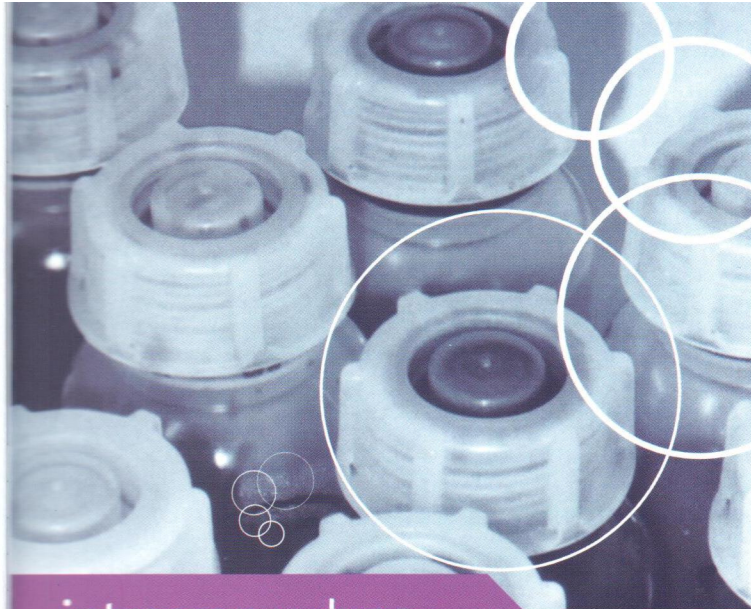


## Important

The information contained in this document is based upon the present state of our knowledge and upon the results of detailed evaluation work, presented objectively. It is made without liability as to any results obtained by the application of the products described therein. It is strongly recommended that, before proceeding to industrial scale work, trials should be carried out to assess product performance under the specific conditions that will be encountered.



intracron v dyes



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# intracron v dyes

Intracron V dyes are characterised by the general term -vinyl sulphone type. The main benefits of the range are:

- Full shade gamut
- Most dyes applicable by exhaust, cold pad batch and continuous dyeing
- High Stability to acid hydrolysis
- Excellent wash off properties
- High level of dischargeability for most dyes

Intracron	C.I. No type	
<b>withdrawn</b>	Y.160A	
Yellow V-GR 133% 2.2%	Y.15	
Golden Yellow V-RN 150% 2.2%	O.107	
Brill Orange V-3R 3.0%	O.16	
Red V-BB 150% 2.2%	R.21	
Red V-RB 160% 2.2%	R.198	
<b>withdrawn</b>	Br.18	
Violet V-5RL 130% 4.0%	V.5	
<b>withdrawn</b>	B.19	
Blue V-RL 150% 3.0%	B.19	
<b>withdrawn</b>	B.28	
Turq Blue V-G 133% 4.0%	B.21	
Green V-6B 4.0%	B.38	
<b>withdrawn</b>	B.250	
Black V-B 150 6.0%	Bl.5	
Black V-CKN 150% 6.0%	Bl. mix	



## Dyeing Method

The preferred method is determined by a number of factors including dyeing machine type, degree of automation, availability of controlled dispensing, fibre quality and type, fabric and/or yarn construction.

## Standard Method

Set bath at 20/25°C

- Add 1g/l Dyapol ML (lubricant/emulsifier)  
or 1g/l Serilube DAC (antireasing agent)  
0.5 - 1.0 g/l Seriquest CAD (sequestant)  
x g/l Glaubers salt or common salt  
All of the soda ash
- Run 10 minutes
- Add pre-dissolved Intracron dyes over 15 minutes.
- Raise to the dyeing temperature at 1°C/min and hold.
- Run 15 minutes
- Add 1/5 of caustic soda (where applicable) over 15 minutes
- Run 15 minutes
- Add remaining caustic soda (where applicable) over 15 minutes
- Run 30 minutes pale  
45 minutes medium  
60 minutes deep
- Drain and start rinse/soap cycle

## Recommended Dyeing Conditions

The temperature range for exhaust application of these products is 40-80°C with 50-60°C being generally preferred.

Below 50-60°C the running properties of cotton knitgoods in jet dyeing machines are adversely affected.

For jig dyeing, dyes with an optimum dyeing temperature of 40-60°C are preferred.

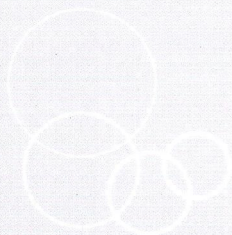
Selected dyes can be applied at 80°C, these products being particularly suitable for Turquoise and Bright Green shades.

The optimum temperature range for each product is indicated in the table of properties.

## Washing off Process

Intracron V dyes have reduced affinity in the hydrolysed form resulting in excellent clearing properties. The efficiency of the washing off process can be influenced by machine factors and the presence of alkali earth metal ions. In such cases a high liquor interchange and efficient machine draining coupled with the use of Seriquest CAD is recommended.

- Optimised washing off will involve the following stages:
  - Cold rinsing
  - Acidifying at 40°C
  - Hot rinsing at 70°C
  - Soaping at 90-95°C
- Warm/ Cold rinsing to clear





## Salt and Alkali requirements Liquor ratio 10:1

Dyeings carried out at 40°C

Depth of Shade	Glaubers/ Common salt (g/l)	Soda Ash (g/l)	Caustic Soda (ml/l) 38°Bé
up to 0.2%	20	5	1
0.2-1.0%	30	5	1.5
1.0-3.0%	50	5	2
over 3.0%	50-80	5	3

Dyeings carried out at 60°C

Depth of Shade	Glaubers/ Common salt (g/l)	Soda Ash (g/l)	Caustic Soda (ml/l) 38°Bé
up to 0.2%	20	5	-
0.2-1.0%	30	5	1
1.0-3.0%	50	5	1.5
over 3.0%	50-80	5	2

Dyeings carried out at 80°C

Depth of Shade	Glaubers/ Common salt (g/l)	Soda Ash (g/l)	Caustic Soda (ml/l) 38°Bé
up to 0.2%	20	5	-
0.2-1.0%	30	5	-
1.0-3.0%	50	5	0.5
over 3.0%	50-80	5	1

**Note:** Jig dyeing is usually carried out at L.R. 3:1 - 5:1. At these L.R.'s more alkali is required. The tables should be modified as follows:

- For L.R.'s of 5:1 use 25% extra caustic soda.
- For L.R.'s of 3:1 use 50% extra caustic soda.

## Cold Pad Batch Dyeing

The rapid pad batch method (KKV) is by far the most popular. This requires caustic soda solution as alkali, either on its own or in conjunction with salt, soda ash or sodium silicate.

The sodium silicate method is widely used to improve pad liquor stability and to overcome the problem of atmospheric carbon dioxide which can cause loss of yield at the selvages.

Recipe: see below

### Procedure

Pad liquor temperature	25 - 30°C
Fixation Temperature	25 - 30°C
Batching Time	4 - 24 hours
Pick Up	70 - 90%

## Alkali Recommendations (KKV)

Dye Concentration	up to 20g/l	up to 30g/l	up to 40g/l	up to 50g/l	up to 60g/l
Sodium Silicate 40°Bé ml/l	80	80	80	80	80
Caustic Soda 50% ml/l	13.5	16	17	19	22

For 38°Bé caustic multiply by 1.75

When preparing pad liquors by gravimetric measurement, full account should be taken of the high specific gravity of the chemical solutions.

### Recipe

- x g/l Intracron V dyestuff
- 2 g/l Dyamul CDW
- 100 g/l Urea (only if required for solubility)
- alkali (see table for quantities)
- It is necessary to use a mixing pump

## Wash Off

Rinsing in cold water followed by hot water (50 - 70°C)  
Soaping at the boil with Seriquet CAD  
Rinsing with hot and cold water

NB. Do not acidify when using sodium silicate.



FASTNESS		PROPERTIES													
		Yellow V-4G 120%	Yellow V-GR 133%	G. Yellow V-RN 150%		Brill Orange V-3R	Red V-BB 150%	Red V-RB 160%	Brown V-GR 110%	Violet V-5RL 130%	Blue V-RL	Blue V-RL 150%	Blue V-3RL	Turq Blue V-G 133%	Green V-6B
Lightfastness	1/6	4	4-5	4-5		5	4-5	4-5	5-6	5-6	6	6	6	5	6-7
Xenotest	1/1	5	6	5		5-6	5	5	6	6-7	7	7	6-7	6	7
Washing @ 60°C	SCo	4-5	4-5	4-5		4-5	5	5	4	5	5	5	5	4-5	4-5
	CS	5	5	5		5	5	5	4	5	5	5	5	4-5	4-5
Washing @ 95°C	SCo	5	4-5	4-5		4	4	4-5	5	5	3-4	3-4	5	4	4
	CS	4	2-3	4		3-4	2-3	5	3-4	2-3	4	4	3-4	3-4	4-5
Cold Water	SCo	5	5	5		5	5	5	4	5	5	5	5	5	5
	CS	5	5	5		5	5	5	4	5	5	5	5	4-5	4-5
Acid Perspiration	SCo	5	4-5	4-5		4-5	5	4-5	5	5	5	5	4-5	4-5	5
	CS	5	5	5		5	4-5	5	4	4-5	5	5	4	5	4
Alkali Perspiration	SCo	4-5	4-5	4-5		4-5	5	4-5	5	4-5	5	5	4-5	4-5	5
	CS	5	5	5		5	4-5	5	4	3-4	5	5	3-4	5	5
20mg/l active chlorine	CS	3-4	1	2-3		4	2	2-3	1	4-5	4	4	3-4	2-3	4
Optimum dyeing temperature range	40°C		+	+		+	+	+	+	+	+	+	+		
	60°C	+	+	+		+	+	+	+	+	+	+	+	+	+
	80°C	+												+	+
Solubility in g/l at	25°C	100	100	100		100	100	100	100	100	100	100	80	100	100
	60°C	100	100	100		100	100	100	100	100	100	100	80	100	100
Solubility in g/l with 50g/l Glaubers salt	25°C	>20	>20	>20		>20	>20	>20	>20	>20	>20	>20	>20	>20	>20
	60°C	>20	>20	>20		>20	>20	>20	>20	>20	>20	>20	>20	>20	>20
Cold pad batch suitability		-	+	+		+	+	+	+	+	+	-	+	+	+
Dischargeability	N	A	A	A		A	A	B	C	A	D	D	B	C	D
	ALK	A	A	A		A	A	B	B	B	D	D	A	B	D
D65 → Tungsten	CS	R	R	R		Y	Y	Y	Y	R	R	R	R	Y	Y

				TEST METHOD
Navy Blue V-RGB 150%	Black V-B 133%	Black V-CKN 150%		
3-4	3-4	3-4	BS EN ISO 105 BO2	
4-5	5	5		
4-5	4-5	5	BS EN ISO 105 CO3	
5	4-5	5		
4-5	4-5	4-5	BS EN ISO 105 CO4	
4-5	4	4		
5	5	5	BS EN ISO 105 EO1	
5	4-5	5		
5	4-5	5	BS EN ISO 105 EO4	
5	4-5	5		
5	4-5	4-5	BS EN ISO 105 EO4	
5	4-5	4-5		
4	4	4	BS EN ISO 105 EO3	
+	+	+		
+	+	+		
100	100	100		
100	100	100		
>20	>20	>20		
>20	>20	>20		
+	+	+		
B	A	A		Dischargeability
A	A	A		
G	R	G		

The dyeings used for fastness testing were produced on bleached unmercerised cotton knit at 1/1 standard depth for all Colours with the exception of:  
 Intracron Navy Blue V-RGB 150%  
 Intracron Blacks V-B 133%, V-CKN 150%  
 which were tested at NB/DK or B/DK standard depth

SCo - Staining on cotton  
 SPA - Staining on polyamide  
 N - Neutral  
 ALK - Alkali  
 PA - Polyamide  
 Wo - Wool  
 CS - Change in shade  
 + - Suitable  
 - - Unsuitable  
 R - Redder  
 Y - Yellower  
 G - Greener

#### Dischargeability:

- A. Dischargeable
- B. Near white dischargeable
- C. In the case of lower demand still sufficiently dischargeable
- D. Not dischargeable