Direct Dyestuffs

on

Cotton Piece Goods.

Direct Dyestuffs.

SANDOZ

Nr. 662 A. Made in Switzerland.

Direct Dyestuffs.

Dissolving.

Direct Cotton Colours should be dissolved in soft or distilled water (if available) in order to prevent the formation of lime salts; hard water is best corrected by a small addition of soda. By pasting the colour with a little Tetracarnit the preparation of solutions is considerably facilitated.

Dyeing Instructions.

Dyeing in a Neutral Bath. (I.)

Dyeing is carried out under the addition of:—

10—40 % Glauber's Salt cryst., or
5—20 % Common Salt

according to the depth of shade. Pale shades may be dyed without addition of salt but, in any case, only Glauber's salt should be used and the amount reduced to 5—10 %.

Enter the material at 100—140 ° F., raise slowly to the boil and continue dyeing without steam.

For pale shades it is advisable to enter the material into a lukewarm bath and raise slowly to 195 ° F. and then continue dyeing without steam. The salt may be added in several portions.

Dyeing in an Alkaline Bath. (II.)

Dyeing is carried out with the addition of:—

10—40 % Glauber's Salt, and
1— 2 % Soda Ash.

The working conditions are similar to those above, (I), a smaller quantity of Glauber's Salt and Soda Ash being used for pale shades. The addition of Glauber's Salt increases the exhaustion of the dye-bath, while Soda Ash has a retarding action.

In all cases where difficulty is experienced in obtaining good penetration it is specially recommended that 2—5 lbs. Sandozol KB per 100 gallons of bath should be added, as this product has a marked levelling and penetrating action.

Dyeing in an Acetic Acid Bath. (III.)

Dyeing is carried out for ¾—1 hour at a temperature of 160 to 175° F. and, according to the depth of shade the following additions are made:—

10—20 % Common Salt and
1— 3 % Acetic Acid.

It is recommended that a small percentage of Acetic Acid should be added to the rinsing bath after dyeing.

Aftertreatment with Metallic Salts.

When aftertreated with some metallic salts the fastness to light and washing of certain colours is increased. In order to increase the fastness to light, a bath is used containing, according to the depth of shade **(IV):**

1—3 % Copper Sulphate, and
1—3 % Acetic Acid 30 %.

The material which has been previously well rinsed is treated in this bath for 20 minutes at a temperature of 140—160° F.

Aftertreatment with Chrome and Acetic Acid improves the washing fastness, and when they are used in conjunction with Copper Sulphate, both the washing and light fastness are improved. **The following quantities are used, according to the depth of shade (V):**

1—3 % Potassium or Sodium Bichromate
1—2 % Acetic Acid 30 %
or
1—2 % Potassium or Sodium Bichromate
1—3 % Copper Sulphate
2—3 % Acetic Acid 30 %.

The aftertreatment is carried out as under (IV) and the material washed off. The bath should remain clear and react slightly acid.

Aftertreatment with Formaldehyde (VI) in order to improve the fastness to washing and perspiration.

(a) The material, previously well rinsed, is treated in a fresh bath containing:—

2—3 % Formaldehyde 40 %
2—3 % Acetic Acid 30 %

for 20—30 minutes at a temperature of 150—165° F. and again well rinsed.

(b) The well-rinsed material is treated for ½ hour at 160° F. with:—

3 % Formaldehyde 40 %
1 % Potassium or Sodium Bichromate
1 % Acetic Acid 30 %

washed and dried. This aftertreatment is especially recommended for the Direct Black brands.

(c) The washed-off material is treated for ½ hour at 160° F. with:—

3 % Formaldehyde 40 %
2—3 % Copper Sulphate
1 % Acetic Acid 30 %

and washed. This aftertreatment increases the fastness both to washing and to light.

Diazotising and Developing. (VII.)

The material is dyed, according to Method I or II, with colours suitable for diazotising and developing. It is then well rinsed and aftertreated for 15—20 minutes in a cold bath containing:

2— 3 % Sodium Nitrite and
6·5—10 % Hydrochloric Acid 32° Tw., or
4— 6 % Sulphuric Acid 168° Tw.

It is again well washed and immediately placed in a cold developing bath containing, according to depth of shade, either:—

(1) 0·5 —1 % Beta-Naphthol dissolved in hot water with an addition of
0·5 —1 % Caustic Soda 77° Tw., or

(2) 0·5 —1 % Metatoluylene Diamine, dissolved in hot water with an addition of
0·5 % Soda Ash, or

(3) 0·35—0·75% Resorcine, dissolved in hot water with an addition of
0·75—1·5 % Caustic Soda 77° Tw., or

(4) 1 % Yellow Developer Z, dissolved in hot water with an addition of
0·5 % Soda Ash.

It is treated in this bath for 20 minutes, well washed and dried.

Different shades are produced according to the particular developer which is used, and these developers may be mixed if required. In this case they should be dissolved separately and mixed in the developing bath.

For Diazamine Fast Yellow 3 GLL and 3 RL only Yellow Developer Z is suitable.

Explanation of the fastness tests of Direct Cotton Colours.

The different numbers represent the following fastness properties:—

Fastness to Light.

1 = Poor.
3 = Moderate.
5 = Fairly Good.
6 = Good.
7 = Very Good.
8 = Excellent.

Other Fastnesses.

1 = Poor.
2 = Moderate.
3 = Fairly Good.
4 = Good.
5 = Very Good.

Solubility.

Dyestuffs marked + possess very good solubility
Dyestuffs marked — possess a sufficient solubility for the majority of practical purposes.

Fastness to Light.

The fastness to light is determined by exposing medium shades, dyed on cloth, to daylight, in such a way that the air has full access to the pattern. The patterns are examined periodically, and as soon as a definite fade is noticed, this is registered.

Fastness to Water.

The patterns are plaited with an equal amount of wool, cotton, viscose and pure silk and are immersed overnight in distilled water at a temperature of approximately 20° C (70° F.). The relation of liquor to material is 20 to 1. On the following morning the plaits are squeezed and dried at the ordinary temperature, and then untwisted and examined.

Fastness to Washing.

The patterns which are plaited with an equal weight of cotton and artificial silk are treated for ½ hour at a temperature of 105° F. in a solution containing 5 grammes of Marseilles soap (free from excess alkali) and 3 grammes of soda ash per litre of distilled water. The relation of liquor to material is 50 to 1. The plait is then alternately squeezed well by hand and immersed in the liquor 10 times, after which it is thoroughly rinsed in cold water and dried.

Fastness to Alkali (Fastness to street dirt and dust).

The patterns are spotted with a mixture of 10 grammes lime and 10 ccs Ammonia (24 %) per litre of distilled water. They are then dried, without rinsing, at the ordinary temperatures, and well brushed.

Fastness to Sulphite.

The patterns are spotted with a solution of 1 in 5 Sodium Sulphite and then dried at ordinary temperature, without rinsing.

Fastness to Mercerising.

The dyed cotton is sewn into a cotton piece and immersed for 2 minutes in cold Caustic Soda 52° Tw., rinsed, soured, thoroughly rinsed again and dried.

Fastness to Acid.

The dyeings are spotted as follows:—

(a) with 30 % Acetic Acid,
(b) with 10 % Hydrochloric Acid,

and the alteration in tone determined after 10 minutes, comparing it with the result obtained when spotting with water only.

Fastness to Rubbing.

A piece of white cotton cloth, containing no finishing preparation, is tightly hold over the finger and the dyed and dried pattern rubbed with it 10 times. The length of the portion rubbed is 4 inches.

Fastness to Perspiration.

The dyeing is rolled up between pieces of white cotton and white wool and immersed for 1/4 hour at 40° C. (105° F.) in a solution of 50 grammes Common Salt and 2 ccs Ammonia 24 % per litre. The material is then squeezed and dried at the ordinary temperature without rinsing.

Fastness to Chlorine.

The dyeing is treated for 10 minutes in a solution of Calcium Hypochlorite containing 2 grammes active chlorine per litre (approximately 0·7° Tw.), soured, washed and dried.

Fastness to Hot Pressing.

The pattern to be examined is covered with a thin doubled white cotton cloth containing no finishing preparation, and which has been

damped with distilled water (100% moisture content). It is ironed until the damp cloth is completely dry. Care is taken that the heat of the iron is such that just does not scorch white woolen felt. The pattern is then examined for change of shade, and, if there is a change, whether the original colour returns quickly or slowly. The white cloth is also examined for marking off.

Dischargeability.

The dischargeability of a colour is determined by means of a Hydrosulphite-Formaldehyde compound (Hydrosulphite RFN). The dischargeability is indicated by three classes:—

3 = Dischargeable to a pure white,
2 = Insufficiently dischargeable,
1 = Resisting discharges.

Reserving of Acetate Rayon.

The percentage indicates the depth of shade which may be dyed without staining white acetate rayon. "—" indicates that the fibre is stained.

Sensitiveness to Copper.

A dyeing carried out in a copper vessel is compared with a dyeing made in an ordinary porcelain vessel.

The results are judged in the following way:—

5 indicates that the dyestuff is not sensitive,
4 „ „ „ „ „ very slightly changed,
3 „ „ „ „ „ visibly changed,
2 „ „ „ „ „ much changed,
1 „ „ „ „ „ destroyed or an entirely different shade is produced.

Abbreviations.

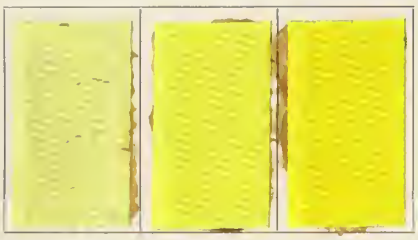
F	=	Aftertreated with	Formaldehyde.
F + Cu	=	„ „	Formaldehyde + Copper Sulphate + Acetic Acid.
Cu	=	„ „	Copper Sulphate + Acetic Acid.
Cu + Cr	=	„ „	Copper Sulphate + Potassium, or Sodium Bichromate + Acetic Acid.
Cr + F	=	„ „	Potassium, or Sodium Bichromate + Acetic Acid + Formaldehyde.
Flu Cr	=	„ „	Chromium Fluoride.

— *Without Guarantee.* —

PATTERNS.

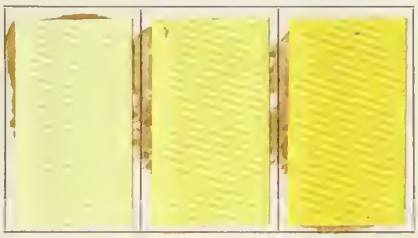
Direct Dyeings.

0·25 % 1 % 3 %



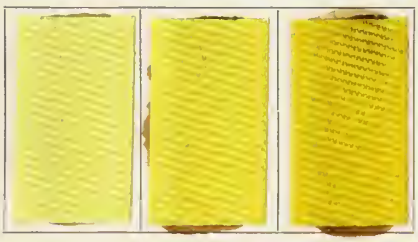
Direct Yellow 5 G

0·25 % 0·75 % 2 %



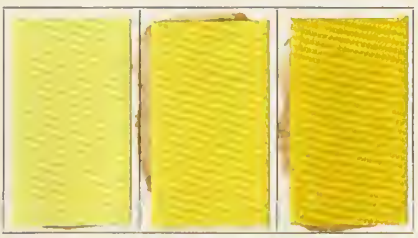
Chloramine Brilliant Flavine S

0·25 % 0·75 % 2 %



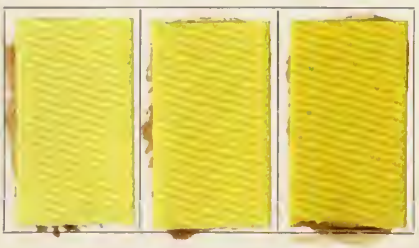
Pyrazol Fast Yellow 5 GL

0·25 % 0·75 % 2 %



Pyrazol Fast Yellow 4 GL

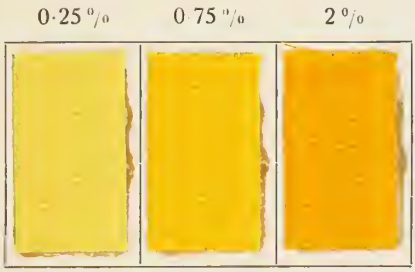
0·25 % 0·75 % 2 %



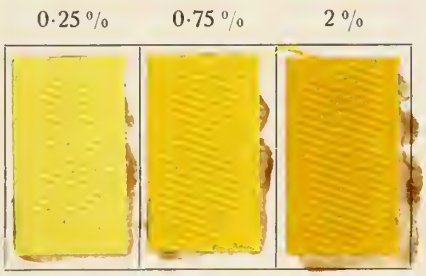
Pyrazol Fast Yellow 4 GL
(Formaldehyde)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	2	2–3	2 3	4–3	5	4	4	3	5	3	1	4	2	—	5
I, II	±	1	3–4	3–4	5–4	4	4	3–4	2	5	4–5	1	5	1	0·5%	5
I, II	+	5	2	2	3	3	1	3–4	1	5	2	1	4–5	3	1%	5
I, II	+	5	2	2	3	3	1	4	1	5	2	1	4 5	3	1%	4
I, II	+	5	2–3	2–3	3	3	1	4	1	5	3	1	4–5	3	1%	4

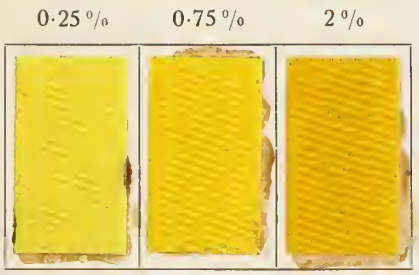
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	1-2	4	3	4	4	3-4	4-5	3	5	3	3-4	4	3	3 %	4-5
I, II	—	5-6	4	2-3	4	3	2-3	4	1	5	2-3	1	4	3	1 %	4
I, II	—	5-6	4	3	4	3	3	4	1	5	3	1	4-5	3	1 %	4
I, II	+	6-7	3	2-3	4	4-5	4-5	3	1	5	2	1-2	4-5	3	2 %	5
I, II	—	3-4	2	2	1	2	2	3	1	5	2	2	4	3-2	—	3



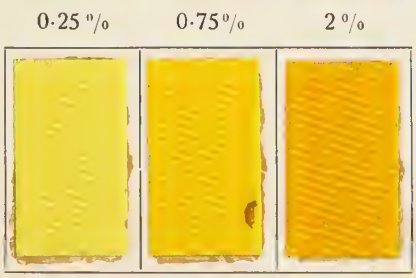
Trisulfon Yellow 3 G



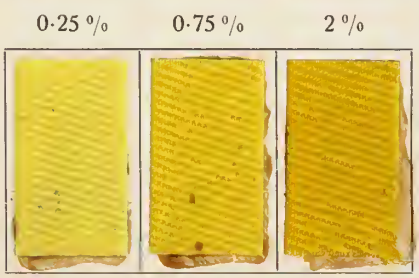
Pyrazol Fast Yellow RL



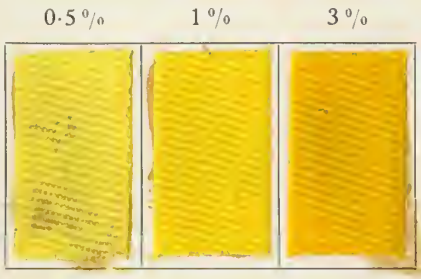
Pyrazol Fast Yellow RL
(Formaldehyde)



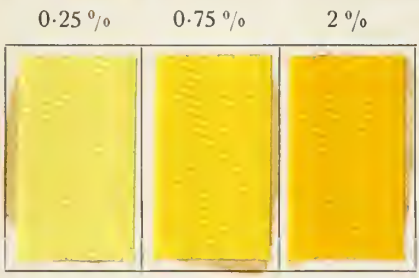
Pyrazol Fast Yellow RSW



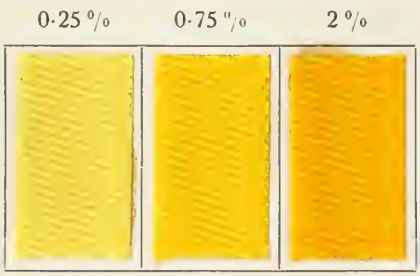
Chrysamine K



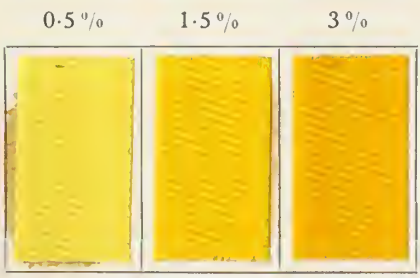
Chrysophenine G



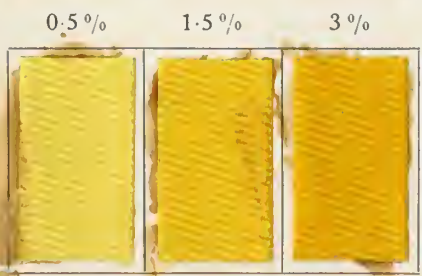
Trisulfon Yellow G



Trisulfon Yellow GF



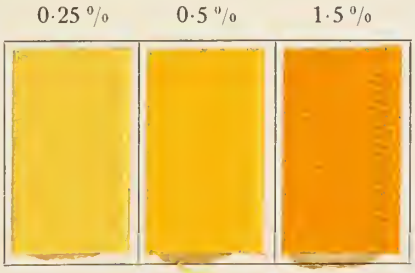
Chloramine Fast Yellow FF



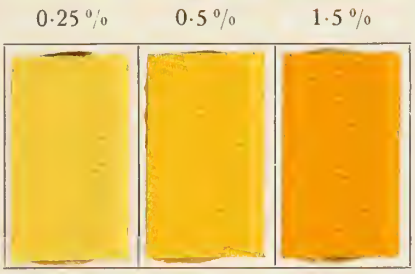
Chloramine Yellow G

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	5	3	2-3	4	2-3	4	2	1	3-4	2	4	3-4	3	2 %	5
I, II	+	2	4-5	3-4	3	2	3-4	5	3	5	3	4-5	4	3	3 %	4-5
I, II	+	2-3	4-5	3-4	4	4	3-4	5	3-4	5	3	4	4-5	3	3 %	5
I, II	+	6	4	4-3	5	4-5	4-5	5	3	5	3-4	3-4	5-4	1	3 %	3-4
I, II	+	6	4	4	4-5	4-5	4-5	5	3	5	3-4	3-4	5-4	1	3 %	4

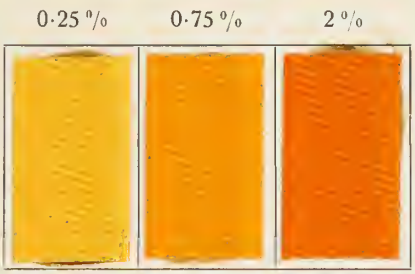
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	6-7	4	4-3	4	3-4	4	5	3	5	3-4	3-4	5-4	3-2	3%	4-5
I, II	—	6-7	4	4-3	4	3-4	4	5	3	5	4-5	3-4	5-4	3-2	3%	4-5
I, II	+	3	4	3	4	3	3	4-5	2	5	3	3	4-5	3-2	3%	4-5
I, II	—	3-4	4-5	3	3	3	4	4	2	5	4	1	4	3-2	--	3
I, II	+	6	4	3	2-3	2	4	4-5	3	4-5	3-4	2-3	4	3	0·5%	5



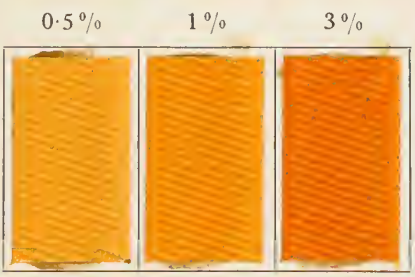
Pyrazol Fast Yellow 2 R



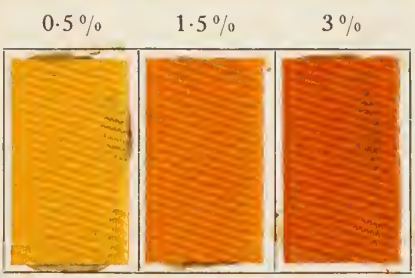
Pyrazol Fast Yellow 2 R
(Formaldehyde)



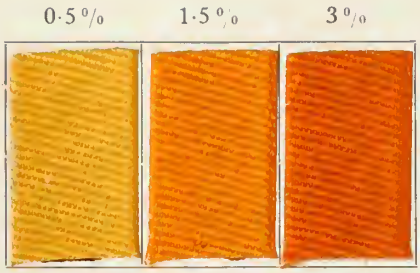
Trisulfon Yellow 2 R



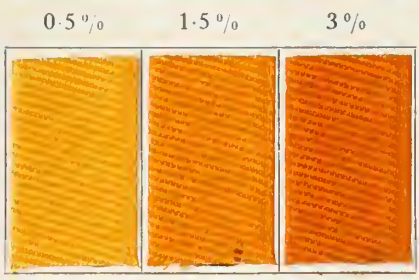
Pyrazol Orange G



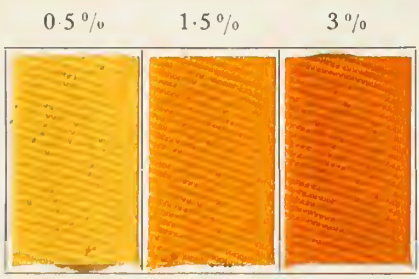
Pyrazol Fast Orange GX



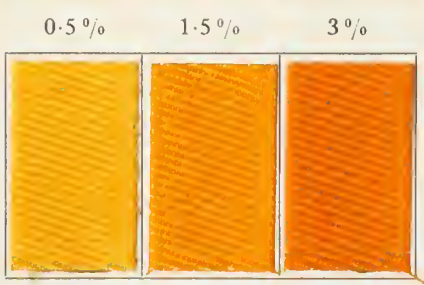
Pyrazol Fast Orange GL



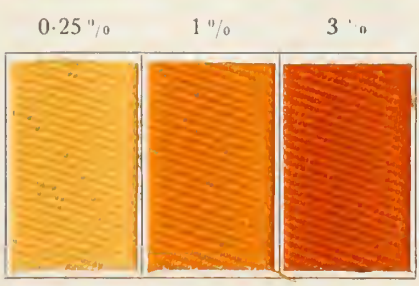
Pyrazol Fast Orange GL
(Formaldehyde)



Pyrazol Fast Orange 2 GL



Pyrazol Fast Orange 2 GL
(Formaldehyde)

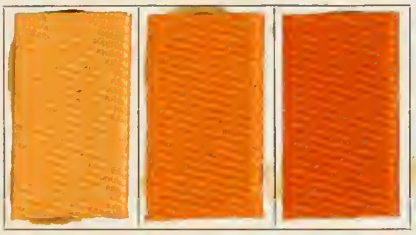


Pyrazol Fast Orange GR

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	6 7	4–3	4 3	3–4	3	4	5	3	4–5	3–4	2–3	3–4	3	3 %	5
I, II	+	6–7	4	4	3 4	3	4	5	3	5	4–5	2–3	4	3	3 %	5
I, II	+	6–7	3–4	4 3	4	3	3–4	5	3–4	5	5–4	3	3–4	3	1 %	4
I, II	+	6	4	4	4	3	4	5	3–4	5	4–5	3	4	3	1 %	4
I, II	+	6	4	3–4	4	2–3	4	5	3–4	5	3–4	3	3–4	3	1 %	4–5

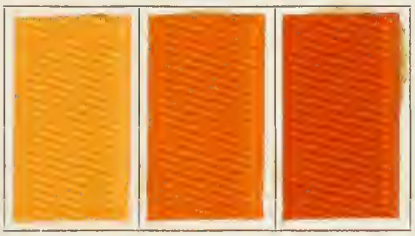
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	3-4	4-3	3	4	2	4	4	3	5	4	1	4	3	—	3-4
I, II	+	3-4	4	4	4	2	4	4	3	5	3	2	2	3	3%	4
I, II	+	3-4	4-5	3-4	4	2	3-4	3-4	3	5	2-3	2	4	3	3%	3-4
I, II	+	1	2-3	3	3	2	2	2	1	4	2	1	3-4	3-2	—	4-5
I, II	+	5-6	4	4-3	4	2	3-4	5	4-3	5	4	2-3	3-4	3-2	—	5

0·5 % 1·5 % 3 %



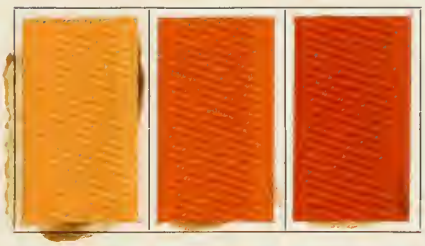
Pyrazol Orange R

0·5 % 1·5 % 3 %



Trisulfon Orange R

0·5 % 1·5 % 3 %



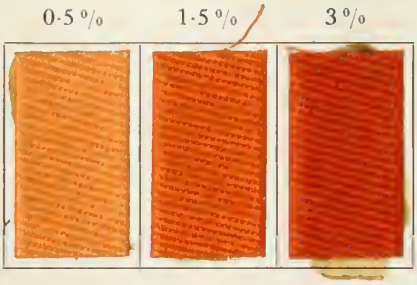
Trisulfon Orange 2 R

0·5 % 1·5 % 3 %

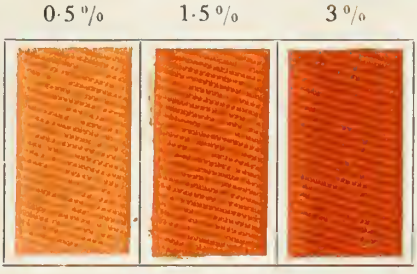
Benzo Orange R

0·5 % 1·5 % 3 %

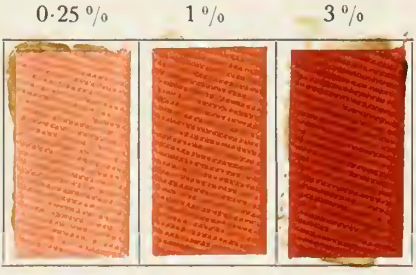
Pyrazol Fast Orange 2 RL



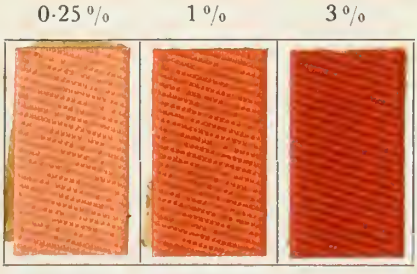
Pyrazol Fast Orange RL



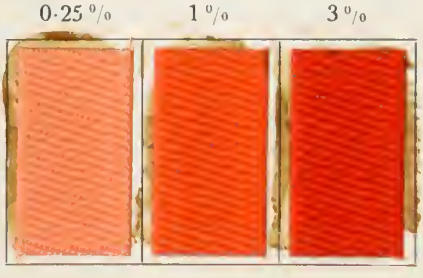
Pyrazol Fast Orange RL
(Formaldehyde)



Pyrazol Fast Orange 2 RN



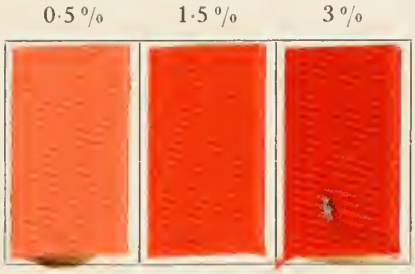
Pyrazol Fast Orange 2 RN
(Formaldehyde)



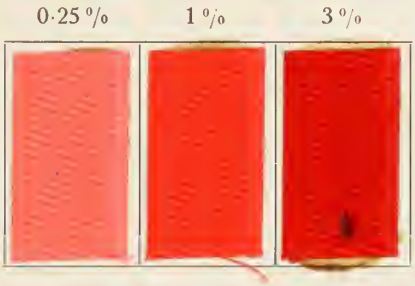
Chloramine Fast Orange SW

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	5–6	4	4–3	4–3	3	4	5	3	5	3	3	3–4	3	2 %	4–5
I, II	+	5–6	4–5	4	4–3	3	4	5	3	5	4	3	4	3	2 %	4–5
I, II	+	7	4	3–4	4 5	3	3 4	5	2–3	5	3–4	3	3	3	1 %	4 5
I, II	+	7	4–5	4	4–5	3	4	5	2–3	5	4–5	3	4	3	1 %	4–5
I, II	+	2–3	2–3	3	4–5	4–5	3	5	4	5	3	2	3–4	3–2	3 %	4–5

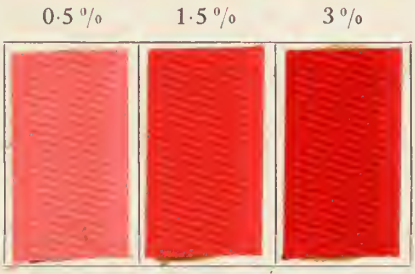
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	3	2-3	3-4	4-5	4-5	3	5	4	5	3	2	4-3	3-2	2 %	4-5
I, II	+	2-3	2-3	3	4-5	4-5	3	5	4-5	5	3	3	4-5	3	3 %	5
I, II	+	3	3	3	3-4	4	3	5	4	5	2	1	3	3-2	3 %	4
I, II	+	3	2-3	3	4-5	3-4	3	5	3-4	5	3	2	3-4	3	3 %	5
I, II	+	3	3	4	4-5	3-4	3-4	5	3-4	5	3-4	2	4	3	3 %	5



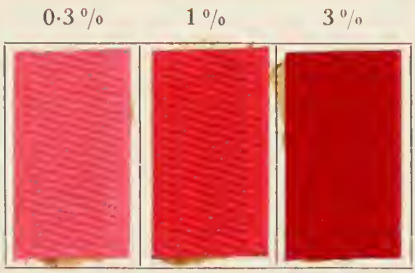
Chloramine Fast Orange SE



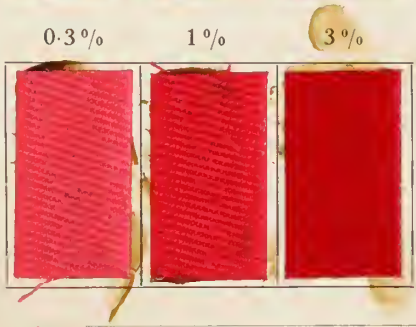
Chloramine Brilliant Orange RS



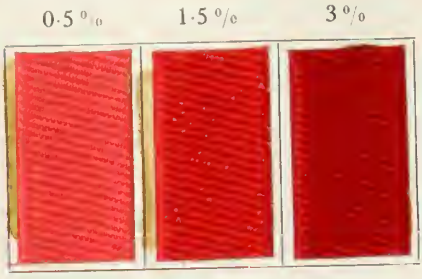
Chloramine Fast Scarlet YSW



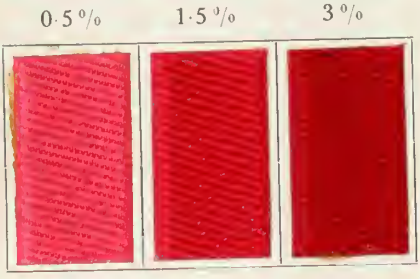
Chloramine Fast Scarlet GFL



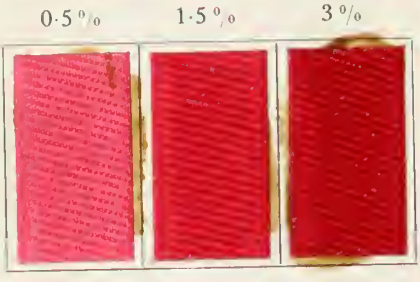
Chloramine Fast Scarlet GFL
(Formaldehyde)



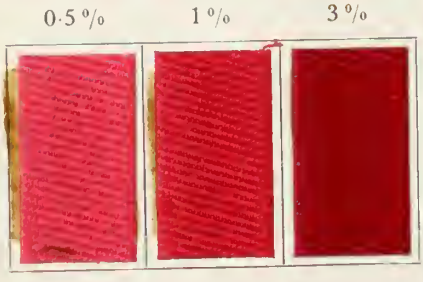
Chloramine Fast Scarlet GS



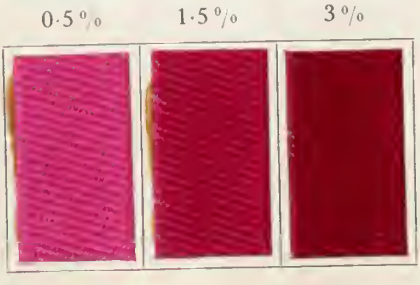
Chloramine Fast Scarlet 2 BSW



Chloramine Fast Scarlet 4 BSW



Chloramine Fast Scarlet 4 B



Chloramine Fast Scarlet 8 BA

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	3	3-4	3	4	4-5	3	5	3-4	5	3-4	1	3-4	3-2	2 %	5
I, II	+	3	3-4	3	4	4	3-4	5	3	5	3	1	3	3-2	1 %	5
I, II	+	3	3-4	3	4	4	3	5	3	5	3	1	3	3-2	3 %	5
I, II	+	3	3-4	3	3-4	4-5	3	5	3	5	3-4	1	3-4	3-2	1 %	4
I, II	+	2-3	3-4	2-3	4	4	4	4-5	3-4	4	3-2	1	2-3	2	3 %	5

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	2 3	3 4	2 3	2 3	3	4	4	2	4	2 3	2	3	3	3 %	5
I, II	+	2	3 4	2 3	3	4	4	4	3	4	2 3	1	3	3	3 %	3 4
I, II	+	2	3 4	2 3	3	4	4	3 4	2	4	2 3	1	3	2	3 %	5
I, II	+	2	3 4	3 4	2	2	2	3	1	4	3 4	2	4	3 2	2 %	4
I, II	+	1	2 3	2	3 4	4	3	2	1	3	3	1	3	3	—	3

0·25 % 0·75 % 1·5 %

Erika B

0·5 % 1·5 % 3 %

Chloramine Brilliant Red 8 B

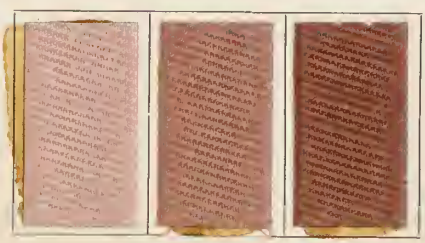
0·25 % 0·75 % 2 %

Chloramine Rose B

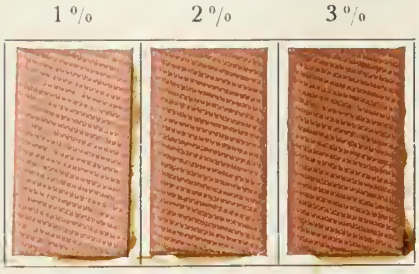
0·25 % 0·75 % 2 %

Chloramine Rose 3 B

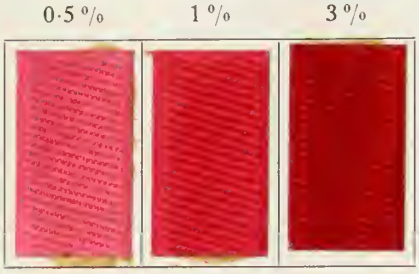
0·5 % 1·5 % 3 %



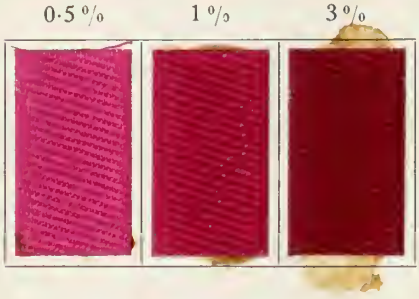
Benzopurpurine 10 B



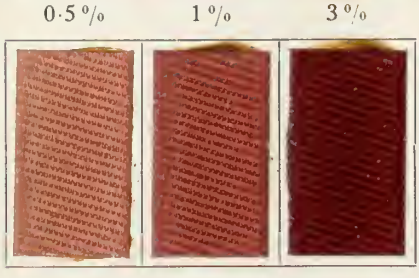
Benzopurpurine 4B



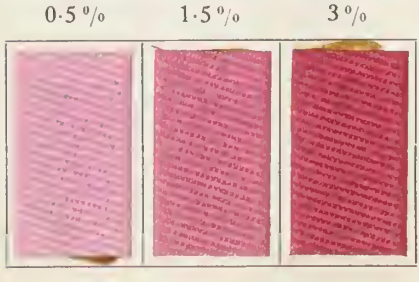
Chloramine Red B



Chloramine Red 3B



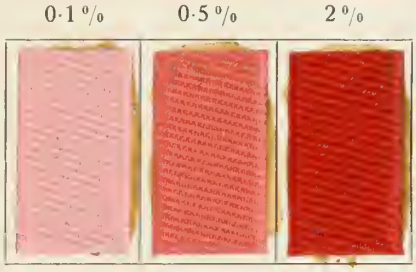
Chloramine Fast Red F



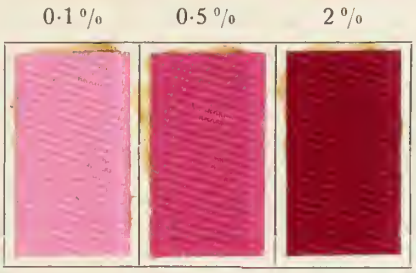
Chloramine Purple 10BC

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	1	2–3	1	3	4	3	1	1	3	2	1	3	3	—	5
I, II	+	2	3	2–3	3	1	4	3–4	1	3	3–2	1	3	2	—	5
I, II	+	2–3	3	2–3	3	1	4	3	1	3	3–2	1	3	3	—	5
I, II	—	2–3	2–3	2–1	2	4	3	3	1	4	2	1	3	3 4	—	5
I, II	—	1	2–3	2	3	4	3	3	1	3	3	1	3	3	—	5

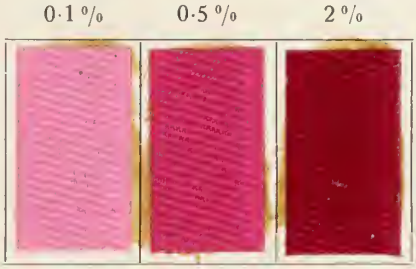
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	6 7	4 3	2	3 4	1	3	4	3	5	3	1	4 5	3	1 %	5
I, II	+	4 5	2	2 3	1	2	2 3	5	2	4 5	3	2	4	3	2 %	4
I, II	+	5	4	3 4	1	2	3	3	2	4 5	3 4	3	4 5	3	3 %	4 5
I, II	+	5	2 3	2	2 3	2	2	4 5	3	4 5	2 3	2	3	3	2 %	4
I, II	+	1	2	2 3	2 3	1	2	2	1	3 4	1 2	1	3	3 2	—	4



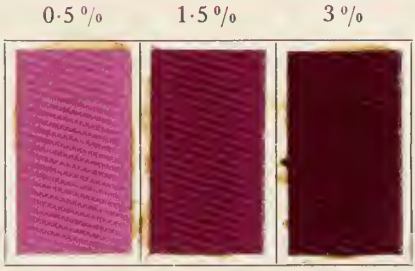
Pyrazol Fast Red 5 GL



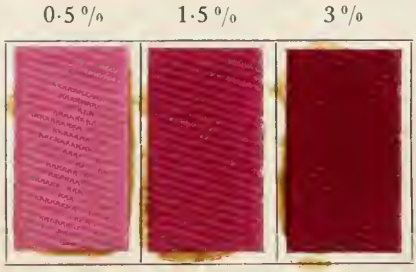
Pyrazol Fast Red 8 BL



Pyrazol Fast Red 7 BSW

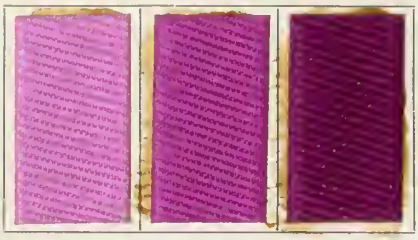


Pyrazol Fast Rubine B



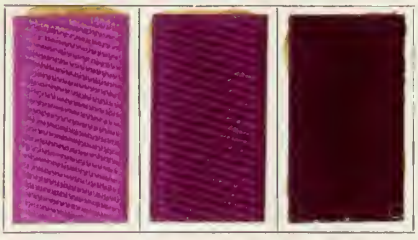
Chloramine Rubine

0·25 % 0·75 % 2 %



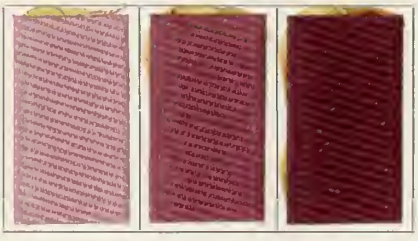
Pyrazol Fast Rubine R

0·5 % 1·5 % 4 %



Pyrazol Fast Bordeaux 2 BL

0·5 % 1·5 % 3 %



Trisulfon Garnet BR

0·5 % 1·5 % 3 %

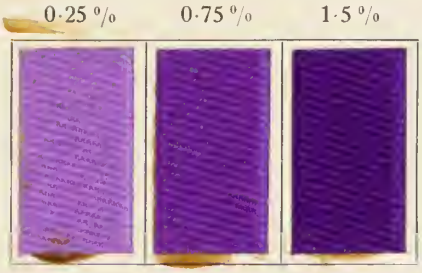
Chloramine Garnet R

0·25 % 0·75 % 2 %

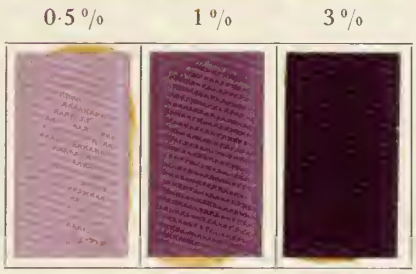
Pyrazol Fast Violet RHL

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	7	4-5	4	4-5	2	3-4	4-5	2	4-5	3-4	1	5-4	3-2	2 %	4
I, II	+	5	3	3-4	5	1	3	5	3	5	3-4	3-2	3-4	3	2 %	5
I, II	+	2	3	3	2	3	3	1	1	4	2-3	1	3	3-2	—	5
I, II	+	1	3	3	2	3	3	1	1	4-5	3	1	3	3-2	—	4-5
I, II	+	6	3-2	2	5	5	3	5	2	4	2-3	1	4	3-2	1 %	5

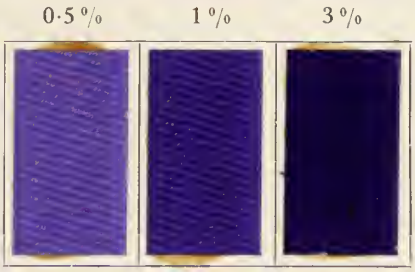
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	┤	4	2	2-3	4-5	5	2-3	5	2	4	2	1-2	3-4	3	2 %	5
I, II	┤	1-2	1-2	2-3	4	1	4	4-5	2	3	3-4	1	3	3	—	4
I, II	┤	1	2-3	2-3	4	4	4	4	3	3	2-3	1	4	3	—	1
I, II	┤	4-5	2	2-3	5	4	2-3	5	2	5	2	1-2	3	3	1 %	4-5
I, II	┤	6	4	3-4	5	4	2-3	5	2	4-5	4-5	1	4	3-2	1 %	5



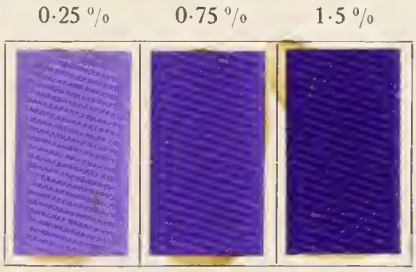
Pyrazol Brilliant Fast Violet 3 R



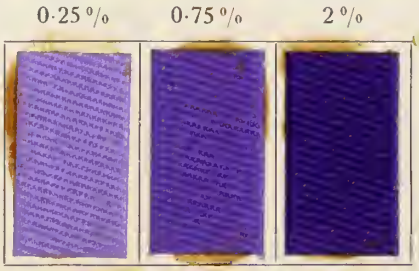
Trisulfon Violet N



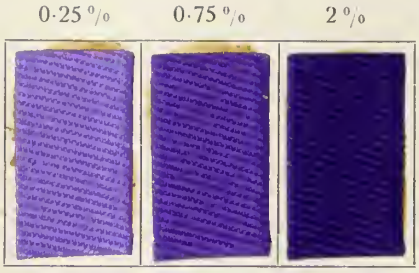
Trisulfon Violet B



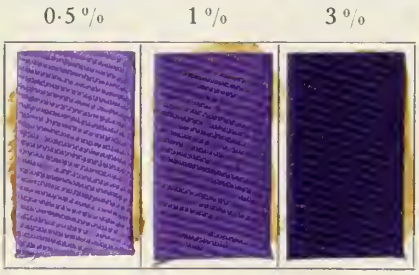
Pyrazol Brilliant Fast Violet 3 B



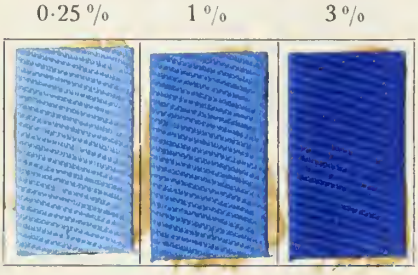
Pyrazol Fast Violet 5 BL



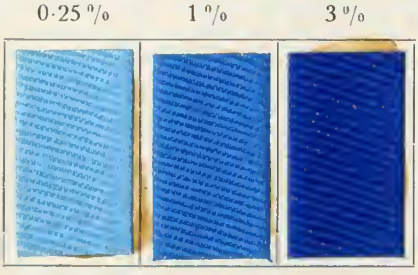
Pyrazol Fast Violet 4 BL



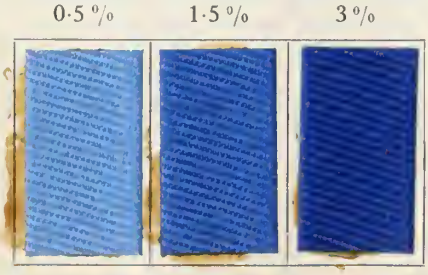
Pyrazol Fast Violet R



Chloramine Brilliant Blue 6 BR



Chloramine Brilliant Blue 8 B



Chloramine Sky Blue FF

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	6	4	3-4	5	4	2-3	5	2	4-5	4-5	1	4	3-2	1 %	5
I, II	—	4	4-3	2-3	3	1	2-3	5	3	5	4-3	1	2-3	3	1 %	5
III	—	1	2-3	2	1	1	2	4	3	4	3	1	3	3-2	—	5
III	—	1	2-3	2	1	1	3	4-3	2	5-4	3	1	3	3-2	1 %	4
I, II	+	1	4	2-3	3-4	2	4	5	4	4	3-4	1	3	3	3 %	4

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
IV	+	6	5	3	3	2	2	4-5	3	4	4	1	4	2	3 %	4
I, II	+	1	4	2	4	2	4	5	4	4	2-3	1	4	3	3 %	3
I, II	+	2	3-4	2-3	3-4	3	4	5	3-4	4	2-3	1	3-4	3	3 %	5
I, II	+	2	2-3	2-3	2-3	3	4	4	3-4	4	2-3	1	3	3	3 %	5
I, II	+	4-5	4	2-3	3	2	2-3	5	4	4-5	4-3	1	4	3	3 %	5

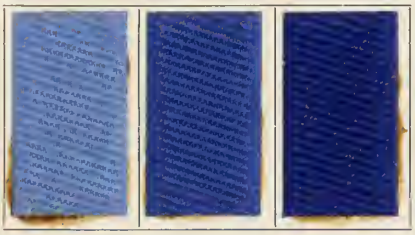
0·5 % 1·5 % 3 %

Chloramine Sky Blue FF
(Copper)

0·5 % 1·5 % 3 %

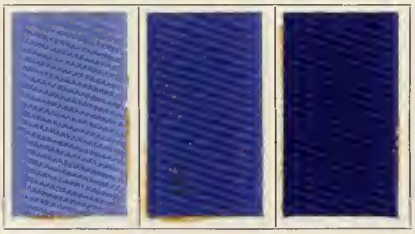
Chloramine Sky Blue A

0·5 % 1·5 % 3 %



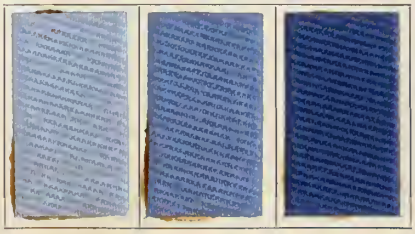
Chloramine Blue 3 B

0·5 % 1·5 % 3 %



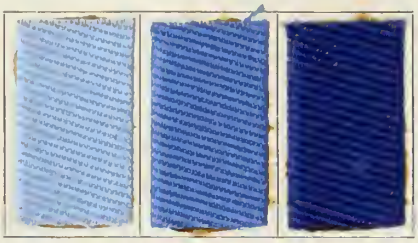
Chloramine Blue 2 B

0·25 % 0·75 % 2 %



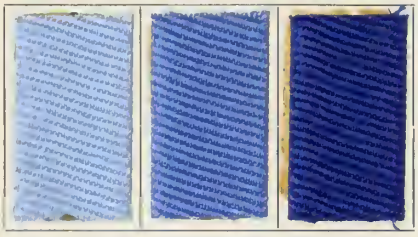
Pyrazol Fast Blue 8 GL

0·1 % 0·5 % 2 %



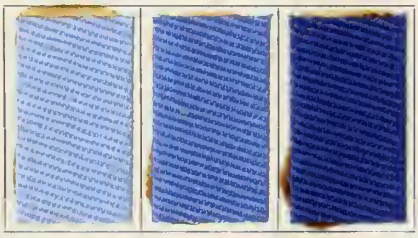
Pyrazol Fast Blue 4 GL

0·1 % 0·5 % 2 %



Pyrazol Fast Blue 2 GL

0·1 % 0·5 % 2 %

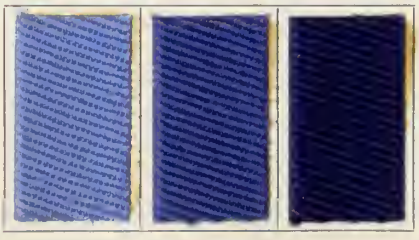


Pyrazol Fast Blue 2 GL
(Formaldehyde)

0·1 % 0·5 % 2 %

Pyrazol Fast Blue RL

0·25 % 0·75 % 2 %



Pyrazol Fast Blue BS

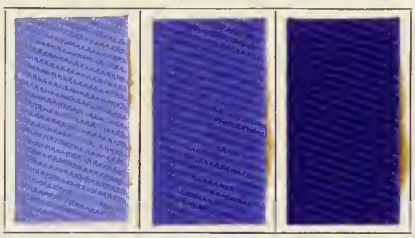
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	5-6	4	3	5	2	3-4	5	4-5	4-5	4-3	1	4	3	3 %	5
I, II	+	5-6	3-4	3-4	5	2	3-4	5	4-5	4-5	4-5	1	4	3	2 %	4-5
I, II	+	5-6	4	4-5	5	2	4	5	4-5	4-5	5	1	4-5	3	2 %	4-5
I, II	+	6	4	3-4	4	1-2	4	4	2-3	5	3-4	1	4	3	2 %	4
I, II	+	5-6	4-3	4-3	5	2	3	4-5	2-3	5	3	1	3-4	3	3 %	5

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	┤	5-6	4	4	5	2	4	4-5	2-3	5	4	1	4	3	3 %	5
I, II	┤	6-7	3-4	3	4	2	2-3	4	4	5	4-3	2	4	3	3 %	5
I, II	┤	2	4	5-4	4	3-4	5	4-5	4-5	5	5	1	4-3	3-2	2 %	5
IV	┤	6	4	5-4	4	3-4	5	4-5	4-5	5	5	1	4-5	2	2 %	5
I, II	┤	2	4	5-4	4	3-4	5	4-5	4-5	5	5	2	4-5	3	2 %	5

0·25 % 0·75 % 2 %

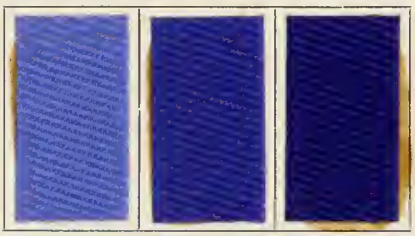
Pyrazol Fast Blue BS
(Formaldehyde)

0·25 % 0·75 % 2 %



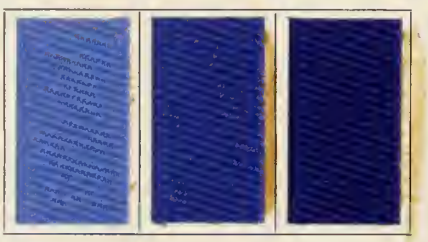
Pyrazol Fast Brilliant Blue A

0·5 % 1·5 % 3 %



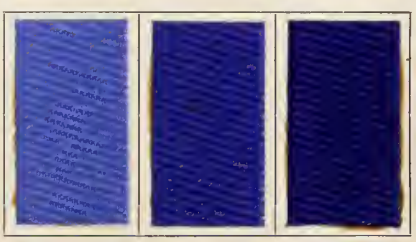
Chloramine Copper Blue 3 G

0·5 % 1·5 % 3 %



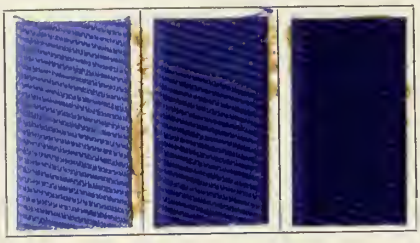
Chloramine Copper Blue 3 G
(Copper)

0·5 % 1·5 % 3 %



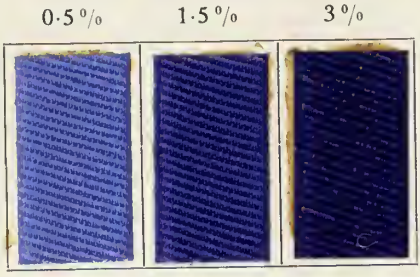
Chloramine Copper Blue 3 G
(Formaldehyde)

0·5 % 1·5 % 3 %



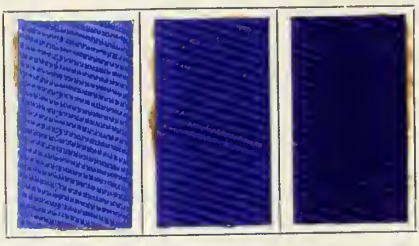
Visco Blue E

0·5 % 1·5 % 3 %



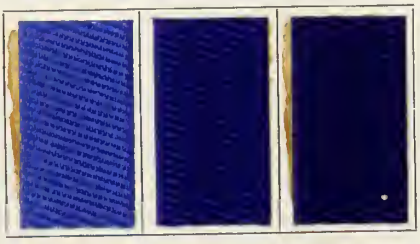
Visco Blue E
(Formaldehyde)

0·5 % 1·5 % 3 %



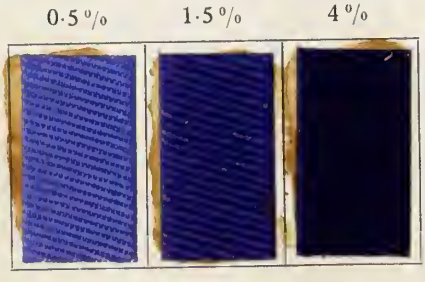
Benzo Azurine G

1 % 3 % 5 %



Trisulfon Blue RW

0·5 % 1·5 % 4 %

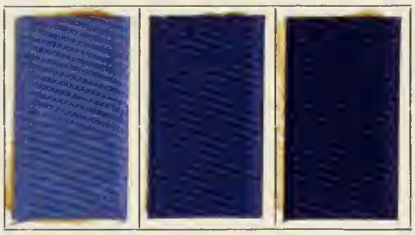


Chloramine Blue BX

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	1	3	2	4	2	4	5	4	4	2–3	1	2–3	3	3 %	4
I, II	—	1	3–4	3	4	2	4	5	4	4	2–3	1	2–3	3	3 %	4
I, II	—	1	2–3	2–3	1	1–2	3	4–5	4	4	3	1	2–3	3	—	3
I, II	⊦	1	2–3	2–3	3–4	2	3	5	4	4	2–3	1	3	3	—	3
I, II	⊦	1	3–4	2–3	4	2	4	5	4	4	3	1	4–3	3	3 %	3

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	2	3	3-4	4-5	4	3	5	3-4	4	2-3	1	3-4	3	—	5
I, II	—	2	3-4	4	4-5	4	4	5	3-4	4	3-4	1	4	3	—	5
I, II	—	2	3	4-3	4-5	4	3	5	4	4	2	2	3	3	—	4-5
I, II	—	2	3-4	4	4-5	4	3-4	5	4	4	4	2	3-4	3	—	4-5
I, II	—	2-3	2-3	2-3	4	3	4	3	2	3	2-3	1	3	3	6%	5

1 % 3 % 5 %

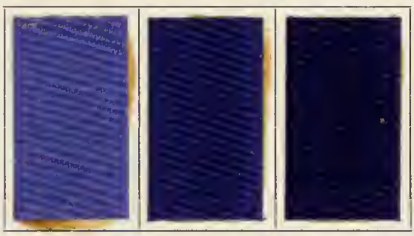


Direct Fast Cyanine CB

1 % 3 % 5 %

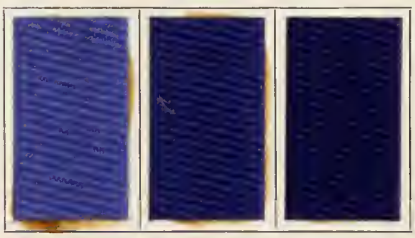
Direct Fast Cyanine CB
(Formaldehyde)

1 % 3 % 5 %



Direct Fast Cyanine CR

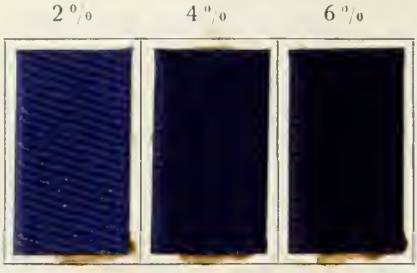
1 % 3 % 5 %



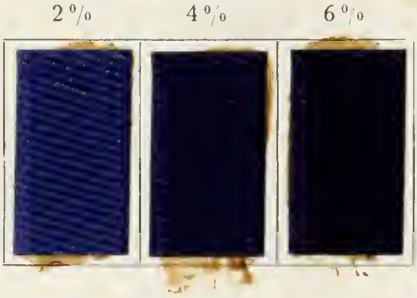
Direct Fast Cyanine CR
(Formaldehyde)

2 % 4 % 8 %

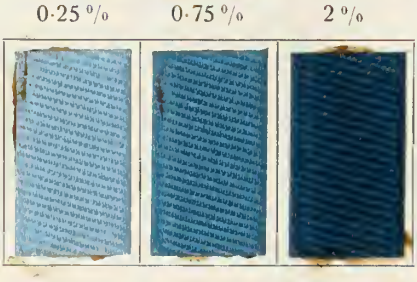
Chloramine Black BH



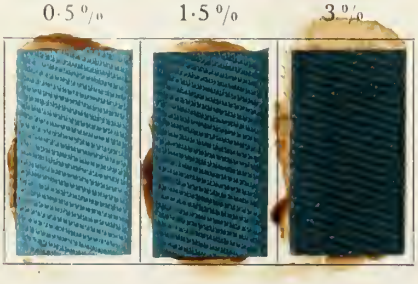
Viscoform Navy Blue GB conc.



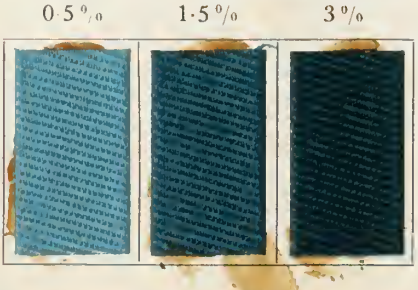
Viscoform Navy Blue GB conc.
(Formaldehyde)



Pyrazol Fast Green BG



Chloramine Green 4 B

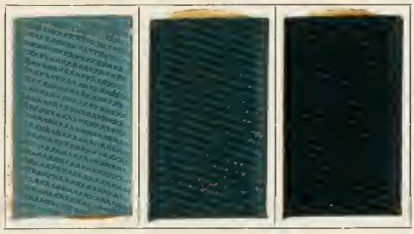


Chloramine Green 4 B
(Formaldehyde)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	3	4	3	2-3	3	3-4	5	4-5	4-5	3-4	1	4-5	3	2 %	4
I, II	+	3	4-5	3-4	2-3	3	4	5	4-5	4-5	4	1	4-5	3	2 %	4
I, II	—	1-2	2-3	2	2	1	3	3-4	3	4-5	2-3	1	3-4	3	—	3-4
I, II	—	1	3-4	3	3	2	3	4-5	1	3	3	1	4	3	—	3-4
I, II	+	1	4	3-4	3	2	3	4-5	1	3	3-4	1	4-5	3	—	3-4

Dyeing Method	Solubility	Light	Water	Washing	A'kali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maxinum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	⊦	1	3-4	3	2	2	2	4-5	2-3	3	2-3	1	3-4	3	—	1
I	—	1	2-3	2-3	2	1	3-4	4	1	3	2-3	1	4	3	—	3-4
I, II	⊦	6	4	2-3	3-4	1	2-3	4-5	2	5	4	1	4	3-2	2%	4
I	⊦	1	3-4	3	2-3	3	3-4	4-5	2-3	4-5	3	1	4	3	—	2
I	—	1	3-4	3	4-5	4	3	4-5	3-4	5	3-4	1	4	3	—	3

0·5 % 1·5 % 3 %



Chloramine Green 2 B

0·5 % 1·5 % 3 %

Chloramine Dark Green B

0·25 % 1 % 3 %

Pyrazol Fast Green BL

0·5 % 1·5 % 3 %

Chloramine Green BC

0·5 % 1·5 % 3 %

Chloramine Green GB

0·5 % 1·5 % 3 %

Chloramine Green 3 G

0·5 % 1·5 % 3 %

Trisulfon Bronze B

0·5 % 1·5 % 3 %

Parasulfon Bronze GS

0·5 % 1·5 % 3 %

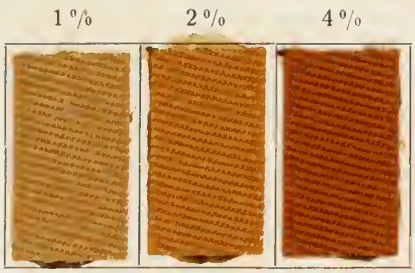
Trisulfon Brown 3 R

1 % 3 % 6 %

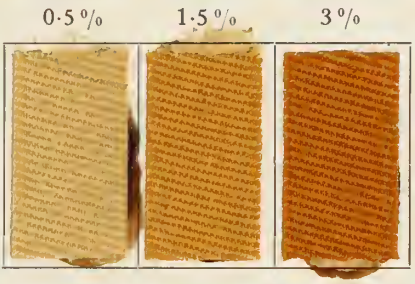
Visco Brown 3 G

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I	+	1	3	2–3	2–3	3	2	4–5	2	4–5	3	1	4	3	—	1
I, II	+	1–2	2–3	2–3	2–3	2	3–4	4–5	3–4	4	3–4	1	4–5	3	—	3
I, II	+	1	3–4	2–3	4	1	4	4	3	4	3	1	3–4	3	2 %	2
I, II	+	3	4	2	1	2	1	4–3	3	3	3	1	3	3	—	4
I, II	+	1	3–4	3	3	1	2–3	4	3	2	3	1	3–4	3–2	—	3–4

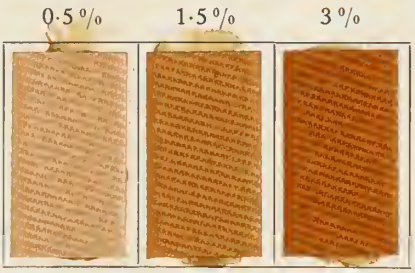
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	2	3 4	3 4	3	1	4	4	2	3	3 4	1	4	3	—	4
I, II	+	1 2	4	3 4	3 4	2	4	3 4	2	3 4	3 4	1	3 4	3	—	3
I, II	+	4 5	3 4	3 4	4 5	4 5	2	5	2	5	3 4	2	4 5	3	—	4 5
I, II	+	6	4 3	3 4	4	3	3 4	5	2	4 5	3	2	3	3	—	5
I, II	+	6	4	4 3	4	3	3 4	5	2	4 5	4	2	4	3	—	5



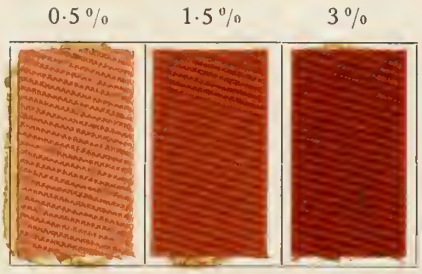
Trisulfon Brown MB



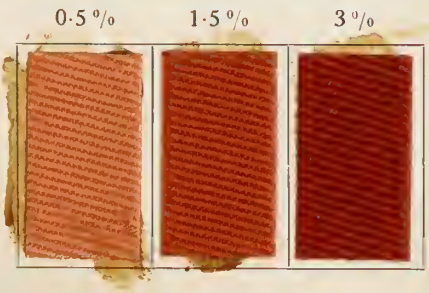
Trisulfon Brown TW



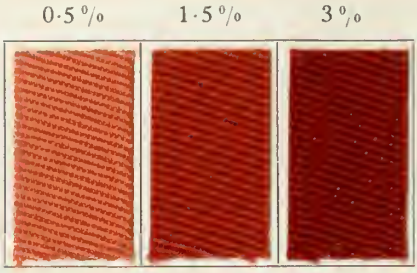
Viscolan Fast Brown SR



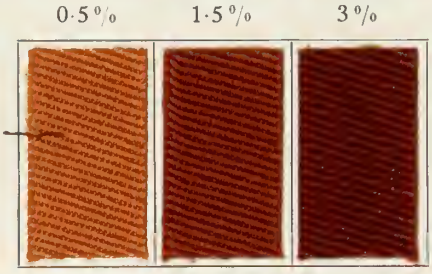
Pyrazol Fast Brown R



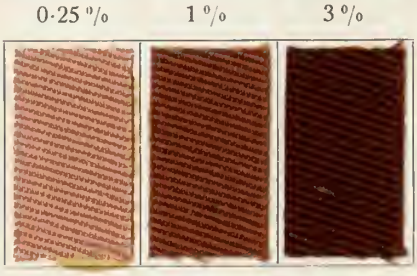
Pyrazol Fast Brown R
(Formaldehyde)



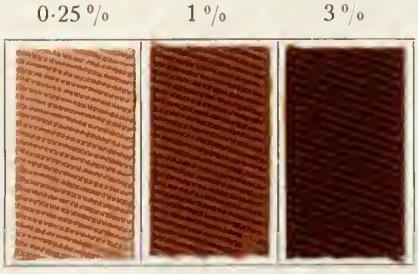
Pyrazol Fast Brown 2 Rl



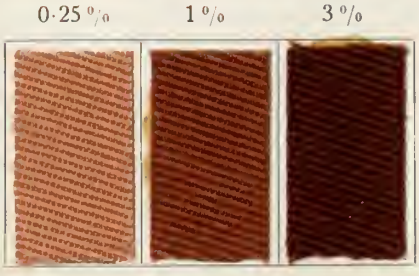
Chloramine Brown GRD



Pyrazol Fast Brown BRL



Pyrazol Fast Brown C

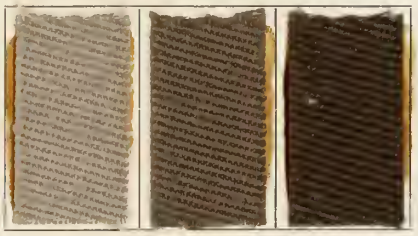


Pyrazol Fast Brown C
(Formaldehyde)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	┤	5-6	4-3	3	4-3	3	3-4	5	2	4-5	4	2	3	3-2	1 %	5
I, II	|	2-3	4	2-3	3-4	2-3	2	5	2	2	2-3	1	3-4	3	—	4-5
I, II	┤	6	4	3	3-4	3	2-3	5	3	4	4	1	4-5	3	1 %	4-5
I, II	|	6	3-4	3	4-5	3	3-4	5	3	4-5	4	2	3	3-2	1 %	4-5
I, II	┤	6	4	3-4	4-5	3	4	5	3	4-5	4-5	2	3-4	3-2	1 %	4-5

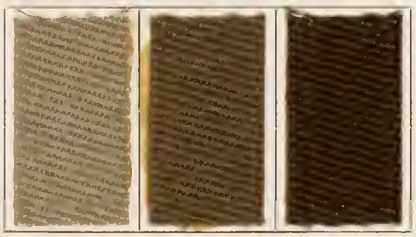
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	2 3	4	4	4 5	4 5	4	4	3-4	4 5	3-4	1	4-5	3-2	—	4
I, II	+	5	2	3	4	4	2	4	2	4	2	1	4	3	—	4
I, II	+	2	3	2 3	4	3	3-4	4	3	4	3	1	4	3	—	4
I, II	+	2	4 3	3	4-3	4	2	5	2	4 5	4	2	3	3	1 %	3
I, II	+	2	3	3	4-3	4	2	4	2	4 5	3	1	3	3-2	—	4

0·5 % 1·5 % 3 %



Visco Brown T

0·5 % 1·5 % 3 %

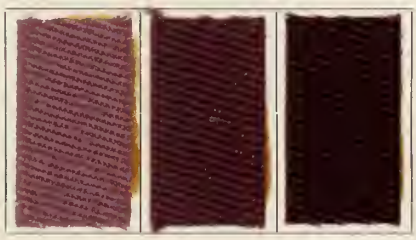


Trisulfon Fast Brown BL

0·5 % 1·5 % 3 %

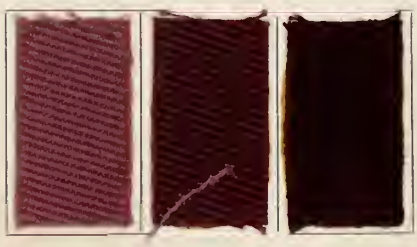
Trisulfon Brown 2 G

0·5 % 1·5 % 3 %

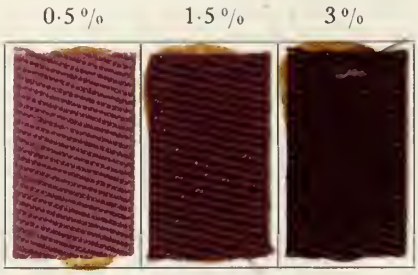


Chloramine Brown 2 R

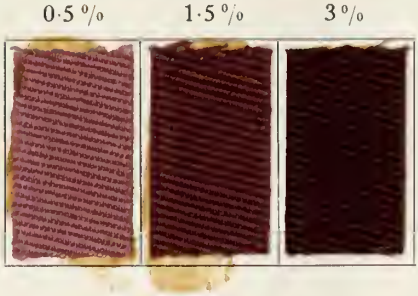
0·5 % 1·5 % 3 %



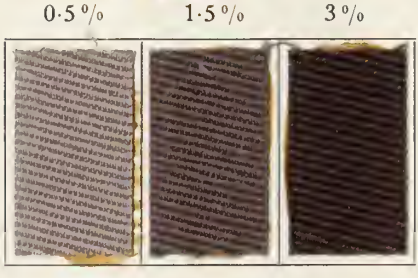
Chloramine Brown M



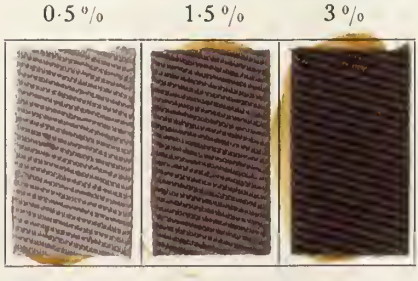
Chloramine Brown M
(Formaldehyde)



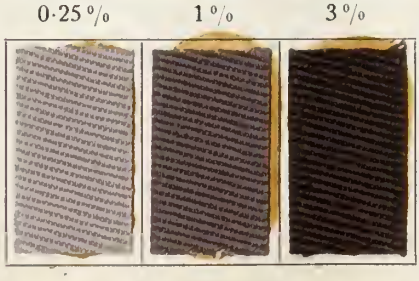
Chloramine Brown MR



Visco Brown R New



Visco Brown R New
(Formaldehyde)



Chloramine Fast Brown 3 B

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	2	3 4	3 4	4 3	4	2	4	2	4–5	3–4	1	3–4	3 2	—	4
I, II	+	2	3	3	4–3	4	2	4	2	4–5	3	1	3	3–2	—	4
I, II	—	2–3	4–5	4–5	3	4	1	4	2–3	4–5	4–5	1	4	3	—	4
I, II	—	2–3	4–5	4–5	3	4	1	4	2–3	4–5	4–5	1	4	3	—	4
I, II	+	3	4	2–3	3	2	2	5	3	5	3–4	1	4–5	3	—	3

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	2	3-4	2-3	3	2	3-4	3	2	4	4	1	4-5	3	—	2
I, II	+	2	3-4	3	3	2	3-4	3	2-3	4-5	4	1	4-5	3	—	3
I, II	+	2	3-4	2-3	3	2	3-4	3	2	4	4	1	4-5	3	1 %	2
I, II	+	5	4-3	2	4-5	2	4	5	2-3	5	4	1	3-4	3	3 %	4
I, II	—	6	4-3	3	4-5	2	3	5	3	5	4	1	4	3	3 %	5

0·5 % 1·5 % 3 %

Trisulfon Brown B

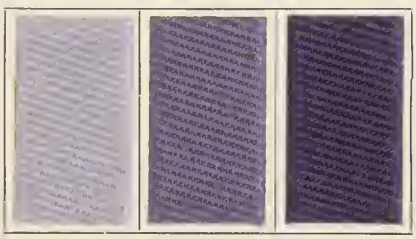
0·5 % 1·5 % 3 %

Trisulfon Brown 2 B

0·5 % 1·5 % 3 %

Trisulfon Brown BP

0·25 % 1 % 2 %

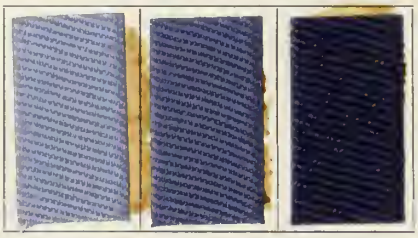


Pyrazol Fast Grey B

0·25 % 1 % 2 %

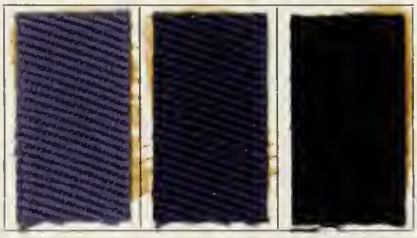
Pyrazol Fast Grey R

0·25 % 0·75 % 2 %



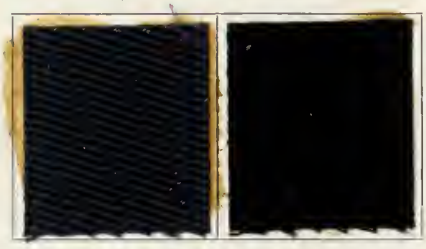
Pyrazol Fast Black L

1 % 2 % 6 %



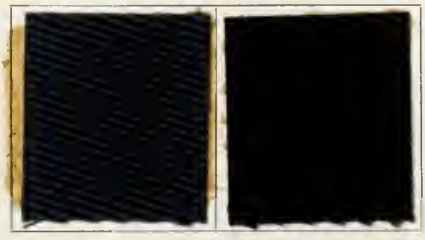
Chloramine Fast Black FF

3 % 8 %



Chloramine Black EXR

3 % 8 %



Chloramine Black EX

2 % 5 %

Chloramine Deep Black EA

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	5	2	2	4	2	3-2	2	1	4	2	2-1	4-5	3-4	—	4
I, II	—	3	3	3	4	2	4	4-5	4	3	2-3	1	4	3	—	4
I, II	+	2	2-3	2-3	3-4	3	3-4	3	2	3	3	1	4	3	—	3-4
I, II	+	2	2-3	2-3	3-4	3	3-4	3	2	3	2-3	1	4	3	—	3-4
I, II	+	4	2-3	2	3-4	3	3	3	2	3	2	1	3-4	3	—	4-5

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	3	2-3	2	3-4	2-3	2	3	2	2-3	3	1	3-4	3-2	—	4
I, II	—	3	3	2	3	2	3	3-4	3-4	2-3	2-3	1	3-4	3	—	4
I, II	—	4-5	3	2-3	3	2	2	2-3	2-3	4-5	3-4	2	3	3-2	3 %	5
I, II	—	2	2-3	2-3	3-4	2-3	2	4	2-3	4	3-4	1	2-3	2	3 %	3
I, II	—	2	3	3	3-4	4	3	4	2-3	3	3	1	2-3	2	2 %	4

3 % 8 %

Chloramine Black C conc.

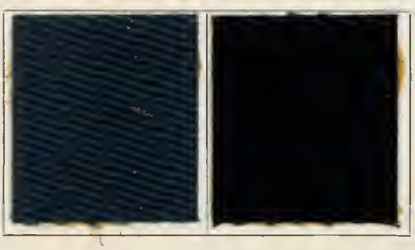
3 % 8 %

Chloramine Fast Black FB

3 % 8 %

Chloramine Black BG conc.

3 % 8 %

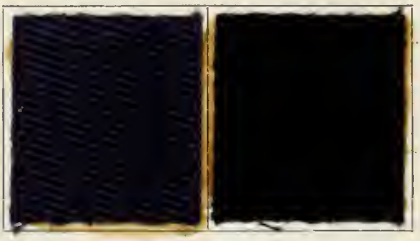


Chloramine Black 3 GR

3 % 8 %

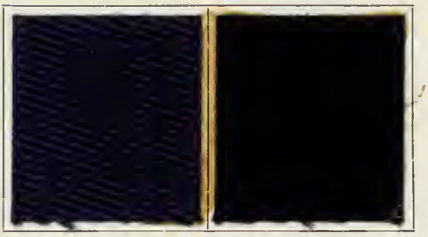
Chloramine Black 3 G

3 % 8 %



Chloramine Fast Black GCW

3 % 8 %

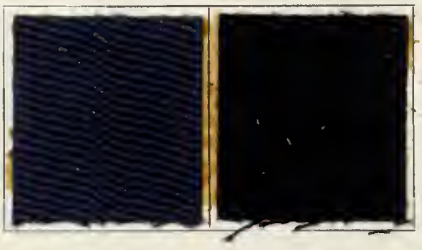


Pyrazol Fast Black RCW

4 % 10 %

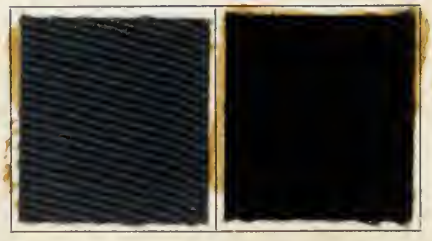
Viscoform Black G

4 % 10 %



Viscoform Black G
(Formaldehyde)

3 % 8 %

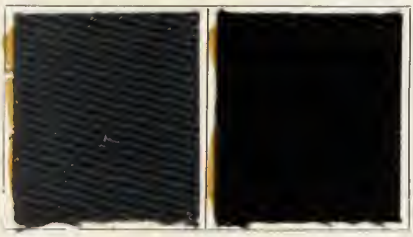


Visco Black N

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	—	3	4	3-4	3	4	3-4	4	4-5	4	3-4	1	3-4	3-2	—	4
I, II	—	6	2-3	2	3	4	1	2	1-2	4	2-3	2	2-3	3	—	4
I, II	+	4	4-5	4	3	2	3	3-4	4	4	4	1	4-5	3	2 %	4-5
I, II	+	4	5	4-5	3	2	4	3-4	4	4	4-5	1	5-4	3	2 %	4-5
I, II	+	5	3	2-3	4	2	3-4	4	3	4	3	1	3	3	—	4

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric							
I, II	+	3-4	4	3-4	4	2	3	4	4	4-5	3	1	4	3	—	4
I, II	+	3	3	4	3-4	2	3-4	3	2	5-4	3	1	5	3-2	—	3-4

3 % 8 %

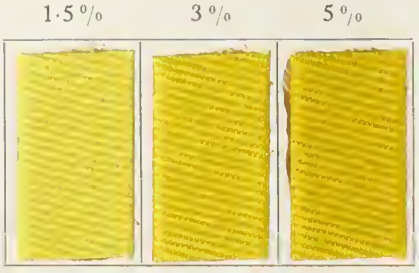


Visco Black N
(Formaldehyde)

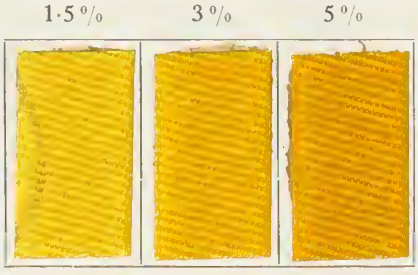
3 % 8 %

Chloramine Black W

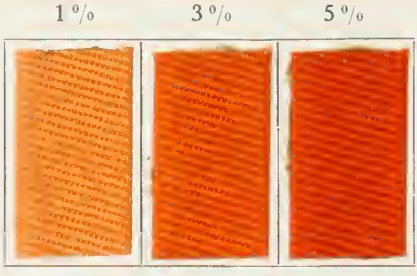
Diazotized and Developed Dyeings.



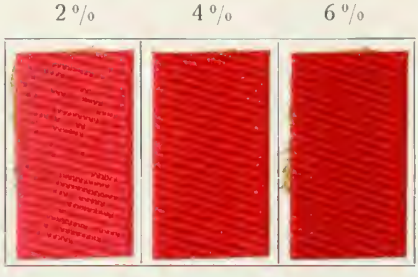
Diazamine Fast Yellow 3 GL
(Developer Z)



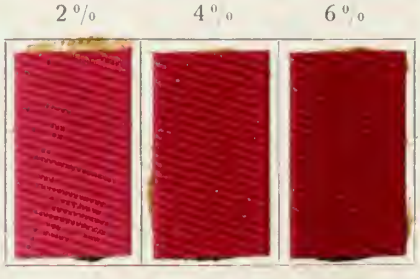
Diazamine Fast Yellow 3 RL
(Developer Z)



Diazamine Orange RS
(β-Naphthol)



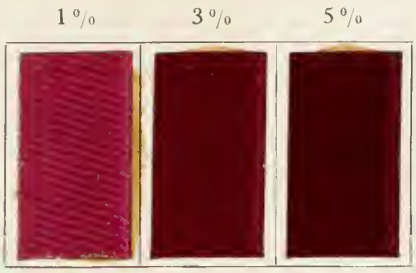
Diazamine Red RS
(β-Naphthol)



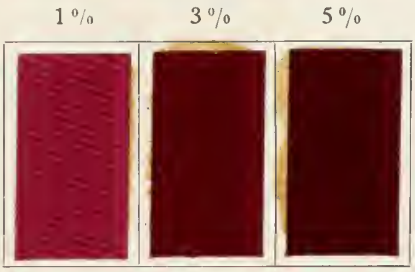
Diazamine Red BS
(β-Naphthol)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, IV	+	6	5	3	3	3-4	4	4	2	5	5	1	5	4	3	—	4-5
VII, IV	+	5	4	3	4	3	4	3-4	2	5	3	1	4-5	4-3	3	1 %	4
VII, I	—	1	5	4	3-4	2	4 3	4	3-4	4	4-5	1	5	5-4	3	1 %	4
VII, I	+	1	4	3-2	3	2-3	4	4 5	3-4	4	4	2	4	4-3	3	0·5%	4-5
VII, I	+	1	4	3-4	2-3	2-3	4-3	4-5	3-4	4	5 4	2	4	4-3	3	—	4-5

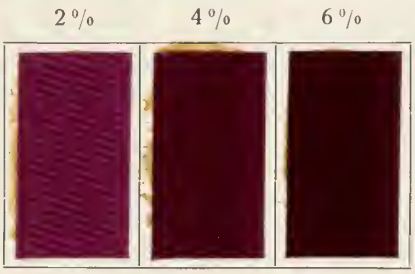
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, I	—	3-4	4	3-4	2	2	2-3	5	2-3	4	3-4	4	3	2	3	—	4-5
VII, I	+	3-4	4	4	2	2	2-3	5	2	4	3	4	3	2	3	—	4
VII, I	—	1	5-4	4-5	2	2	3	5	3	4	5-4	2	4	4-5	3	1 %	4
VII, I	—	4	5-4	3	3	2	4-3	5	3	5-4	5-4	3	3-4	3	3	0·5 %	5
VII, I	+	4	5-4	4-5	3	2	4	5	3	5-4	4-5	3-4	4	4-3	3	1 %	5



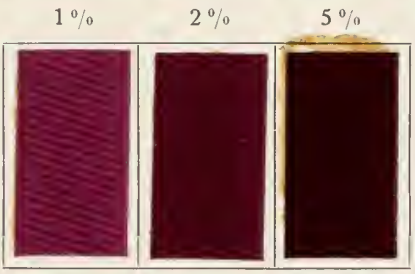
Diazamine Fast Red 8 BL
(β-Naphthol)



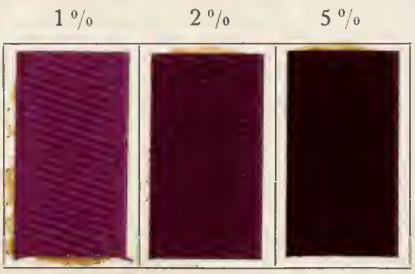
Diazamine Brilliant Red 5 BL conc.
(β-Naphthol)



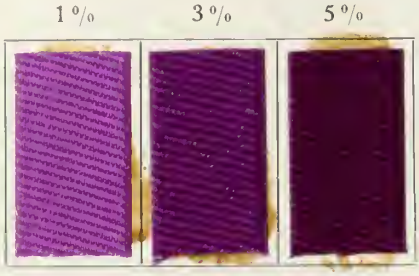
Diazamine Bordeaux BS
(β-Naphthol)



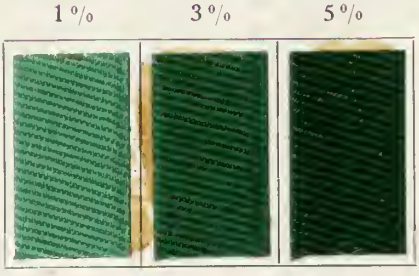
Diazamine Light Bordeaux BL
(β-Naphthol)



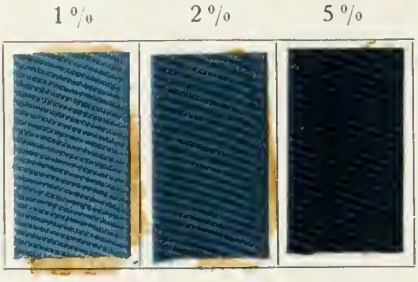
Diazamine Light Bordeaux 2 BL
(β-Naphthol)



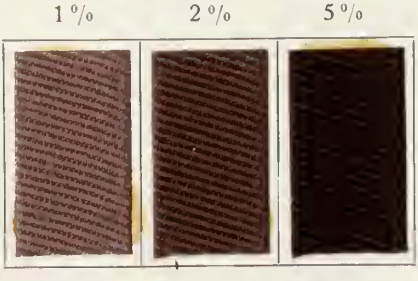
Diazamine Violet 5 R
(β-Naphthol)



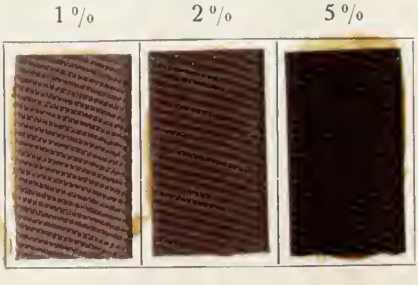
Diazamine Brilliant Green 3 GL
(Developer Z)



Diazamine Fast Green BL
(β-Naphthol)



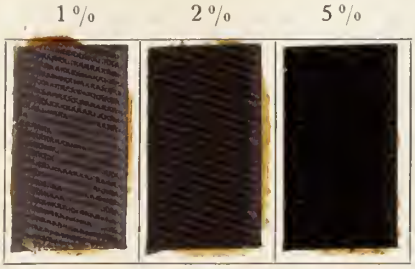
Diazamine Brown 5R
(β-Naphthol)



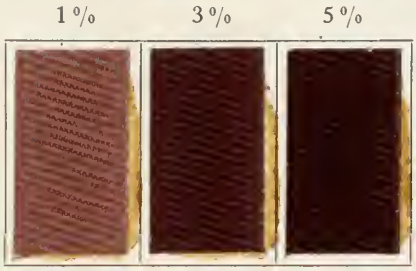
Diazamine Brown LR
(β-Naphthol)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, I	—	1	5	4	3	1	5–4	4	3	5 4	4	3	4 3	4–3	3	2 %	2
VII, IV	+	3	5	5–4	3	2–3	4–5	4–5	4 5	5–4	4 5	1	4	4	3	3 %	4
VII, IV	+	4	5	4–3	2	3	4	4 5	2	5	5	1	4–5	5–4	3 2	0·5 %	4–5
VII, I	—	2	5	4–5	3	1	2	5	3	4	4	2	5 4	3–4	3	—	4–5
VII, I	+	2	4–5	3–4	3	3	3	4–5	2–3	4	4	2	3–4	3–4	3	—	4–5

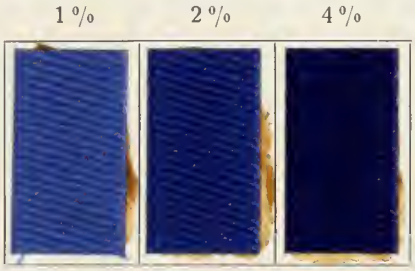
Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, I	—	2	5-4	4-5	3	2-3	4-5	4-5	2-3	3-4	4-5	2	3-4	3-4	3	—	5
VII, I	+	3	5	3	2	1	3	5	4	5	5	1	4-5	5-4	3	—	5
VII, I	+	4-5	4-5	4	4	3	3-4	2	4	5	5	2	5	4	3	1%	5
VII, I	+	5	4-5	4	4	2-3	4	2	4	4	4	1	5-4	4	3	2%	5
VII, I	—	2-3	3	3-4	3	2	3	4	4	4	2-3	1	3-4	3-4	3	—	4-5



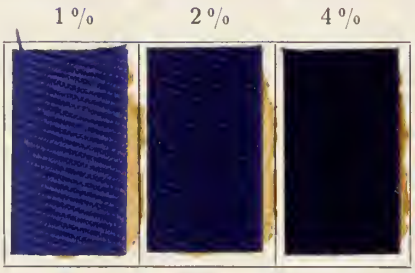
Diazamine Brown MR
(β-Naphthol)



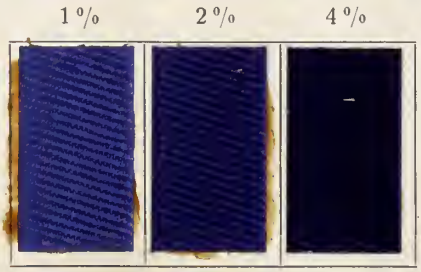
Diazamine Brown 3 RA
(β-Naphthol)



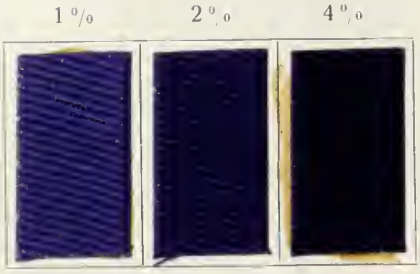
Diazamine Blue GW
(β-Naphthol)



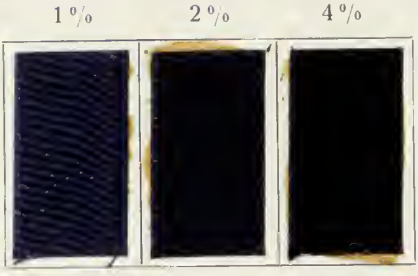
Diazamine Blue BR
(β-Naphthol)



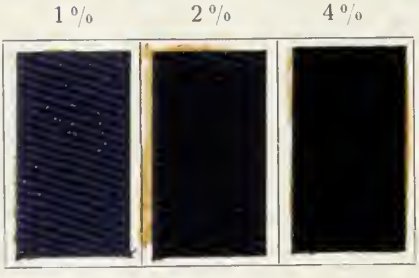
Diazamine Fast Blue NB
(β-Naphthol)



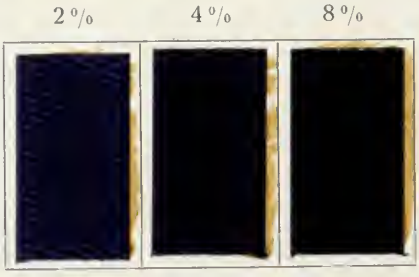
Diazamine Blue 2 RW
(β-Naphthol)



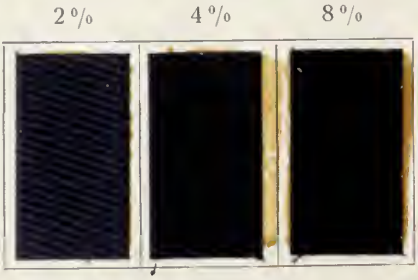
Chloramine Black BH conc.
(β-Naphthol)



Chloramine Black BH conc.
(m-Toluylene Diamine)



Diazamine Black D
(β-Naphthol)

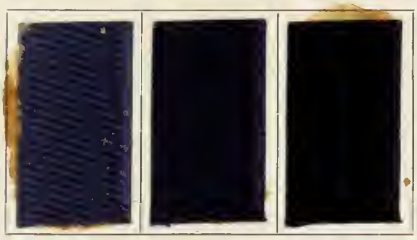


Diazamine Black D
(m-Toluylene Diamine)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, I	+	4–5	3	4	4	2	3 4	3	4	4	4	1	4	4	3	0·5%	4–5
VII, I	+	3	4	4	3 4	2	4	4–5	3–4	4	4	1	4	4–3	3	6 %	5–4
VII, II	+	4	4	3	3–4	2	4 5	4–5	3–4	4	4 3	1	4	5–4	3	—	5–4
VII, I	—	3	4	3	4	3	4–5	4	3	4	4	1	4–5	4	3	—	4–5
VII, II	—	4	4	3	3	3	5	4	3	4	4	1	4–5	4	3	—	4–5

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, I	—	4	4-5	4 3	4	3	3-4	4-5	4	3-4	4	1	4	4	2 3	—	5
VII, II	—	4	4 5	4 3	4	3	4	4-5	4	3-4	4	2	4	5-4	3 2	—	5
VII, I	+	3	4	3-4	3-4	2 3	3 4	4 5	4 5	3 4	4	2	3 4	3-4	3 2	6 %	5
VII, II	+	3-4	4-5	3-4	3-4	2-3	4	4 5	4 5	4	3-4	2	3-4	3-4	3 2	—	5
VII, I	+	3-4	3-4	3	4	3	2	4	3 4	3	3	1	3	2	2	—	5

2 % 4 % 10 %



Diazamine Black SVL
(β-Naphthol)

2 % 4 % 10 %

Diazamine Black SVL
(m-Toluylene Diamine)

2 % 4 % 8 %

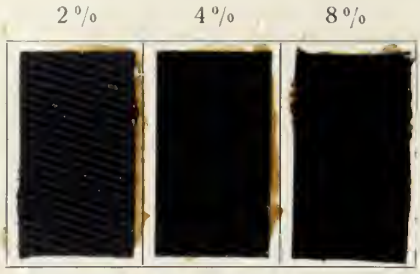
Diazamine Black S
(β-Naphthol)

2 % 4 % 8 %

Diazamine Black S
(m-Toluylene Diamine)

2 % 4 % 8 %

Diazamine Black G
(β-Naphthol)



Diazamine Black G
(m-Toluylene Diamine)

Dyeing Method	Solubility	Light	Water	Washing	Alkali	Sulphite	Mercerizing	Acids		Rubbing	Perspiration	Chlorine	Hot Pressing	Acid Boiling	Dischargeability (neutral)	Reserve of Acetate (maximum percentage)	Sensitiveness to Copper
								Acetic	Hydrochloric								
VII, II	—	3–4	3–4	3	3–4	3	3	4	4	3	3	1	3	2	2	—	4–5