One-bath Dyeing of Blended Fabrics

No.1	Dyeing of Polyester/Cotton and Rayon Blends (1)	Disperse Dyes/Kayacelon React
No.2	Dyeing of Polyester/Cotton and Rayon Blends (2)	Disperse Dyes/Kayacelon C
No.3	Dyeing of Polyester/Cotton and Rayon Blends (3)	Disperse Dyes/Kayacion E
No.4	Dyeing of Polyester/Urethane Blends	Kayalon Polyester UT
No.5	Dyeing of Polyester/Wool Blends	Disperse Dyes/Acid Dyes(Carrier dyeing)
No.6	Dyeing of Polyester/Acrylic Blends	Disperse Dyes/Kayacryl ED
No.7	Dyeing of Polyester/CDP Blends	Disperse Dyes/Kayacryl ED
No.8	Dyeing of Polyester/Triacetate or Heat-Resistant Diacetate	Disperse Dyes
No.9	Dyeing of Nylon/Cotton and Rayon Blends (1)	Acid Dyes/Kayacelon React
No.10	Dyeing of Nylon/Cotton and Rayon Blends (2)	Acid Dyes/Kayacion CF
No.11	Dyeing of Nylon/Cotton and Rayon Blends (3)	Acid Dyes/Kayacelon C
No.12	Dyeing of Nylon/CDP Blends	Acid Dyes/Kayacryl ED
No.13	Dyeing of Nylon/Wool Blends	Kayanol NWN
No.14	Dyeing of Acrylic/Cotton and Rayon Blends	Kayacryl ED/Kayacelon React
No.15	Dyeing of Acrylic/Wool Blends	Kayacryl ED/Acid Dyes
No.16	Dyeing of Acrylic/CDP Blends	Kayacryl CA

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Dyeing of Polyester/Cotton and Rayon Blends (1)

○This dyeing method makes it possible to carry out high-temperature one-bath dyeing combining disperse dyestuffs and Kayacelon React dyestuffs on polyester/cotton and polyester/rayon blends. The fastness properties in pale to medium shades as well as the brightness of the hues are particularly remarkable.

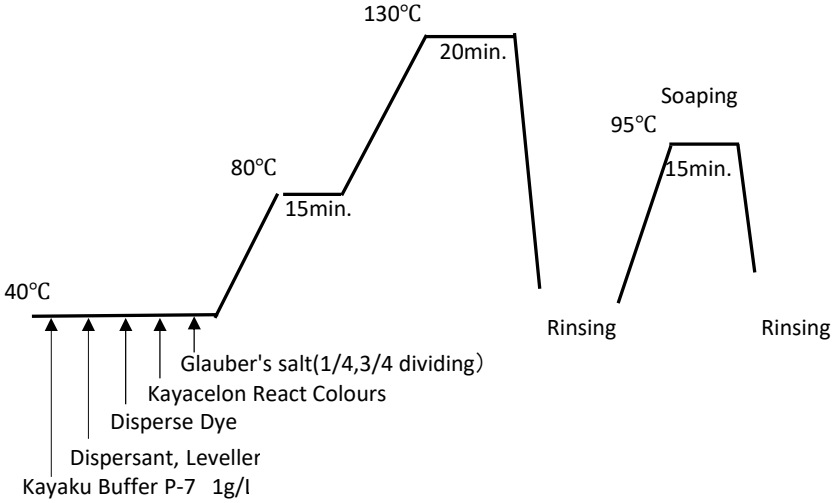
○It enables the dyeing to achieve a very effective rationalisation by means of a reduction of the dyeing process and the corresponding time as well as a decrease in the dyeing costs.

○The disperse dyes and the Kayacelon React dyes are dissolved in separate baths and are then added to the dyebath. The disperse dyes are dissolved in warm water at between 40 and 50℃, whereas the Kayacelon React dyes are dissolved in hot water at over 80℃.

○The Kayacelon React dyes are absorbed well and show good fixing behaviour at a neutral pH, so attention must be paid to the dyebath pH.
As pH adjusting agents, Kayaku Buffer P-7 and non-phosphorus Kayaku Buffer NFP, etc. are available.

○Kayaclean KFS is recommended as a disperse levelling agent if needed. If the resistance of the disperse levelling agent to a Glauber's salt bath is weakened, and a problem is caused by the lowering of the high-temperature dispersability of the disperse dyestuffs, then use should be made of an agent which improves this situation.

○In order to achieve level dyeing, the temperature at the start should be nearing 40℃ and the dyestuffs as well as the additives should be added at 40℃.



Standard quantity of Glauber's salt on Non-mercerized Cotton

(Reduce the Glauber's salt amount to 3/4, if the mateials are Mercerized-Cotton and Rayon)

Dyeing depth	Glauber's salt				Dyeing depth	Glauber's salt		
% O.W.C	01:10	01:20	01:30		% O.W.C	01:10	01:20	01:30
0.01以下	3	3	4		0.70-1.00	20	24	28
0.01-0.03	5	6	6		1.00-1.50	25	30	34
0.03-0.05	8	10	11		1.50-2.00	31	37	43
0.05-0.30	10	13	15		2.00-2.50	38	44	50
0.30-0.50	14	17	20		2.50-3.00	43	51	57
0.50-0.70	16	20	23		3.00-3.50	49	56	63

Recommended Dyes

For the polyester portion	For the cotton portion
Trichromatic combination Dyes	Trichromatic combination Dyes
Kayalon Microester Yellow AQ-LE	Kayacelon React Yellow CN-EX
Kayalon Microester Red AQ-LE	Kayacelon React Red CN-3B
Kayalon Microester Blue AQ-LE	Kayacelon React Blue CN-MG
Turquoise and Green Dyes	Turquoise and Green Dyes
Kayalon Polyester Yellow 4GN	Kayacelon React Yellow CN-4G
Kayalon Polyester Tur.Blue GL-S(C) 200	Kayacelon React Turquoise CN-2G

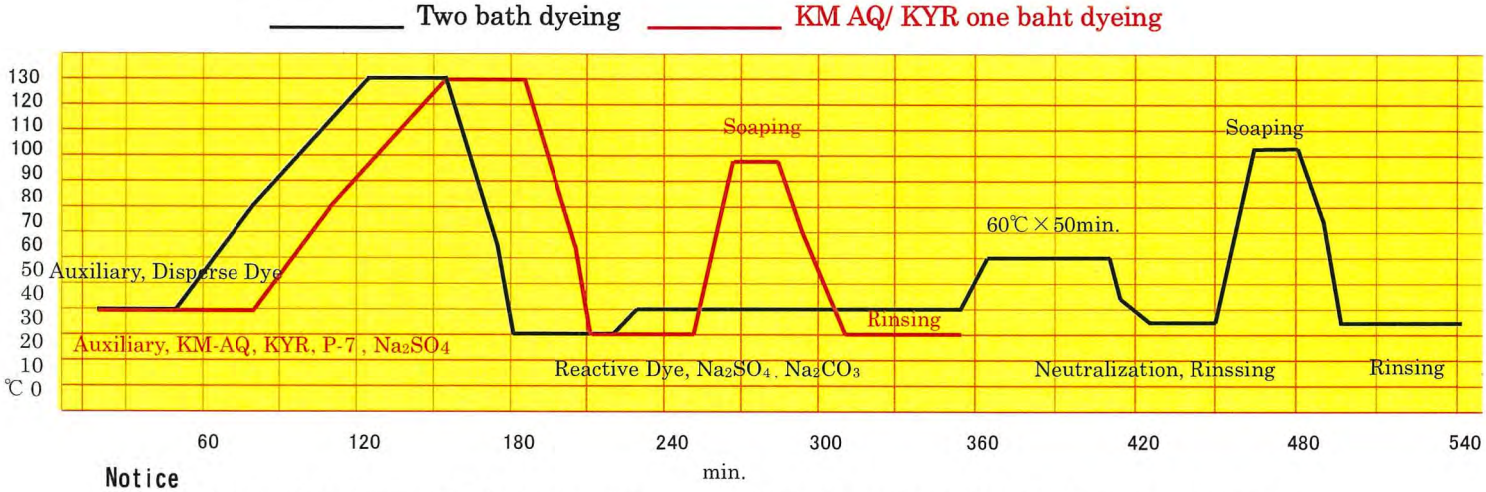
Global "sukima" idea

NIPPON KAYAKU

Kayalon Microester AQ-LE / Kayacelon React

One bath Dyeing with Kayalon Microester AQ-LE / Kayacelon React Colours

- This method makes it possible to dye polyester/cotton blended in one bath with disperse and reactive dyes. It gives very good fastness properties and results in clear shade in pale to medium shades.



Notice

- After Dyeing, Soaping over 95℃ is necessary. Lack of soaping cause defect of reproducibility and fastness.
- Percentage of Cotton vary Liquor ratio of cotton. It is necessary to change Amount of Sodium Sulphate.

Polyester / Cotton Blended Fabrics (50/50) Colour Patterns

	%o.w.f.							
KM Yellow AQ-LE	0.0084	0.126	0.00035	0.0052	0.00078	0.0117	0.00474	0.0711
KM Red AQ-LE	0.0008	0.012	0.0208	0.312	0.00136	0.0204	0.00333	0.0500
KM Blue AQ-LE	–	–	–	–	0.00887	0.133	0.00184	0.0276
KYR Yellow CN-EX	0.02	0.30	–	–	–	–	0.0132	0.198
KYR Red CN-3B	–	–	0.02	0.3	–	–	0.0026	0.039
KYR Blue CN-MG	–	–	–	–	0.02	0.30	0.0042	0.063
Na_2SO_4 (g/L)	6	20	6	20	6	20	6	20
Fastness properties (JIS)								
Light	4	3-4	3-4	3-4	4	4	4	4
Perspiration Light	4-5	4-5	3-4	3	4	4	4-5	4-5
Chlorinated water (10ppm)	5	3-4	4-5	4-5	4-5	4	4-5	4-5
Washing 50℃ (Nylon)	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5

KM Yellow AQ-LE	0.00326	0.0489	0.00453	0.068	0.00286	0.0429	–	–
KM Red AQ-LE	0.00330	0.0495	–	–	–	–	–	–
KM Blue AQ-LE	0.00324	0.0486	–	–	–	–	0.00028	0.0042
KP Turq. GL-S (C) 200	–	–	–	–	0.00256	0.0384	0.00820	0.1230
KYR Yellow CN-4G	–	–	0.02	0.3	0.014	0.210	–	–
KYR Yellow CN-EX	0.0092	0.138	–	–	–	–	–	–
KYR Red CN-3B	0.0026	0.039	–	–	–	–	–	–
KYR Blue CN-MG	0.0082	0.123	–	–	–	–	–	–
KYR Turq. CN-2G	–	–	–	–	0.006	0.09	0.02	0.30
Na_2SO_4 (g/L)	6	20	6	20	6	20	6	20
Fastness properties (JIS)								
Light	4	4	3-4	3-4	4	3-4	4	3-4
Perspiration Light	4-5	4-5	3-4	3	4-5	4	4-5	4-5
Chlorinated water (10ppm)	4-5	3-4	4-5	4-5	4	3	4-5	3-4
Washing 50℃ (Nylon)	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5

Nippon Kayaku Thailand offers one-bath dyeing and other efficient dyeing solutions for various types of blended fabrics.

For more information, please feel free to contact us at info@kayakuth.co.th