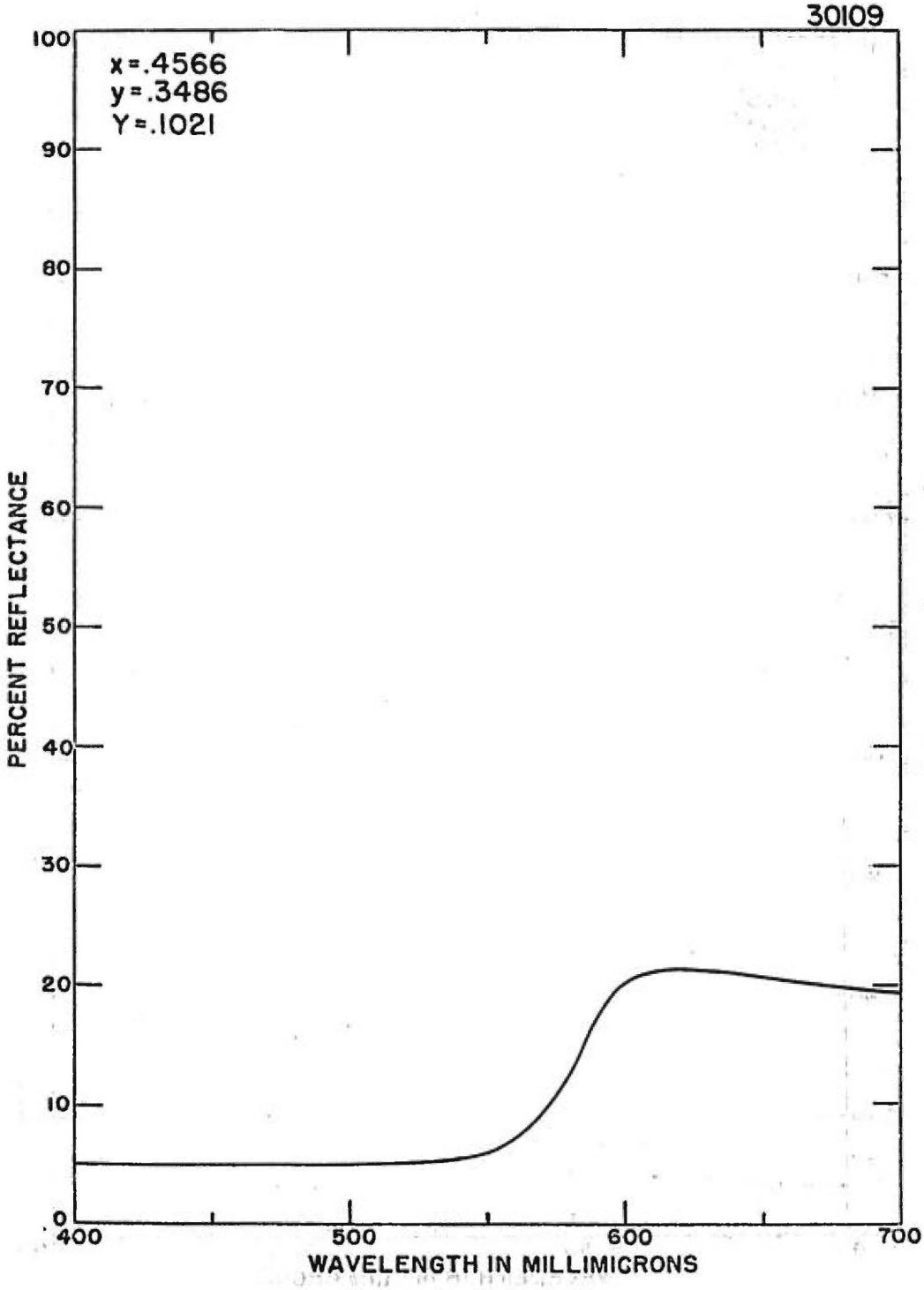

26307
x = .3162
y = .3291
Y = .3055
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

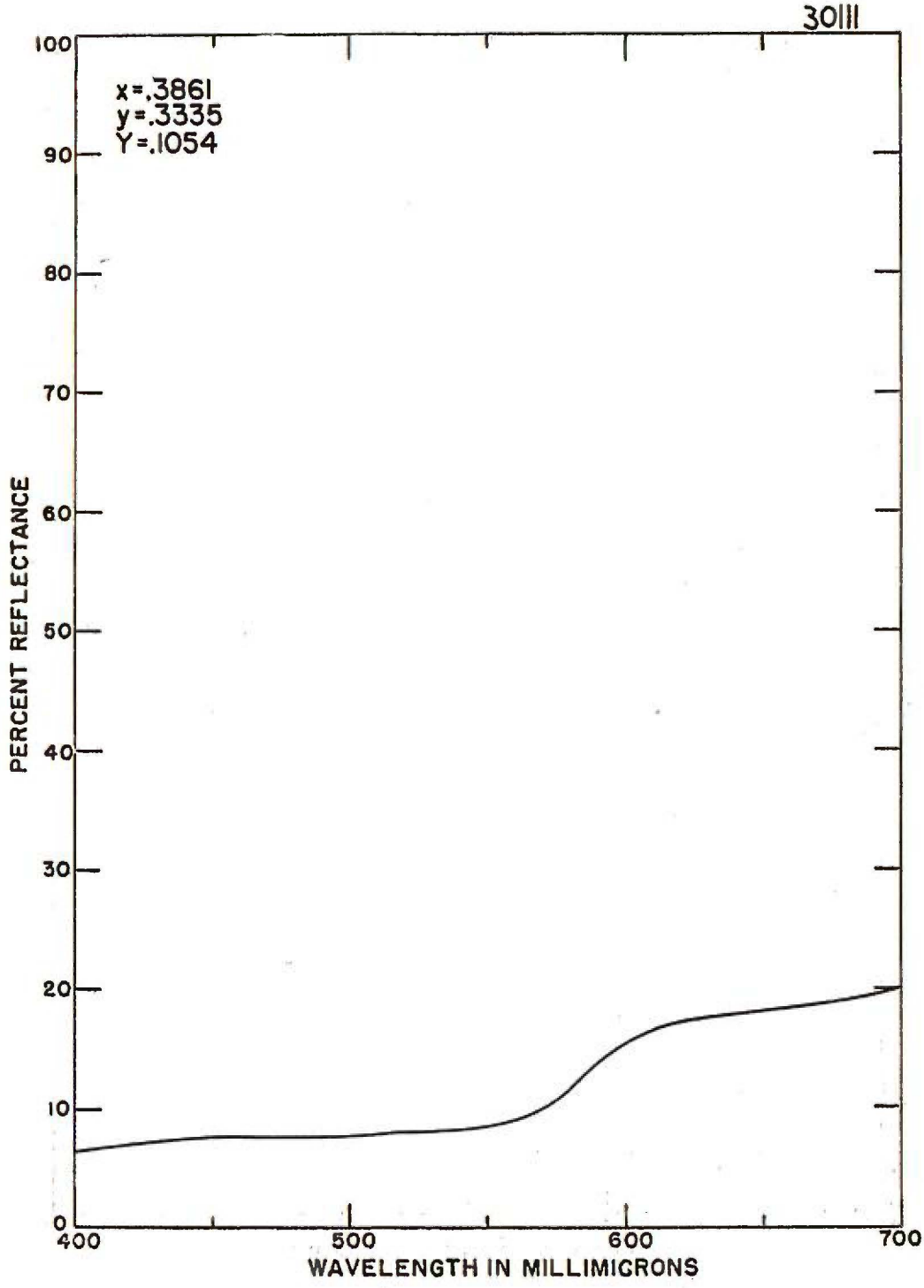

26496
x = .3194
y = .3332
Y = .4926
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

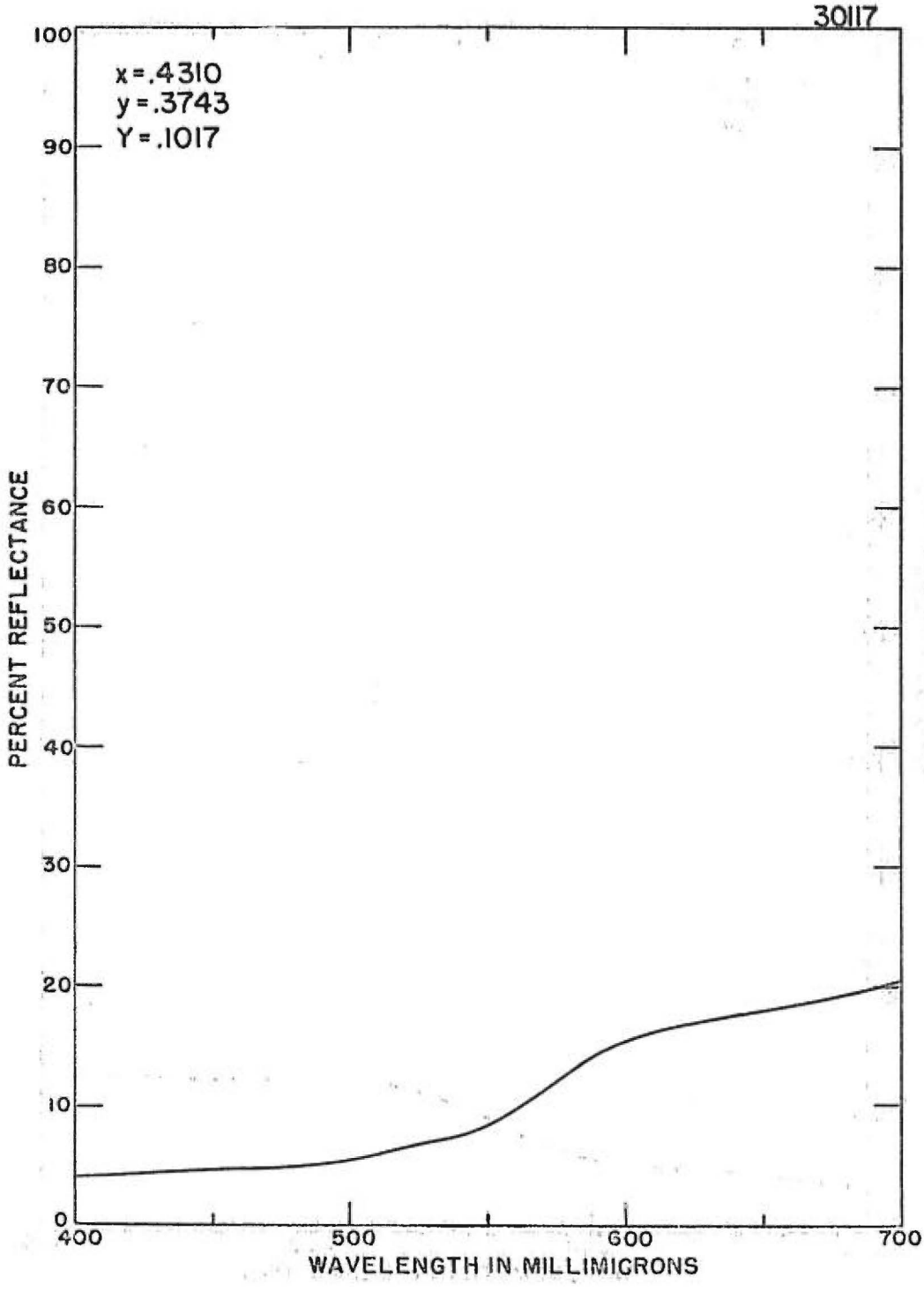

27144
x = .2884
y = .2213
Y = .1295
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

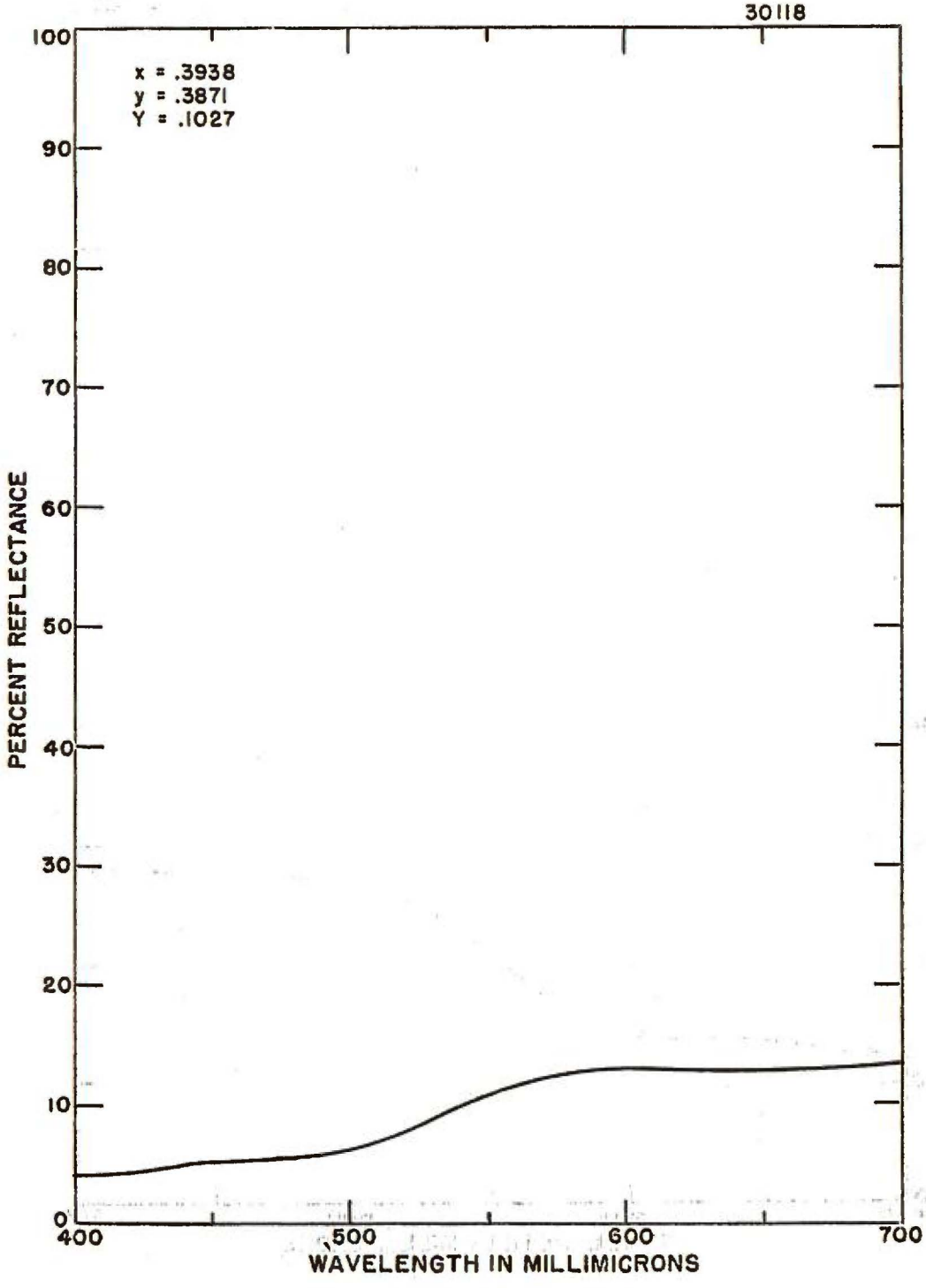

30045
x=.3590
y=.3379
Y=.0598
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

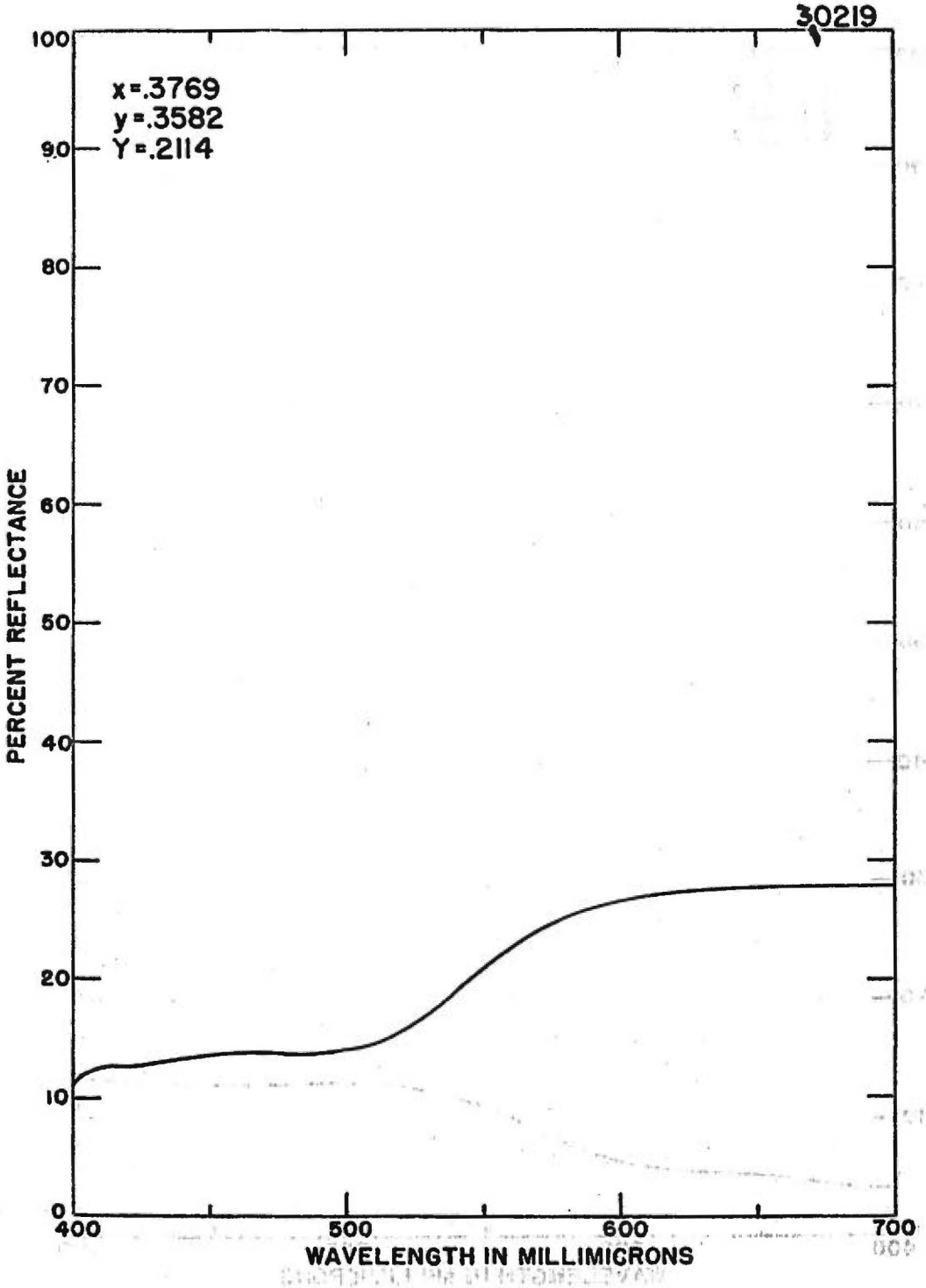

30099
x=.3803
y=.3627
Y=.0800
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

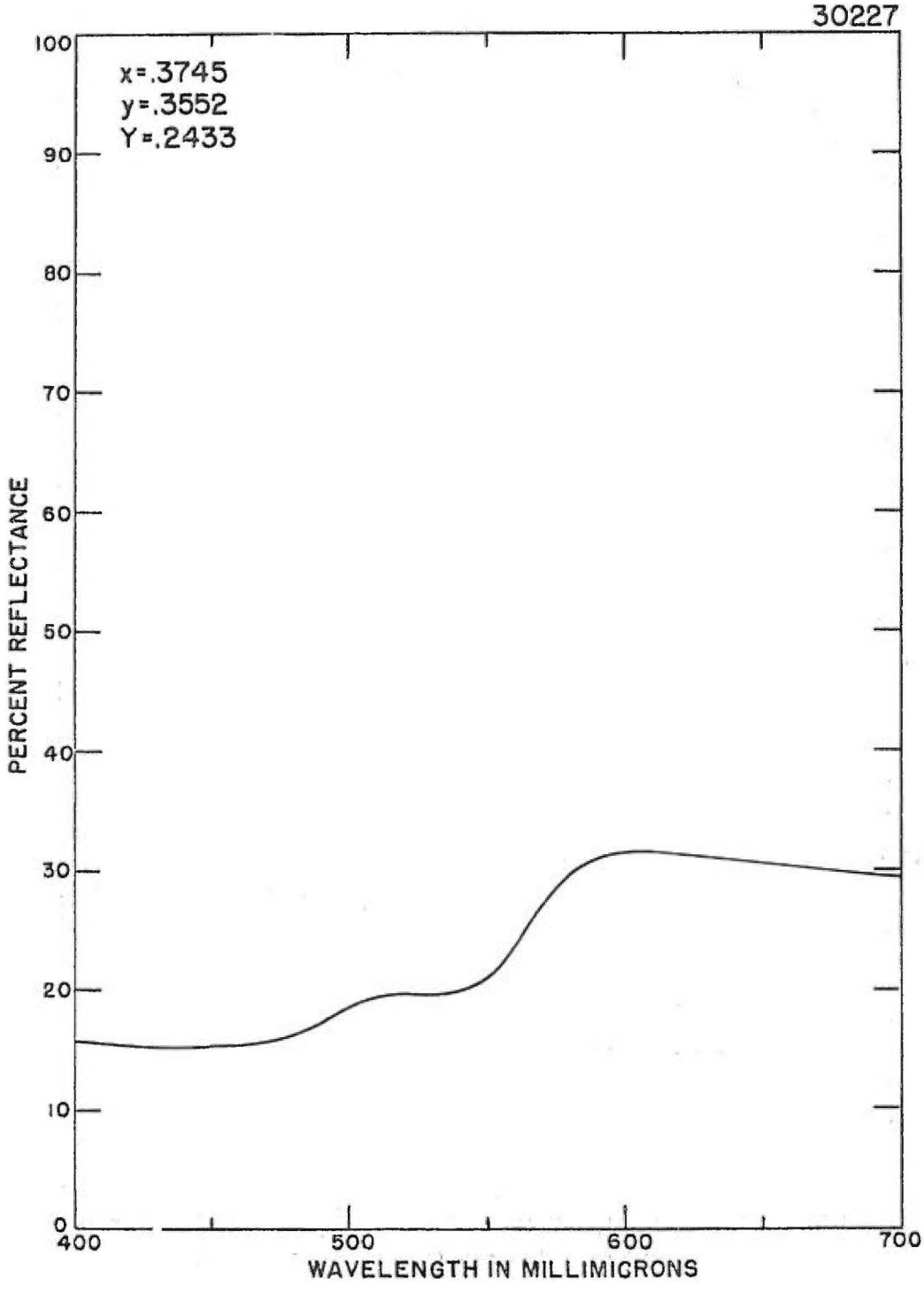

30109
x=.4566
y=.3486
Y=.1021
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

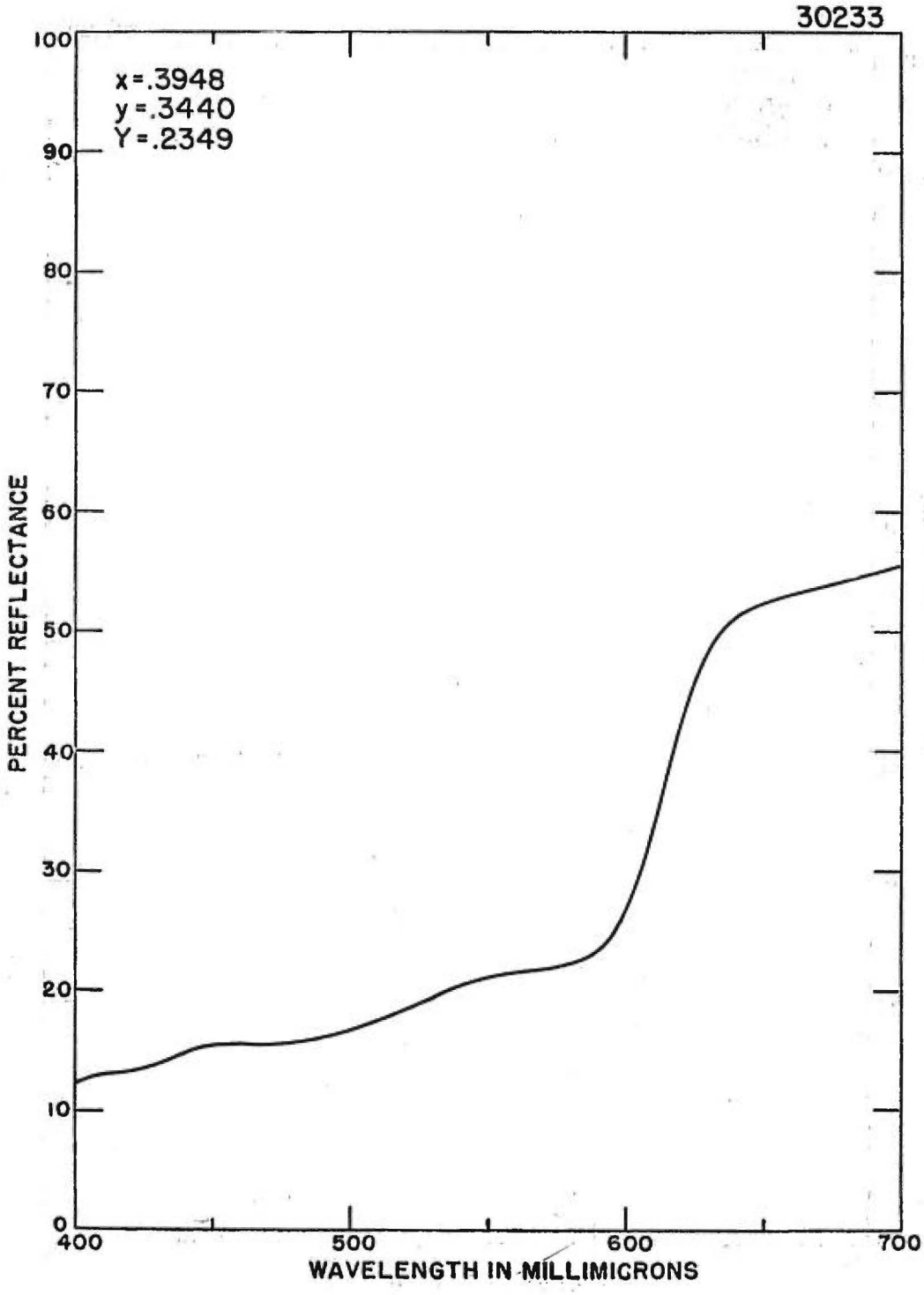

30111
x=.3861
y=.3335
Y=.1054
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

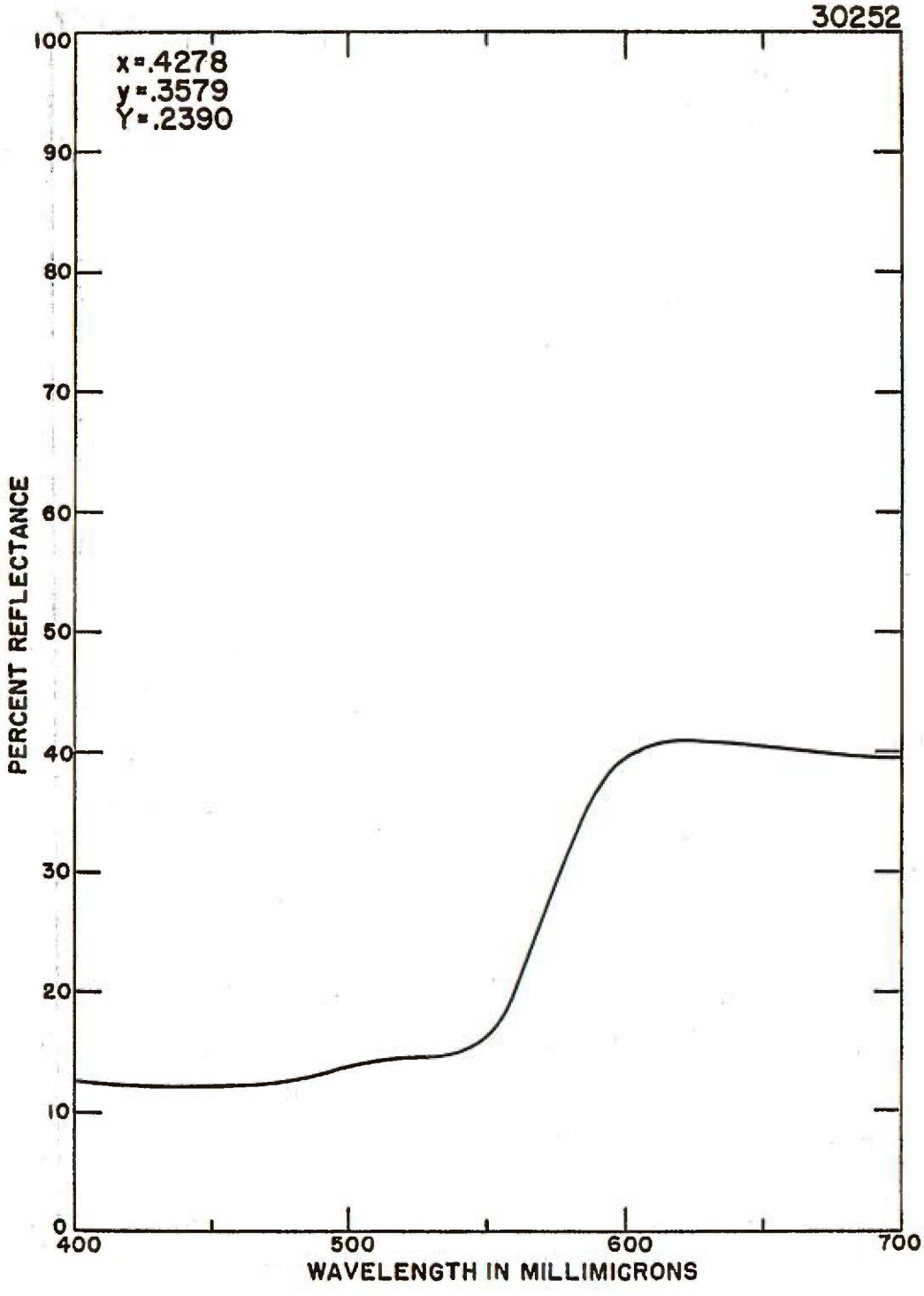

30117
x = .4310
y = .3743
Y = .1017
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

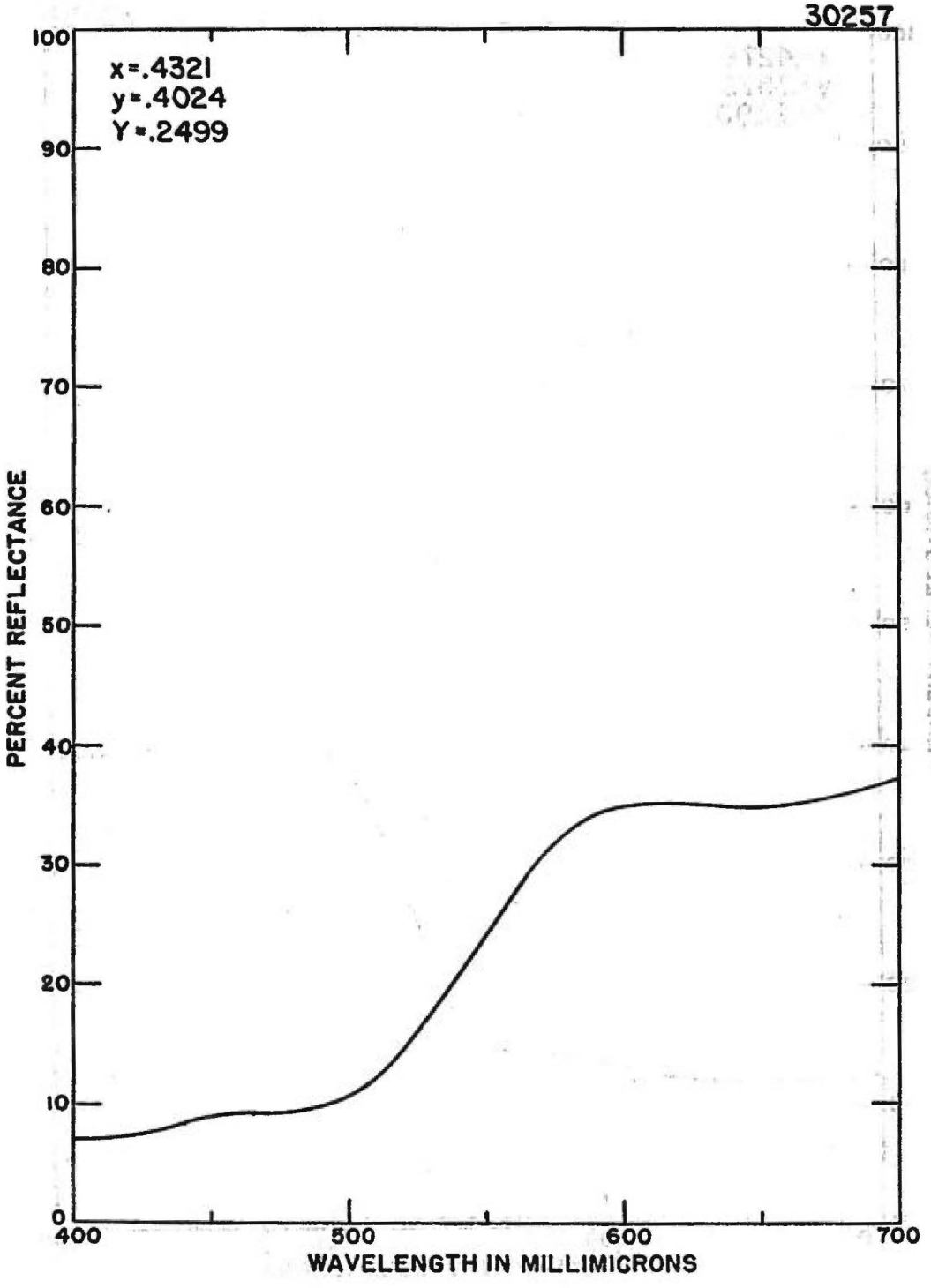

30118
x = .3938
y = .3871
Y = .1027
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

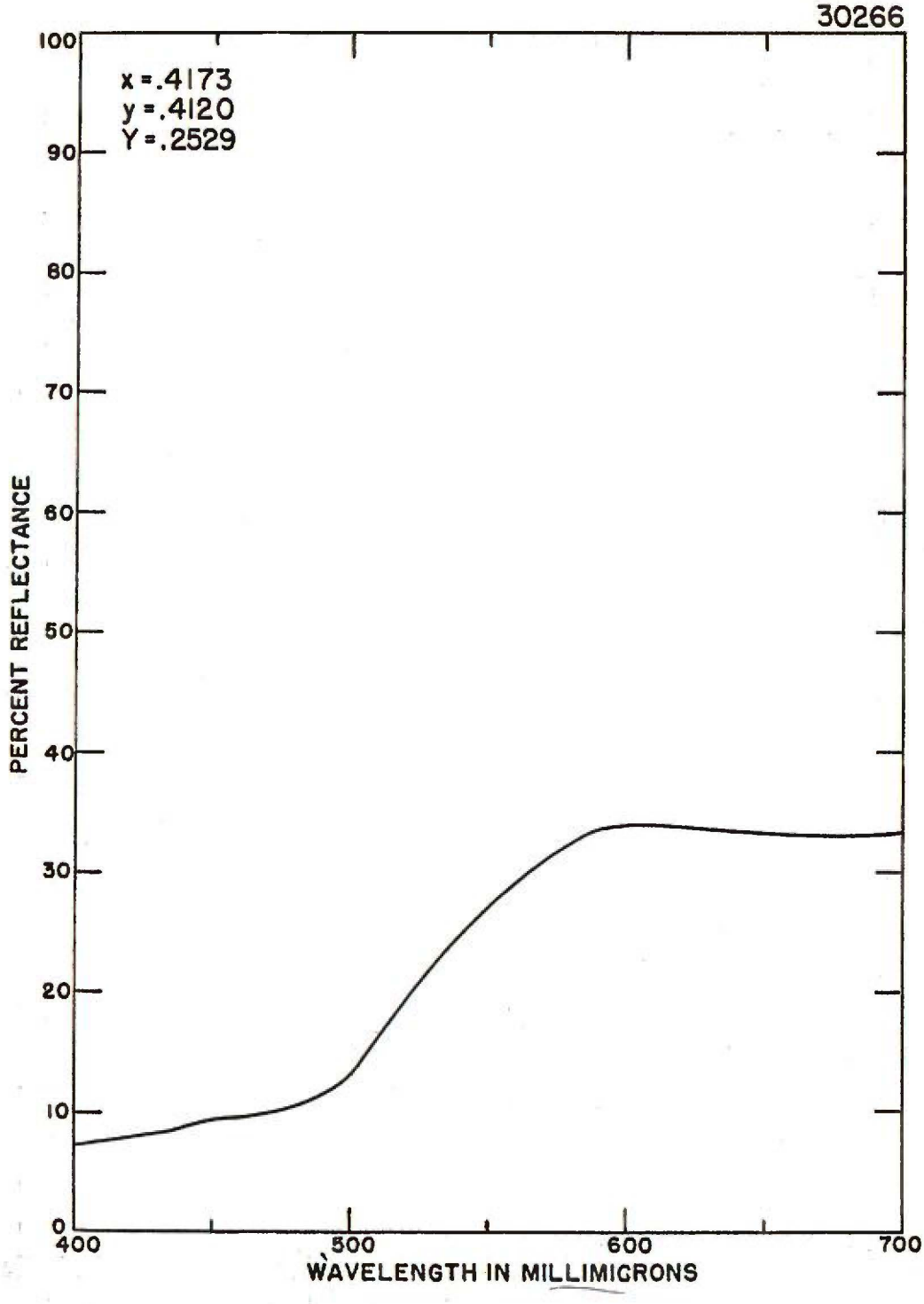

30219
x=.3769
y=.3582
Y=.2114
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

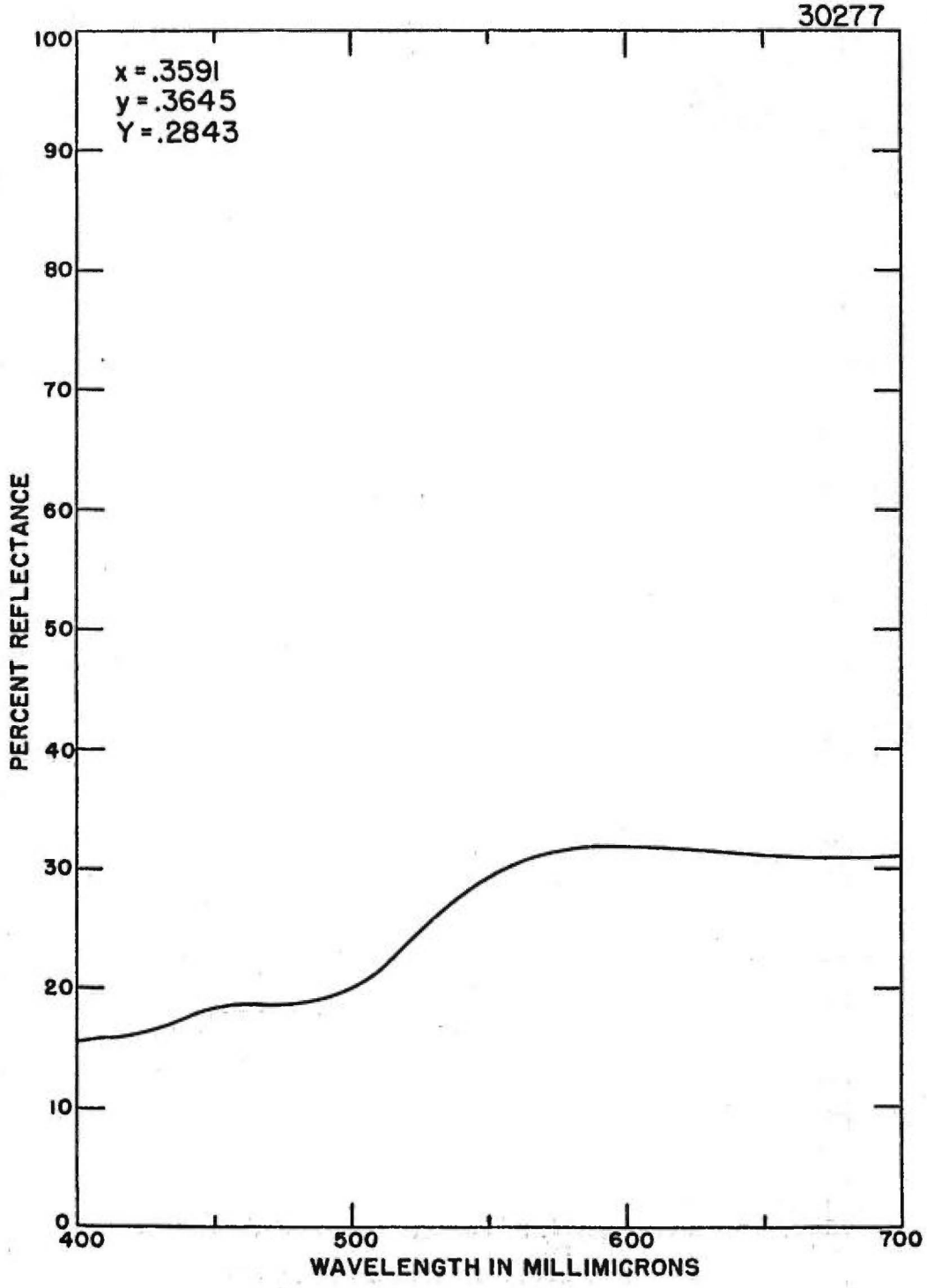

30227
x=.3745
y=.3552
Y=.2433
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

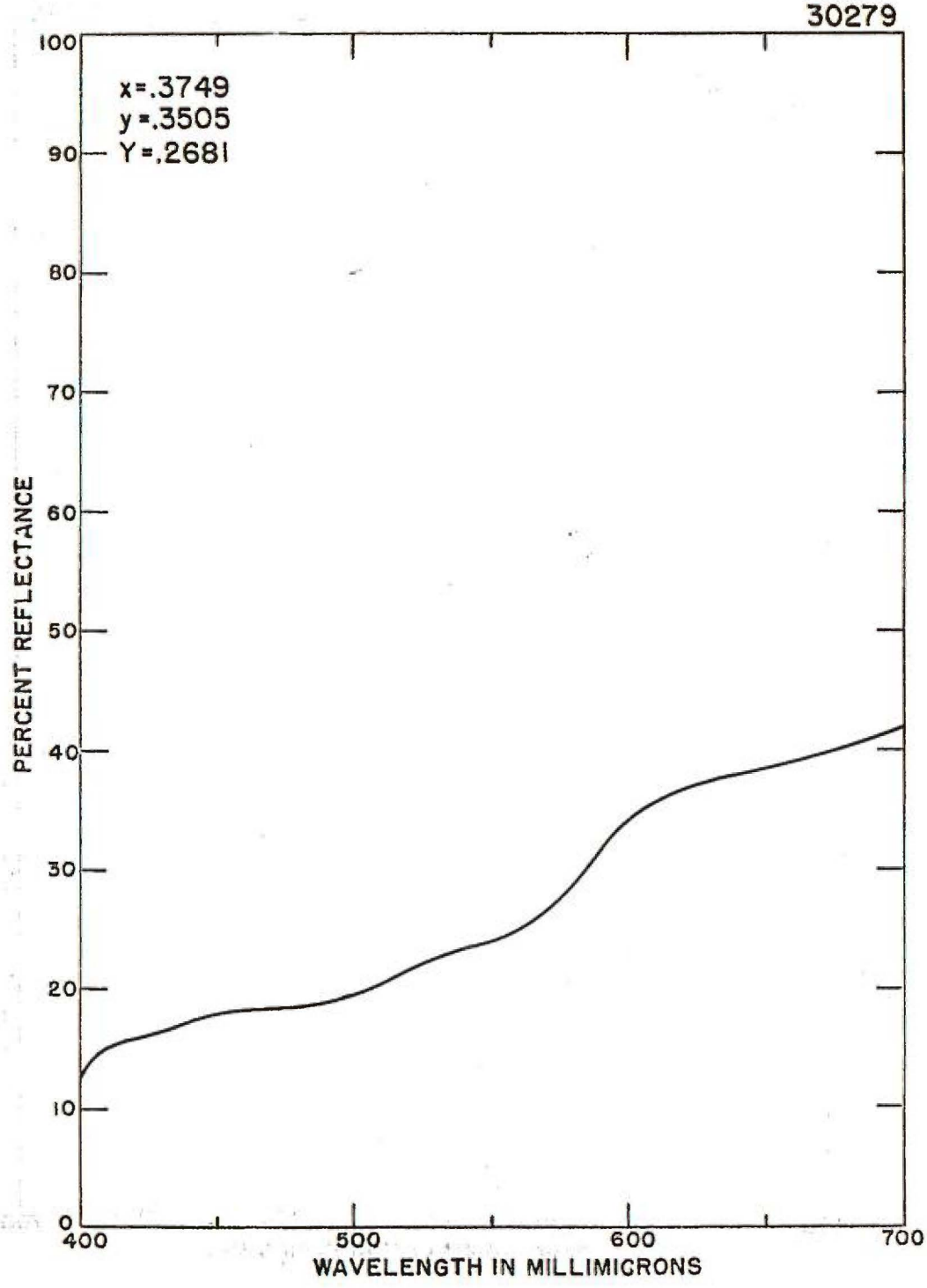

30233
x=.3948
y=.3440
Y=.2349
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

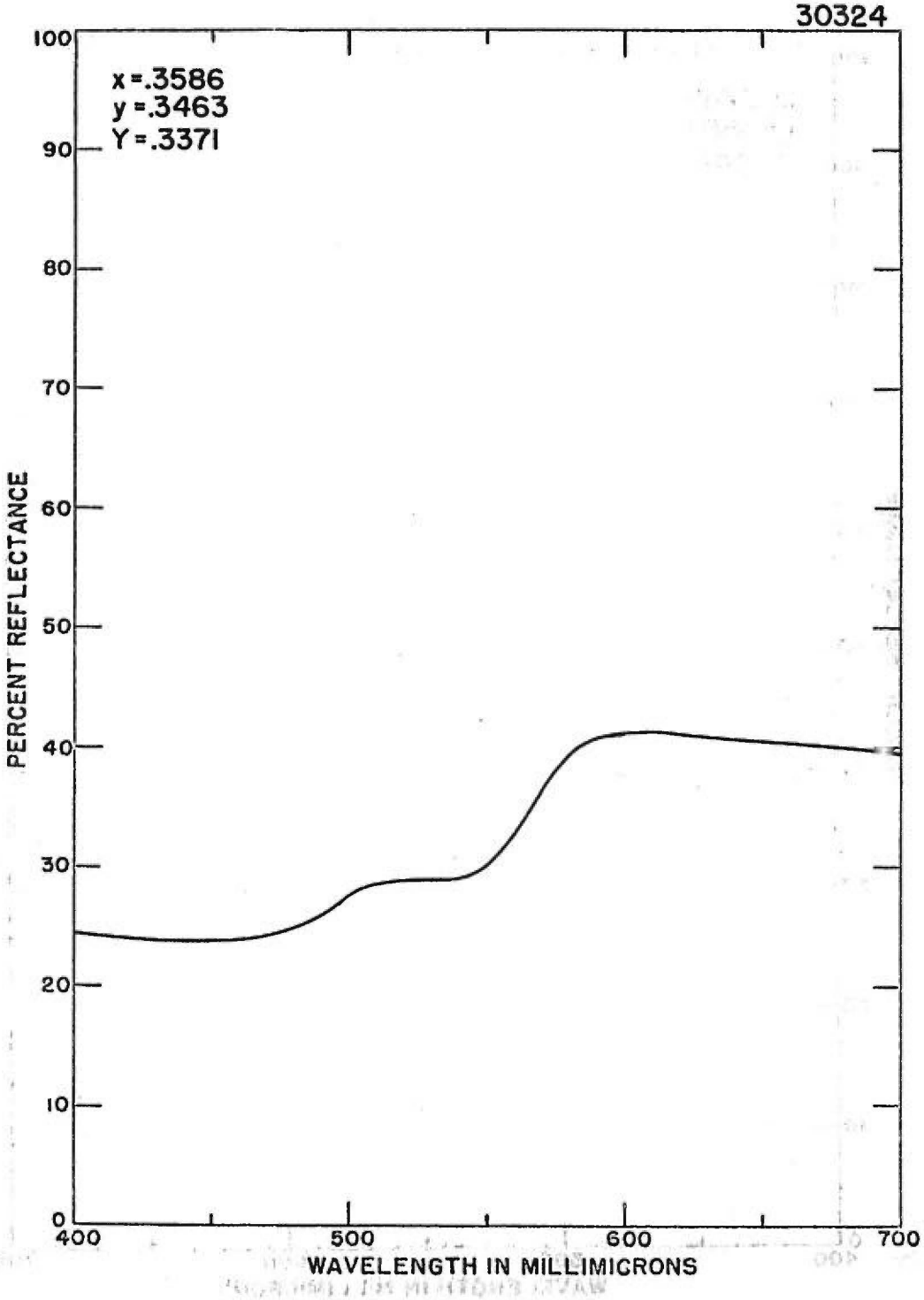

30252
x=.4278
y=.3579
Y=.2390
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

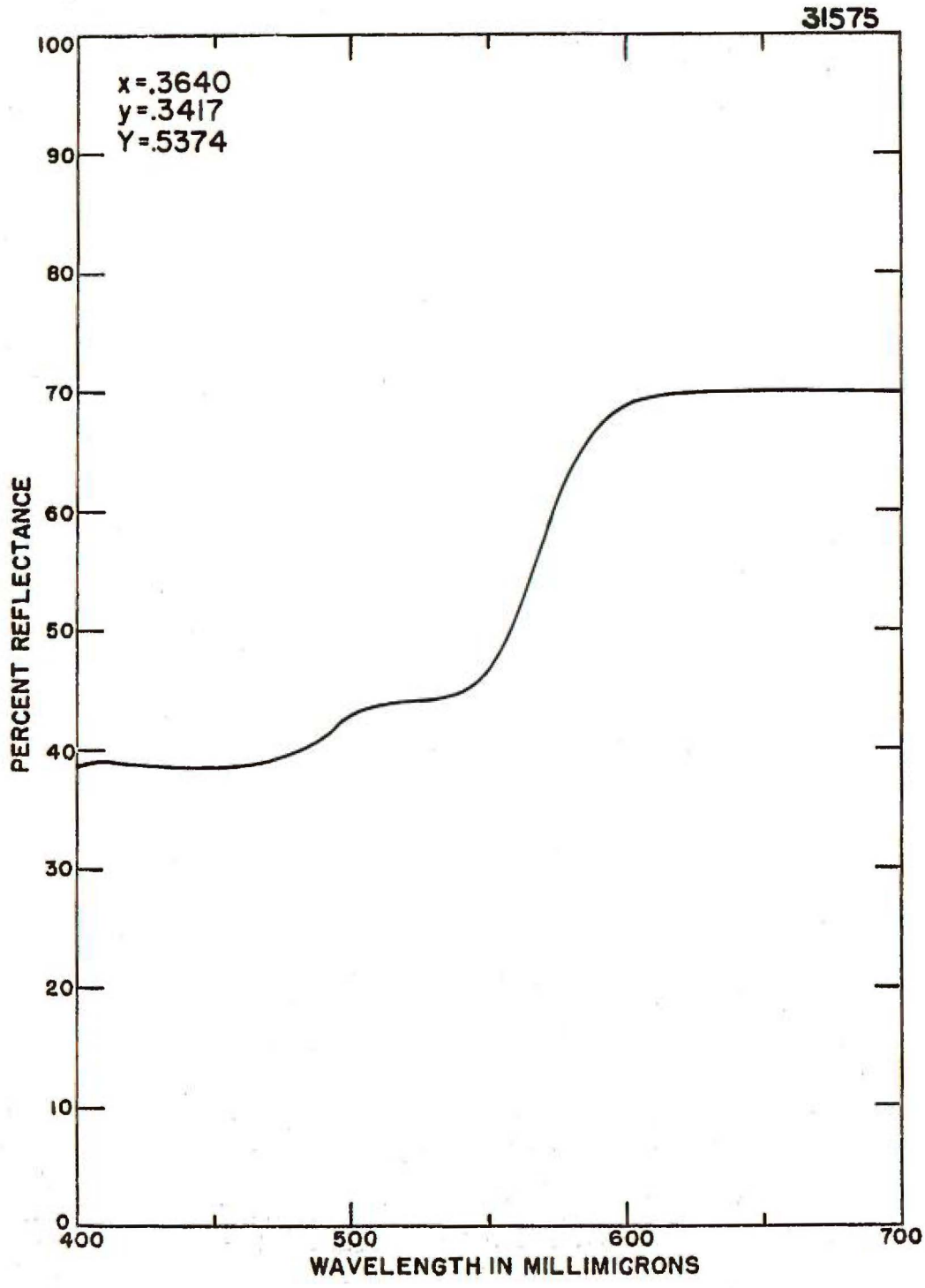

30257
x=.4321
y=.4024
Y=.2499
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

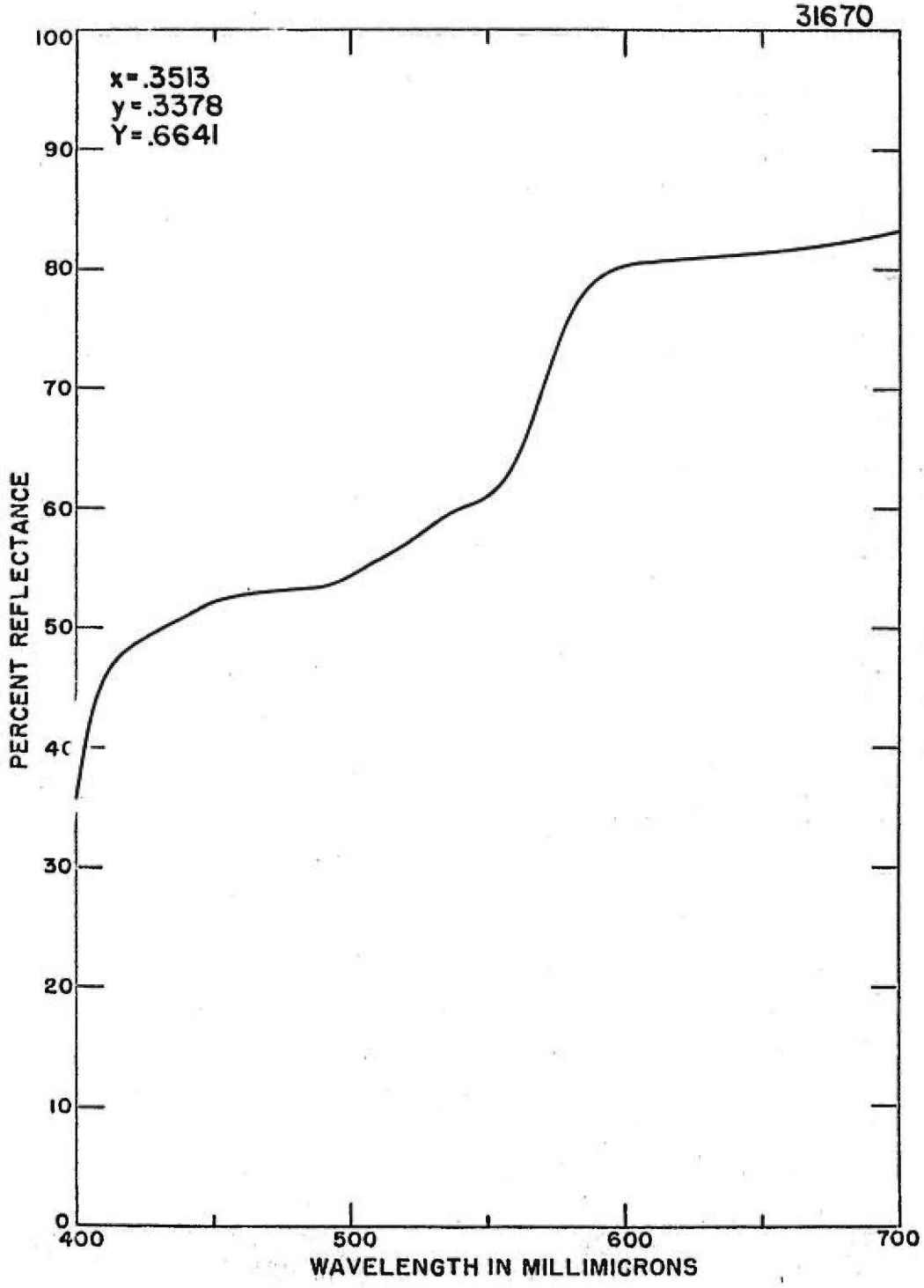

30266
x = .4173
y = .4120
Y = .2529
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

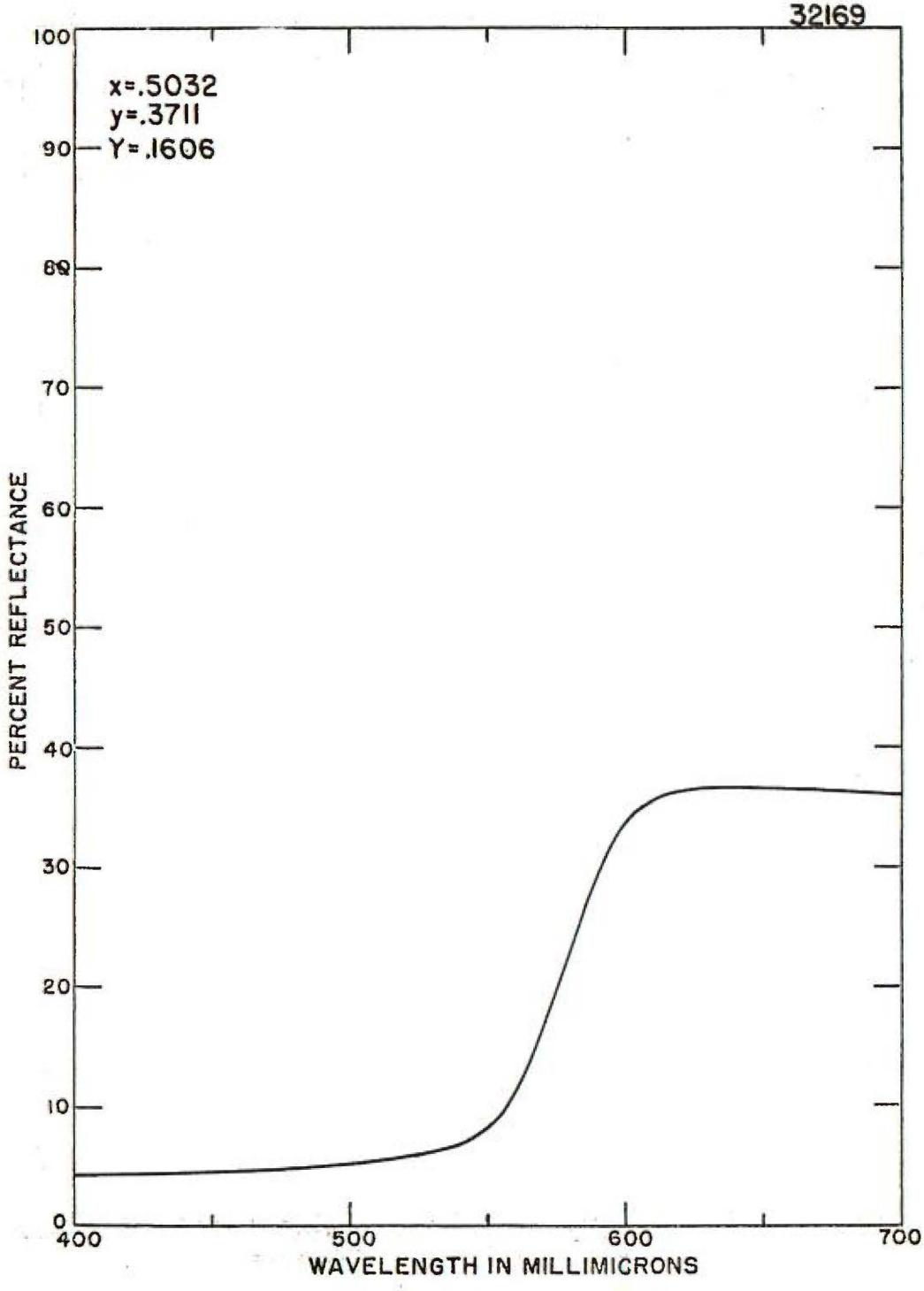

30277
x = .3591
y = .3645
Y = .2843
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

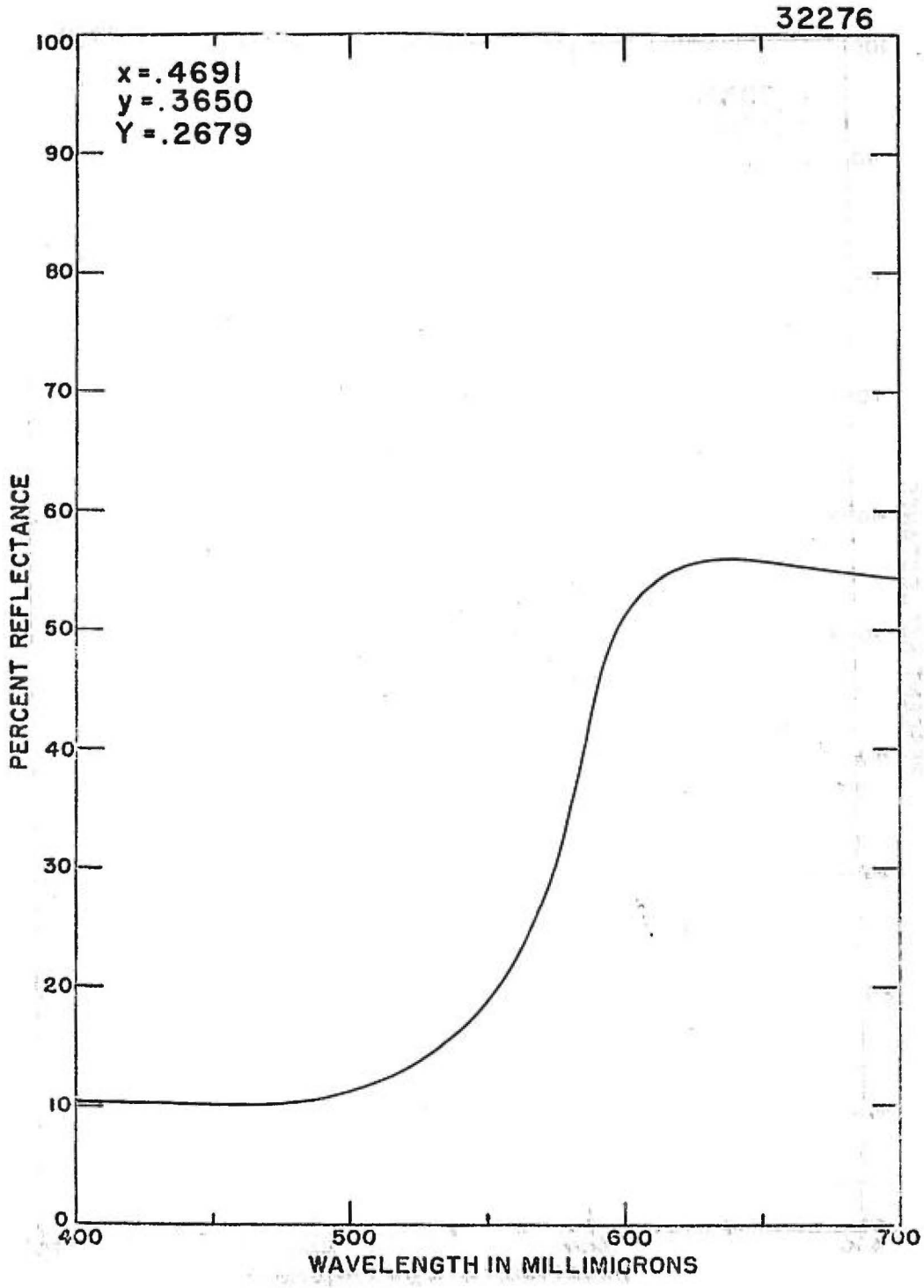

30279
x=.3749
y=.3505
Y=.2681
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

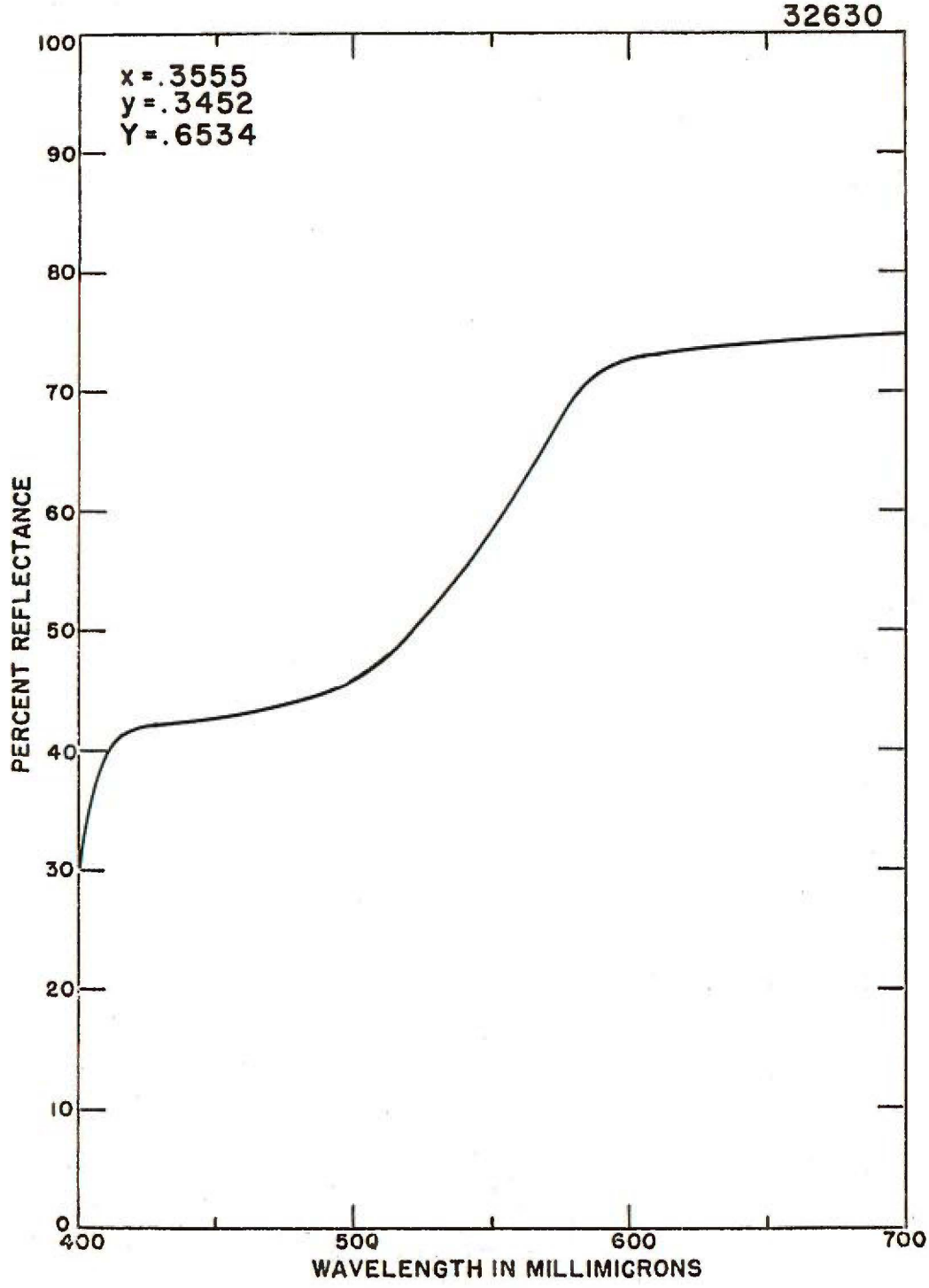

30324
x =.3586
y =.3463
Y =.3371
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

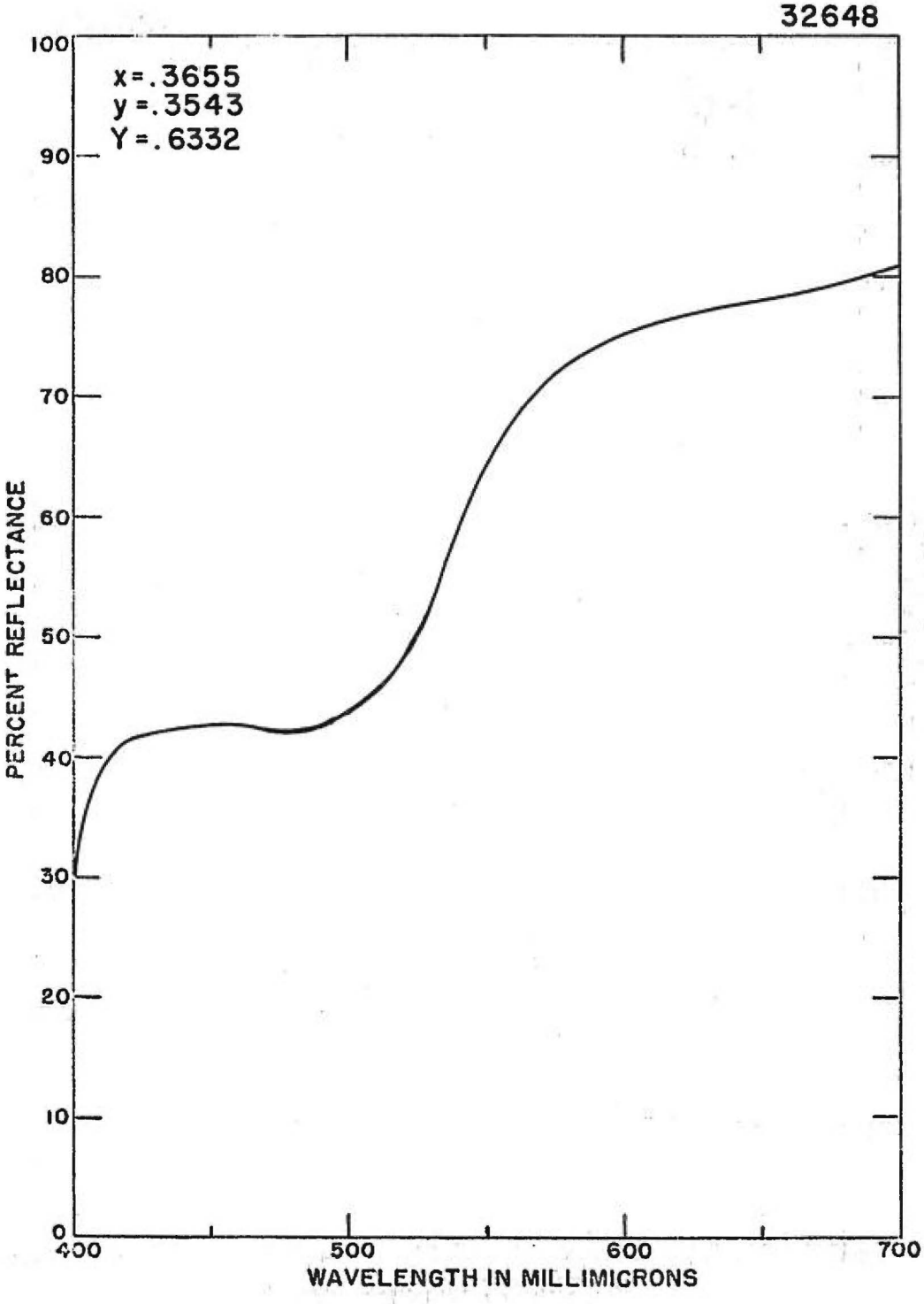

31575
x=.3640
y=.3417
Y=.5374
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

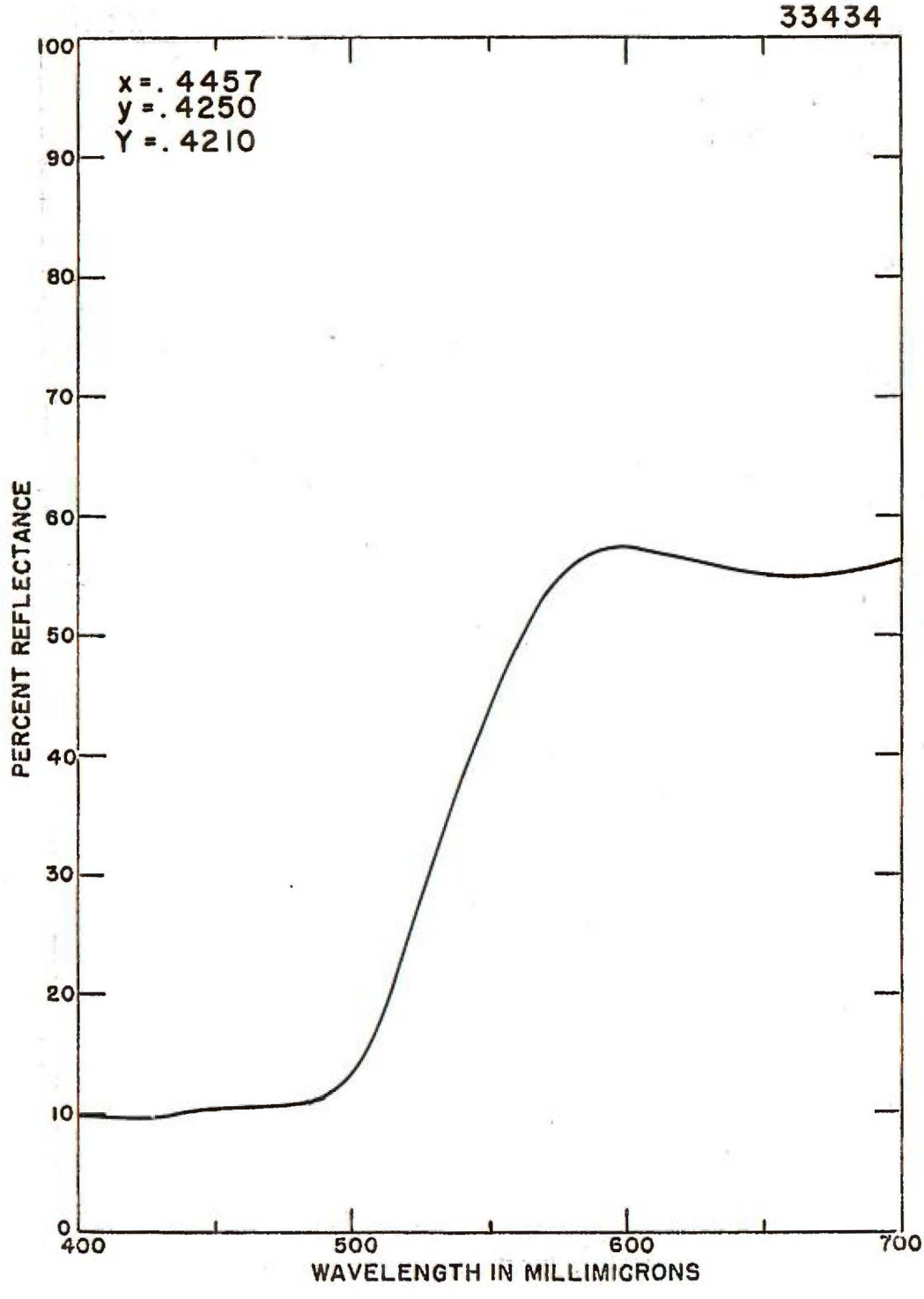

31670
x=.3513
y=.3378
Y=.6641
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

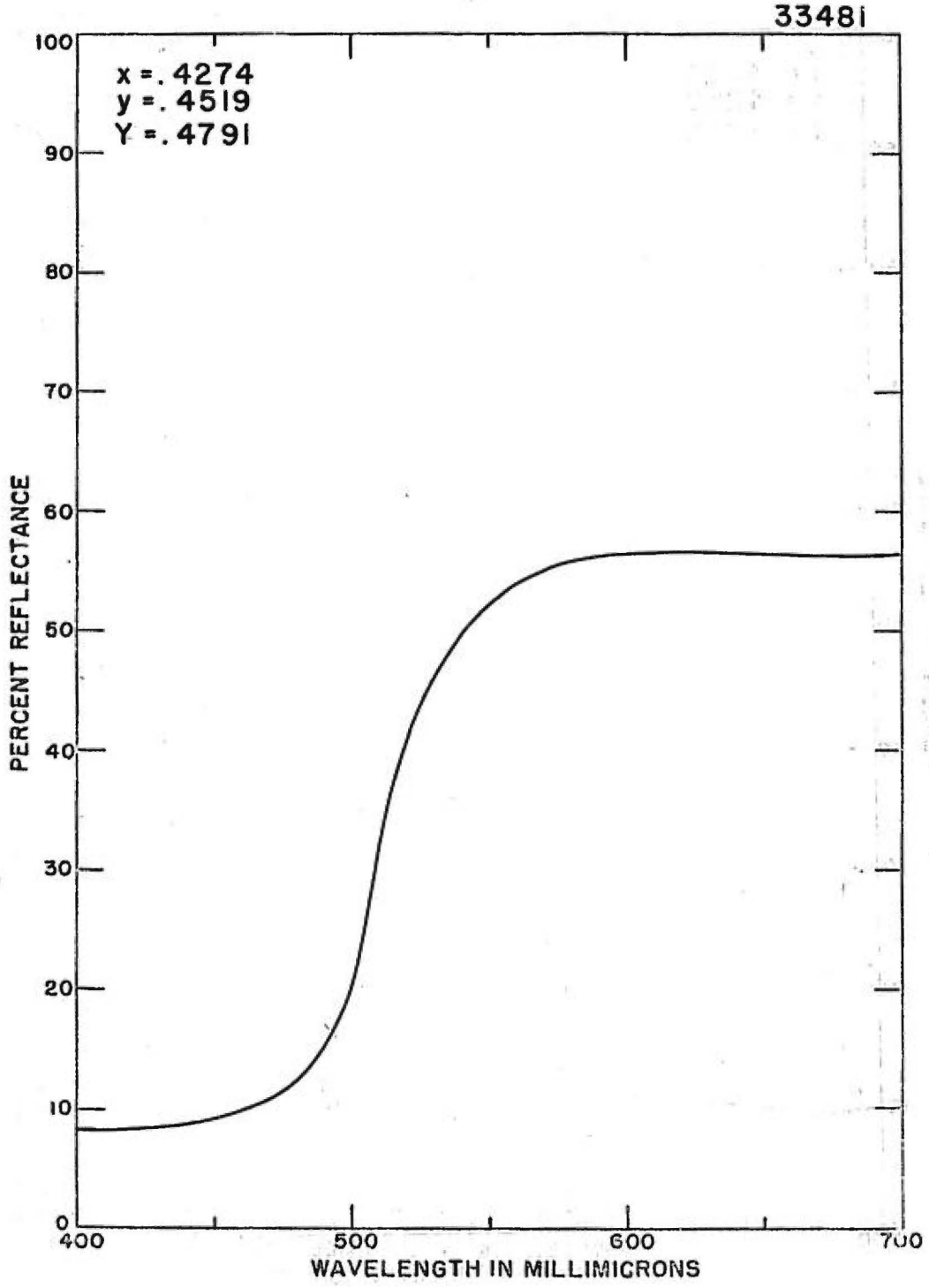

32169
x=.5032
y=.3711
Y=.1606
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

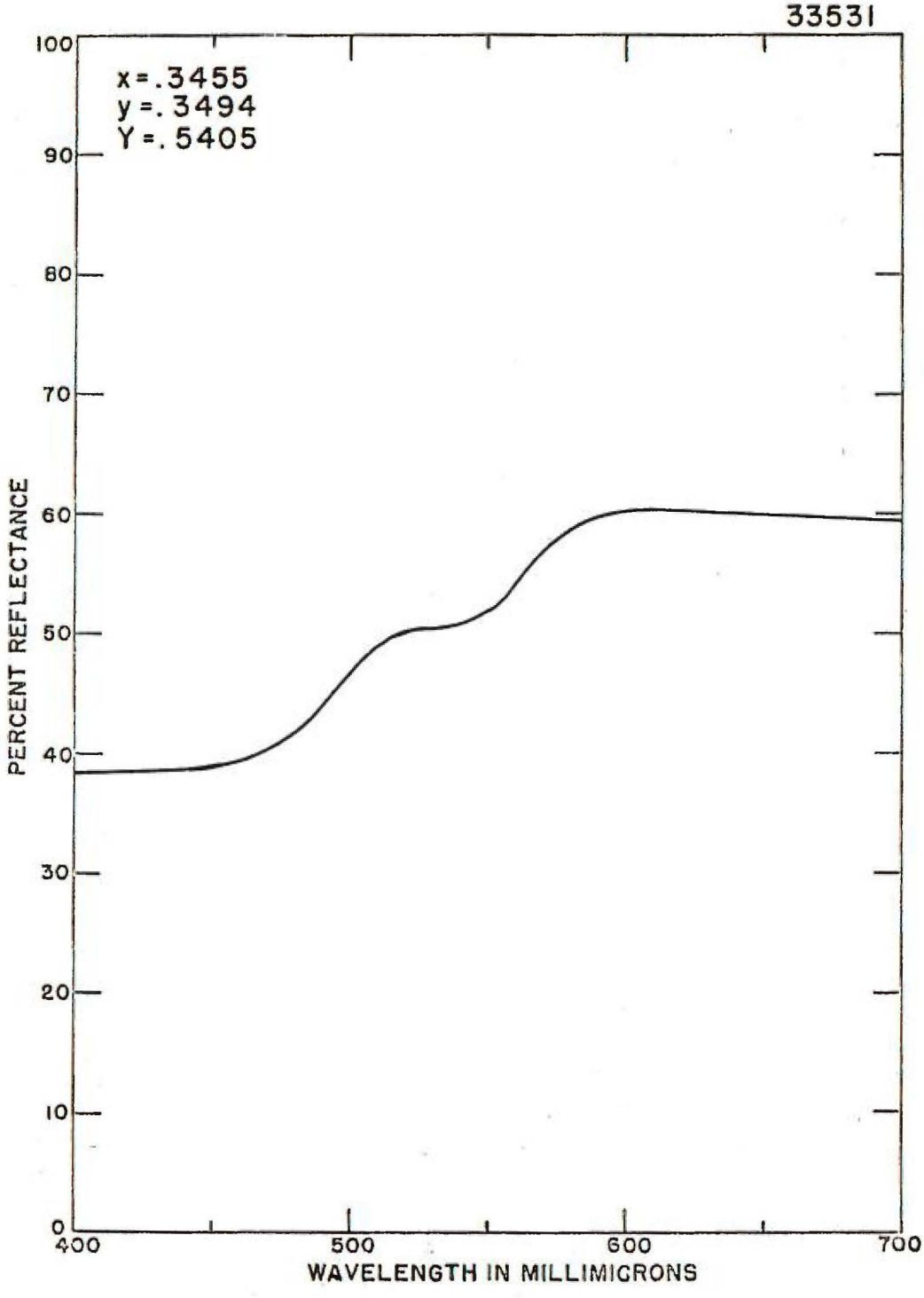

32276
x=.4691
y=.3650
Y=.2679
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

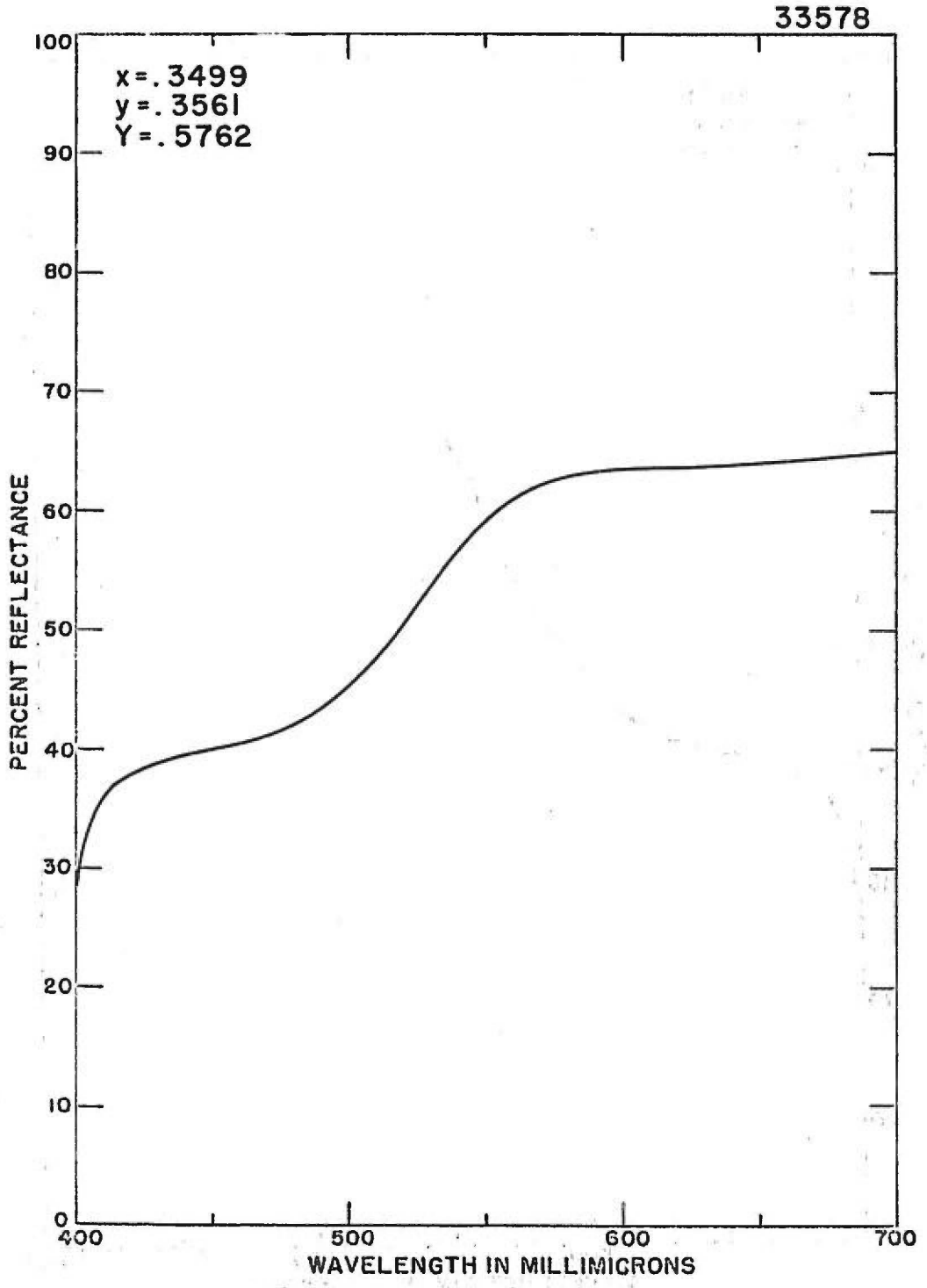

32630
x = .3555
y = .3452
Y = .6534
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

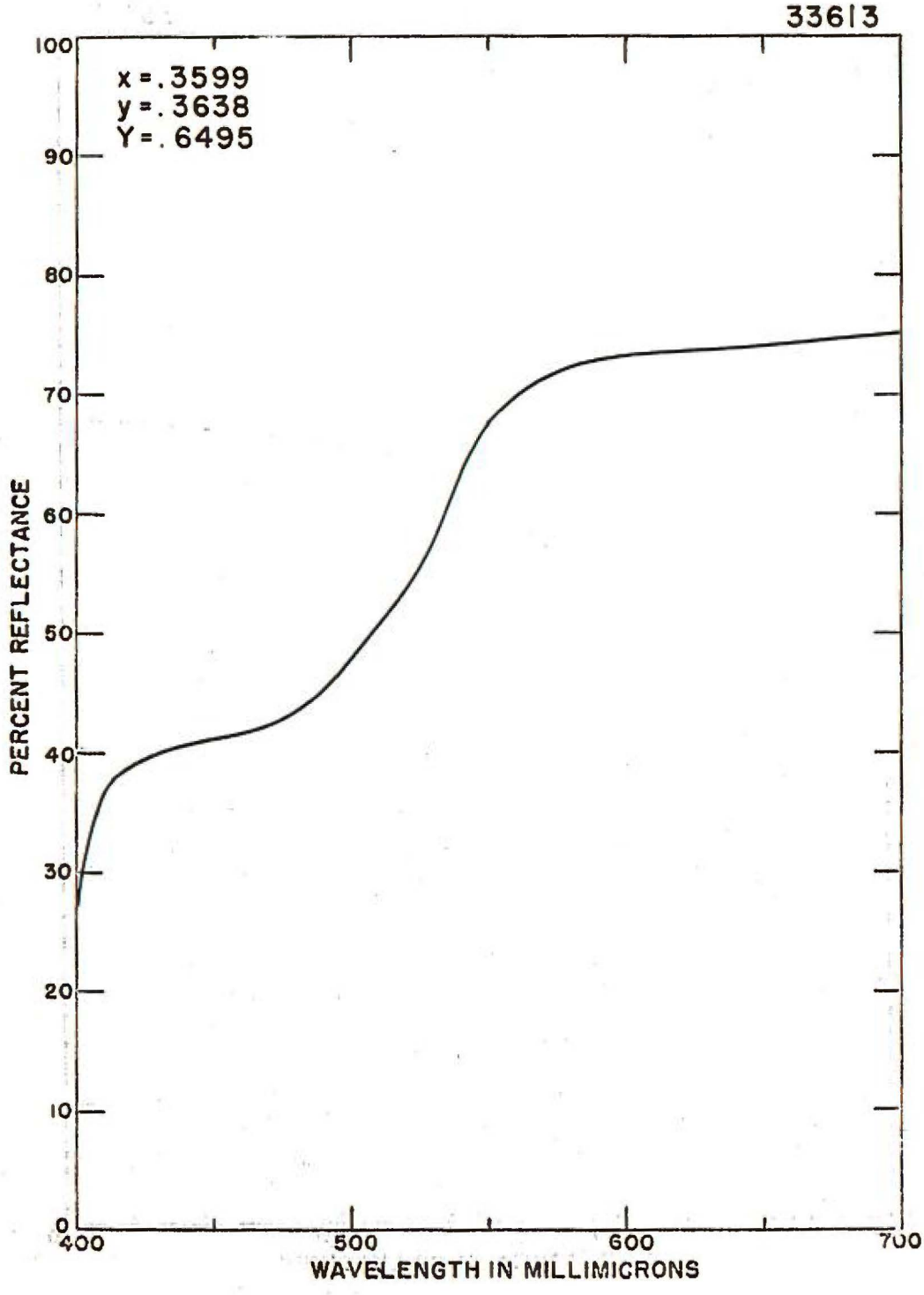

32648
x=.3655
y=.3543
Y=.6332
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

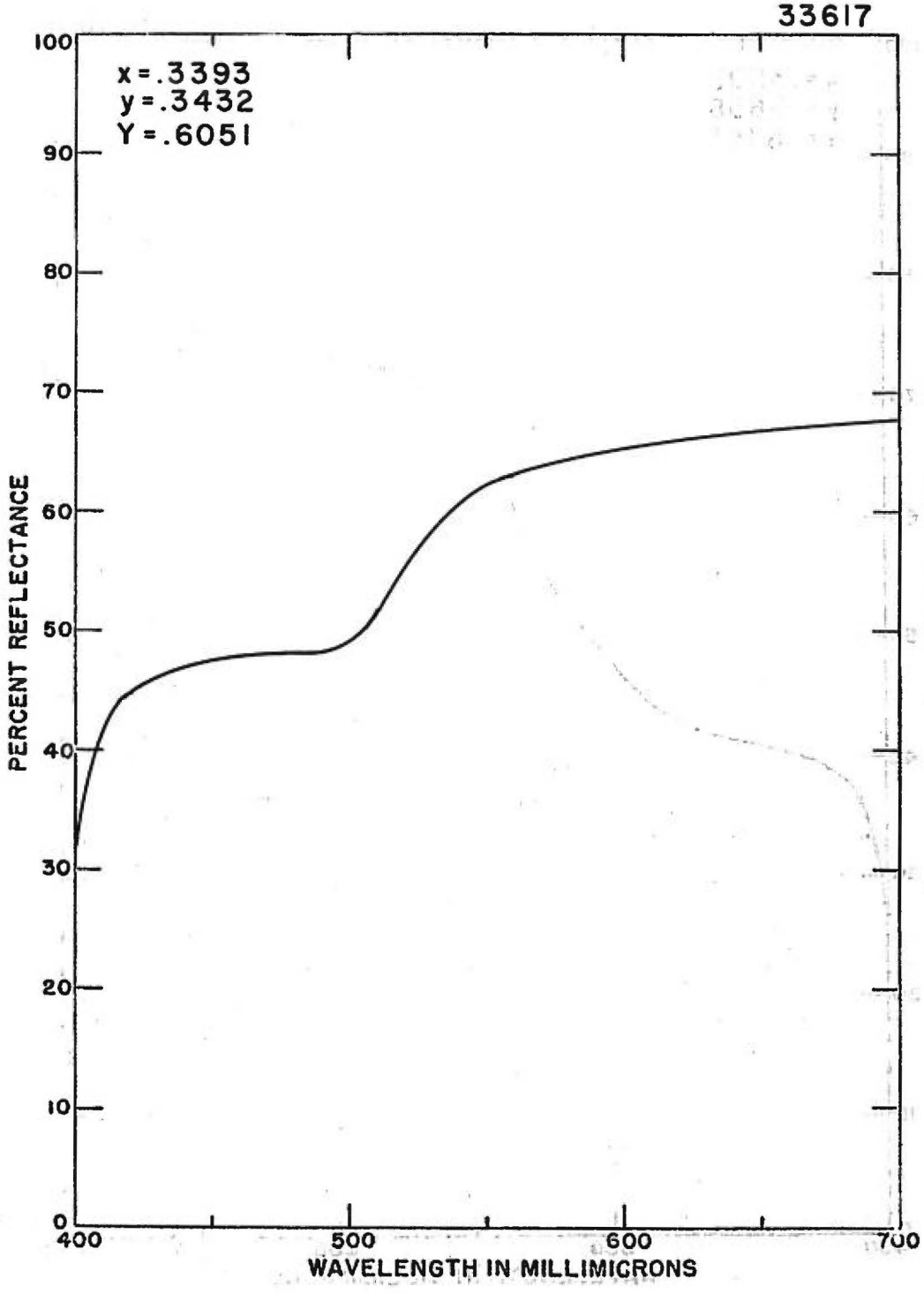

33434
x = .4457
y = .4250
Y = .4210
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

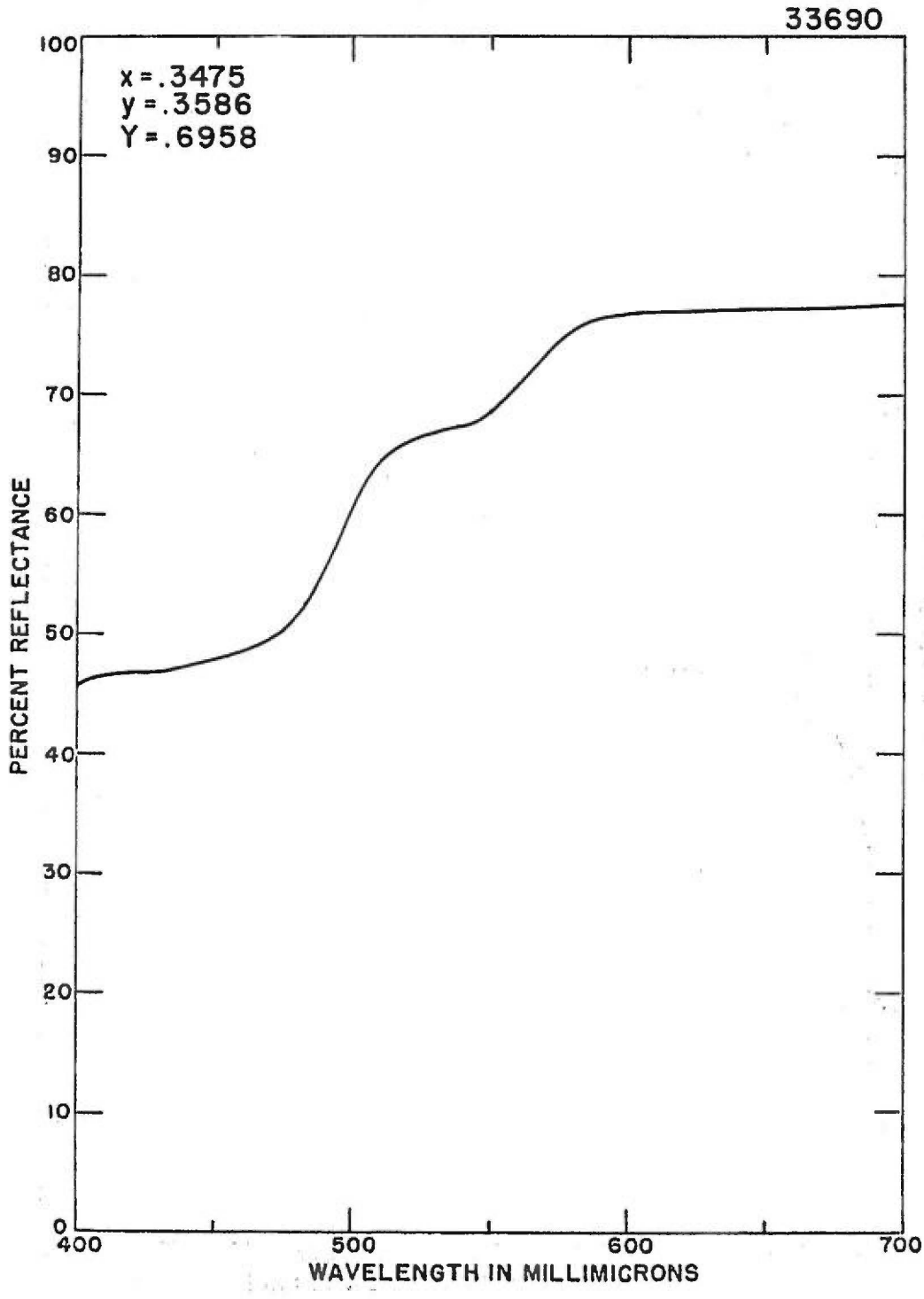

33481
x = .4274
y = .4519
Y = .4791
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

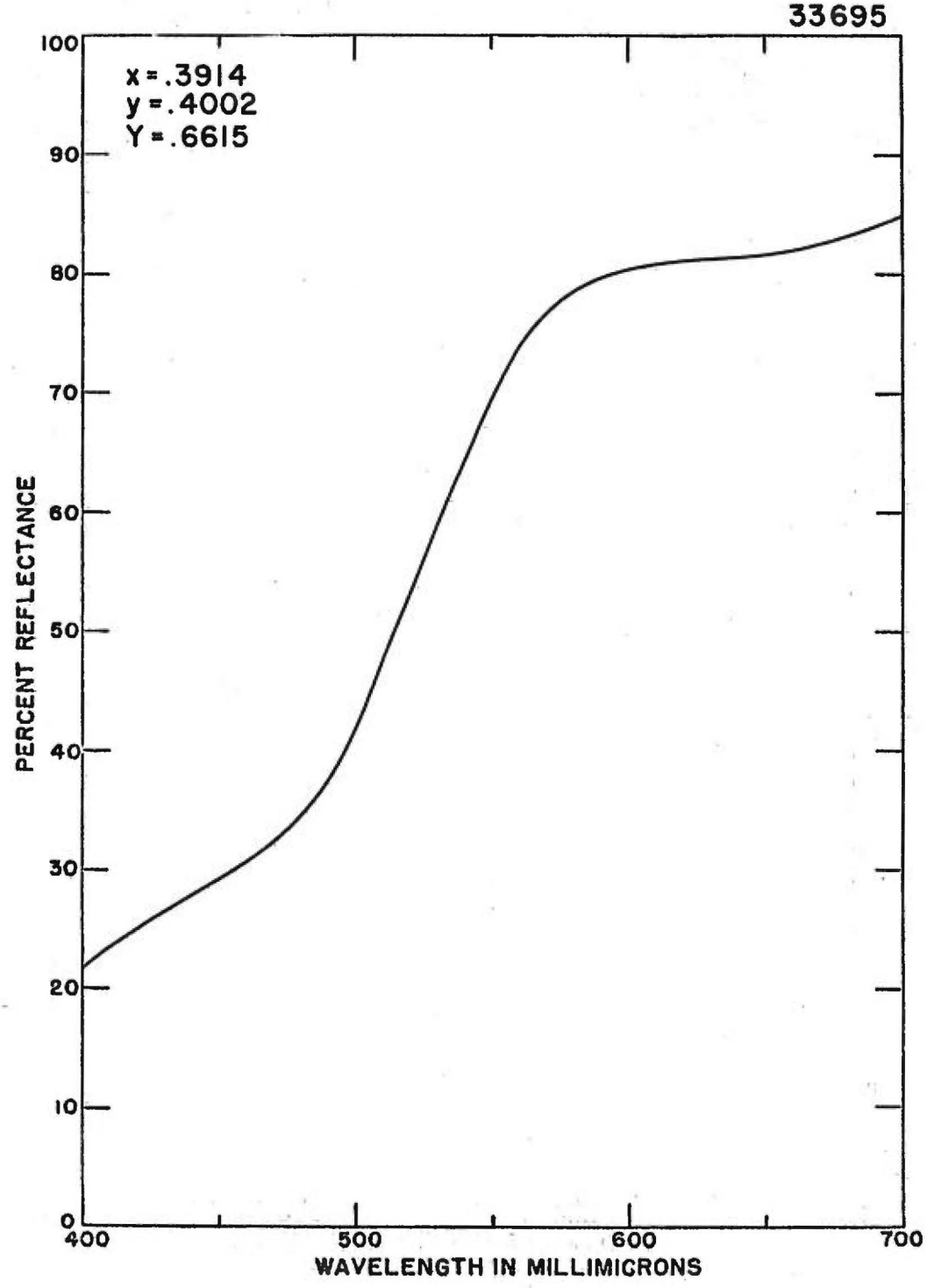

33531
x=.3455
y=.3494
Y=.5405
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

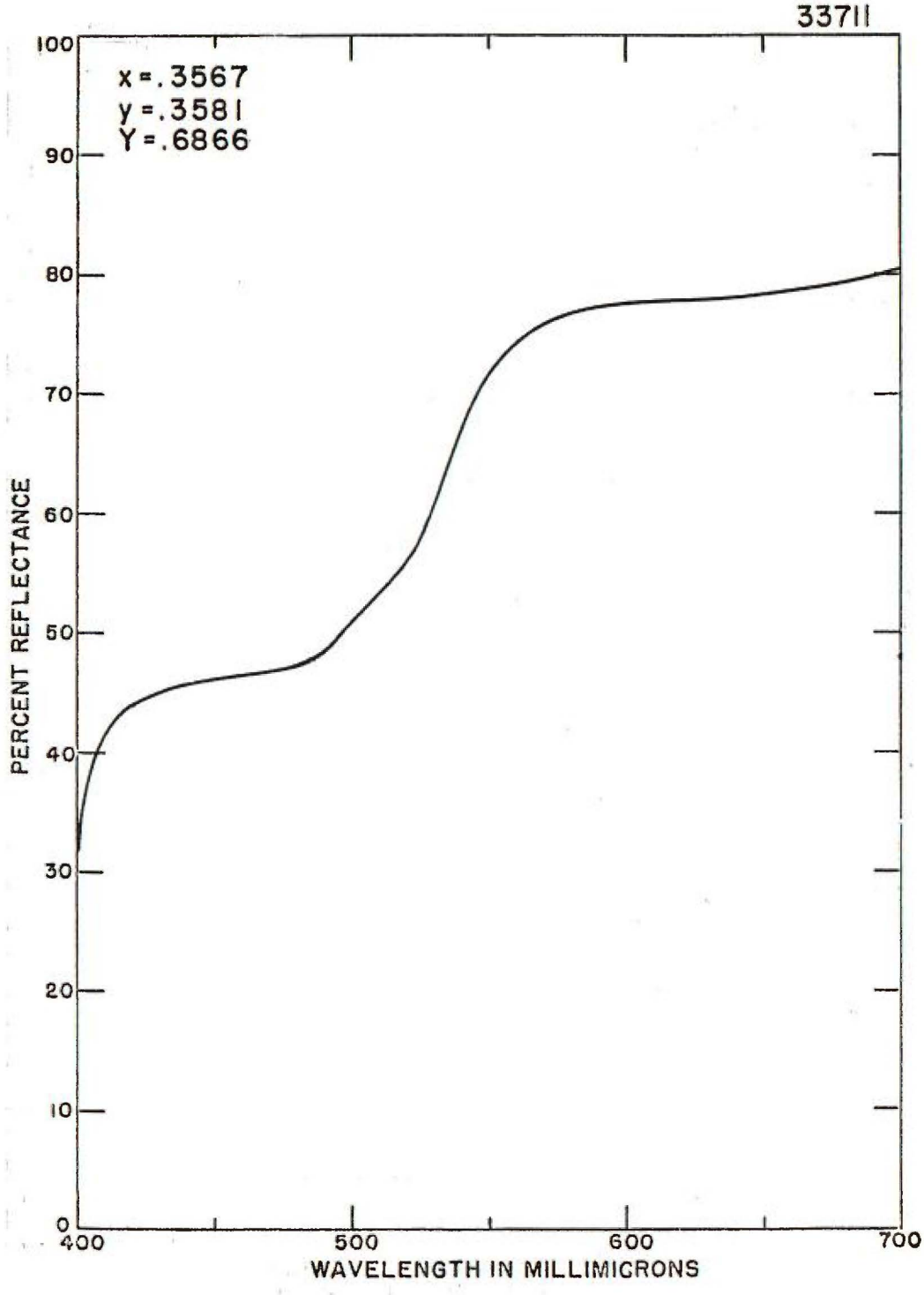

33578
x=.3499
y=.3561
Y=.5762
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

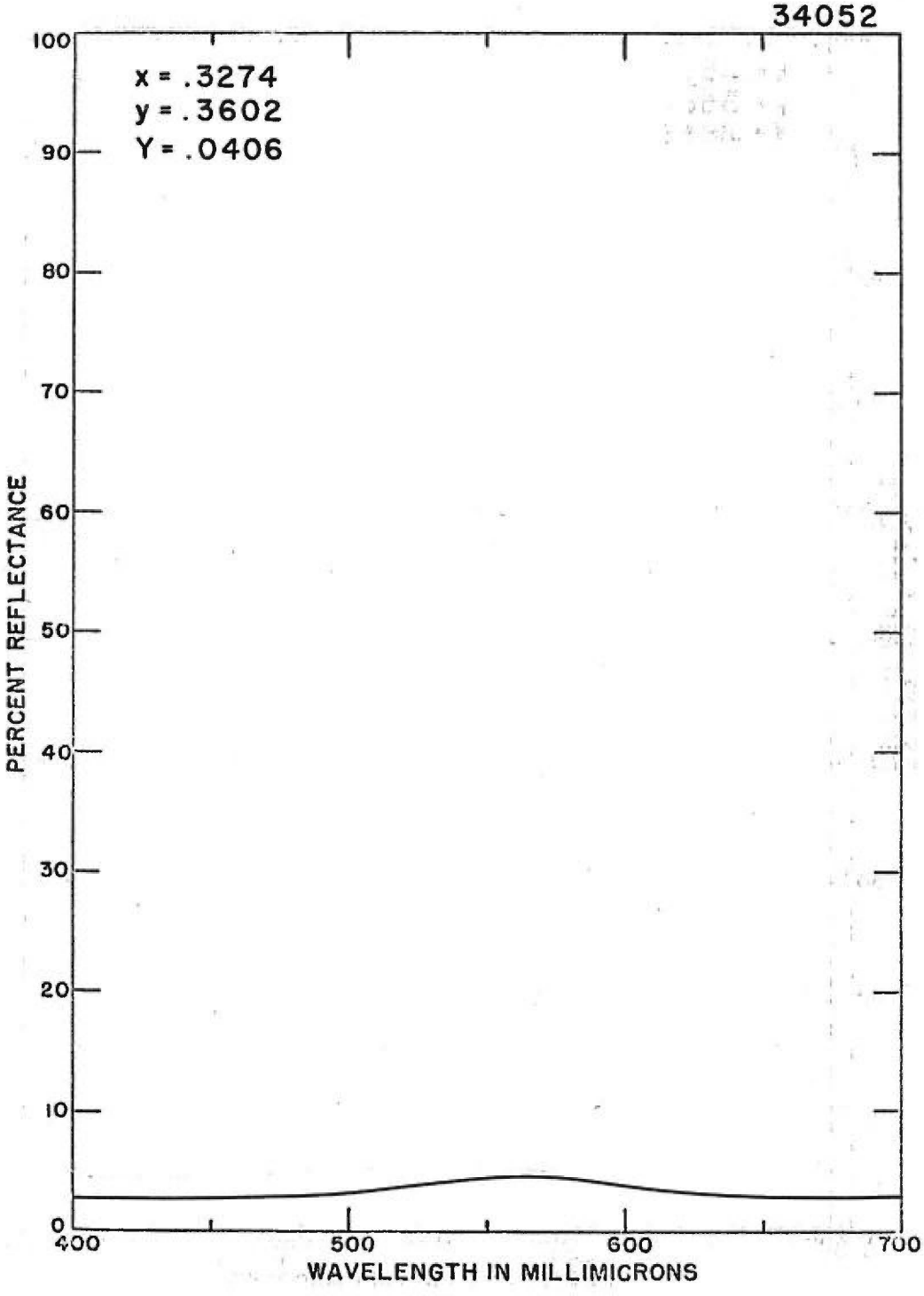

33613
x = .3599
y = .3638
Y = .6495
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

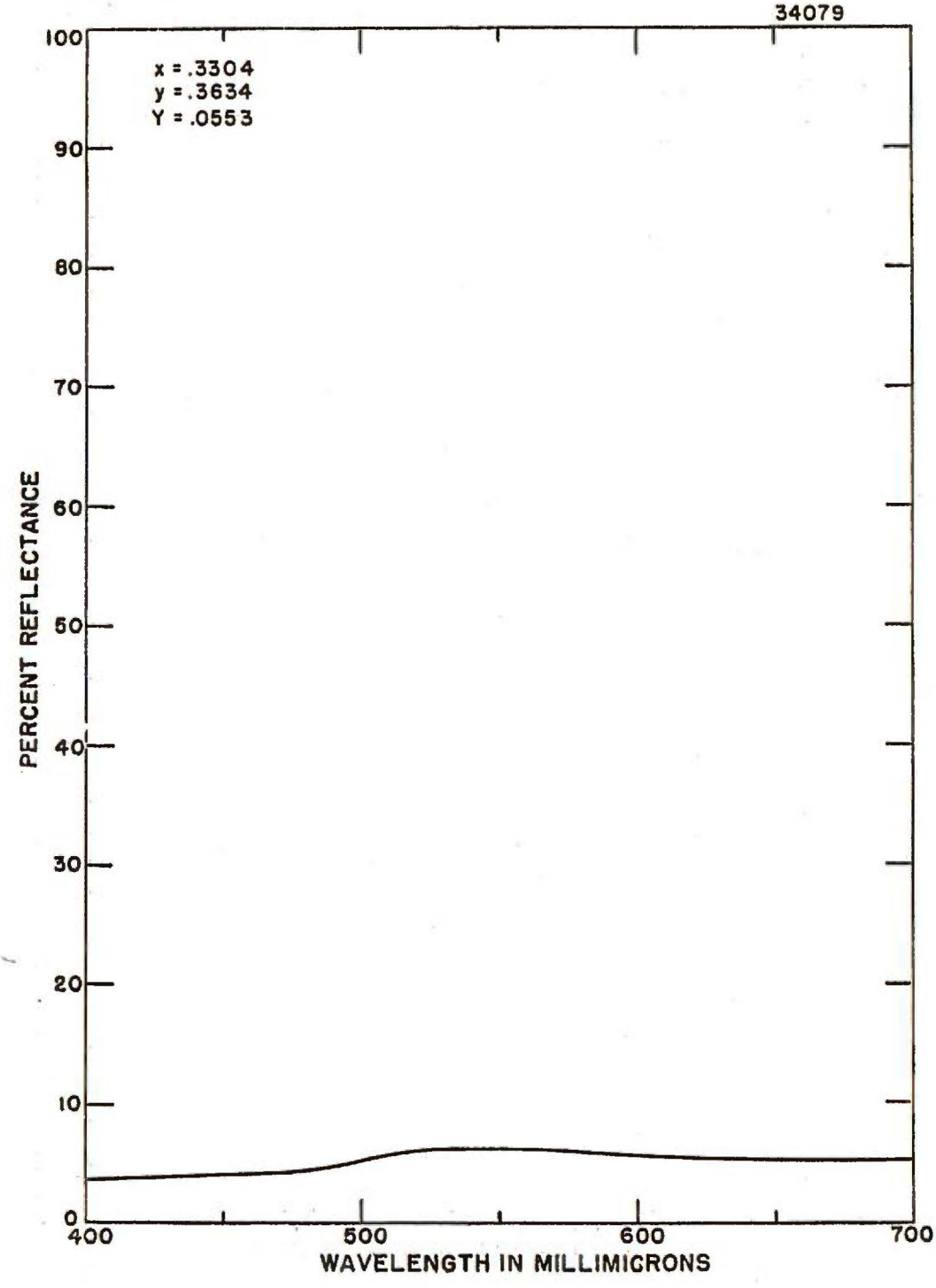

33617
x = .3393
y = .3432
Y = .6051
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

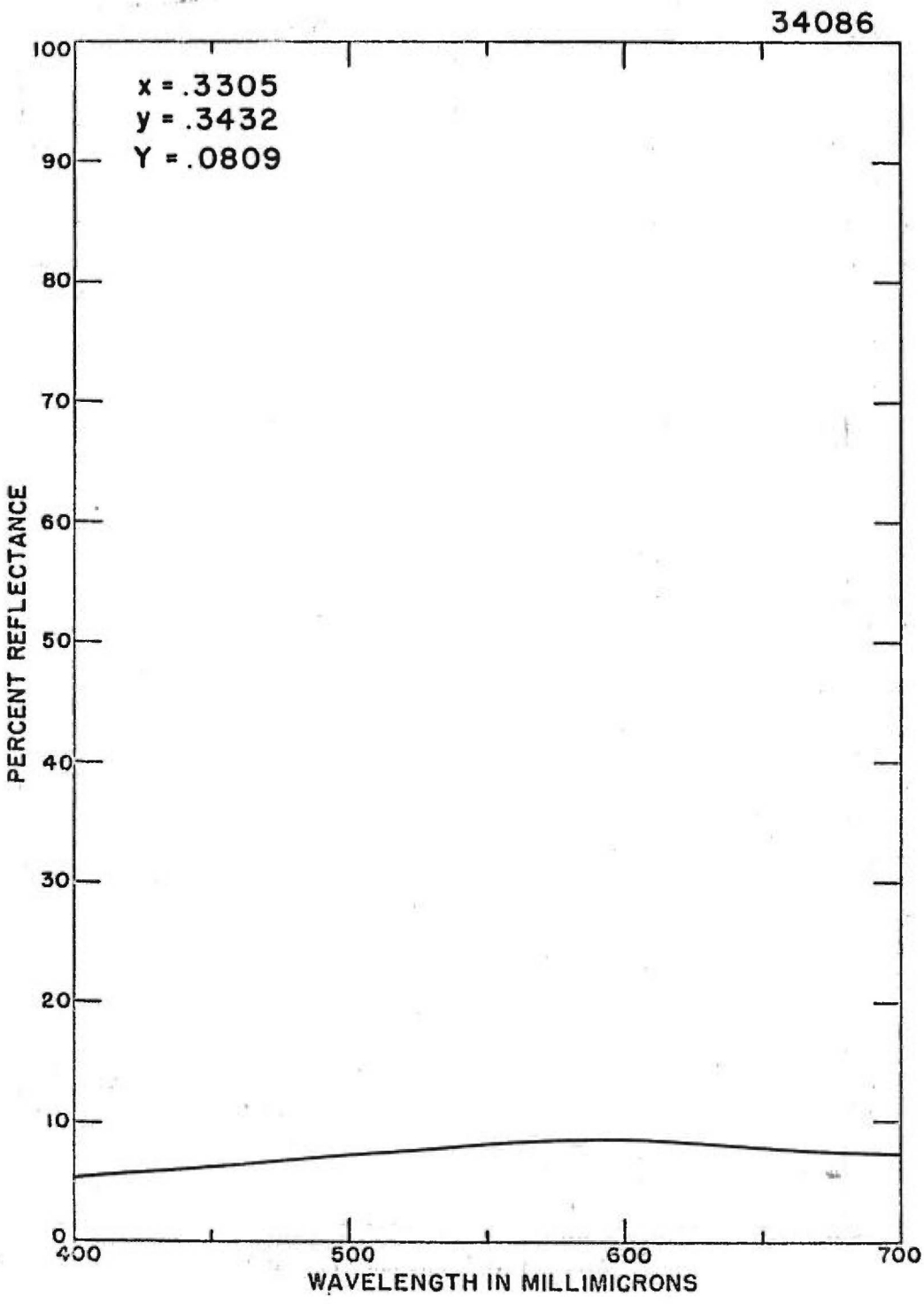

33690
x = .3475
y = .3586
Y = .6958
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

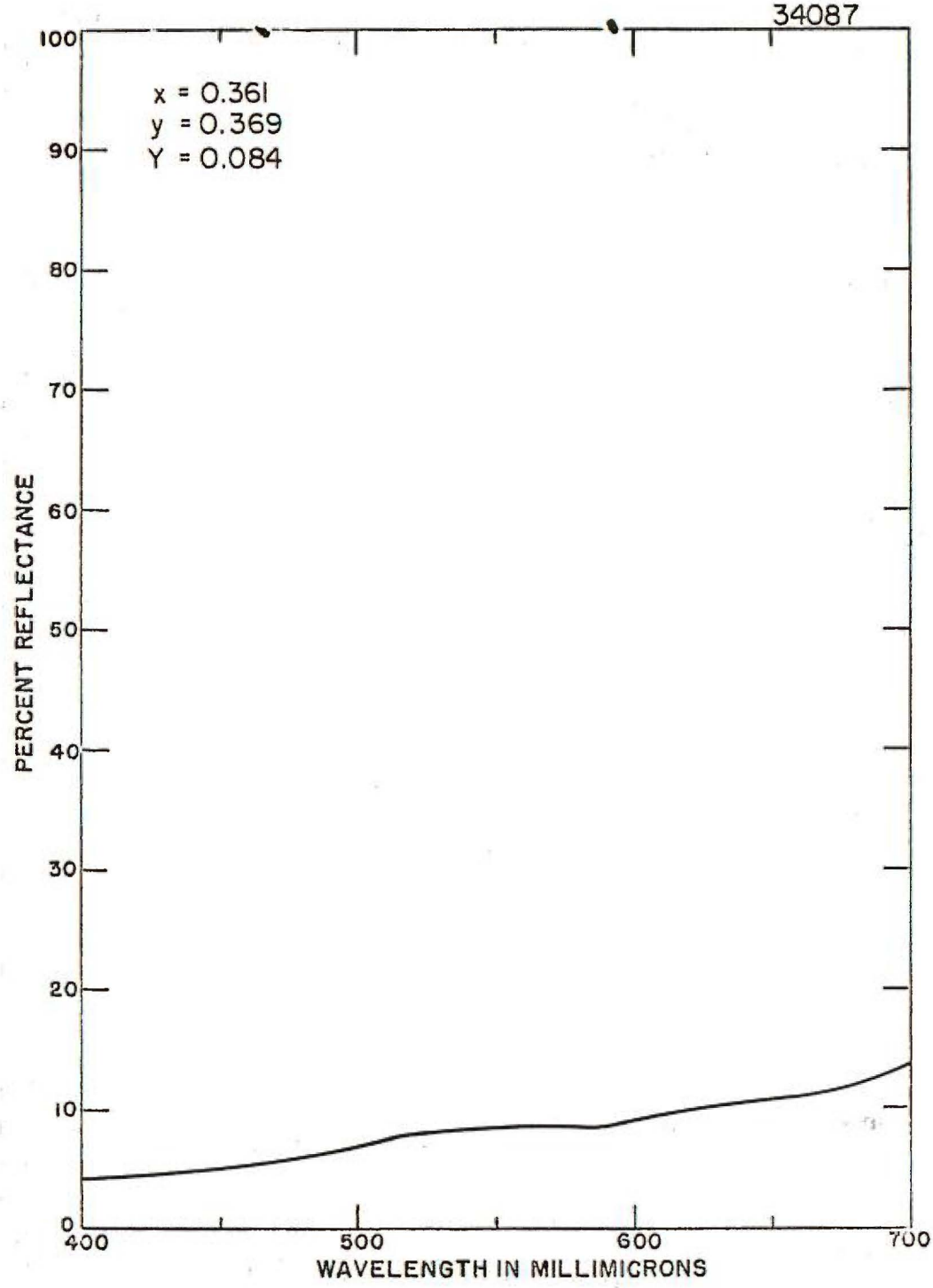

33695
x = .3914
y = .4002
Y = .6615
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

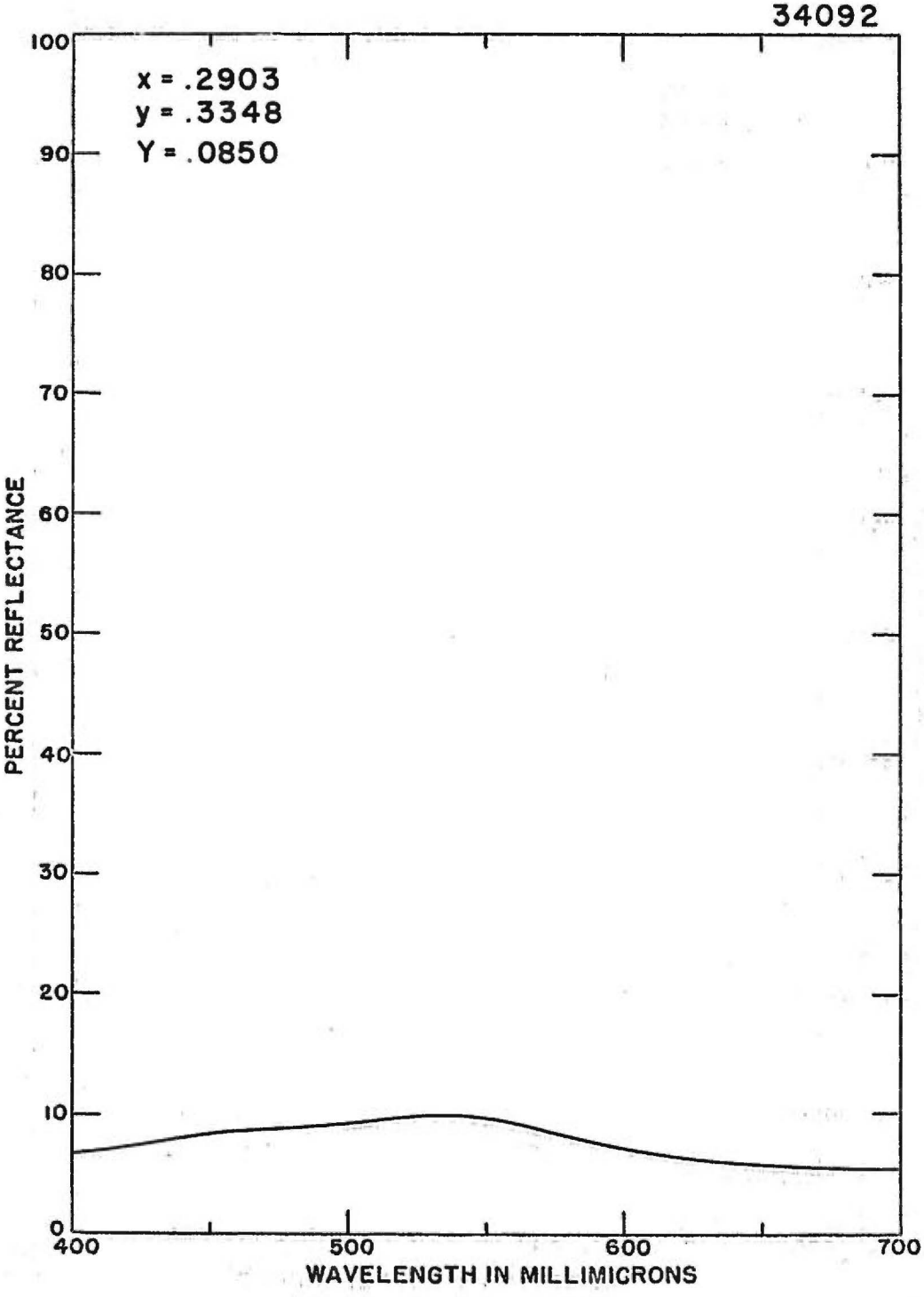

33711
x = .3567
y = .3581
Y = .6866
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

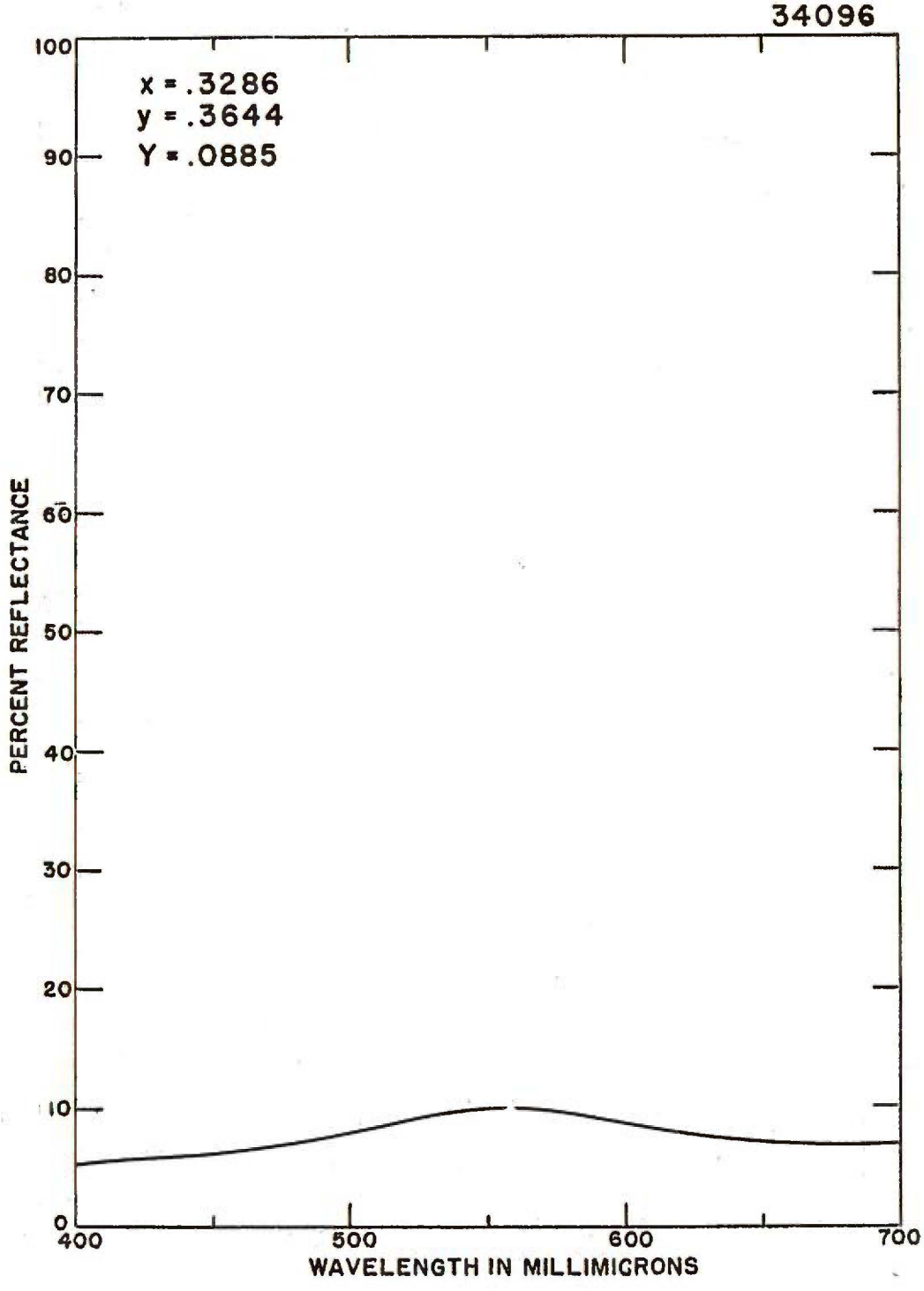

34052
x = .3274
y = .3602
Y = .0406
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

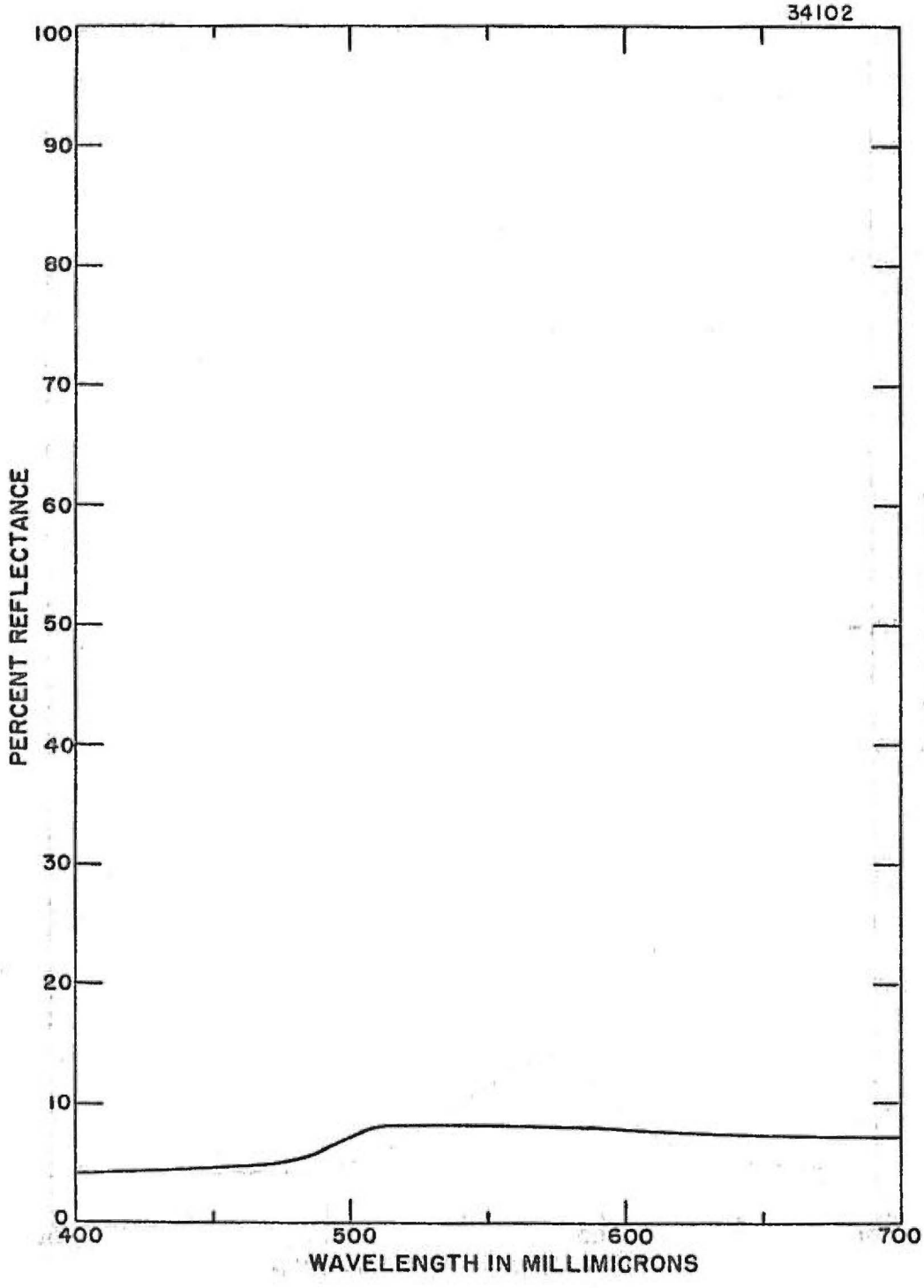

34079
x = .3304
y = .3634
Y = .0553
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

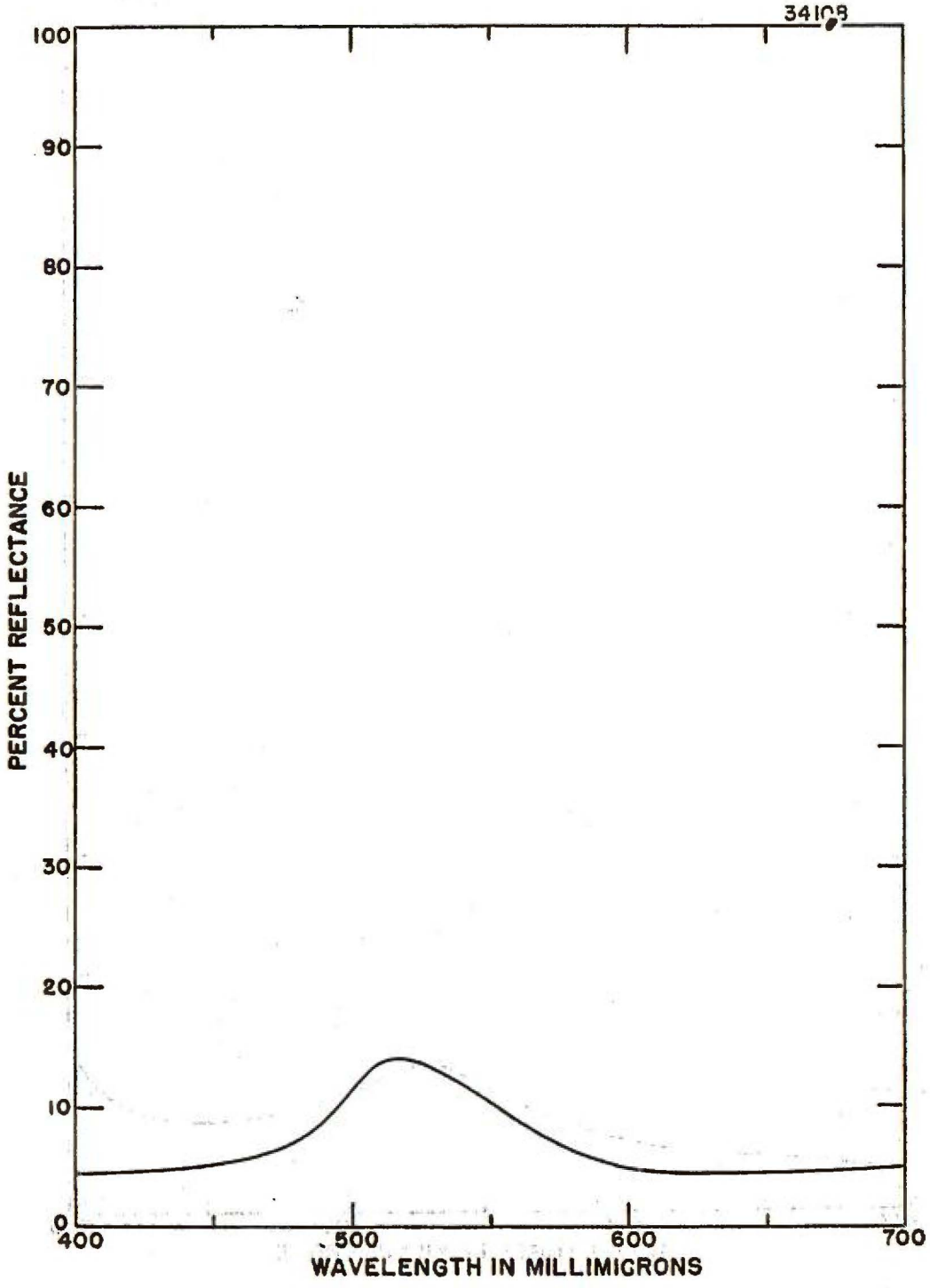

34086
x = .3305
y = .3432
Y = .0809
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

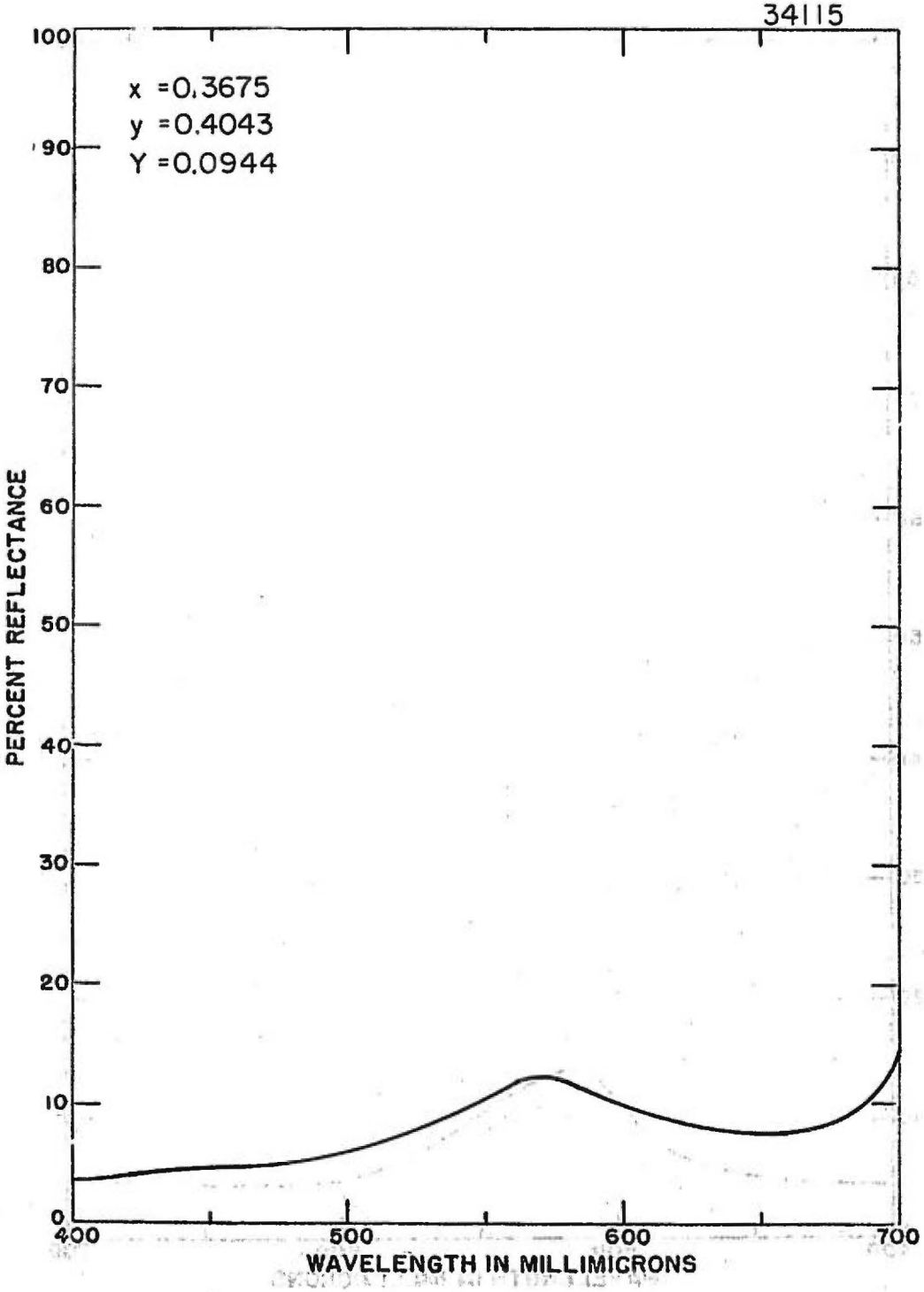

34087
x = 0.361
y = 0.369
Y = 0.084
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

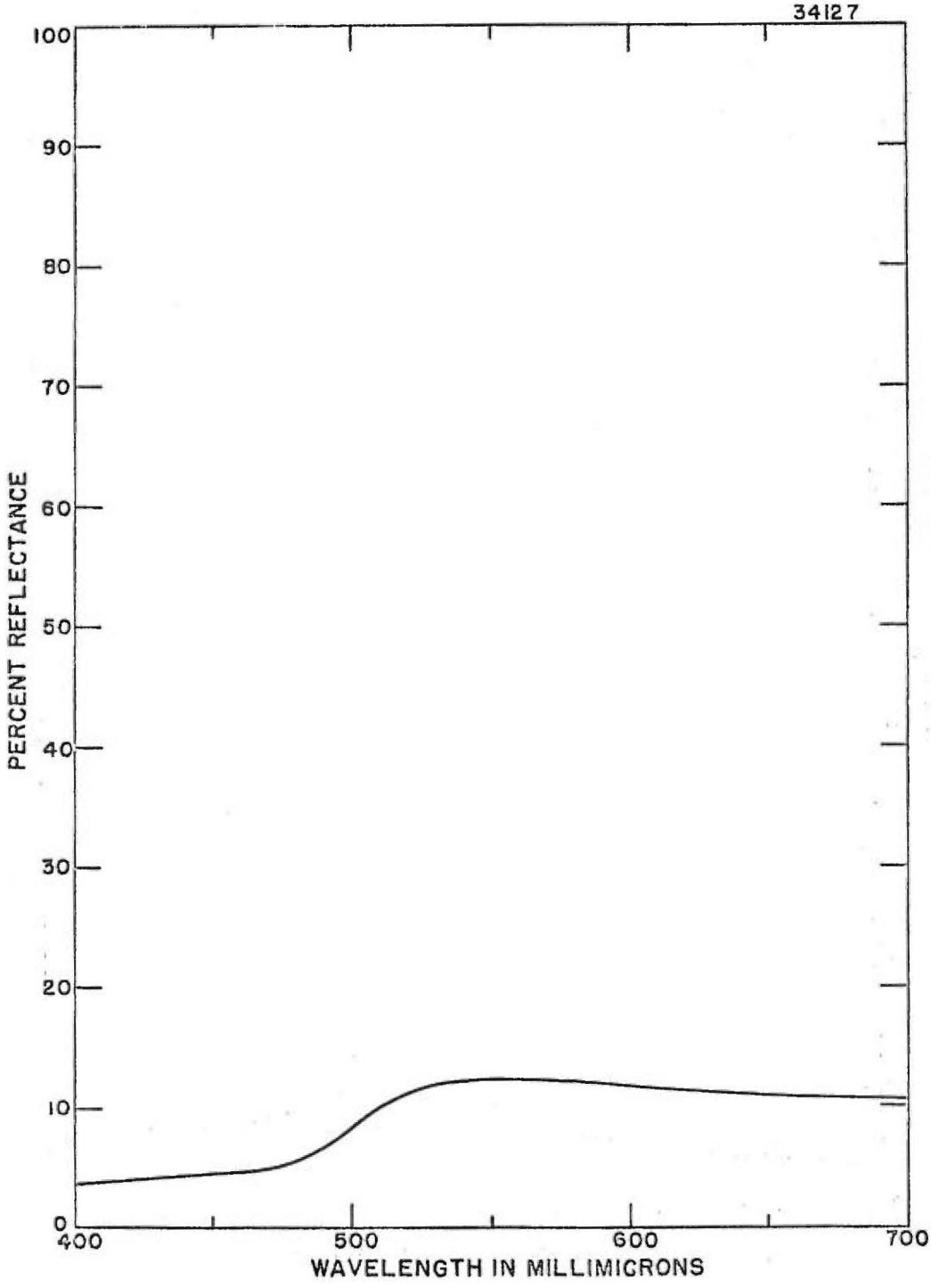

34092
x = .2903
y = .3348
Y = .0850
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

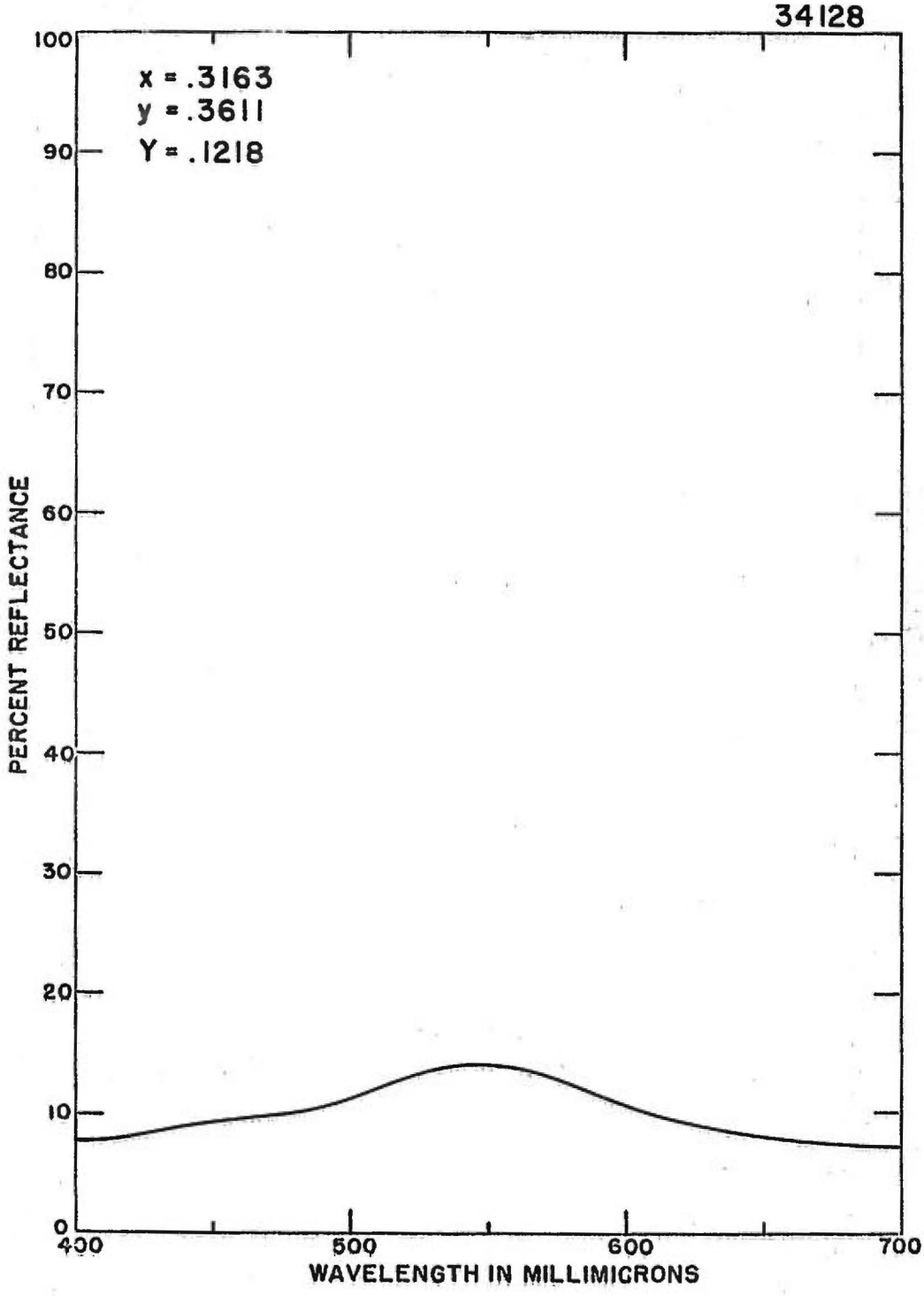

34096
x = .3286
y = .3644
Y = .0885
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

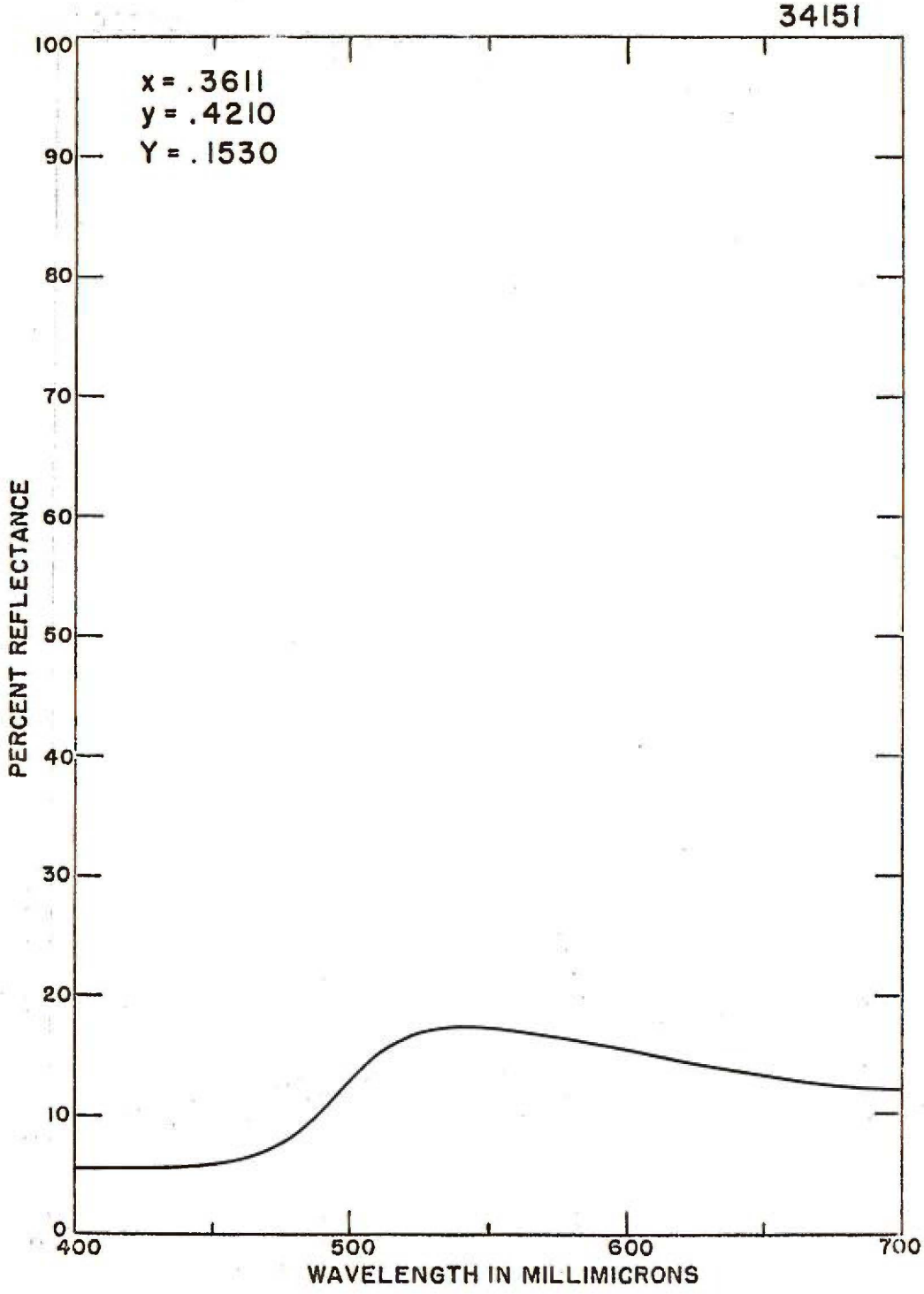

34102
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

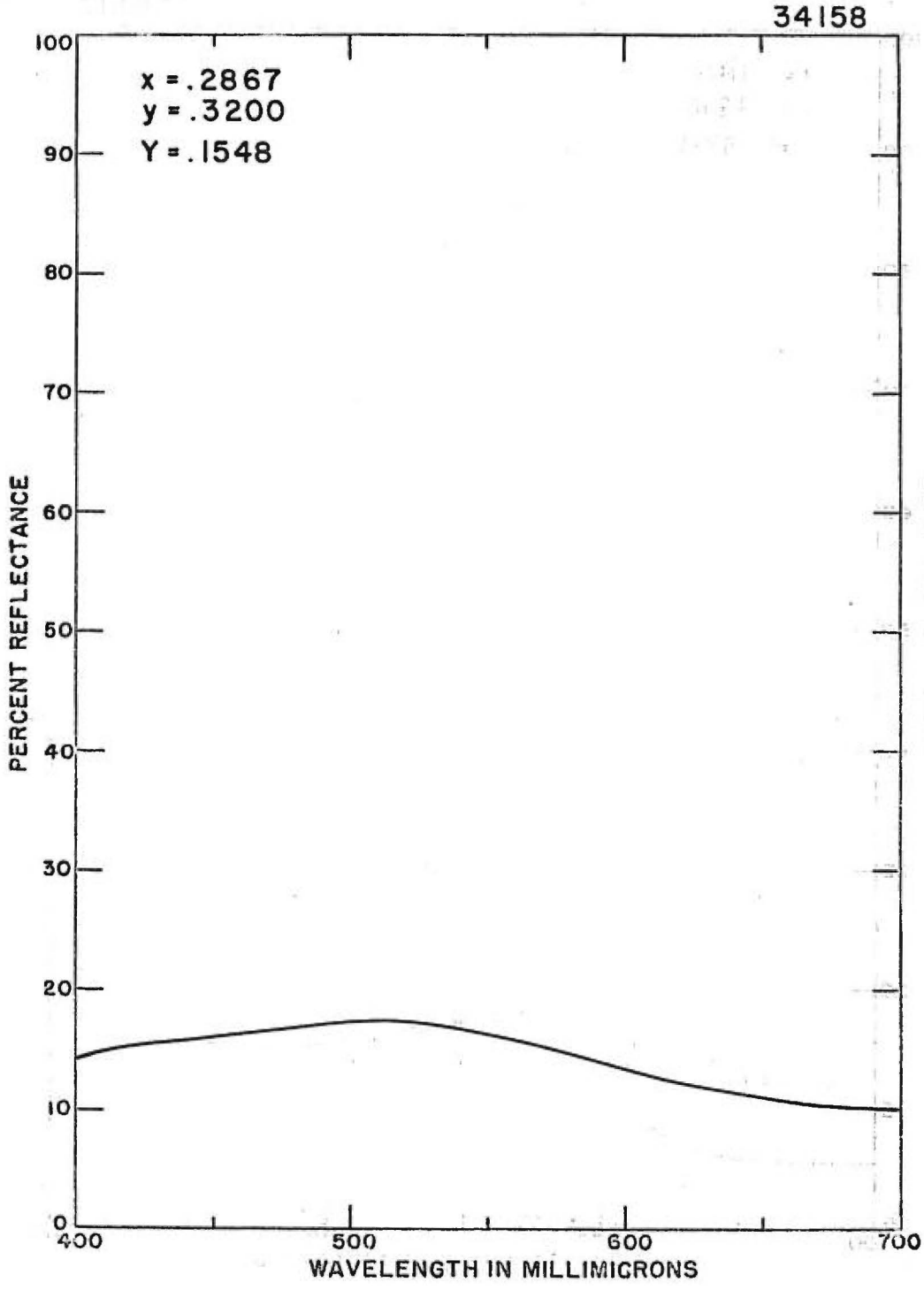

34108
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

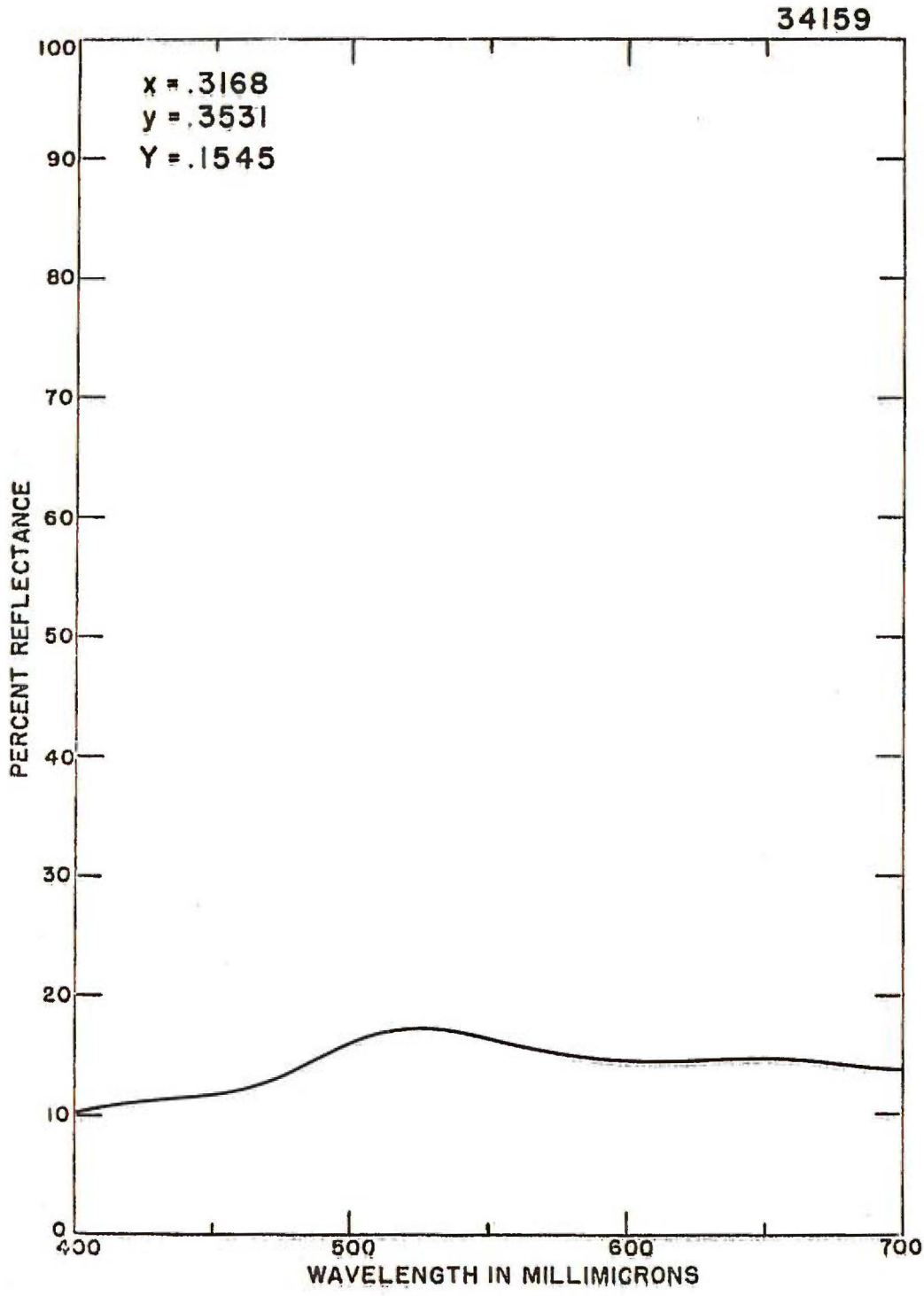

34115
x =0.3675
y =0.4043
Y =0.0944
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

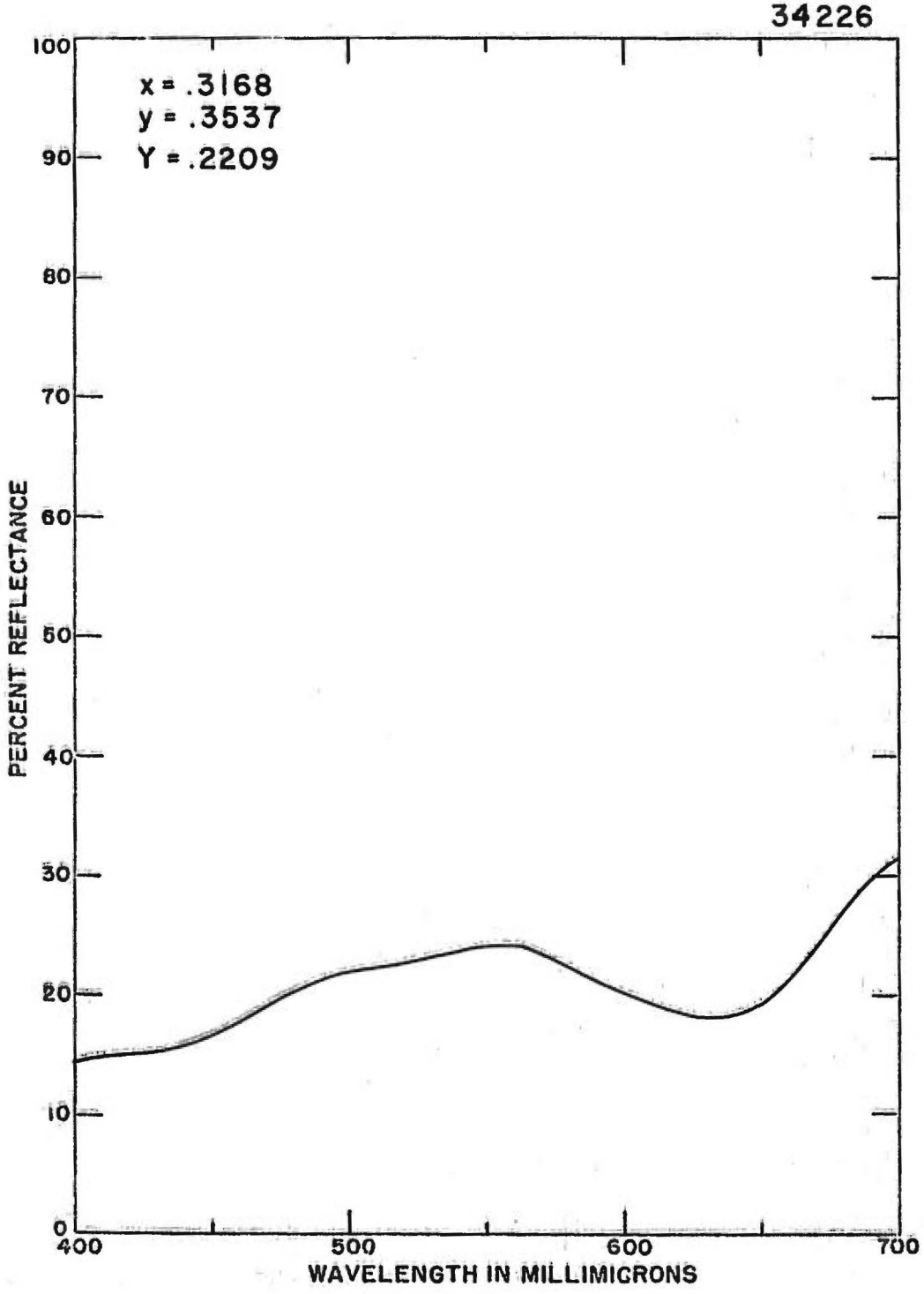

34127
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

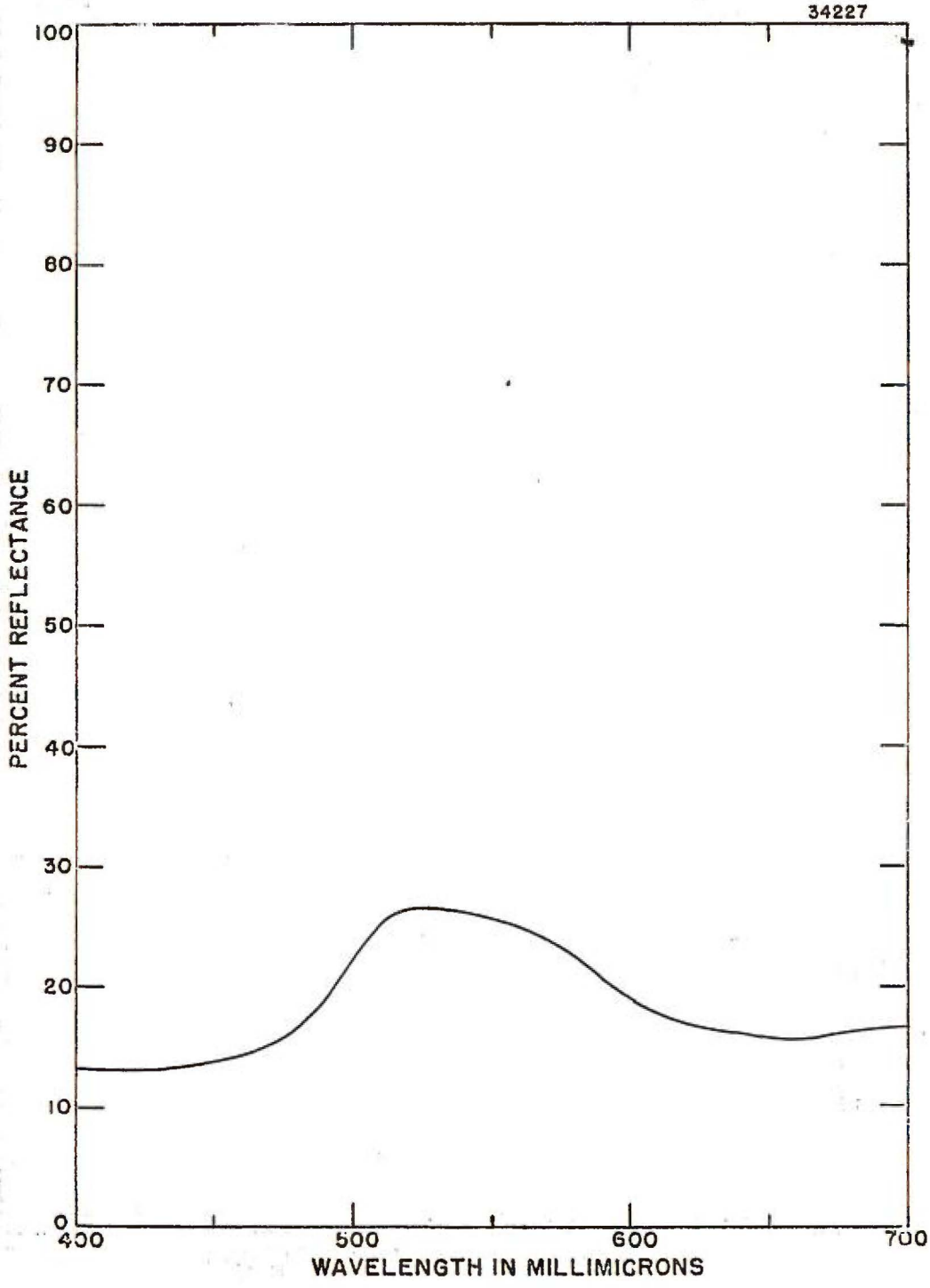

34128
x = .3163
y = .3611
Y = .1218
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

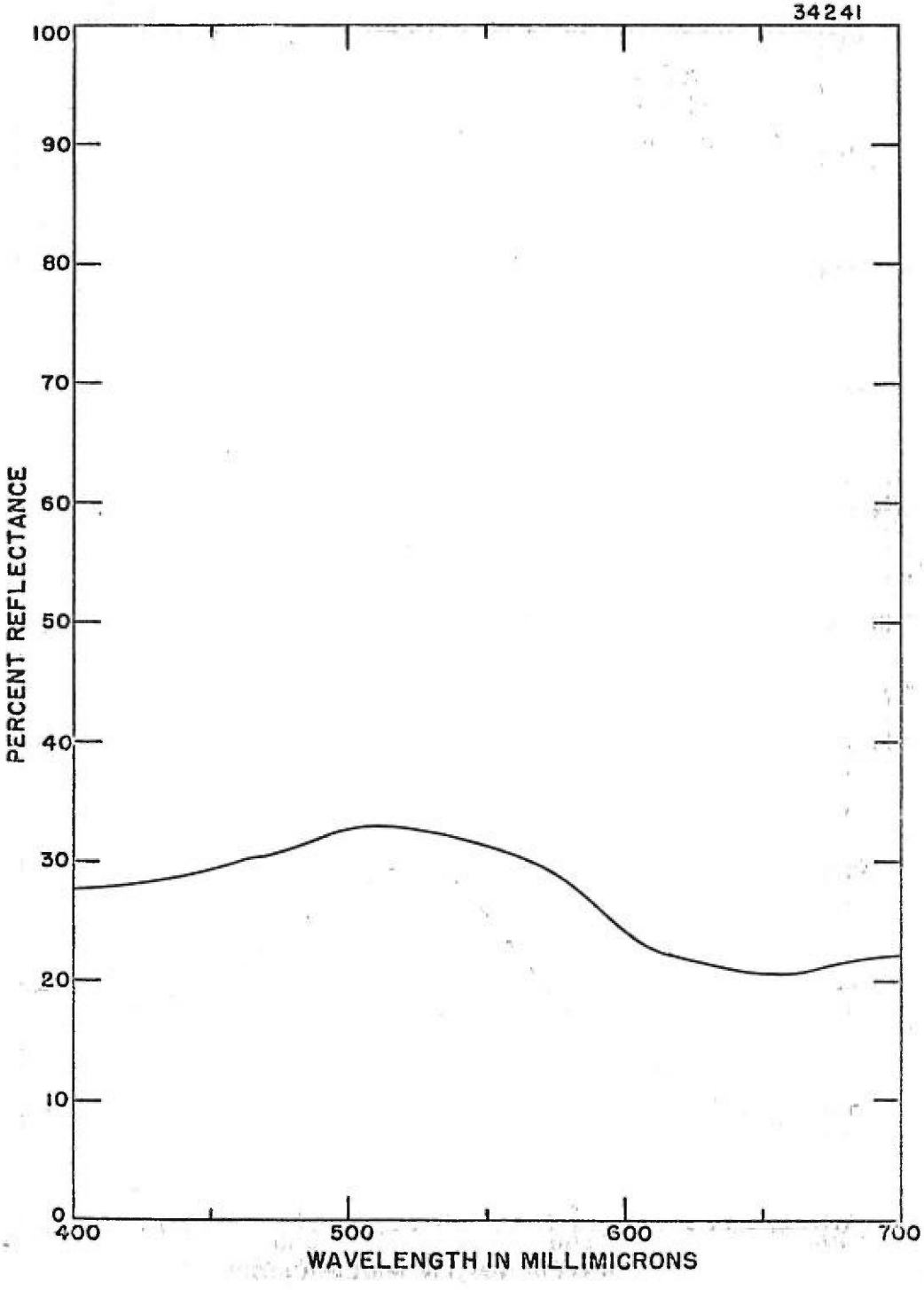

34151
x = .3611
y = .4210
Y = .1530
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

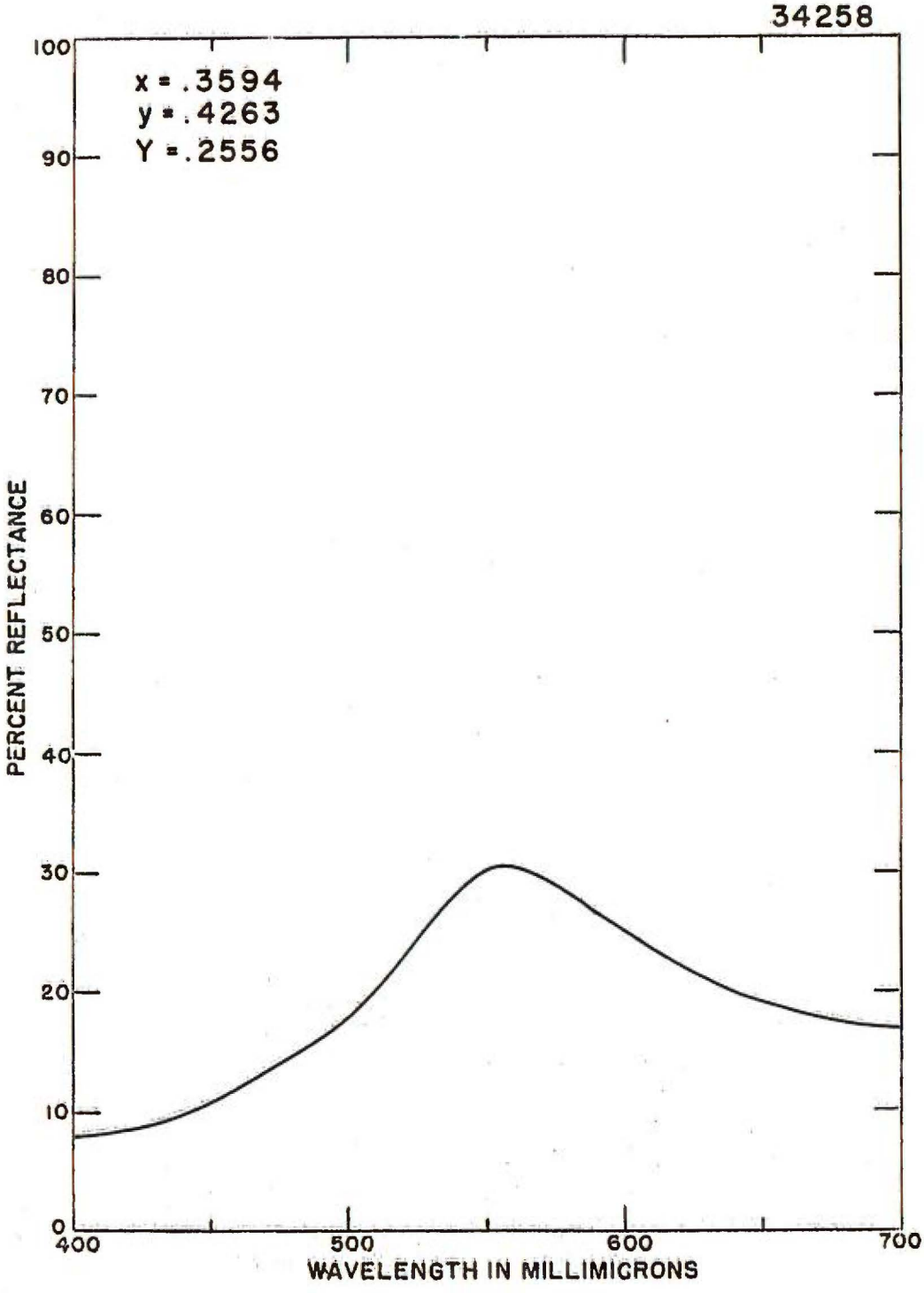

34158
x = .2867
y = .3200
Y = .1548
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

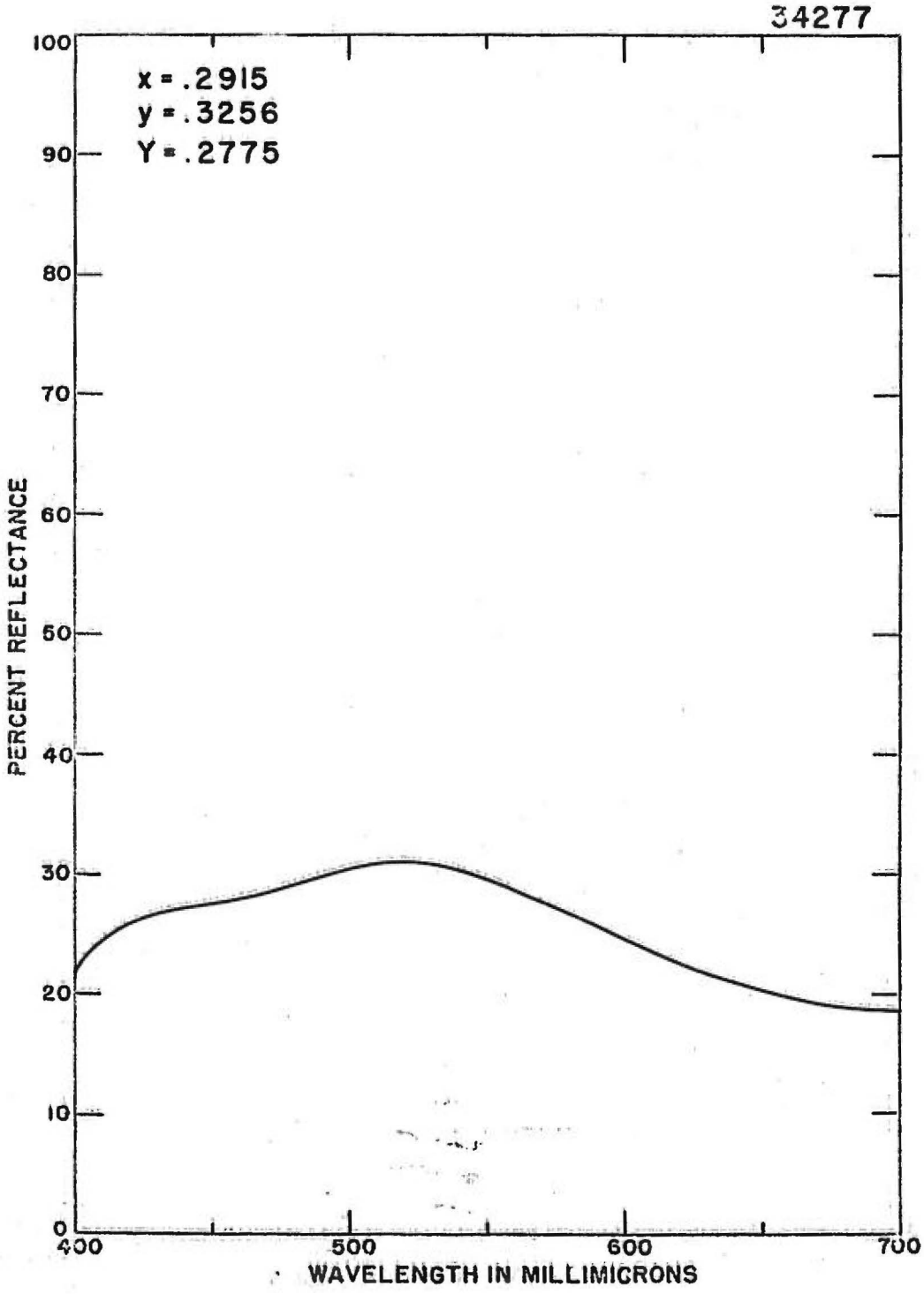

34159
x = .3168
y = .3531
Y = .1545
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

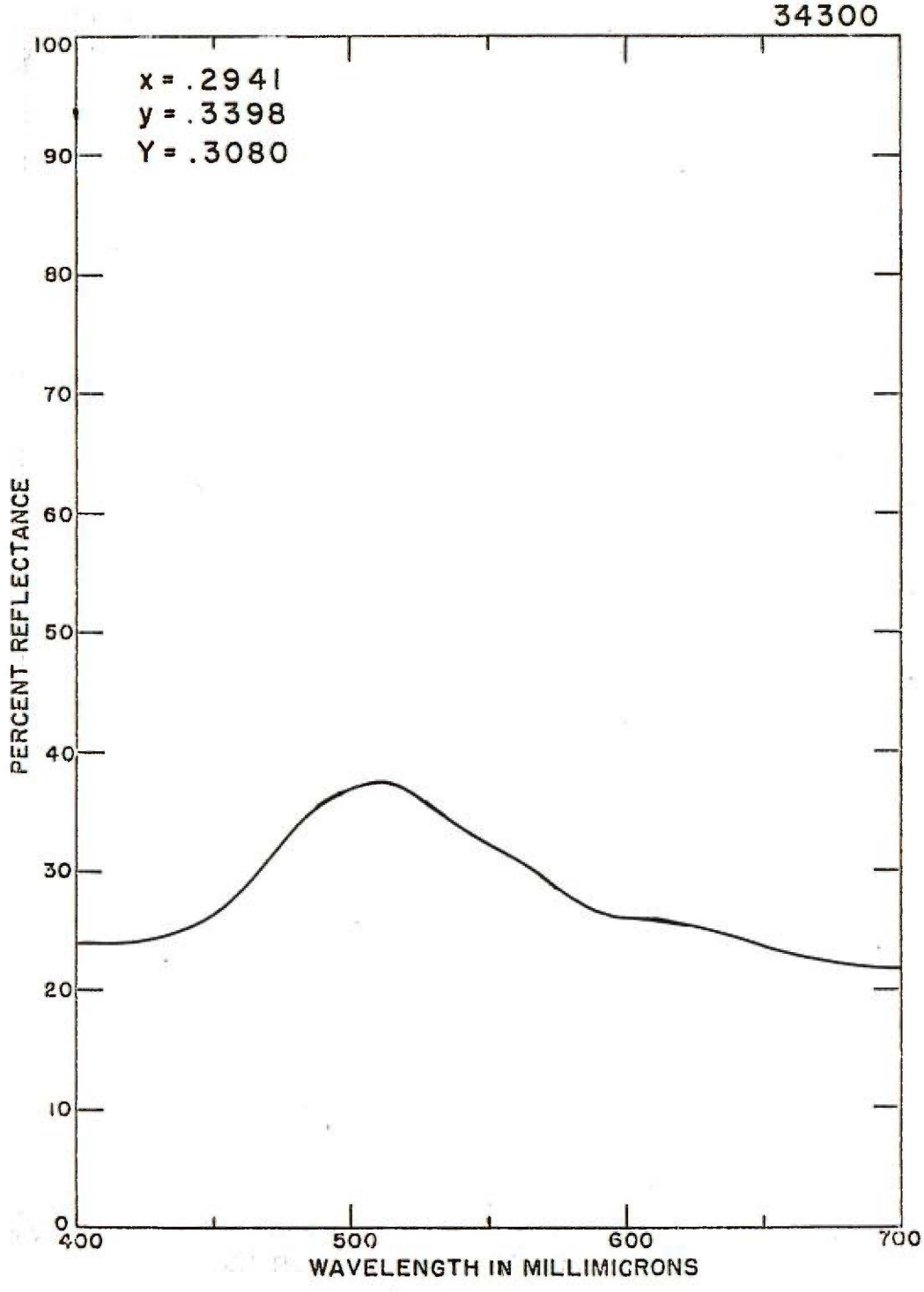

34226
x = .3168
y = .3537
Y = .2209
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

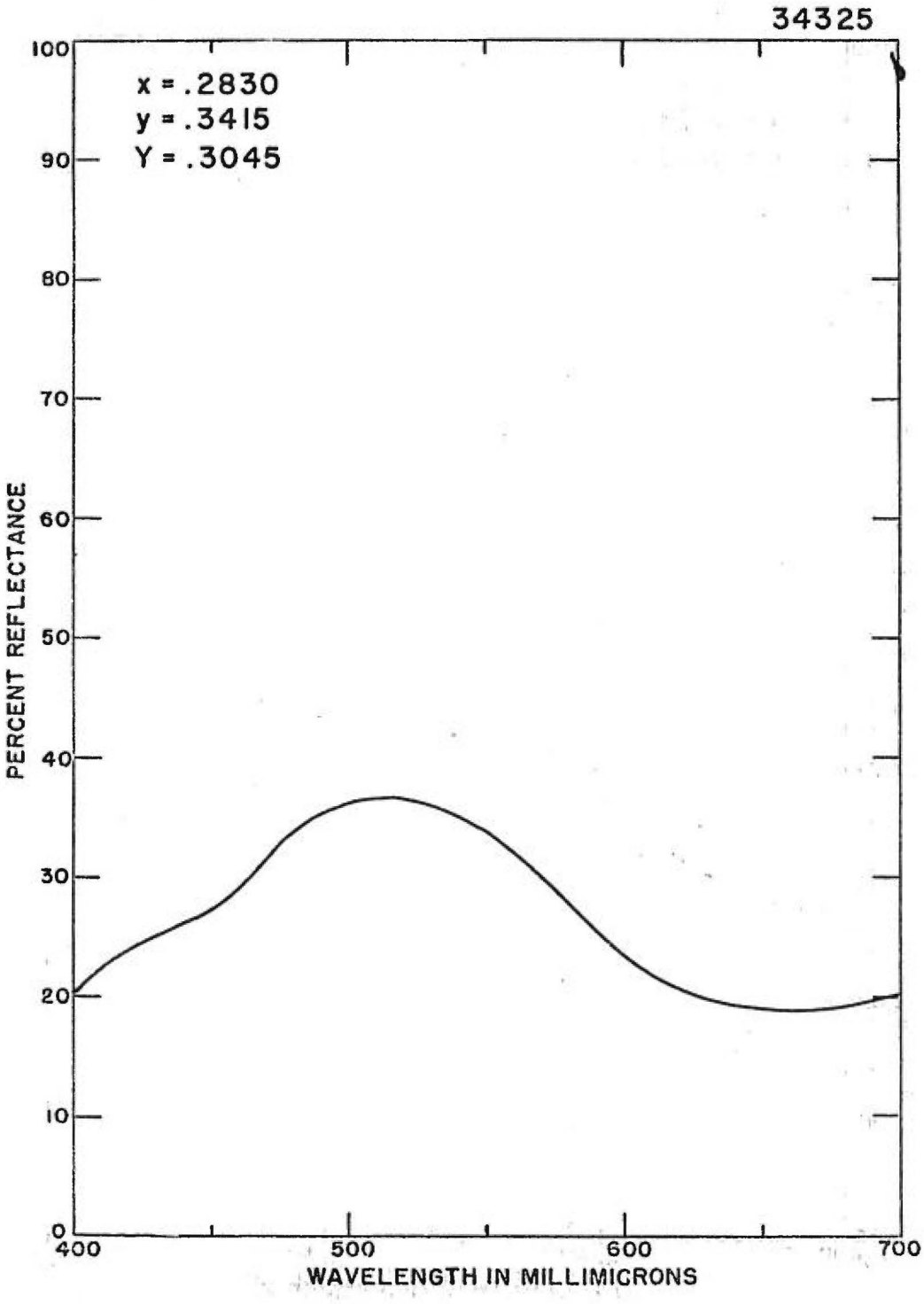

34227
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

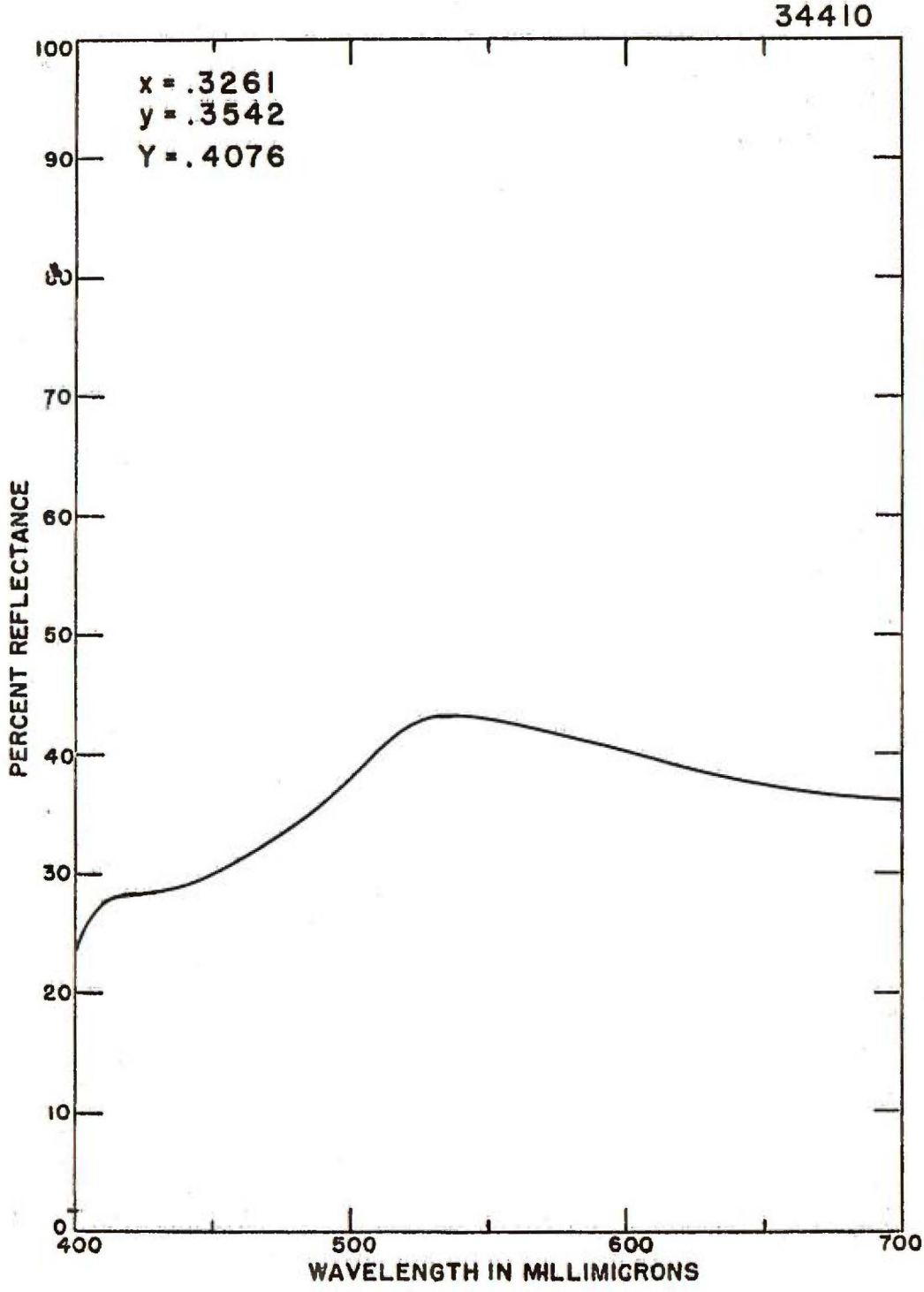

34241
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

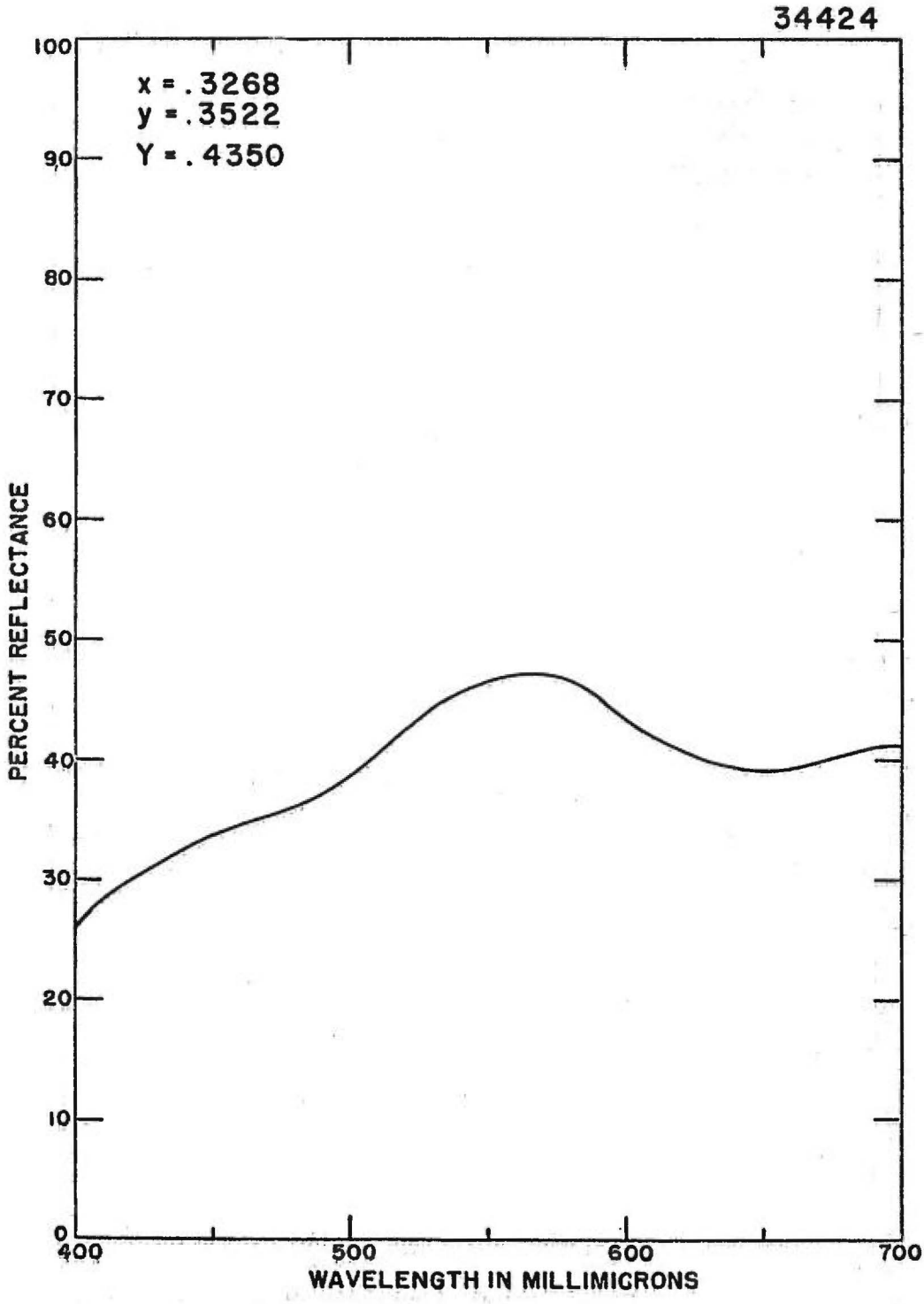

34258
x = .3594
y = .4263
Y = .2556
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

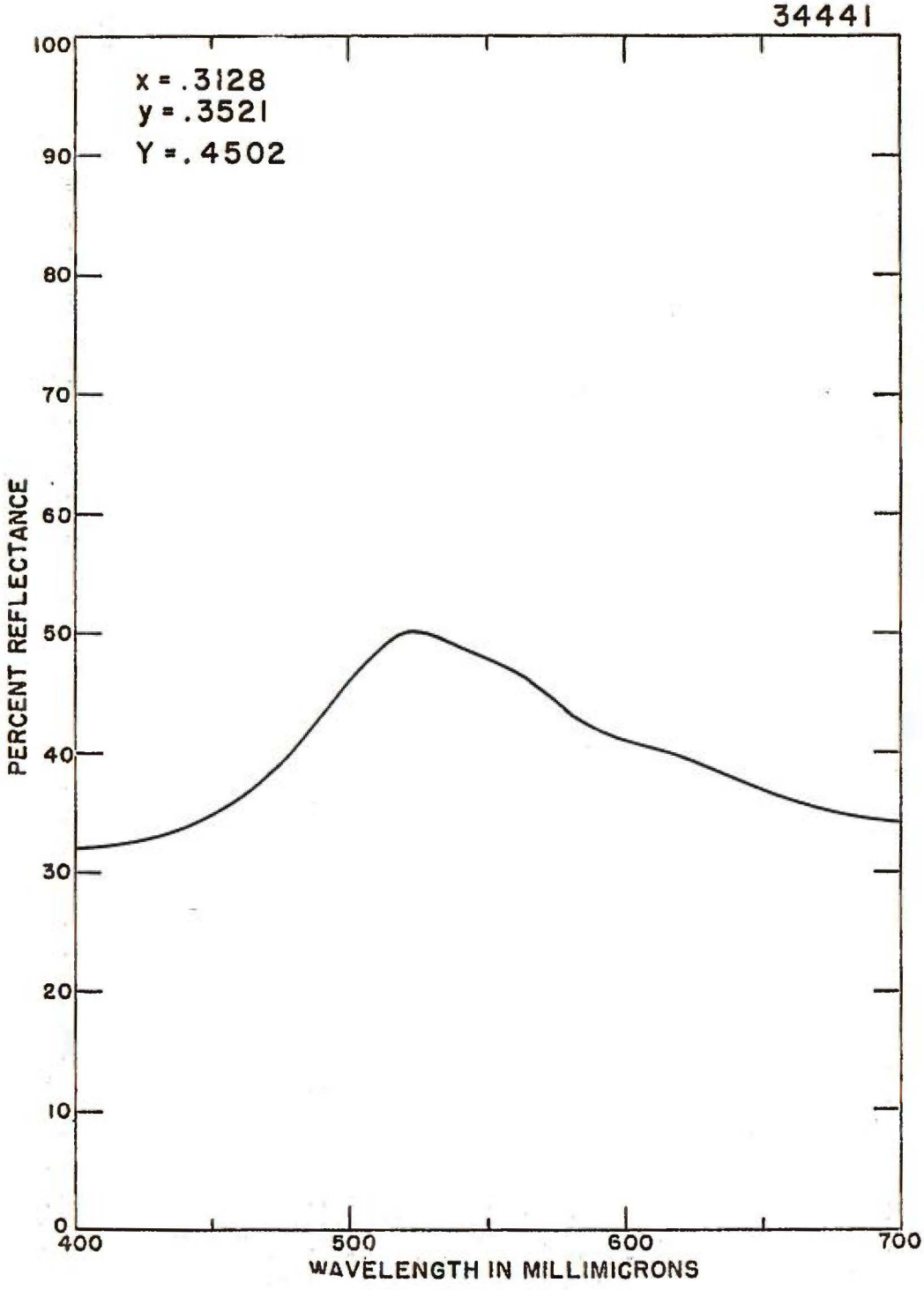

34277
x = .2915
y = .3256
Y = .2775
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

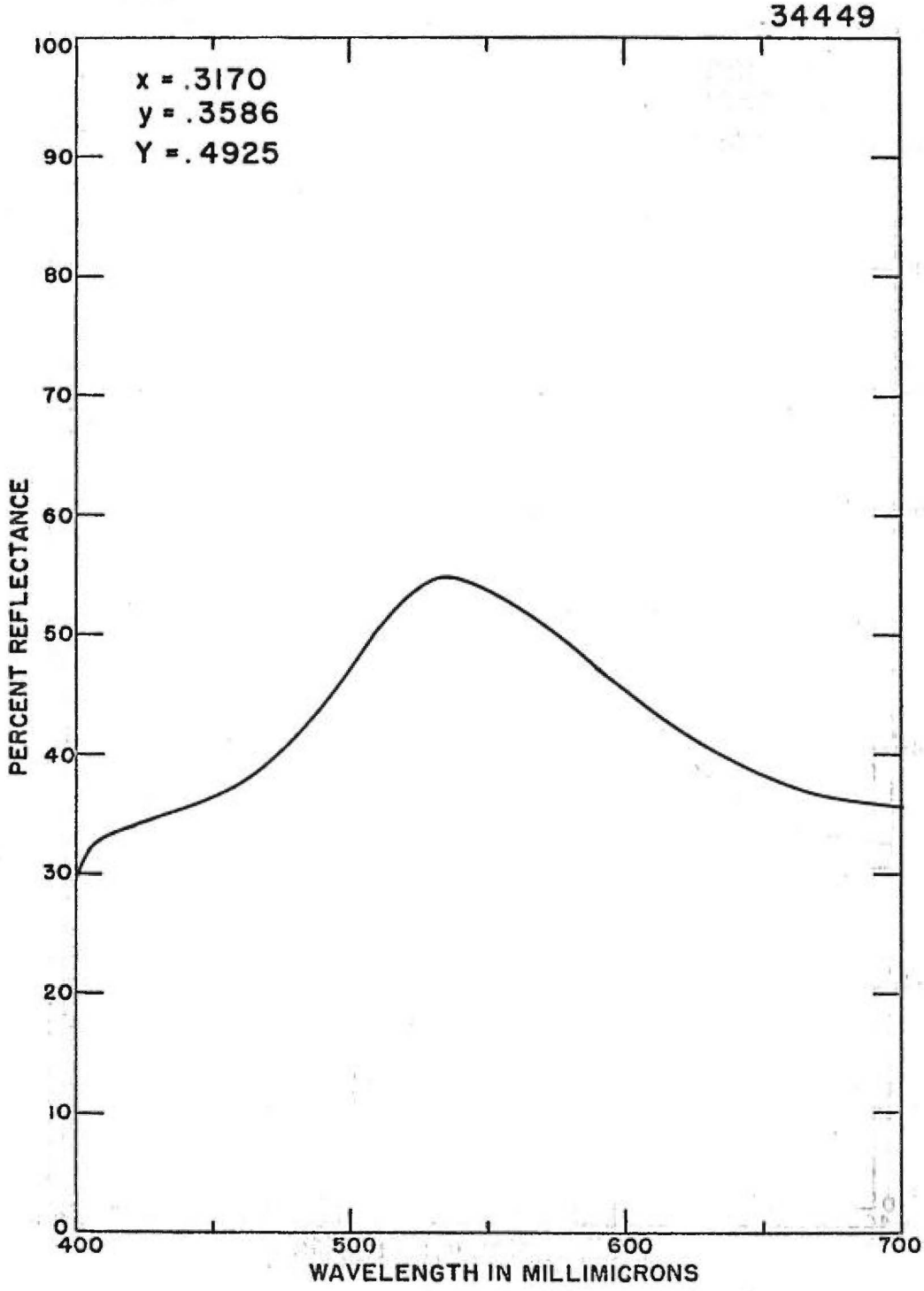

34300
x = .2941
y = .3398
Y = .3080
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

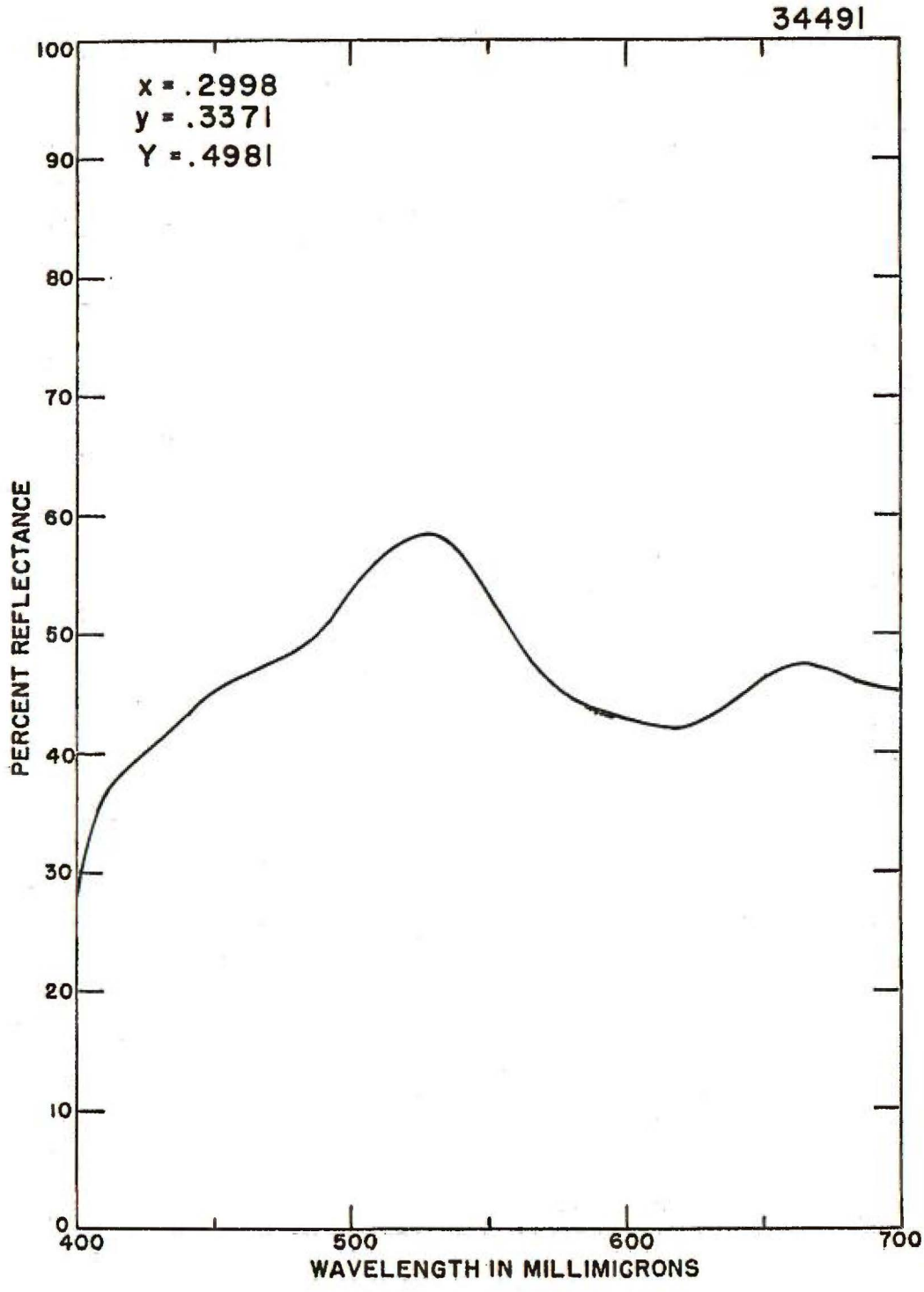

34325
x = .2830
y = .3415
Y = .3045
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

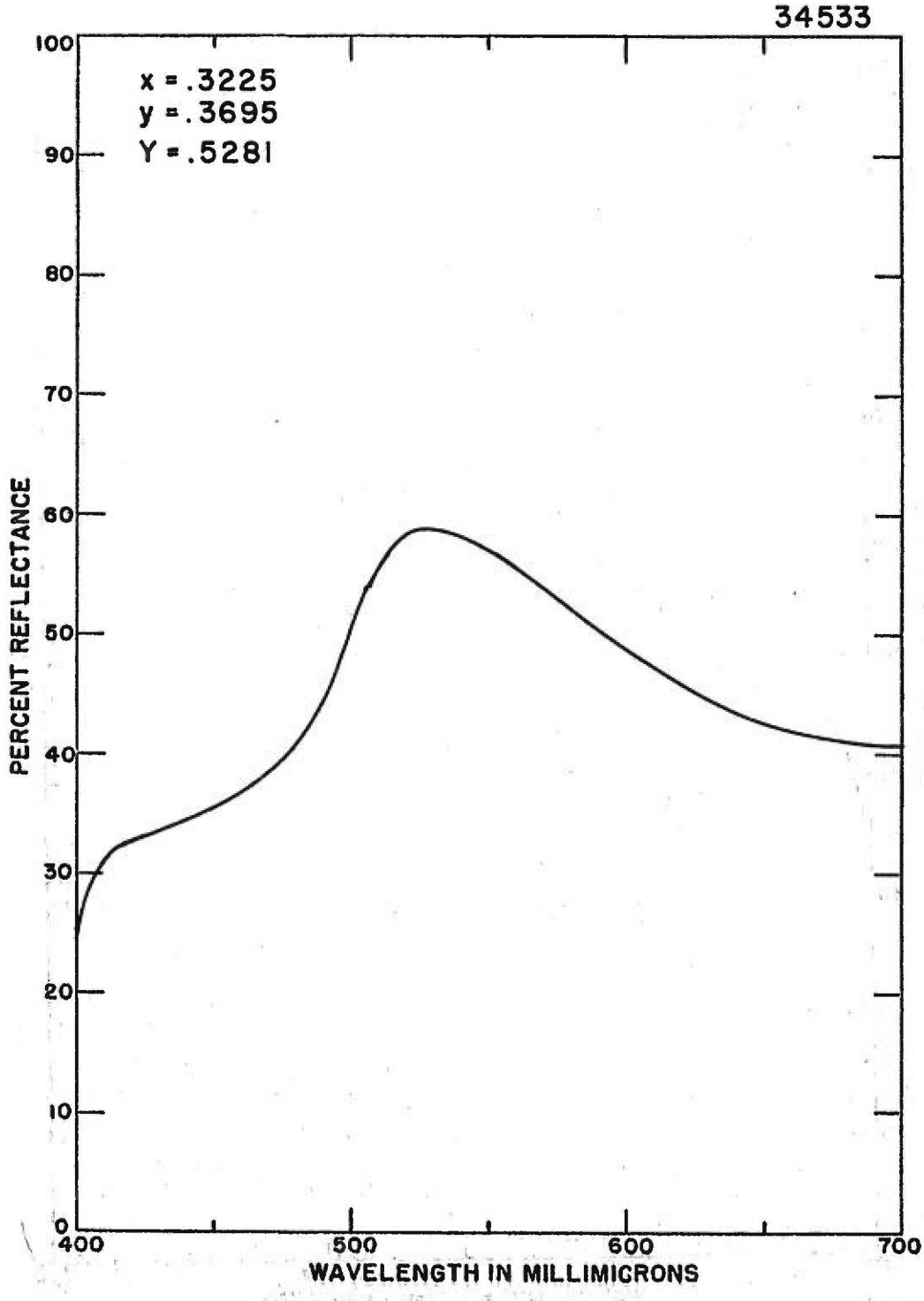

34410
x = .3261
y = .3542
Y = .4076
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

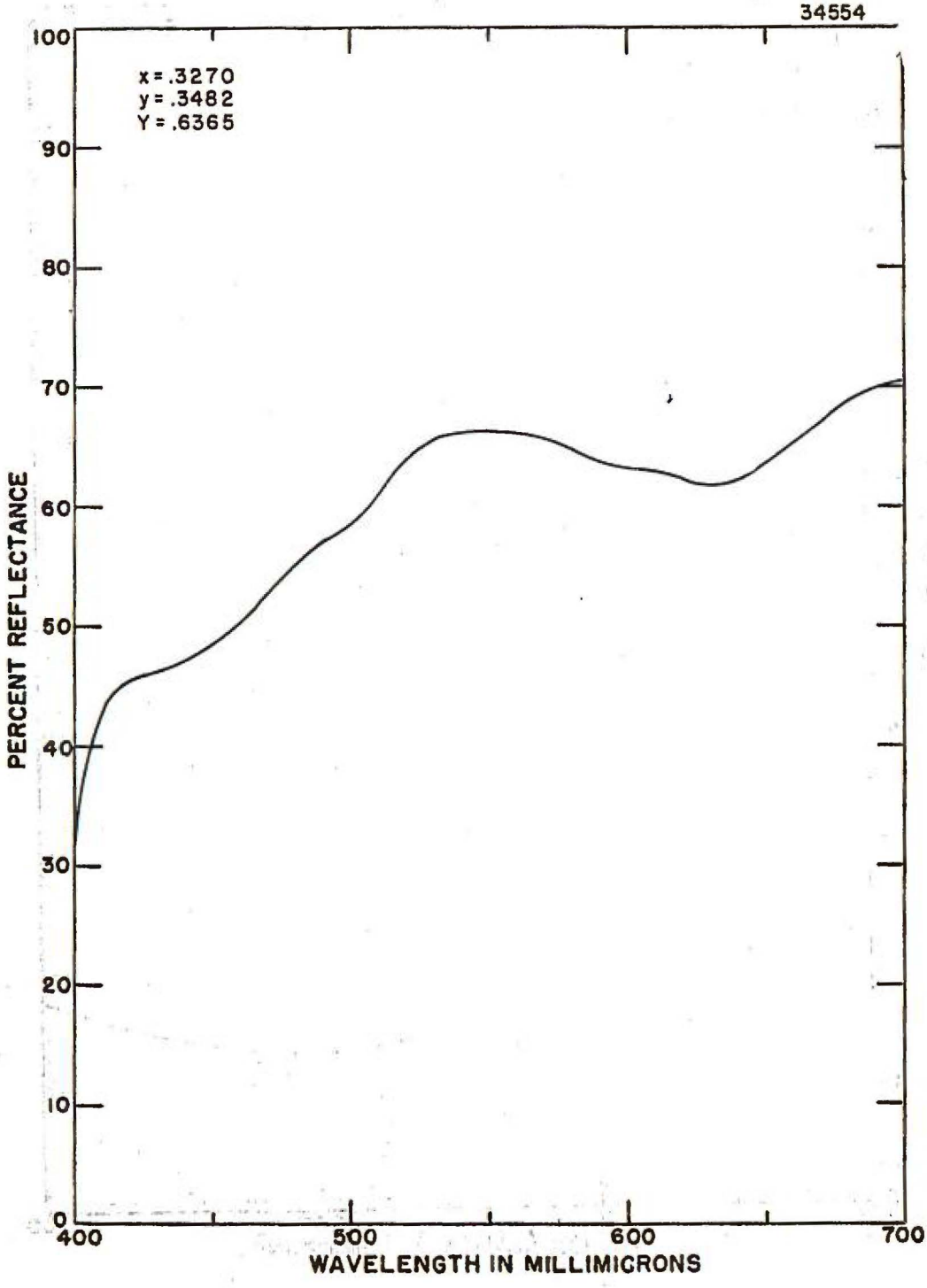

34424
x = .3268
y = .3522
Y = .4350
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

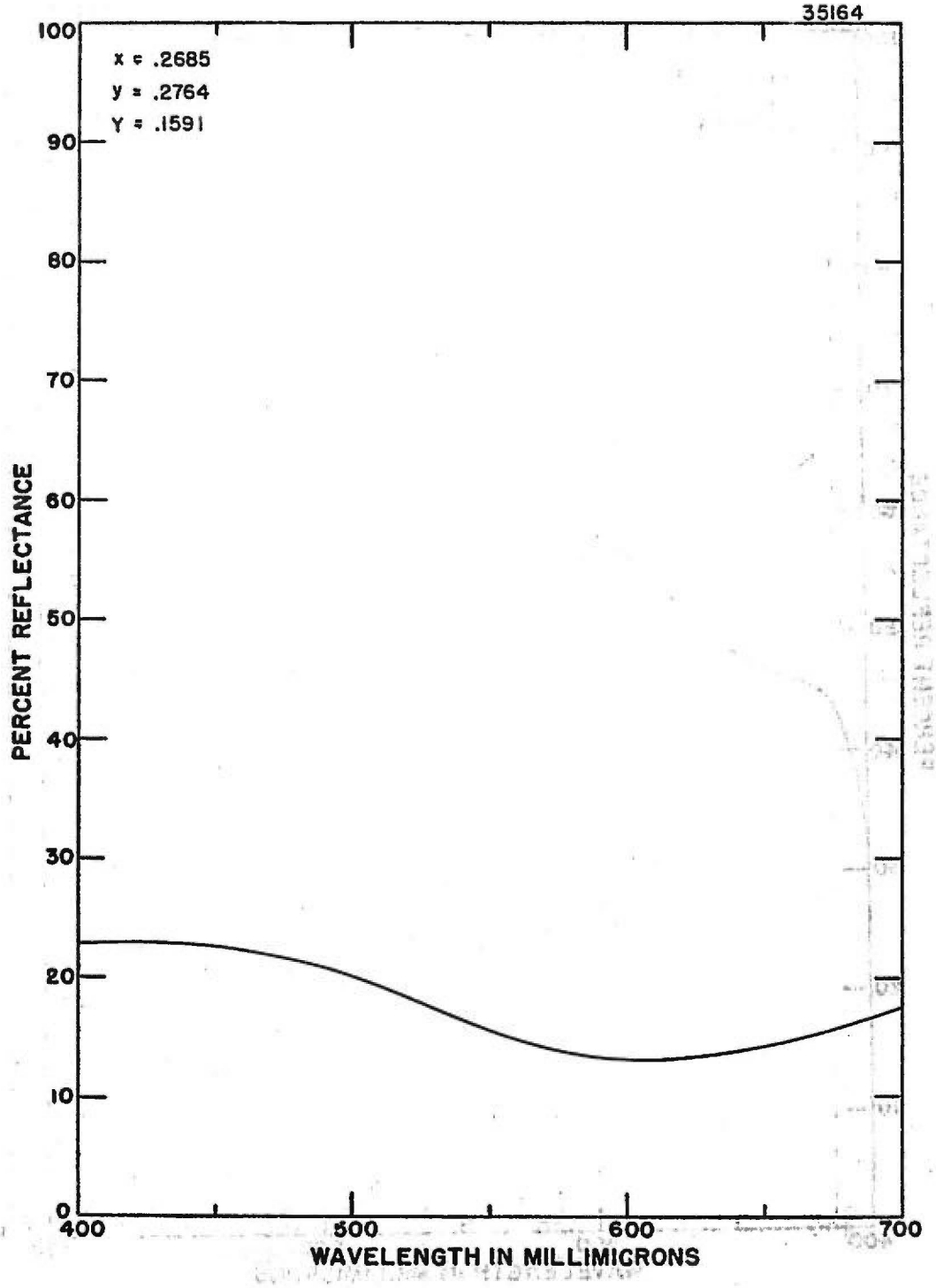

34441
x = .3128
y = .3521
Y = .4502
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

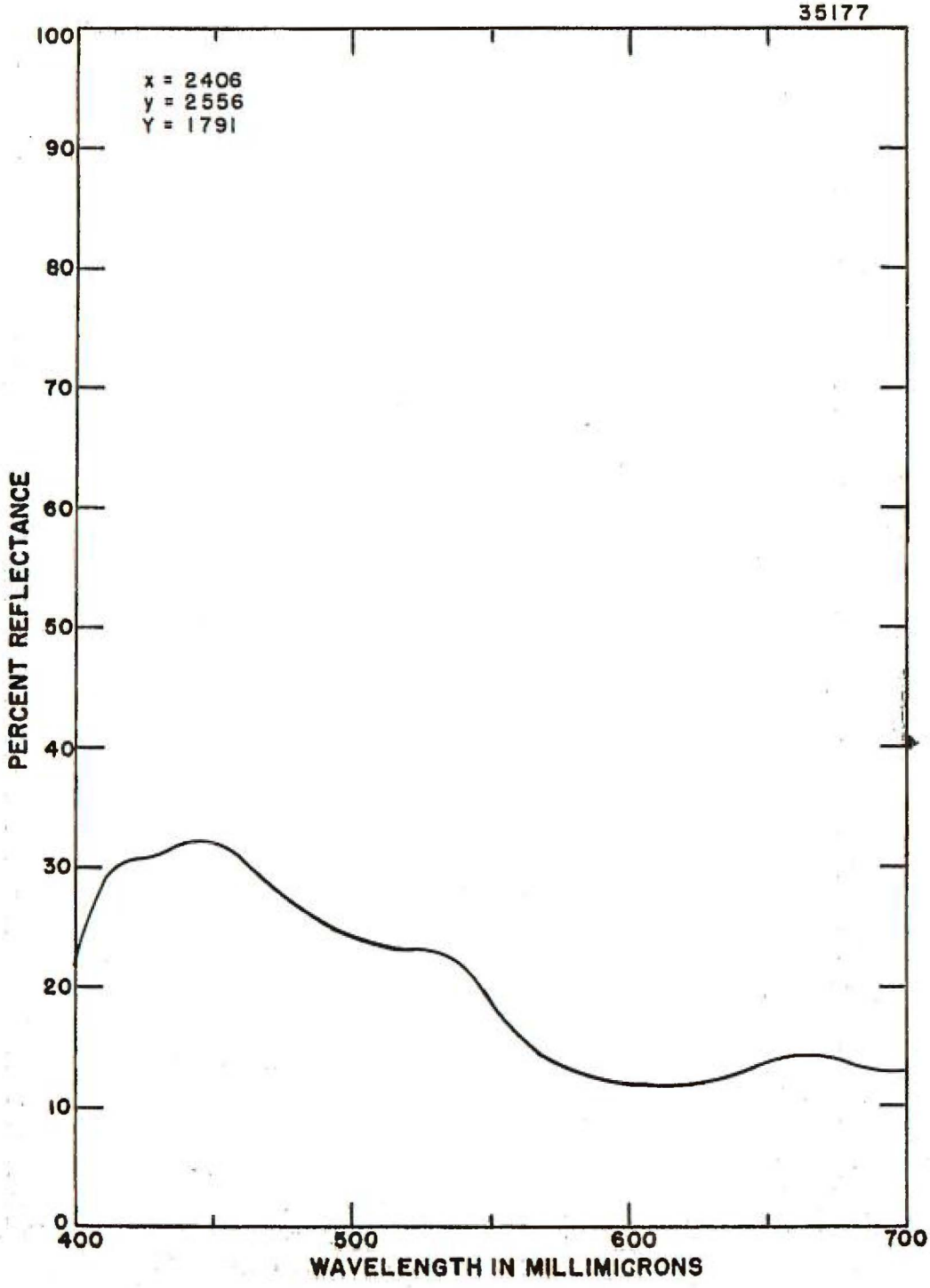

34449
x = .3170
y = .3586
Y = .4925
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

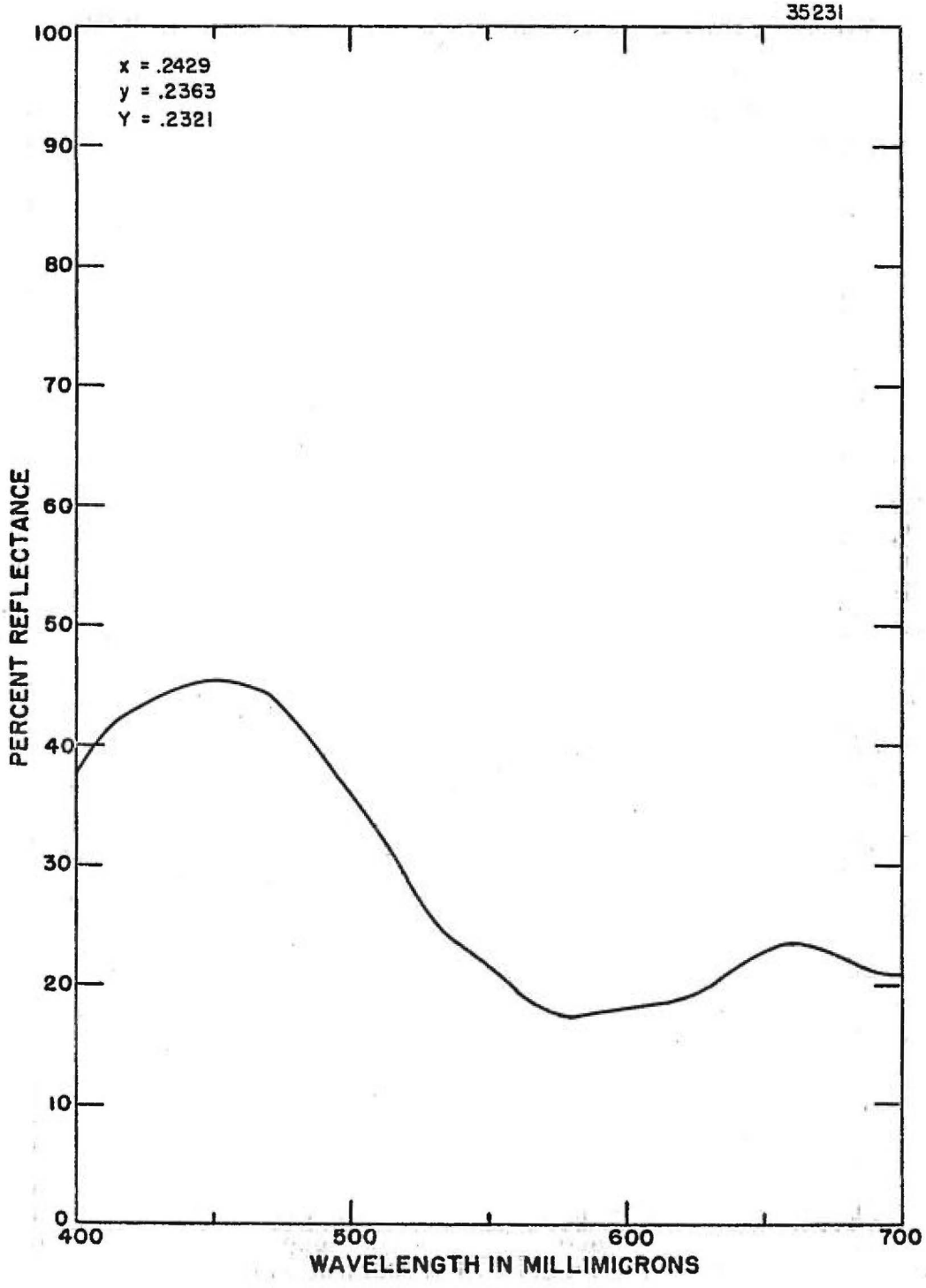

34491
x = .2998
y = .3371
Y = .4981
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

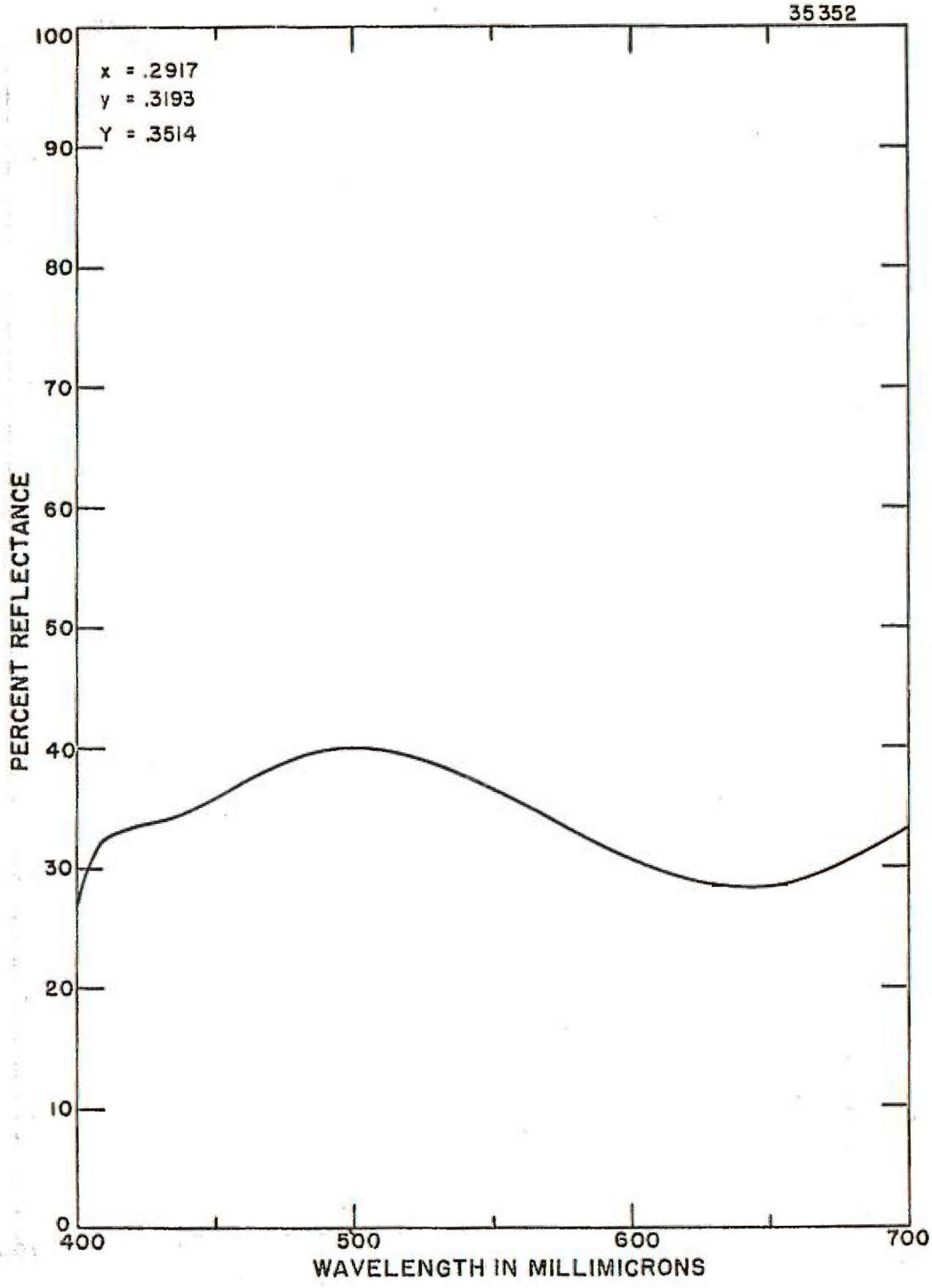

34533
x = .3225
y = .3695
Y = .5281
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

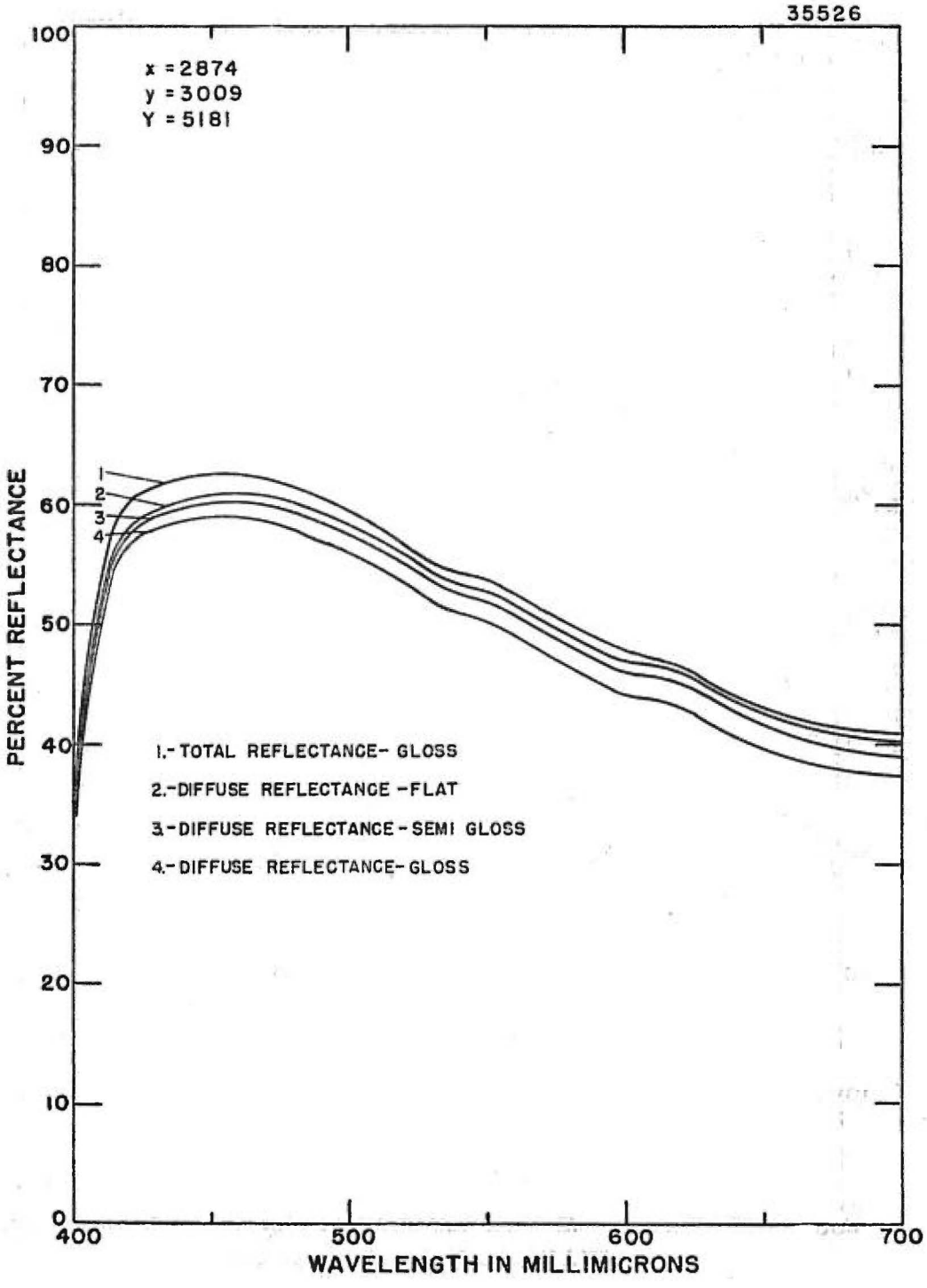

34554
x = .3270
y = .3482
Y = .6365
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

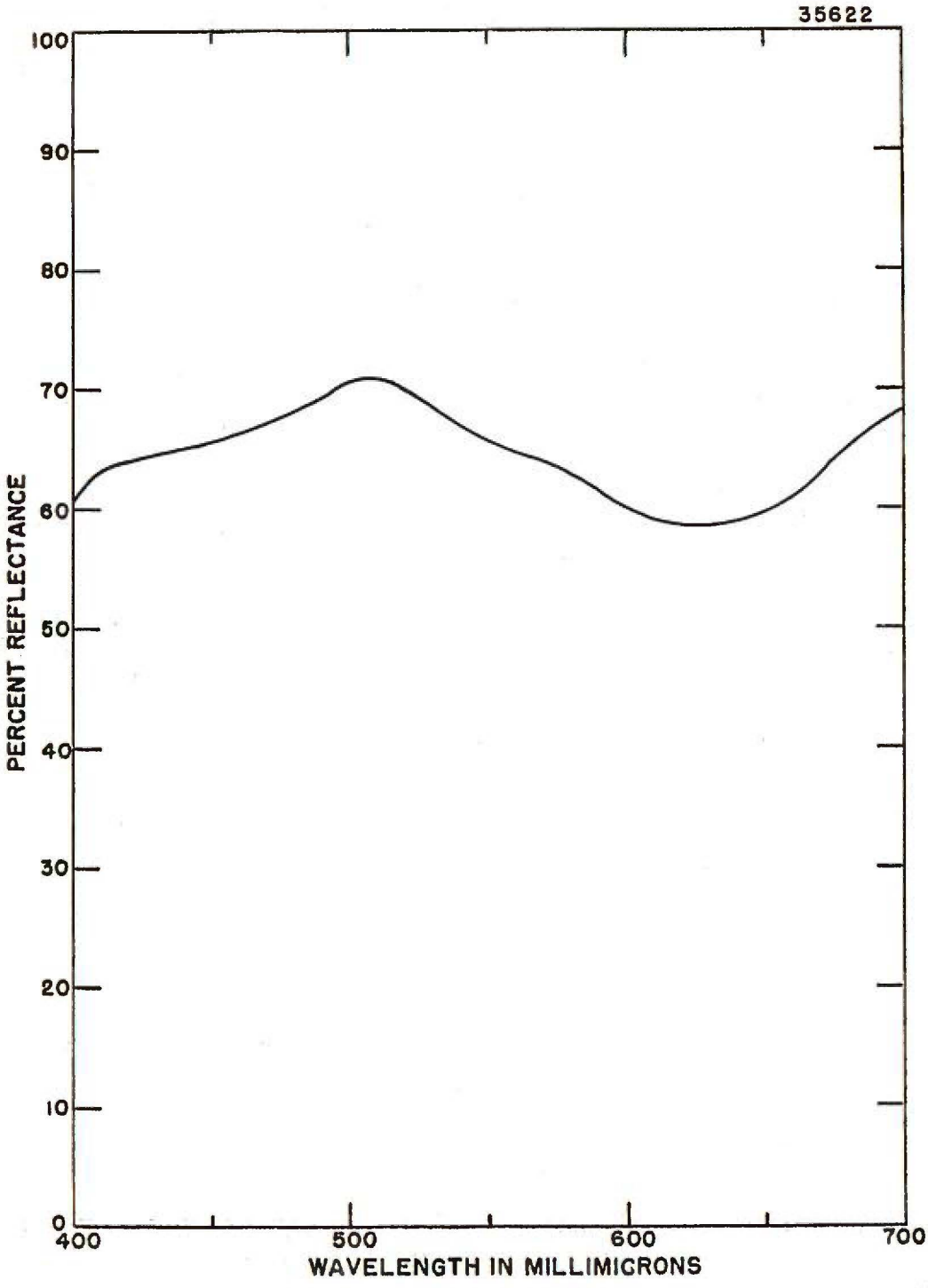

35164
x = .2685
y = .2764
Y = .1591
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

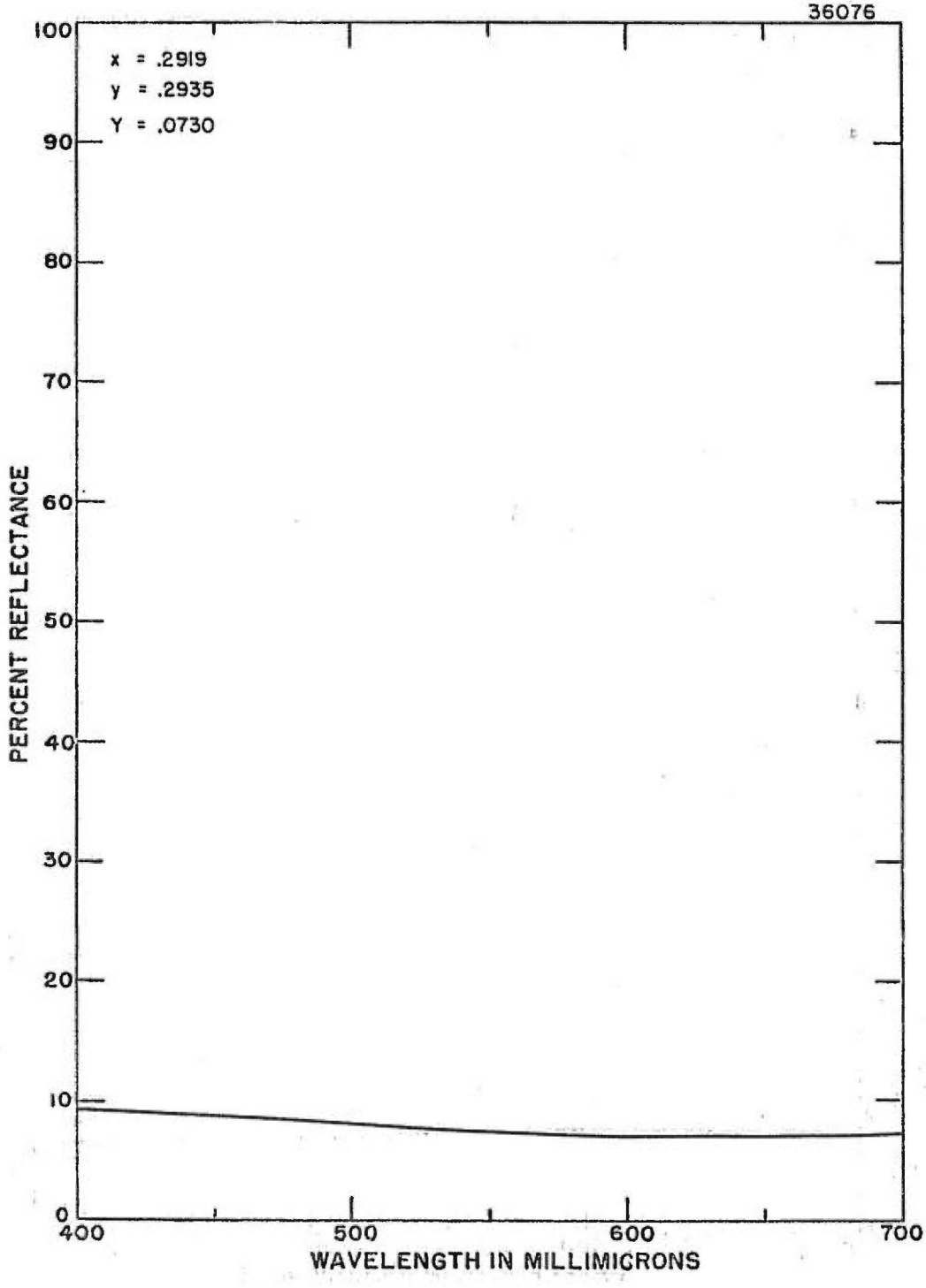

35177
x = 2406
y = 2556
Y = 1791
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

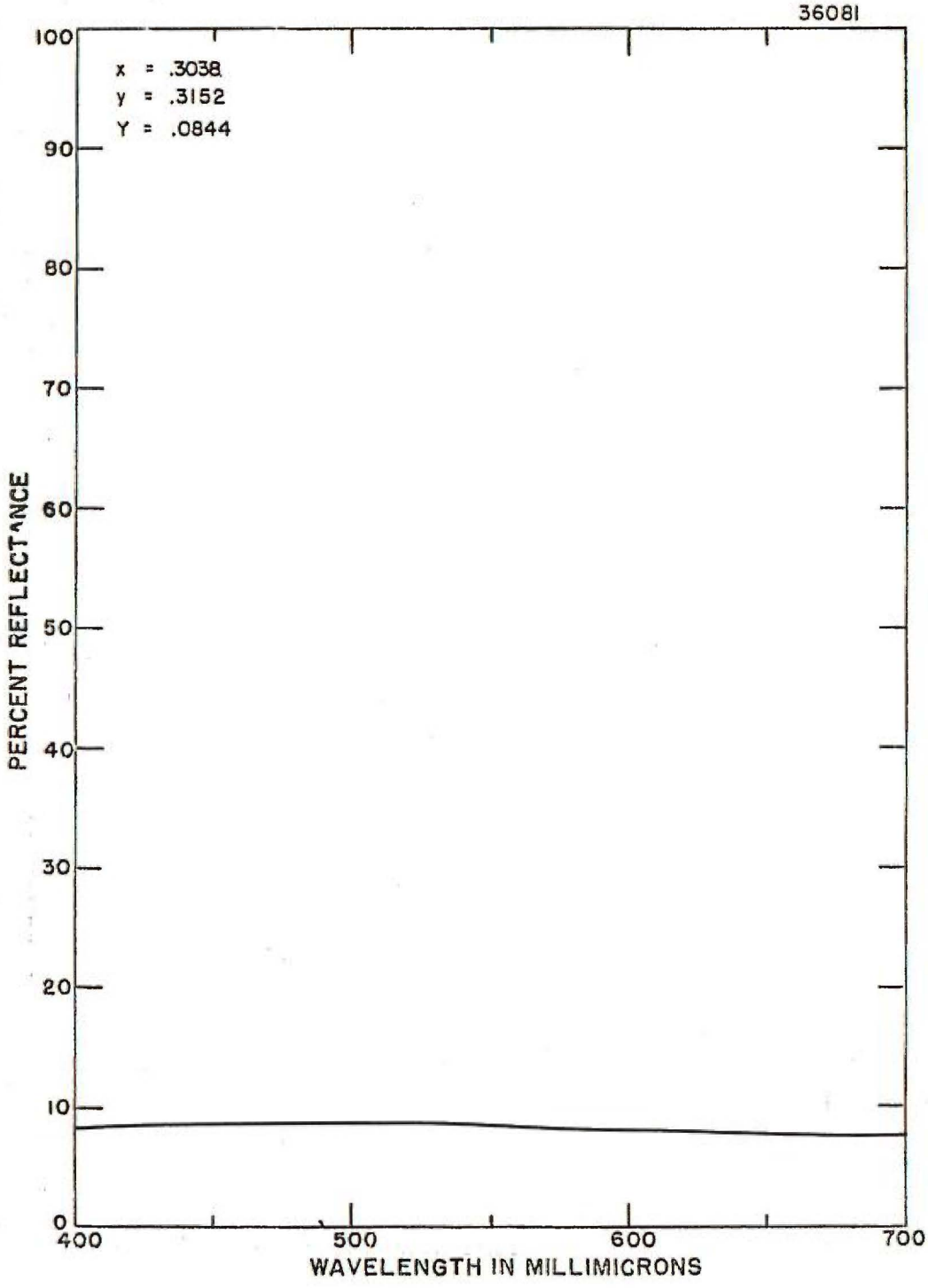

35231
x = .2429
y = .2363
Y = .2321
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

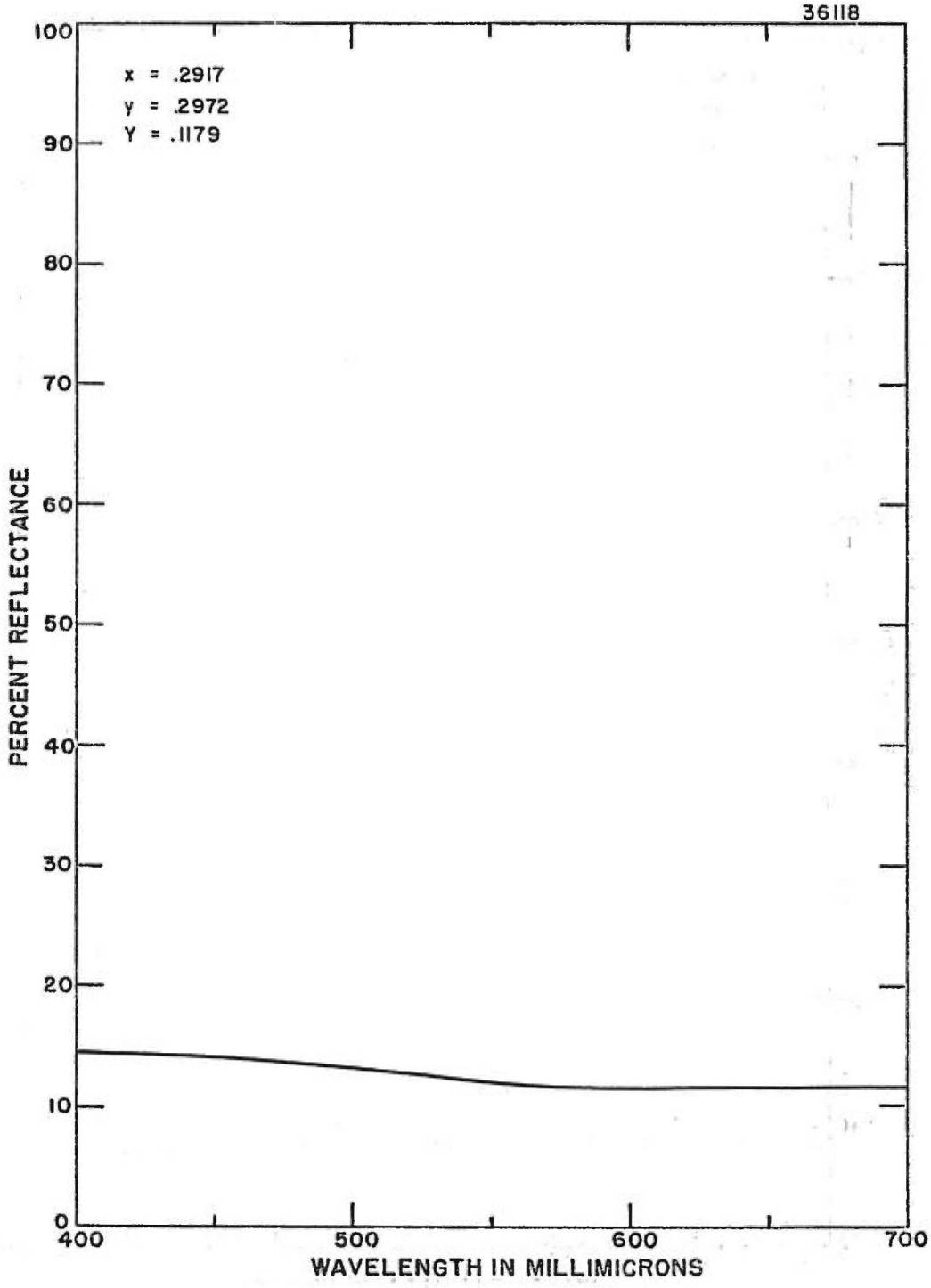

35352
x = .2917
y = .3193
Y = .3514
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

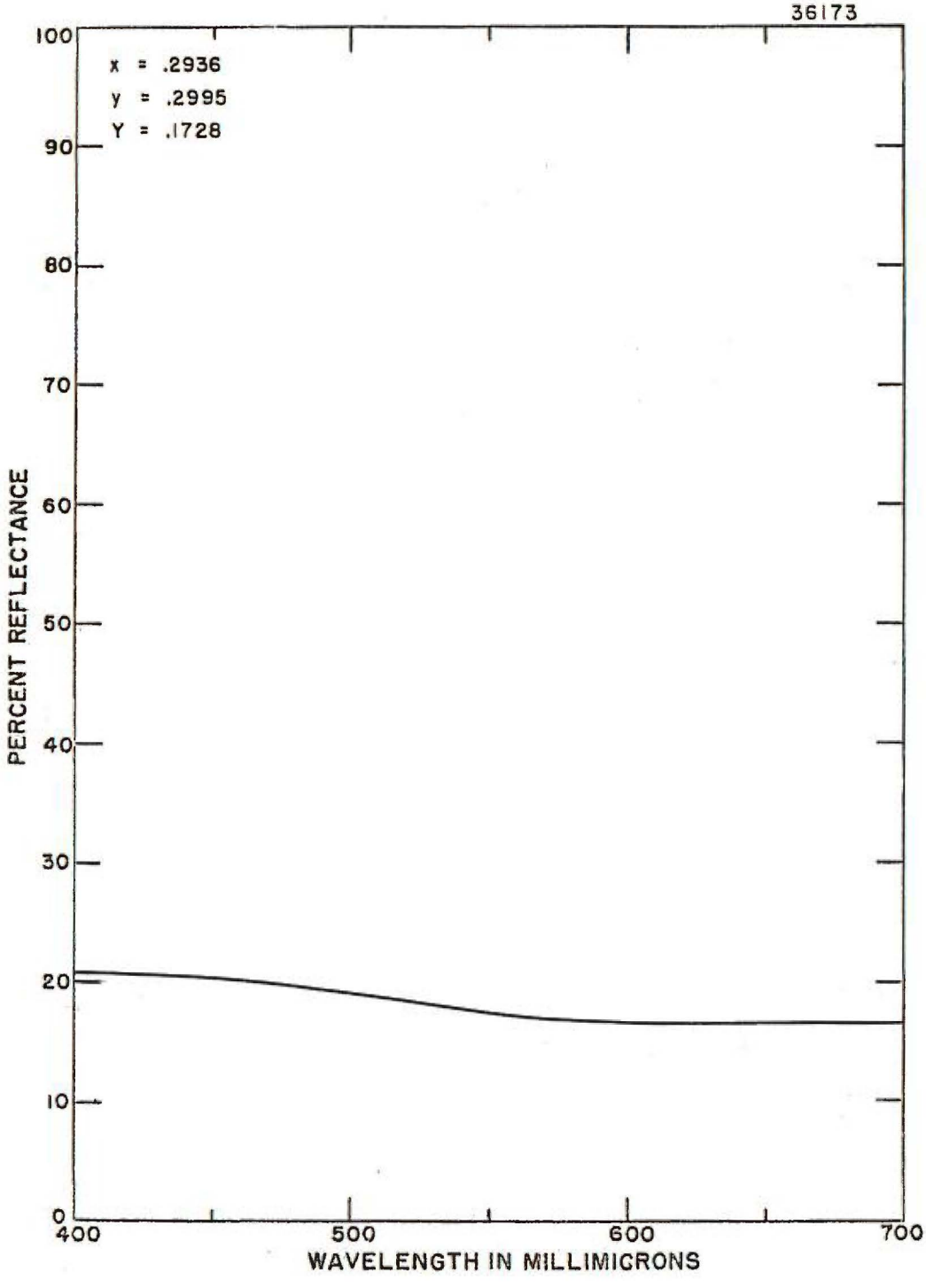

35526
x = 2874
y = 3009
Y = 5181
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
1.- TOTAL REFLECTANCE- GLOSS
2.-DIFFUSE REFLECTANCE -FLAT
3.-DIFFUSE REFLECTANCE-SEMI GLOSS
4.-DIFFUSE REFLECTANCE-GLOSS
400
500
600
700
WAVELENGTH IN MILLIMICRONS

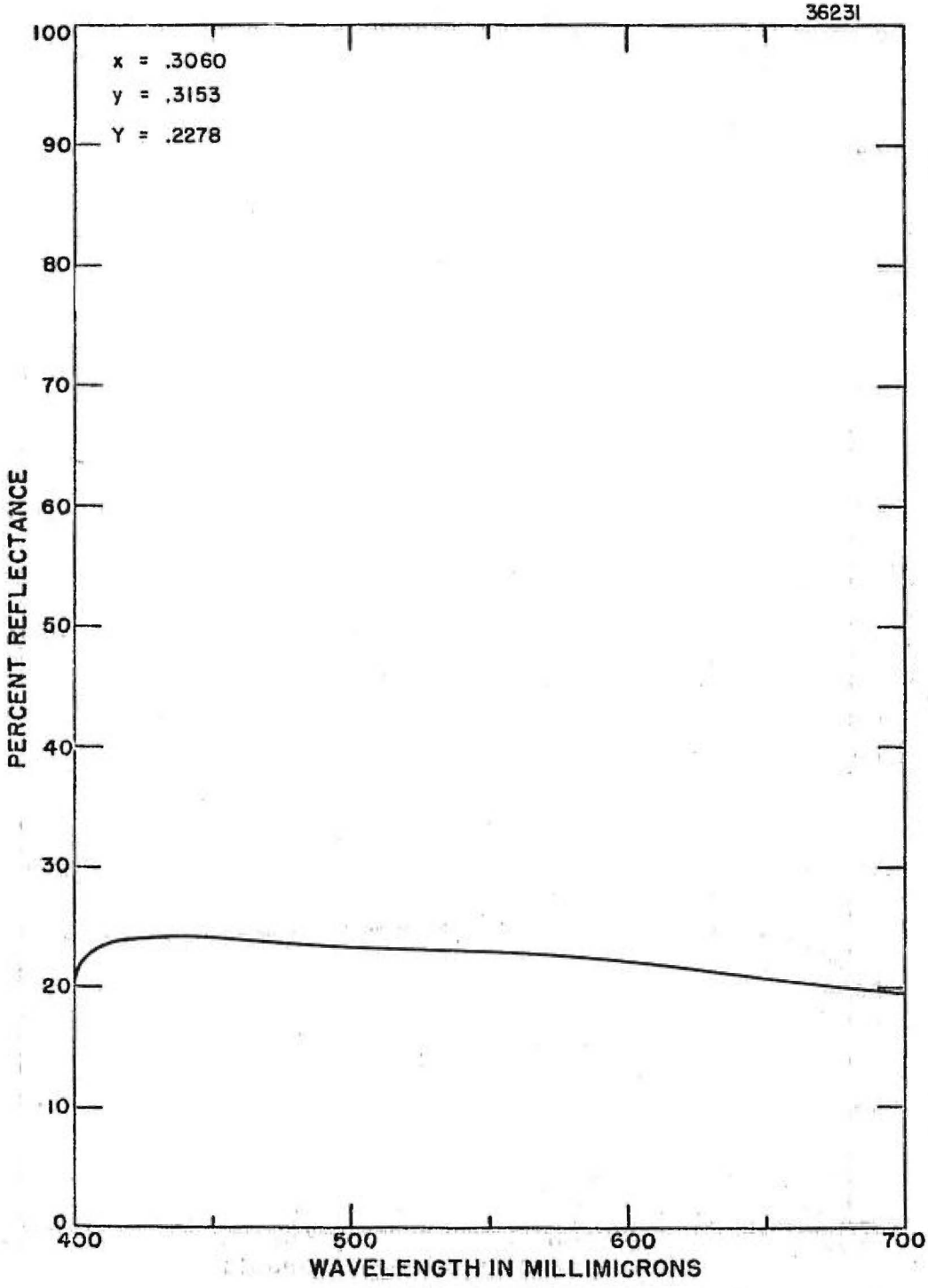

35622
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

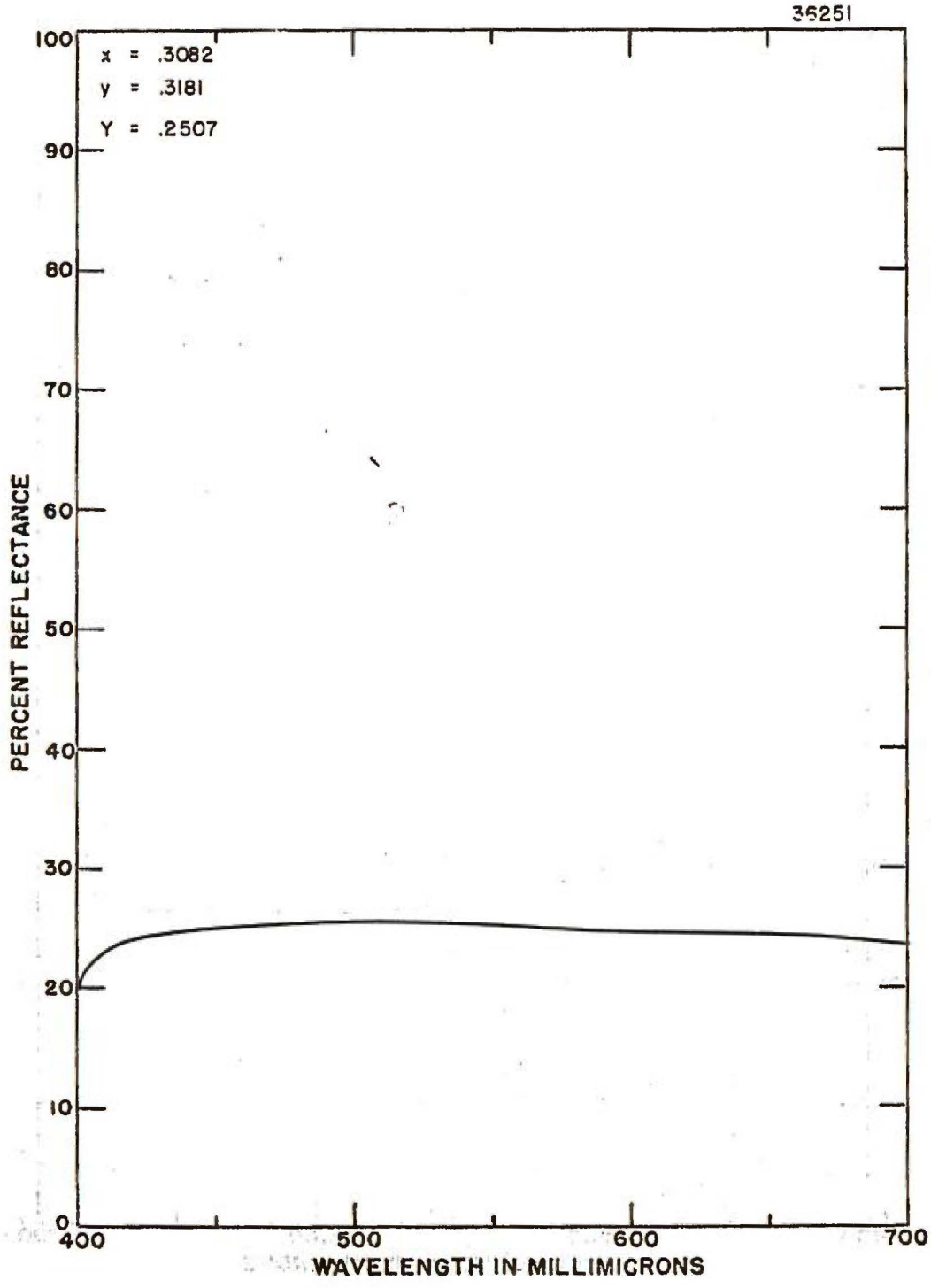

36076
x = .2919
y = .2935
Y = .0730
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

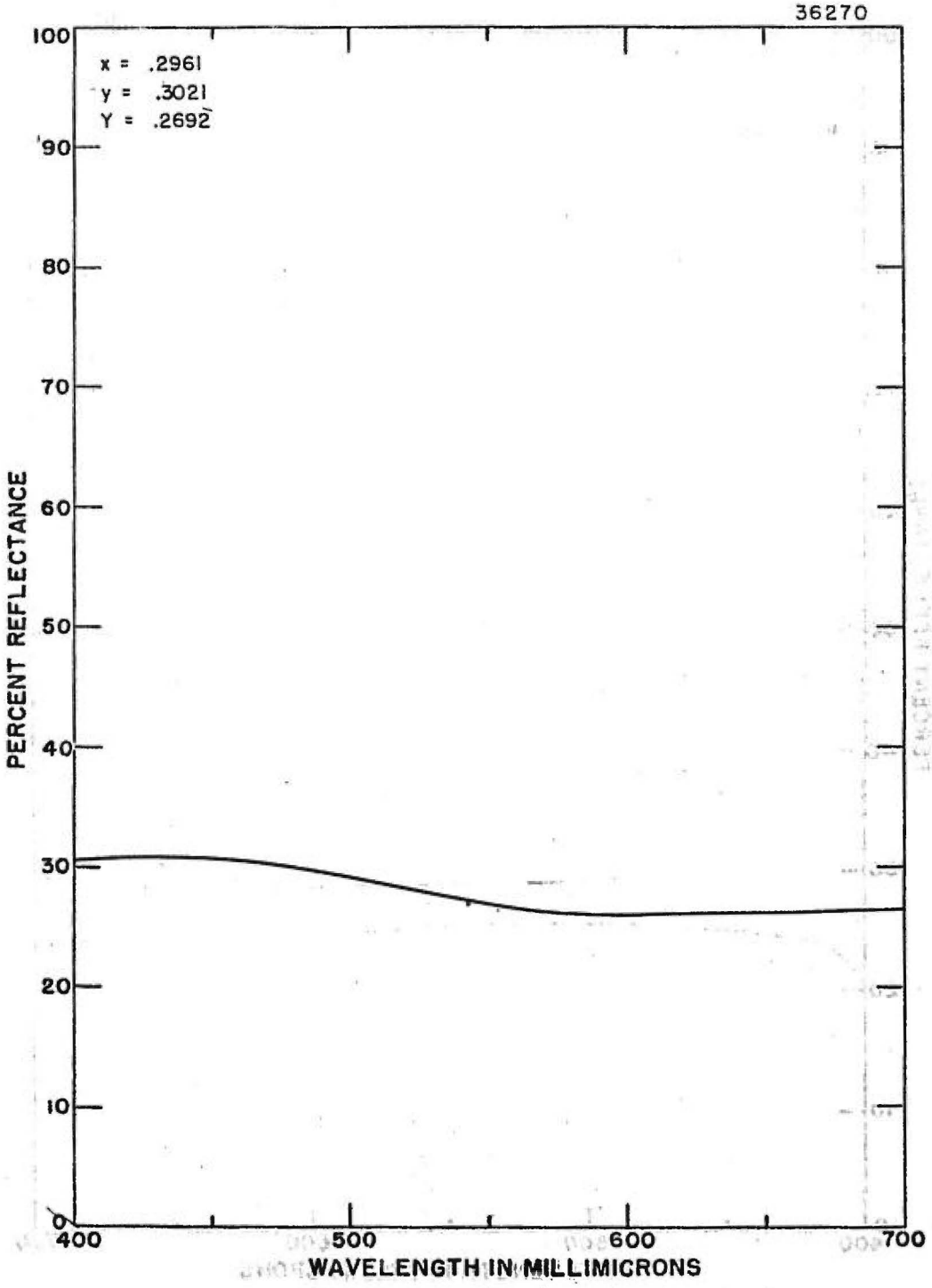

36081
x = .3038
y = .3152
Y = .0844
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

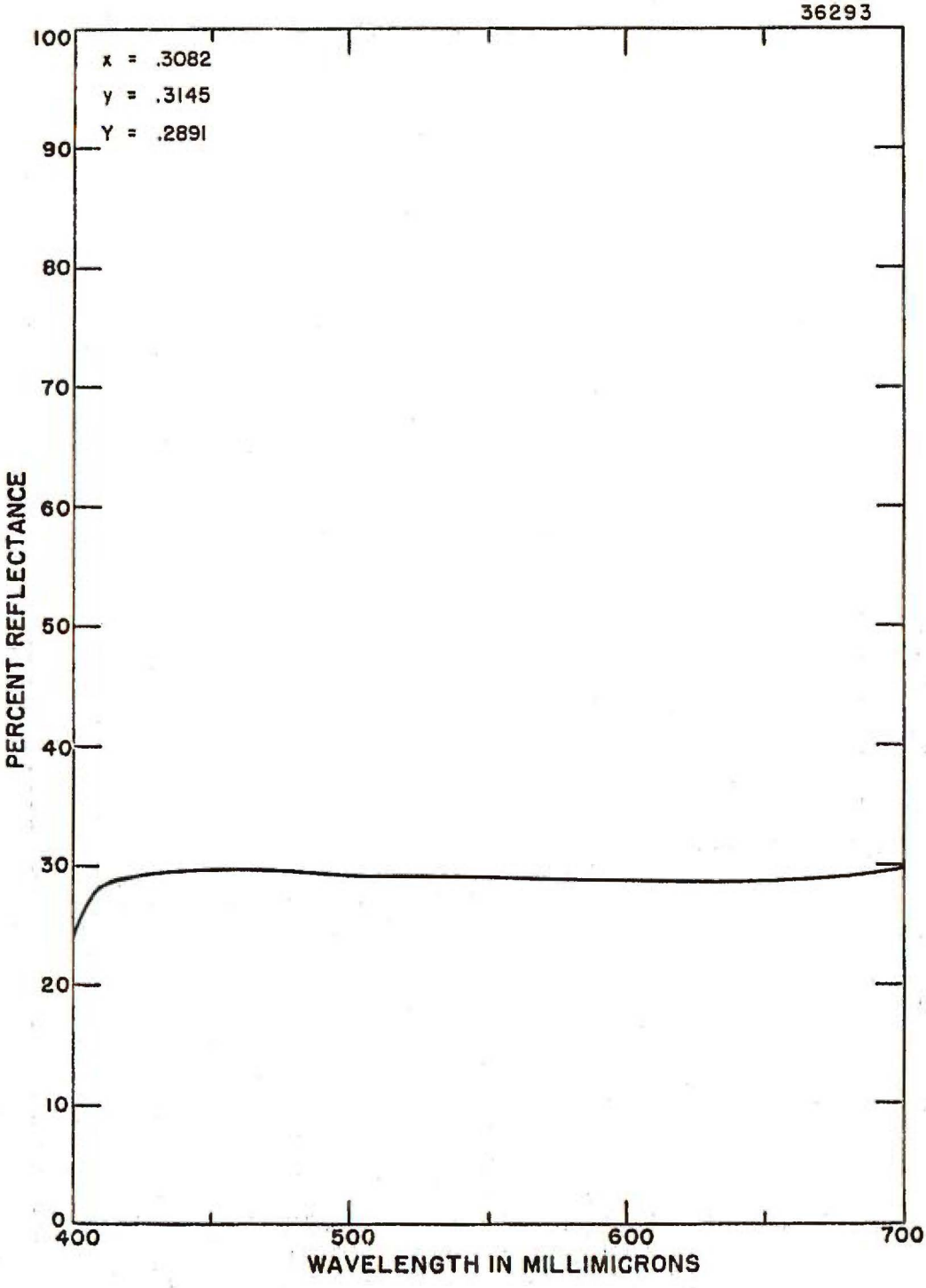

36118
x = .2917
y = .2972
Y = .1179
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

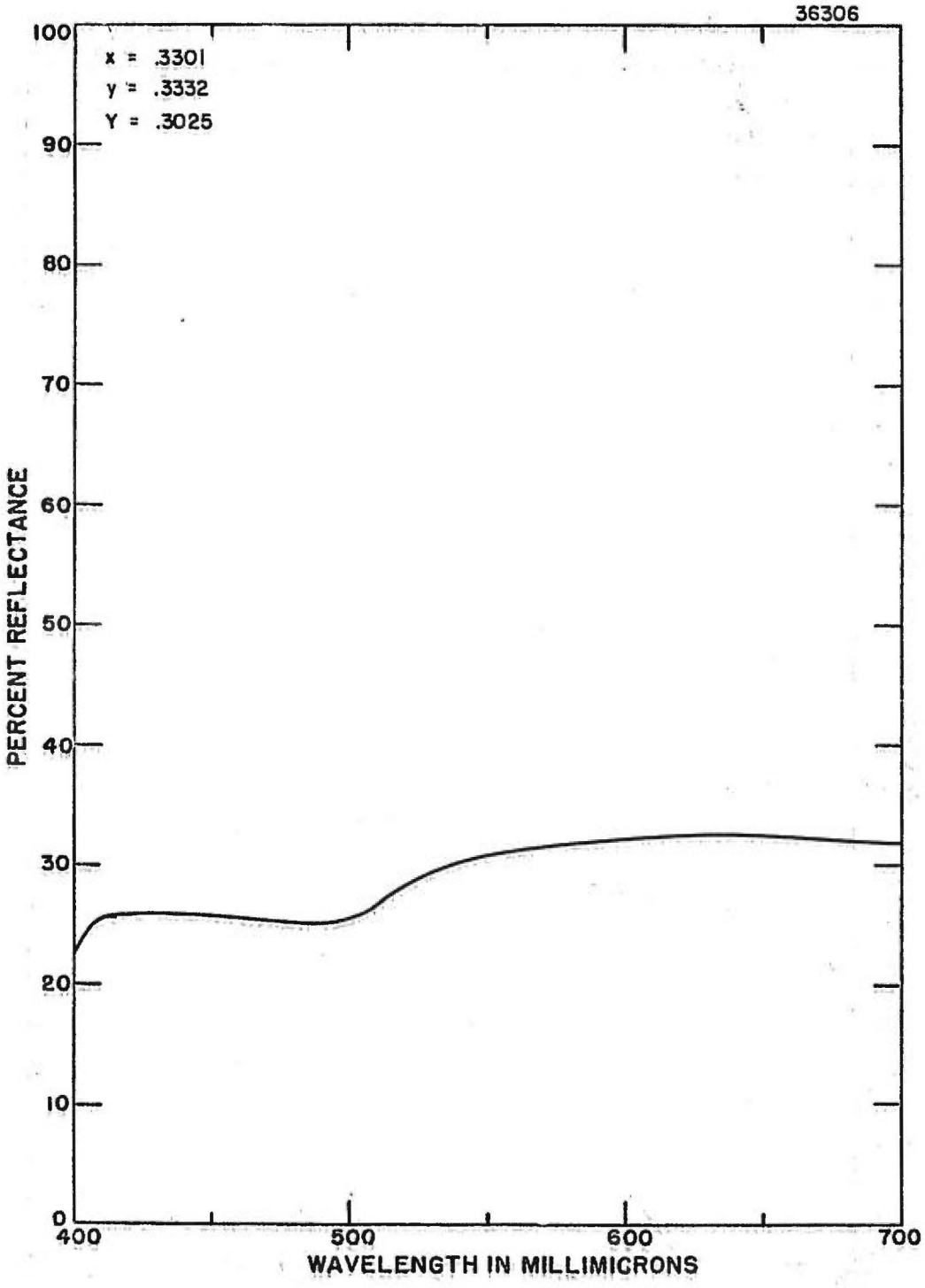

36173
x = .2936
y = .2995
Y = .1728
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

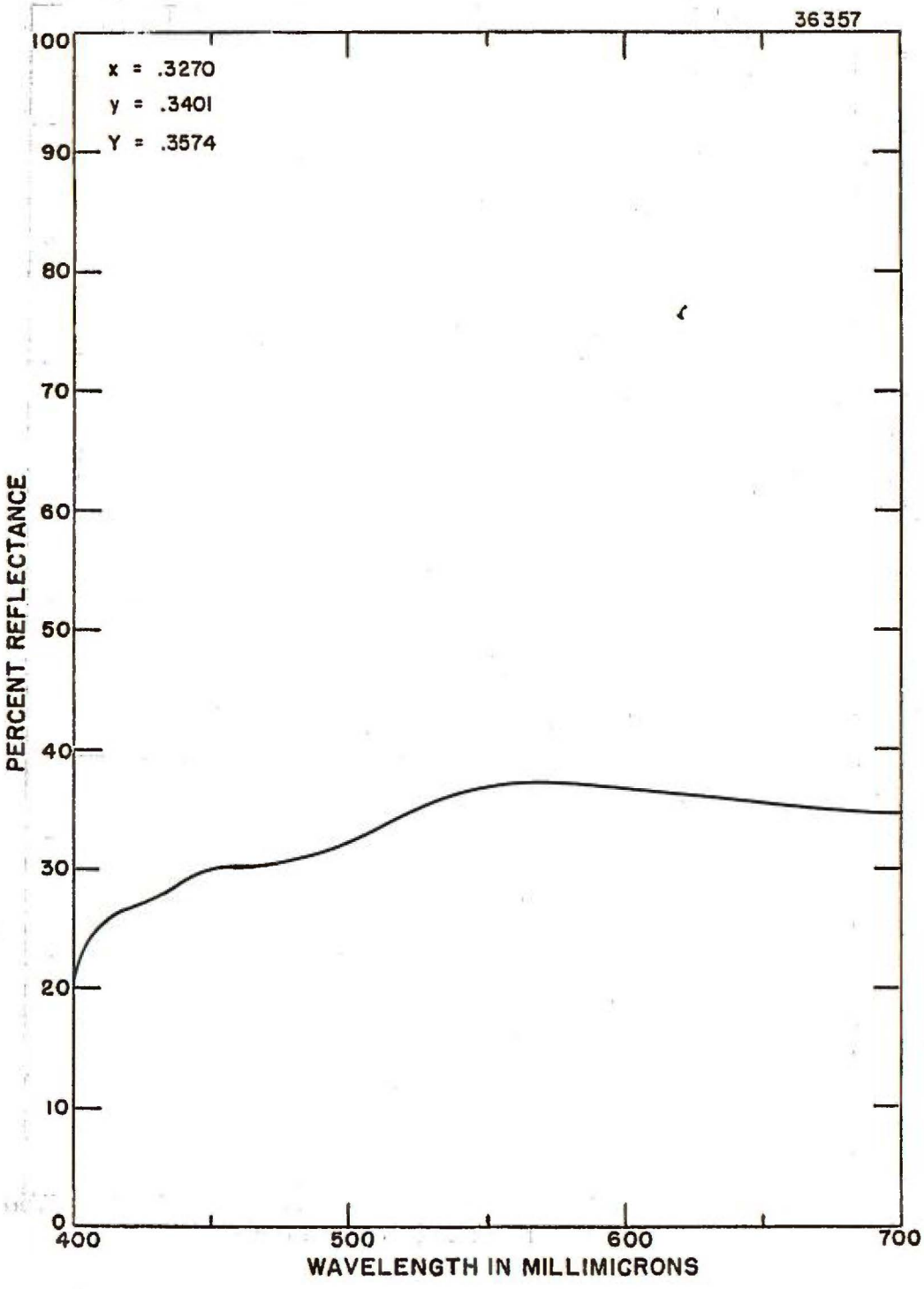

36231
x = .3060
y = .3153
Y = .2278
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

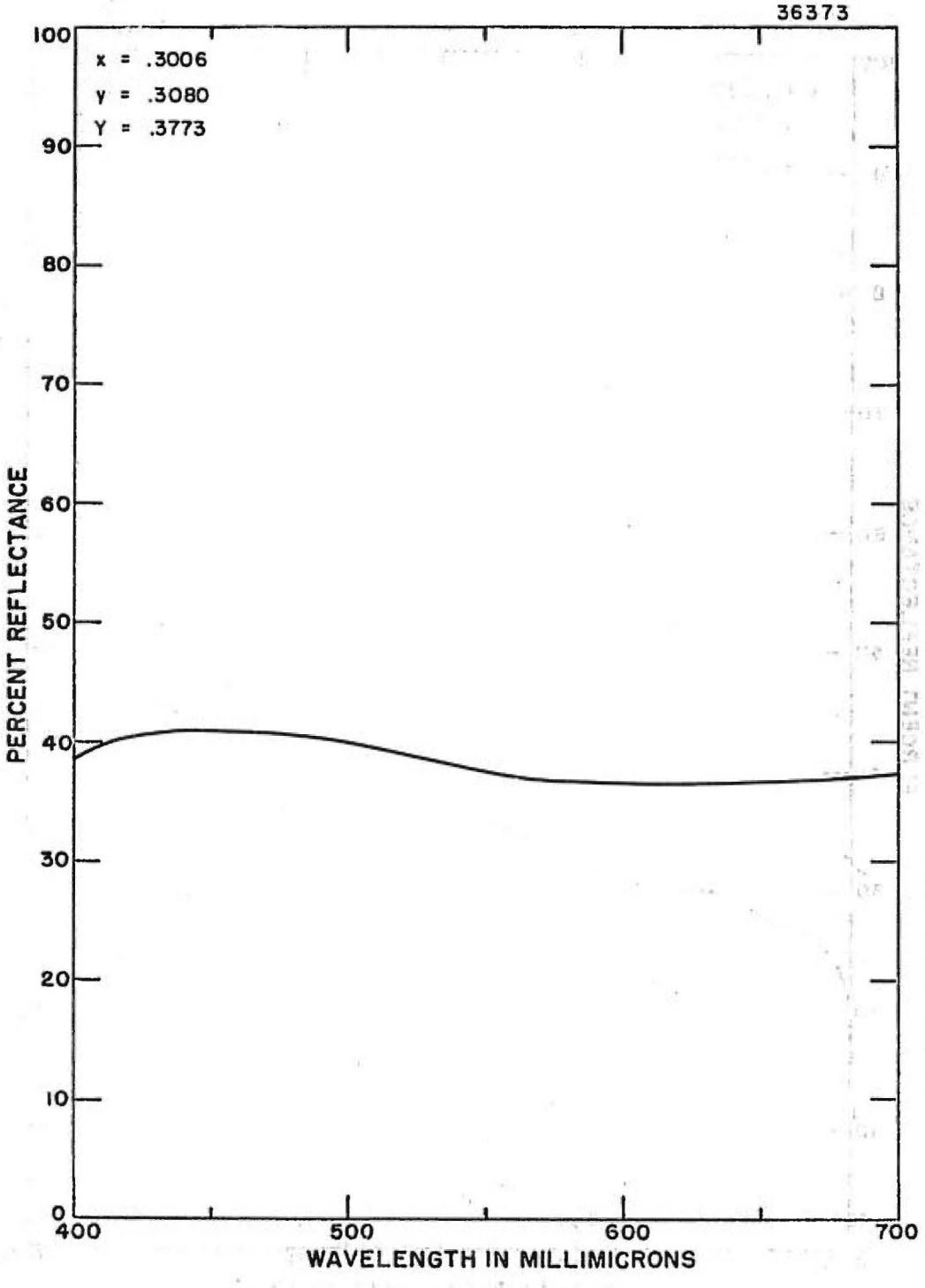

36251
x = .3082
y = .3181
Y = .2507
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

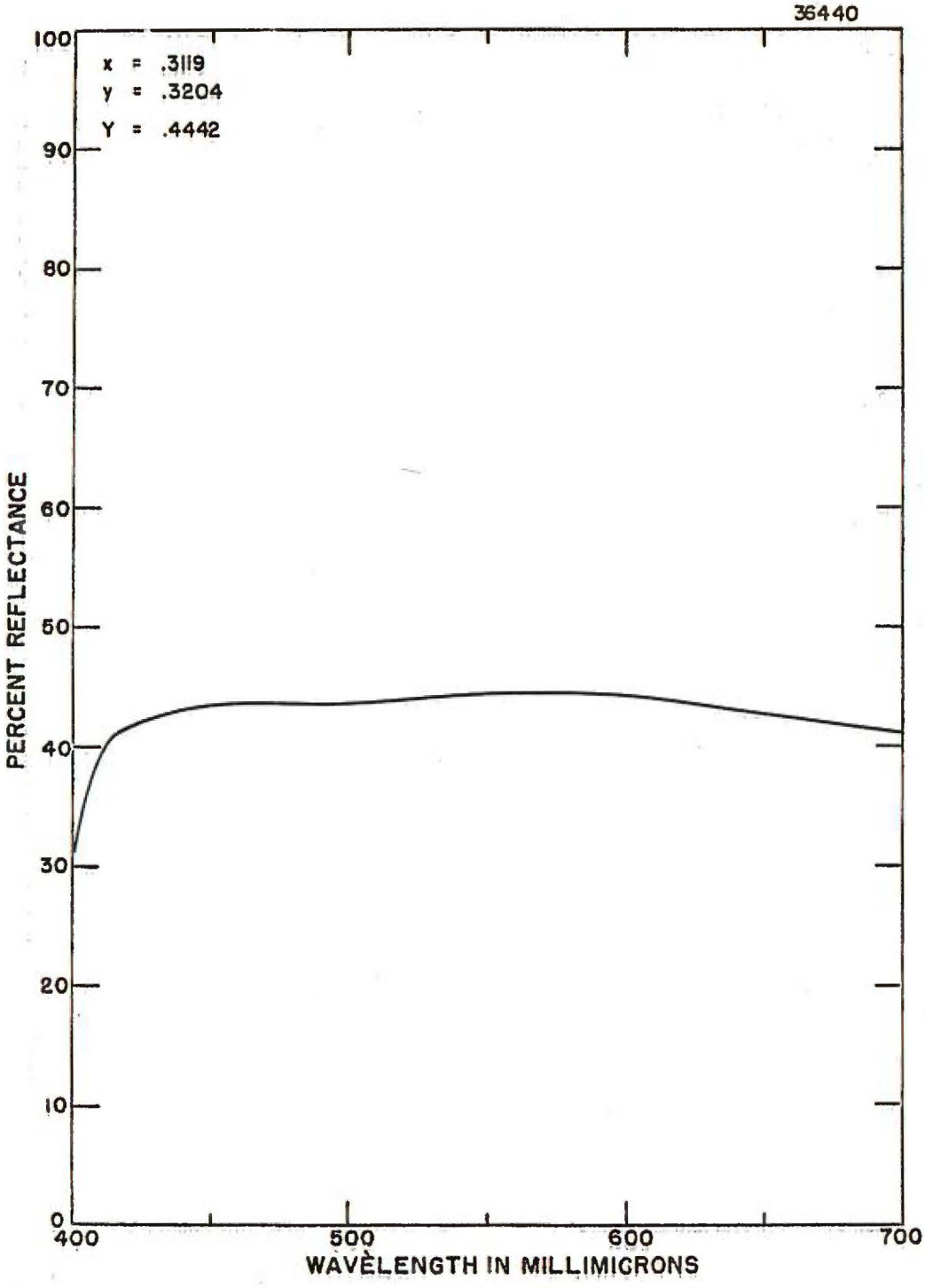

36270
x = .2961
y = .3021
Y = .2692
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS

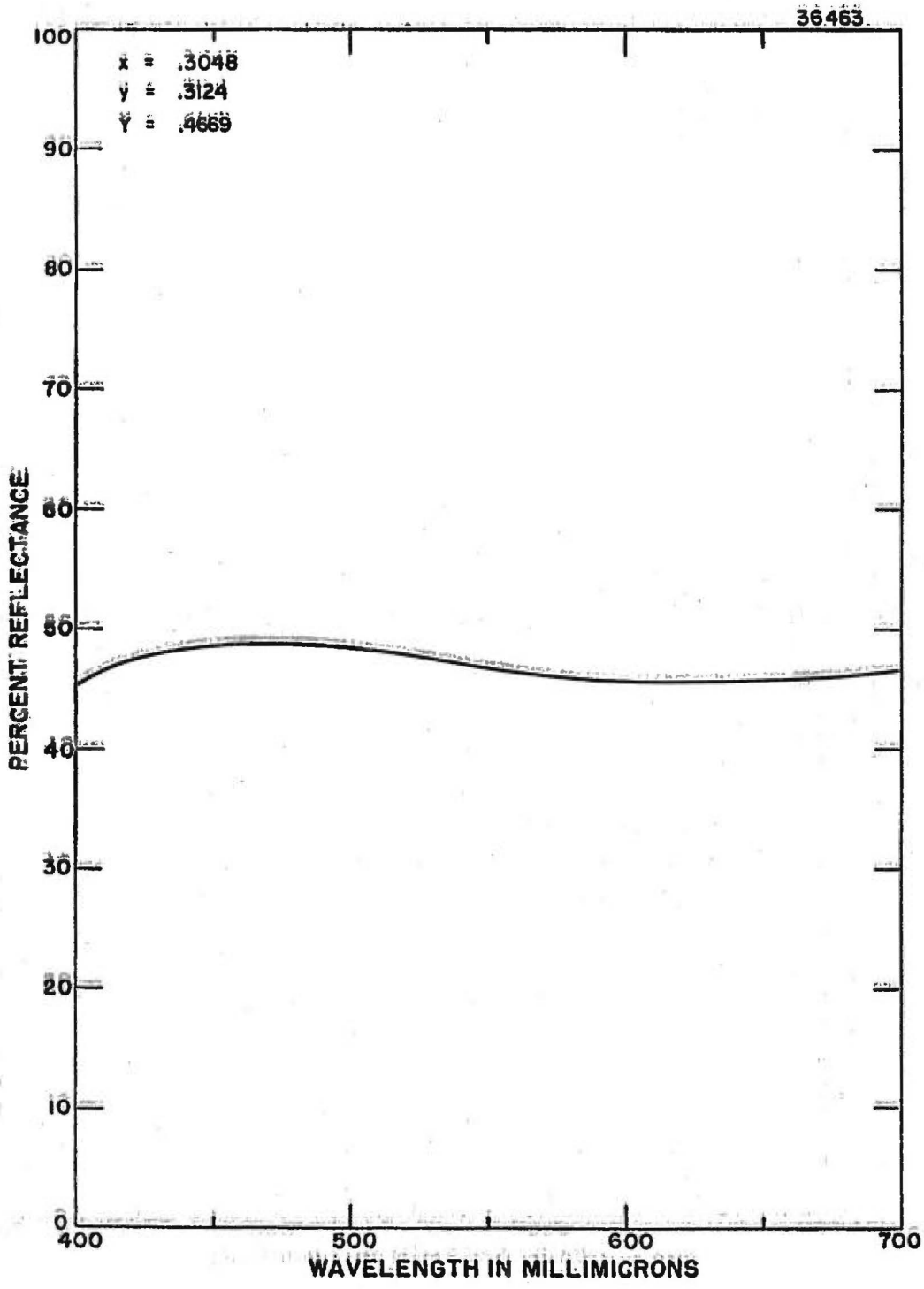

36293
x = .3082
y = .3145
Y = .2891
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

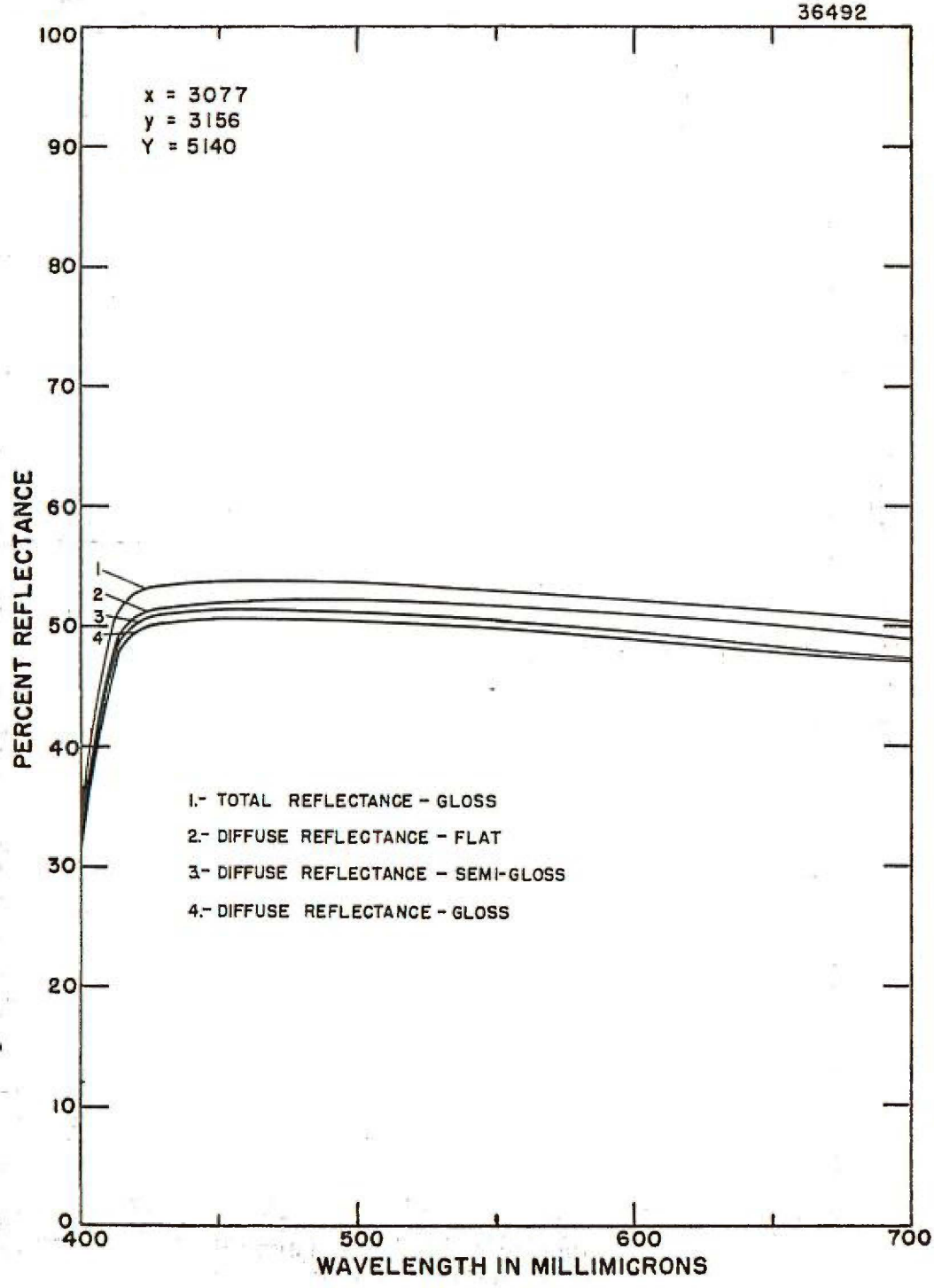

36306
x = .3301
y = .3332
Y = .3025
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

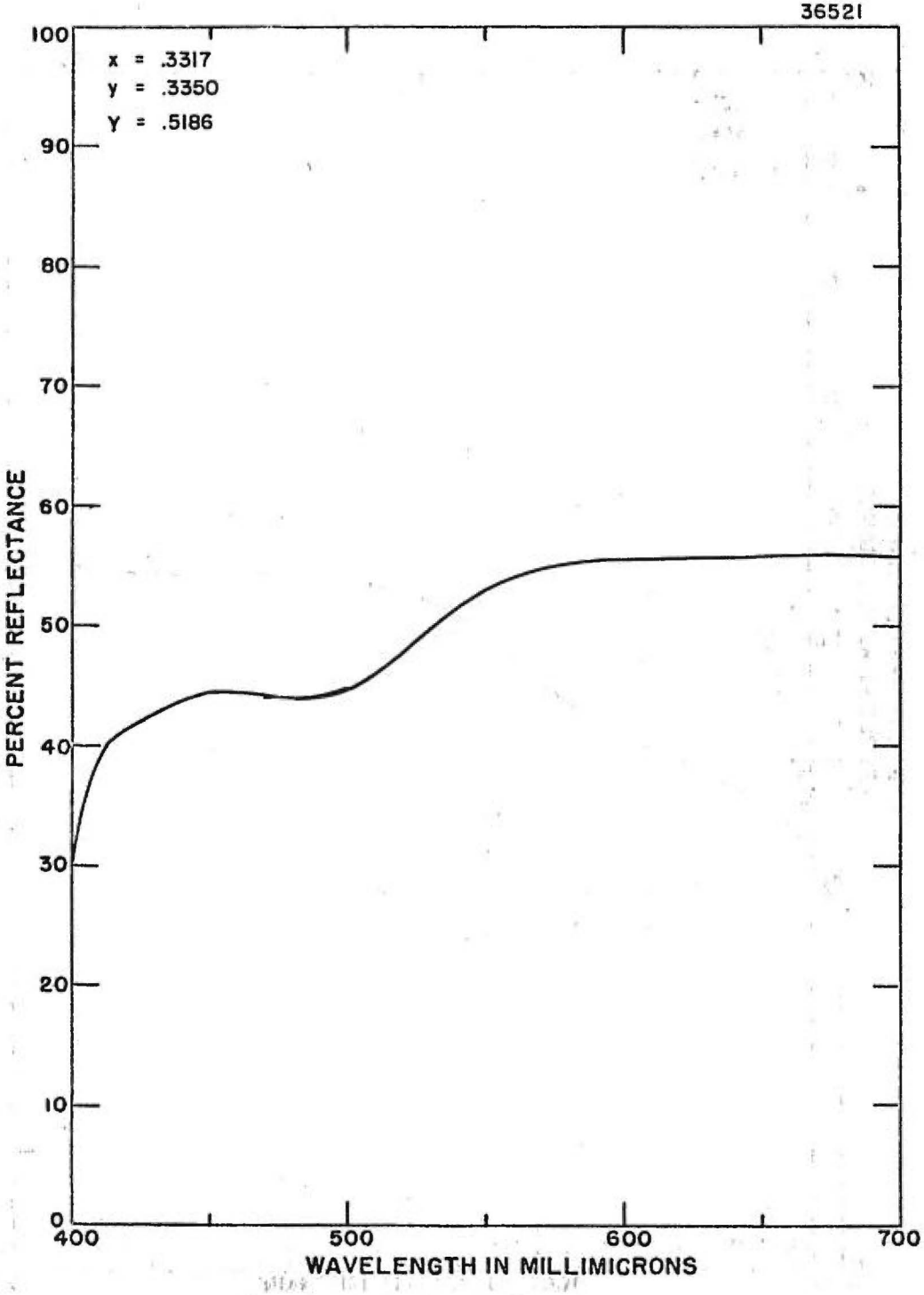

36357
x = .3270
y = .3401
Y = .3574
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

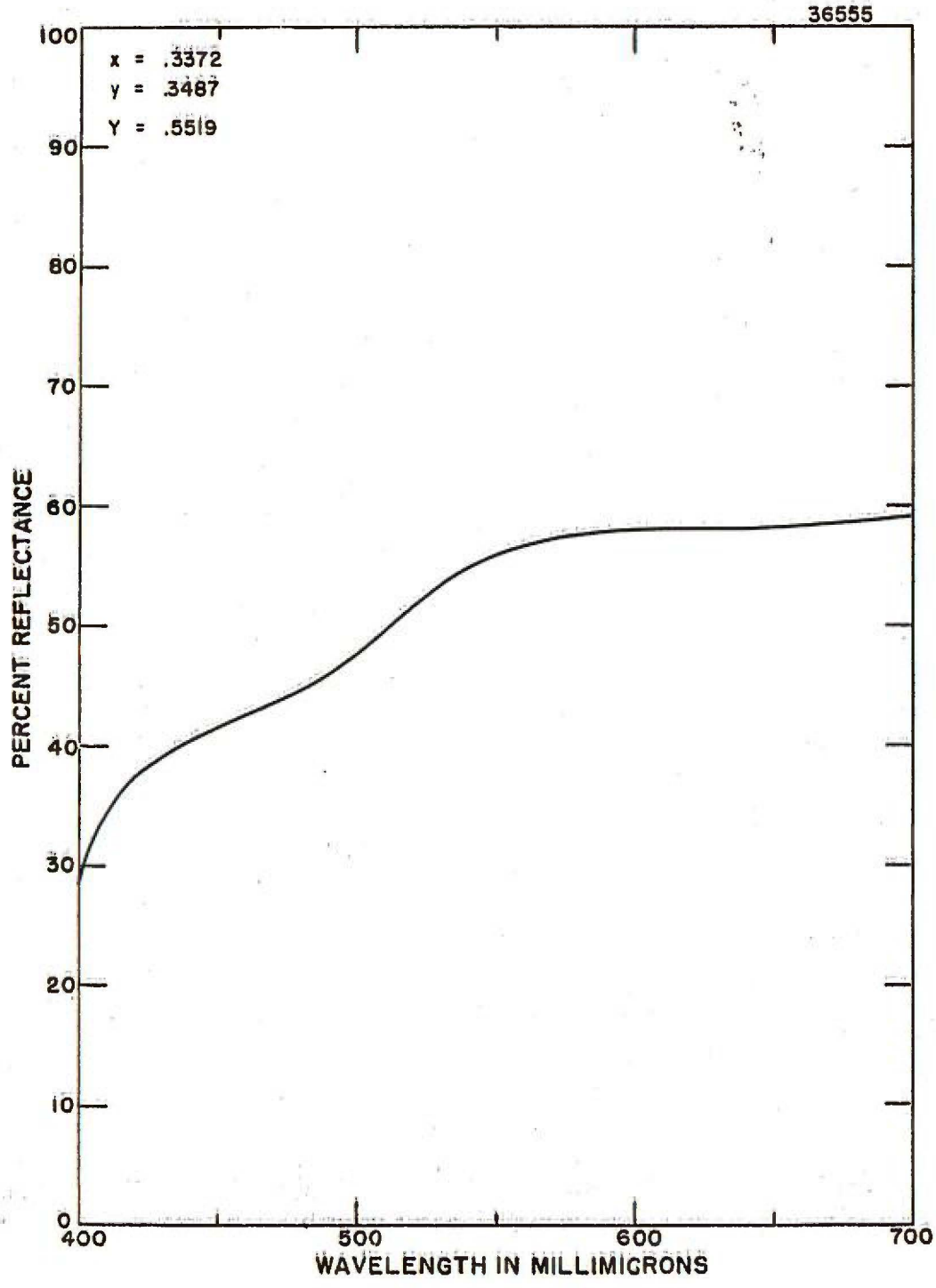

36373
x = .3006
y = .3080
Y = .3773
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

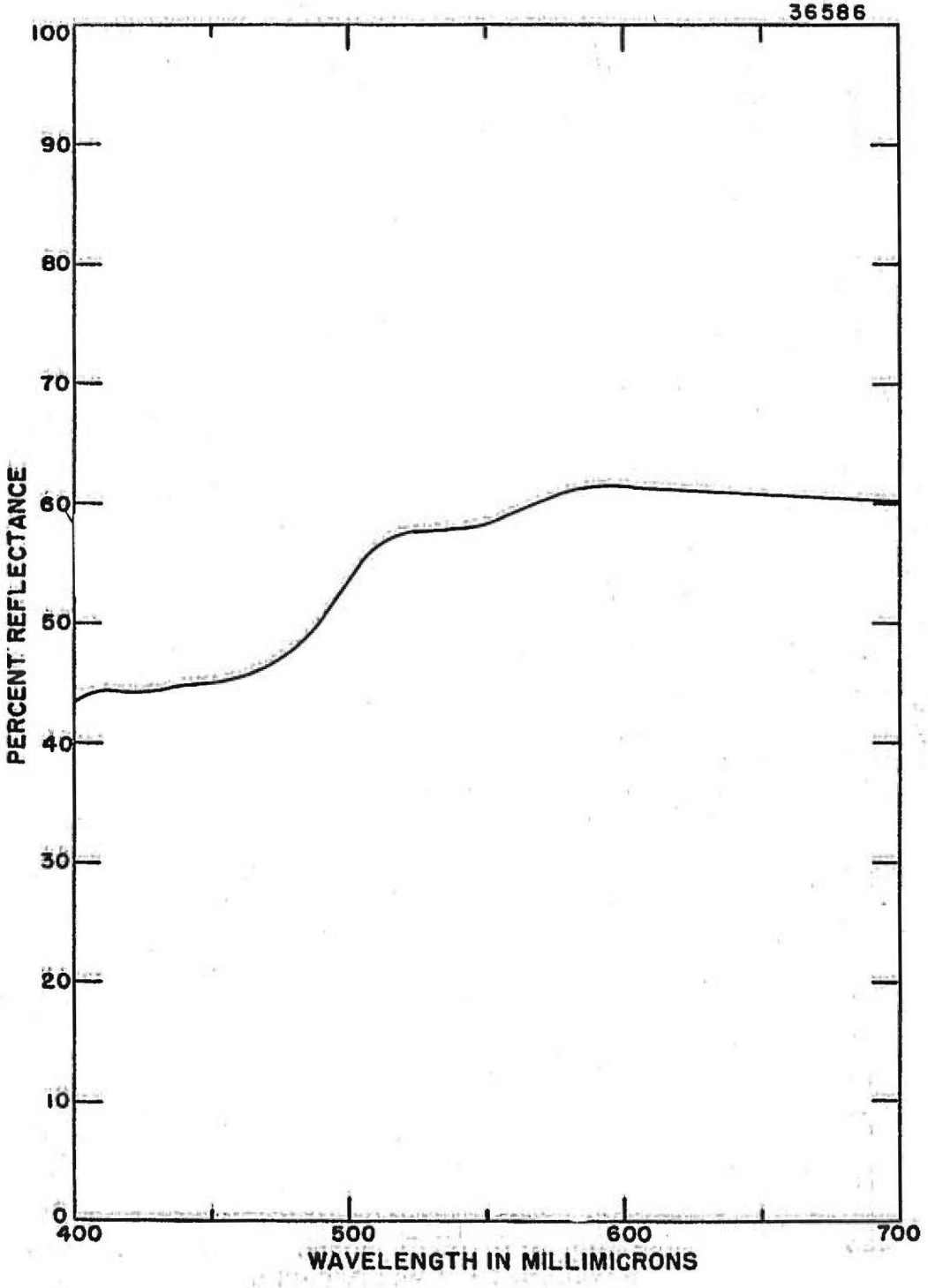

36440
x = .3119
y = .3204
Y = .4442
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

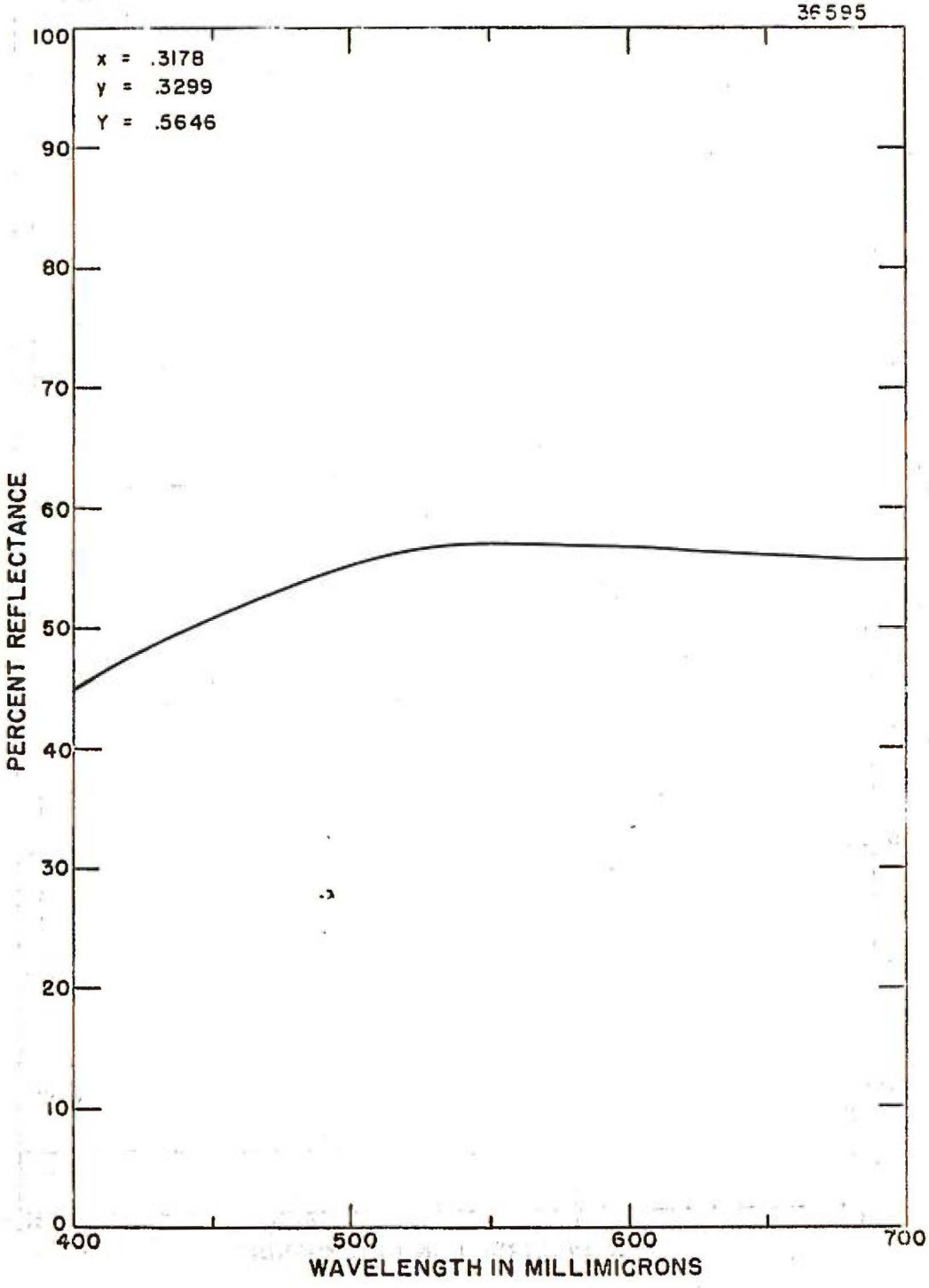

36463
x = .3048
y = .3124
Y = .4669
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

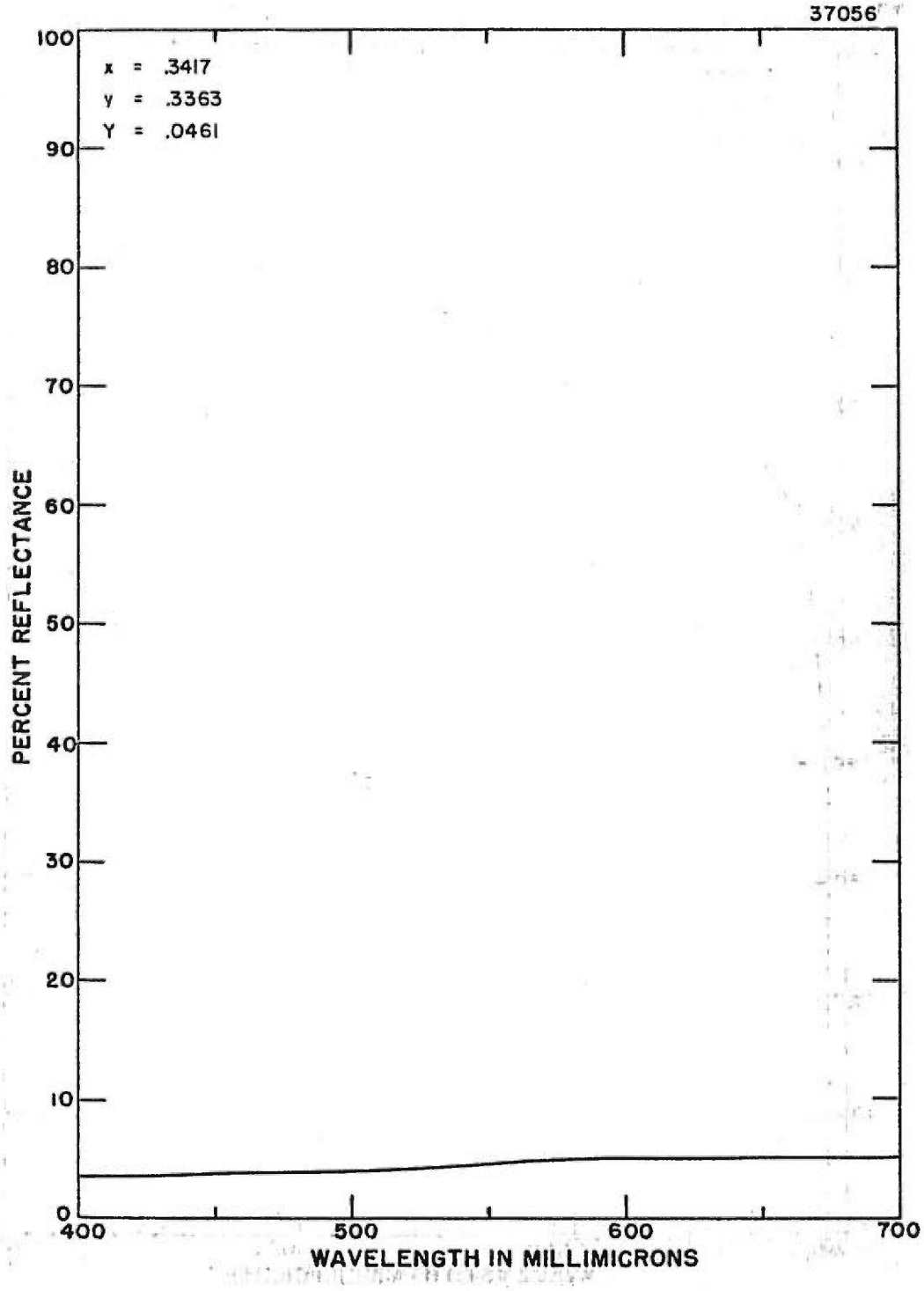

36492
x = 3077
y = 3156
Y = 5140
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS
1
2
3
4
1.- TOTAL REFLECTANCE - GLOSS
2.- DIFFUSE REFLECTANCE - FLAT
3.- DIFFUSE REFLECTANCE - SEMI-GLOSS
4.- DIFFUSE REFLECTANCE - GLOSS

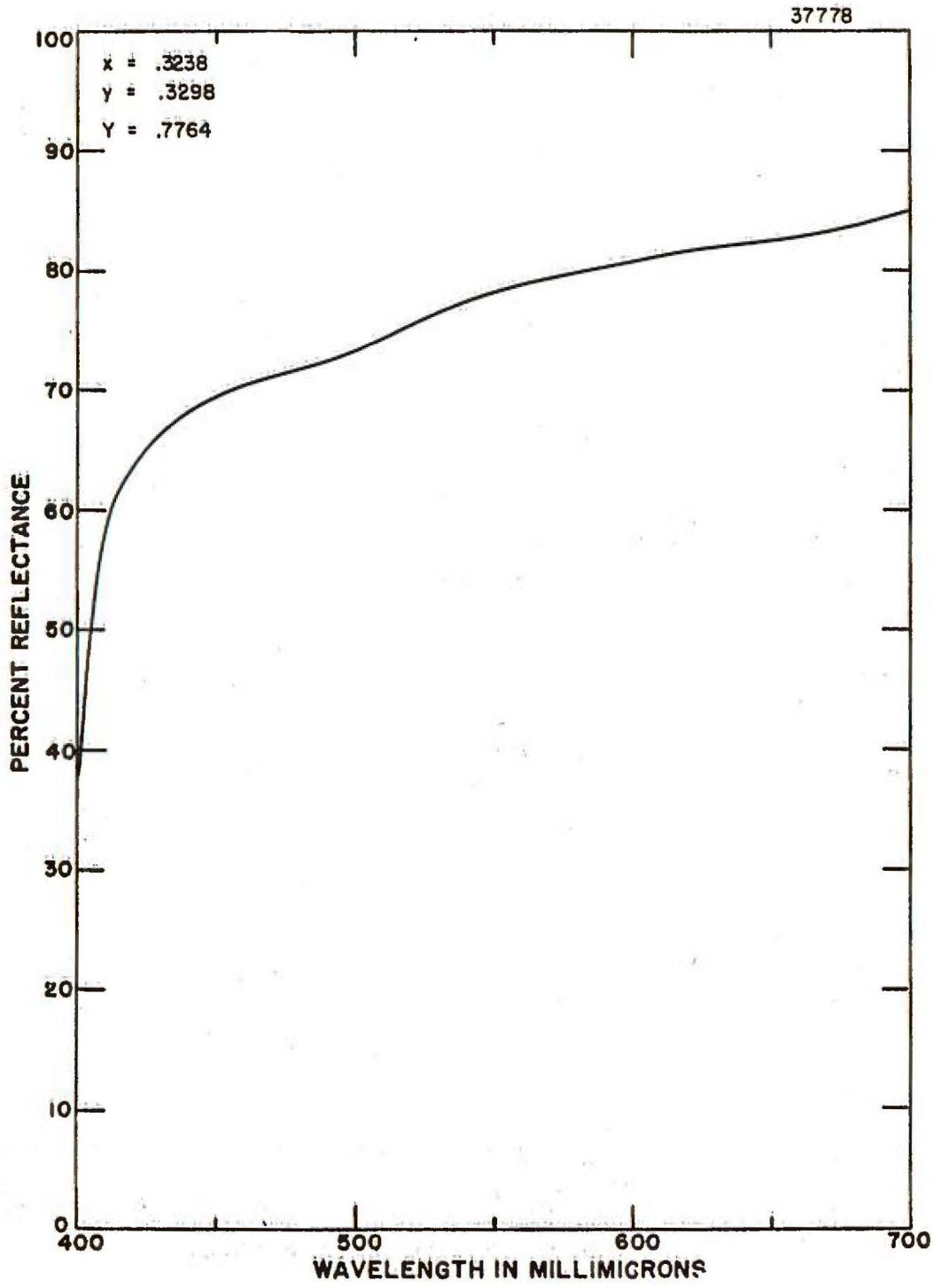

36521
x = .3317
y = .3350
Y = .5186
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS


36555
x = .3372
y = .3487
Y = .5519
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS


36586
100
90
80
70
60
50
40
30
20
10
0
PERCENT REFLECTANCE
400
500
600
700
WAVELENGTH IN MILLIMICRONS


36595
x = .3178
y = .3299
Y = .5646
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS


37056
x = .3417
y = .3363
Y = .0461
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS


37778
x = .3238
y = .3298
Y = .7764
PERCENT REFLECTANCE
100
90
80
70
60
50
40
30
20
10
0
400
500
600
700
WAVELENGTH IN MILLIMICRONS

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document*(s)* or to amend contractual requirements.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE ARMY

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 12062 WASHINGTON D. C.
POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE ARMY

Commander
US Army Armement Research and Development Command
ATTN: DRDAR-TST-S
Dover, NJ 07801

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ VENDOR ☐ USER ☐ MANUFACTURER ☐ OTHER *(Specify)*: _____

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE.