



SUBJECT: SETTLING P1 FLUORESCENT SCREENS
Process Specifications

SUPERSEDED DATE Jan. 8, 1954

SCHEDULE NO. 1

1. EQUIPMENT As specified in 34-17-14.
2. MATERIALS
W12 Willemite Suspension
L14 N/25 Lithium Hydroxide
P69B 1-N Potassium Sulfate Solution
* P264D 16% Potassium Silicate
A66 Glacial Acetic Acid
W7K Distilled, W7J Distilled, or W60D Deionized Water.
A609 Ammonium Bifluoride

MAY 1955



LITHIUM HYDROXIDE SAFETY PRECAUTIONS: See 33-2-8A
ACETIC ACID SAFETY PRECAUTIONS: See 33-2-7C
AMMONIUM BIFLUORIDE SAFETY PRECAUTIONS: See 33-2-7C

3. PROCEDURE

a. Prepare the correct (30 mg/cc.) concentration of W12 according to direction found on the bottle of stock solution. Spot check this concentration as follows:

- (1) Equipment: IEC Centrifuge - size #2, 1 each.
IEC Tachometer - Cat. #748, 1 each.
IEC Brass Spider - #239, 1 each.
IEC Cup Holders #239, 2 each.
Graduated glass centrifuge cup - 100 cc., 2 each.
50 cc. graduated cylinder, 1 each.
- (2) Procedure:
- (a) Draw a 45 cc. sample of the suspension solution, after final dilution from the battery jar. This sample is of the supposed 30 mg./cc. concentration.
- (b) Carefully pour this 45 cc. of material into the clean, graduated glass centrifuge cup.
- (c) Rinse the graduate with 25 cc. of water and pour this rinse into the centrifuge cup.
- (d) Repeat step c.
- (e) Repeat steps a,b,c, and d into another centrifuge cup, being sure that the weights of the cups are within a 1.5 g. difference scale. Check to be sure that the volumes in each cup are equal; if not, bring to the same level by adding water.
- (f) Place cups in the cup holders, which are placed opposite, each to each, in the spider which is mounted on the centrifuge shaft. Run centrifuge for 15 min. at 1700 rpm. using the tachometer to read the revolutions as per the directions mounted in the centrifuge. Keep the centrifuge cover clamped down from start to finish of the centrifuge operation.
- (g) Carefully remove cups and take readings.
- (h) Record readings on form provided.
- (i) If readings are not within limits of 0.90 to 1.05 ml., call the foreman.

b. Rinse bulbs with distilled or deionized water.

c. Place bulbs on dispensing table on blocks or trays or in multiple unit bulb holders.

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

(Cont'd on page 1a)

10-552-2-64

PCL26696-126PS

* CHANGE
** ADDITION
*** DELETION

These drawings and specifications are the property of Radio Corp. of America, RCA Victor Div. and shall not be reproduced or copied or used as the basis for the manufacture or sale of apparatus and/or devices without permission.

13D26

**RADIO CORPORATION OF AMERICA**

RCA VICTOR DIVISION 2s

TUBE DEPT. STANDARDIZING
LANCASTER, PA.

DATE Feb. 7, 1955 PAGE 1a

**STANDARDIZING
NOTICE** 34-17-14A**SUBJECT:** SETTLING P1 FLUORESCENT SCREENS
Process Specifications**SUPERSEDED DATE** June 7, 1954SCHEDULE NO. 1 (Cont'd)

4. PROCEDURE (Cont'd)

d. Apply screen material (See Part).

- (1) Add cushion layer, if any, to bulb through an open funnel with 325-mesh stainless steel strainer insert.
- (2) Prepare settling suspension as given for specific bulb type.
- (3) Add settling suspension to bulb through appropriate funnel fitted with 325-mesh strainer.
- (4) Allow screen to settle specified time.
- (5) Pour off clear solution - pouring time 6-8 minutes.
- (6) Wash neck with tap water.
- (7) Air dry - 3-4 minutes.
- (8) Clean bulb:
 - (a) For bulbs settled with lithium hydroxide - wipe face with cloth dampened with tap water.
 - (b) For bulbs settled with potassium silicate - wash neck and face with 3-3.5% ammonium bifluoride solution, then with cloth dampened with tap water.
 - (c) Alternate bulb cleaning process see

34-17-4P

5. SCREEN APPLICATION SPECIFICATIONS

Tube Type	Fluorescent Material mg.	Screen Weight mg./cm ²	Cushion Water cc.	W12 at 30 mg./cc. cc.	Silicate*16% cc.	LiOH (114) N/25 cc.	Sulfate (P69B) 1-N cc.	Suspension Water cc.	Total Susp. Volume cc.	Suspension/Bulb cc.	Funnel Type	Settling Time hr.
2AP1A 2BP1 902A	30	1.5	0	40	-	110	60	1590	1800	45	Open	4
3AP1A 3BP1A	68	1.5	0	36	-	100	55	1409	1600	100	Open	3
3JP1	82	2.0	0	44	-	100	55	1401	1600	100	Open	3
3KP1 3RP1	62	1.5	0	33	-	100	55	1412	1600	100	Open	3
5BP1A 5UP1	210	1.5	0	28	-	110	60	1602	1800	450	Open	3
5CP1A	278	2.0	0	37	-	110	60	1593	1800	450	Open	3

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

(Cont'd on Page 1c)

* CHANGE
** ADDITION
*** DELETION

11-552-2-64 PCL26696-126PS
These drawings and specifications are the property of Radio Corp. of America, RCA Victor Div. and shall not be reproduced or copied or used as the basis for the manufacture or sale of apparatus and/or devices without permission.

13D26



SUBJECT: SETTLING P1 FLUORESCENT SCREENS
Process Specifications

SUPERSEDES Feb. 8, 1955

SCHEDULE NO. 1 (Cont'd)

5. SCREEN APPLICATION SPECIFICATIONS (Cont'd)

Tube Type	Fluorescent Material mg.	Screen Weight mg./cm ²	Cushion Water cc.	W12 at 30 mg./cc. cc.	Silicate*16% cc.	LiOH N/25 cc.	Sulfate 1-N cc.	Suspension Water cc.	Total Susp. Volume cc.	Suspension/Bulb cc.	Funnel Type	Min. Settling Time Hr.
7CP1	560	2.2	0	56	-	145	80	2119	2400	800	Open	3
7VP1	380	1.5	200	38	0	145	80	1537	1800	600	Open	3
914A	870	2.0	1500	29	144	-	300	426	900	900	Open	3
C73617A	1140	2.5	930	38	164	-	415	492	2039	2039	Open	5
→ ** C73619	144	1.5	0	4.8	0	50	25	712	791.8	49.4	Open	3

SCALE—

DIMENSIONS IN

End of Schedule No 1.

UNLESS OTHERWISE SHOWN. DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

8-554-1-60

ES-126JR

* CHANGE
** ADDITION
*** DELETION

These drawings and specifications are the property of Radio Corp. of America, RCA Victor Div. and shall not be reproduced or copied or used as the basis for the manufacture or sale of apparatus and/or devices without permission.

13D26-R1



SUBJECT:

SETTLING P1 FLUORESCENT SCREENS
Process Specifications

SUPERSEDED DATE Oct. 1, 1952

SCHEDULE NO. 3 (P1 Screens by Hand Dispensing)
(Laboratory Process for C7761A)

- 1. EQUIPMENT: As Specified in 34-17-14.
- 2. MATERIALS:
 - * P264B Potassium Silicate Solution - - - 200cc
 - P69B Potassium Sulfate Solution - - - 200cc
 - W7 Double distilled water - - - - - 360cc
 - W2A Willemite at 20 mg/cc - - - - - 12.5cc



AMMONIUM BIFLUORIDE SAFETY PRECAUTIONS: See S. N. 33-2-7C

- 3. PROCEDURE:
 - a. Mix 200cc Potassium Silicate*(P264B), 200cc Potassium Sulfate (P69B) and 360cc double distilled water in 2" high dish with area of 170 sq. cm. This is the cushion layer.
 - b. Place support rack parts in dish and lay face plates on support racks.
 - c. Insert spraying funnel under surface of cushion layer and pour the phosphor solution (W2A) + 100cc water through the funnel.
 - d. Allow the phosphor W2A to settle over night.
 - e. Remove cushion layer by opening drain in bottom of dish.
 - f. Wipe unsettled side of view plate with paper towel dampened with a solution of 50 gms. Ammonium bifluoride and 200cc water.
CAUTION: Do not allow towel to touch settled side of plate.
 - g. Place view plates on a dry paper towel (on a level surface) and allow to dry. The settled side of the view plate should be up while drying.

** End of Schedule #3.

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

3-5312-11-63

PCL22383-133JR

* CHANGE
** ADDITION
*** DELETION

These drawings and specifications are the property of Radio Corp. of America, RCA Victor Div. and shall not be reproduced or copied or used as the basis for the manufacture or sale of apparatus and/or devices without permission.