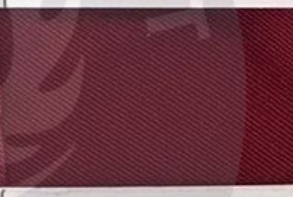


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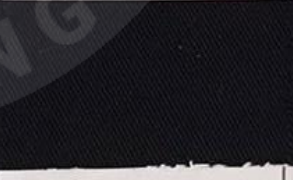
Lampiran 1.1 Kain hasil pencelupan tanpa proses cuci reduksi

Merah	Hitam	Hijau
		

Lampiran 1.2 Kain hasil cuci reduksi warna merah

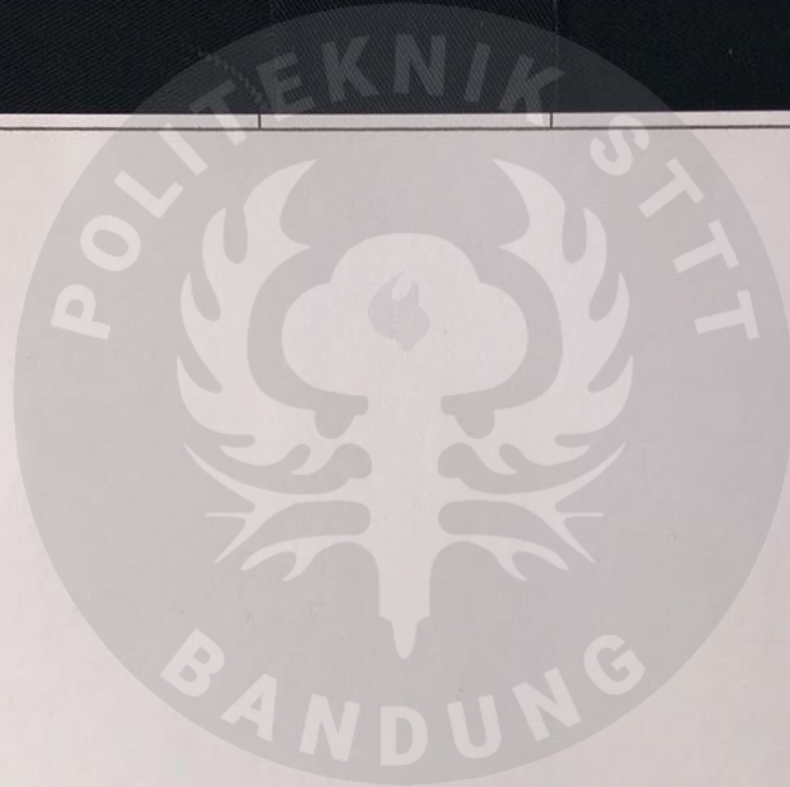
Alkali	Neoclean 1	Neoclean 2	Neoclean 3	Washmatic 1	Washmatic 2	Washmatic 3
						

Lampiran 1.3 Kain hasil cuci reduksi warna hitam

Alkali	Neoclean 1	Neoclean 2	Neoclean 3	Washmatic 1	Washmatic 2	Washmatic 3
						

Lampiran 1.4 Kain hasil cuci reduksi warna hijau

Alkali	Neoclean 1	Neoclean 2	Neoclean 3	Washmatic 1	Washmatic 2	Washmatic 3



Lampiran 1.5 Tabel Perhitungan L,a,b kain cuci reduksi warna hitam

Konsentrasi (g/l)	Percobaan ke-	Zat	L*	a*	b*
Htam					
1	1	Neoclean	14,42	0,83	-1,69
1	2	Neoclean	14,34	0,87	-1,69
1	3	Neoclean	14,19	0,86	-1,63
1	4	Neoclean	14,45	0,83	-1,74
1	5	Neoclean	14,35	0,85	-1,68
Rata- Rata			14,35	0,848	-1,68
2	1	Neoclean	14,51	0,87	-1,51
2	2	Neoclean	14,51	0,86	-1,5
2	3	Neoclean	14,23	0,84	-1,43
2	4	Neoclean	14,5	0,85	-1,57
2	5	Neoclean	14,5	0,87	-1,6
Rata-Rata			14,45	0,85	-1,52
3	1	Neoclean	14,45	0,83	-1,8
3	2	Neoclean	14,43	0,81	-1,84
3	3	Neoclean	14,49	0,8	-1,85
3	4	Neoclean	14,44	0,78	-1,85
3	5	Neoclean	14,4	0,81	-1,96
Rata-Rata			14,44	0,80	-1,86
1	1	Washmatic	14,64	0,81	-1,67
1	2	Washmatic	14,57	0,83	-1,56
1	3	Washmatic	14,24	0,82	-1,61
1	4	Washmatic	14,58	0,82	-1,62
1	5	Washmatic	14,64	0,79	-1,62
Rata-Rata			14,53	0,81	-1,61
2	1	Washmatic	14,33	0,74	-1,86
2	2	Washmatic	14,33	0,74	-1,82
2	3	Washmatic	14,42	0,74	-1,86
2	4	Washmatic	14,38	0,74	-1,94
2	5	Washmatic	14,58	0,75	-2,06
Rata-Rata			14,40	0,74	-1,90
3	1	Washmatic	14,46	0,72	-1,9
3	2	Washmatic	14,33	0,77	-1,87
3	3	Washmatic	14,26	0,79	-1,89
3	4	Washmatic	14,6	0,77	-1,98
3	5	Washmatic	14,51	0,78	-1,95
Rata-Rata			14,43	0,76	-1,92

Lampiran 1. 6 Tabel Perhitungan L,a,b kain cuci reduksi warna hijau

Konsentrasi (g/l)	Percobaan Ke-	Zat	L*	a*	b*
Hijau					
1	1	Neoclean	17,05	-4,56	1,54
1	2	Neoclean	17	-4,54	1,49
1	3	Neoclean	17,09	-4,51	1,47
1	4	Neoclean	17,17	-4,59	1,52
1	5	Neoclean	17,21	-4,49	1,45
Rata-Rata			17,10	-4,53	1,494
2	1	Neoclean	17,25	-4,47	1,31
2	2	Neoclean	17,33	-4,57	1,29
2	3	Neoclean	17,2	-4,68	1,38
2	4	Neoclean	17,4	-4,71	1,31
2	5	Neoclean	17,4	-4,76	1,44
Rata-Rata			17,31	-4,63	1,346
3	1	Neoclean	17,17	-4,58	1,35
3	2	Neoclean	17,39	-4,72	1,4
3	3	Neoclean	17,57	-4,84	1,53
3	4	Neoclean	17,64	-4,87	1,53
3	5	Neoclean	17,36	-4,62	1,36
Rata-Rata			17,42	-4,72	1,43
1	1	Washmatic	17,37	-4,91	1,68
1	2	Washmatic	17,26	-4,69	1,4
1	3	Washmatic	17,23	-4,66	1,4
1	4	Washmatic	17,06	-4,59	1,36
1	5	Washmatic	16,96	-4,59	1,32
Rata-Rata			17,17	-4,68	1,43
2	1	Washmatic	17,55	-4,7	1,56
2	2	Washmatic	17,41	-4,75	1,61
2	3	Washmatic	17,33	-4,74	1,63
2	4	Washmatic	17,31	-4,67	1,55
2	5	Washmatic	17,26	-4,63	1,5
Rata-Rata			17,37	-4,69	1,57
3	1	Washmatic	17,6	-4,98	1,74
3	2	Washmatic	17,59	-5,01	1,75
3	3	Washmatic	17,6	-5,02	1,77
3	4	Washmatic	17,62	-5,05	1,78
3	5	Washmatic	17,51	-4,96	1,68
Rata-Rata			17,58	-5,00	1,74

Lampiran 1.7 Tabel Perhitungan L,a,b kain cuci reduksi warna merah

Konsentrasi (g/l)	Percobaan ke-	Zat	L*	a*	b*
Merah					
1	1	Neoclean	24,49	29,58	9,34
1	2	Neoclean	24,66	29,84	9,47
1	3	Neoclean	24,57	29,64	9,43
1	4	Neoclean	24,52	29,56	9,49
1	5	Neoclean	24,58	29,57	9,43
Rata-Rata			24,564	29,638	9,432
2	1	Neoclean	25,14	30,04	9,51
2	2	Neoclean	25,13	30,16	9,56
2	3	Neoclean	25,1	30,11	9,49
2	4	Neoclean	25,1	30,11	9,43
2	5	Neoclean	25,16	29,99	9,38
Rata-Rata			25,126	30,082	9,474
3	1	Neoclean	25,14	30,15	9,46
3	2	Neoclean	25,18	30,01	9,51
3	3	Neoclean	25,18	30,03	9,48
3	4	Neoclean	25,23	30,04	9,5
3	5	Neoclean	25,17	30,03	9,5
Rata-Rata			25,18	30,052	9,49
1	1	Washmatic	24,04	29,09	9,44
1	2	Washmatic	24,37	29,28	9,36
1	3	Washmatic	24,73	29,53	9,34
1	4	Washmatic	24,46	29,62	9,51
1	5	Washmatic	24,13	28,97	9,3
Rata-Rata			24,346	29,298	9,39
2	1	Washmatic	24,13	28,94	9,37
2	2	Washmatic	24,29	29,04	9,41
2	3	Washmatic	24,23	29,01	9,38
2	4	Washmatic	24,38	29,16	9,43
2	5	Washmatic	24,18	28,99	9,4
Rata-Rata			24,242	29,028	9,398
3	1	Washmatic	23,93	28,96	9,34
3	2	Washmatic	23,93	28,95	9,36
3	3	Washmatic	24,16	29,05	9,39
3	4	Washmatic	24,01	29,05	9,38
3	5	Washmatic	24,26	29,06	9,41
Rata-Rata			24,058	29,014	9,376

Lampiran 1.8 Perhitungan Biaya Proses

Perhitungan cuci reduksi alkali :

Volume larutan : 3000L

Harga NaOH : Rp. 16,900

Harga Na₂S₂O₄ : Rp. 45,000

Harga Sabun : Rp. 13,600

1. NaOH : 2g/l

$$= \frac{2}{1000} \times 3000 = 6 \text{ kg} \times 16,900 = \text{Rp. } 101,400$$

2. Na₂S₂O₄ : 2g/l

$$= \frac{2}{1000} \times 3000 = 6 \text{ kg} \times 45,000 = \text{Rp. } 270,000$$

3. Sabun : 1 g/l

$$= \frac{1}{1000} \times 3000 = 3 \text{ kg} \times 13,600 = \text{Rp. } 40,800$$

Total biaya RC alkali = Rp. 412,200

Perhitungan cuci reduksi asam :

Volume larutan : 3000L

Harga Neoclean Eco /kg : \$ 1,73

Harga Washmatic DM 1557/kg : \$ 3,59

Harga Dyeing Acid /kg : \$ 0.95

\$1 : Rp.16,000

1. Neoclean Eco : 3g/l

$$= \frac{3}{1000} \times 3000 = 9 \text{ kg} \times 1,73 \times 16,000 = \text{Rp. } 249,120$$

2. Washmatic DM 1557 : 1g/l

$$= \frac{1}{1000} \times 3000 = 3 \text{ kg} \times 3,59 \times 16,000 = \text{Rp. } 172,320$$

3. Dyeing Acid : 0.2 g/l

$$= \frac{0.2}{1000} \times 3000 = 0.6 \text{ kg} \times 0.95 \times 16,000 = \text{Rp. } 9,120$$

Total biaya RC asam menggunakan Washmatic 1 g/l = Rp. 182,440

Total biaya RC asam menggunakan Neoclean 3 g/l = Rp. 258,240

Lampiran 1. 9 Tabel Pembobotan Titik Optimum

Pengujian gosokan kering

Warna	Konsentrasi zat (g/l)	Penodaan	Peringkat
merah	Neoclean 1	4	3
merah	Neoclean 2	4	3
merah	Neoclean 3	4-5	2
merah	Washmatic 1	4	3
merah	Washmatic 2	4-5	2
merah	Washmatic 3	4-5	2
hitam	Neoclean 1	4	3
hitam	Neoclean 2	4	3
hitam	Neoclean 3	4-5	2
hitam	Washmatic 1	4-5	2
hitam	Washmatic 2	4-5	2
hitam	Washmatic 3	5	1
hijau	Neoclean 1	4	3
hijau	Neoclean 2	4	3
hijau	Neoclean 3	4-5	2
hijau	Washmatic 1	4-5	2
hijau	Washmatic 2	4-5	2
hijau	Washmatic 3	4-5	2

Pengujian gosokan basah

Warna	Konsentrasi zat (g/l)	Penodaan	Peringkat
merah	Neoclean 1	3-4	4
merah	Neoclean 2	4	3
merah	Neoclean 3	4	3
merah	Washmatic 1	4	3
merah	Washmatic 2	4	3
merah	Washmatic 3	4-5	2
hitam	Neoclean 1	3-4	4
hitam	Neoclean 2	4	3
hitam	Neoclean 3	4	3
hitam	Washmatic 1	4	3
hitam	Washmatic 2	4	3
hitam	Washmatic 3	4-5	2
hijau	Neoclean 1	4	3
hijau	Neoclean 2	4	3
hijau	Neoclean 3	4	3
hijau	Washmatic 1	4	3
hijau	Washmatic 2	4	3
hijau	Washmatic 3	4-5	2

Pengujian pencucian

Warna	Konsentrasi zat (g/l)	Penodaan	Peringkat
merah	Neoclean 1	3-4	4
merah	Neoclean 2	3-4	4
merah	Neoclean 3	4	3
merah	Washmatic 1	4	3
merah	Washmatic 2	4	3
merah	Washmatic 3	4	3
hitam	Neoclean 1	3-4	4
hitam	Neoclean 2	3-4	4
hitam	Neoclean 3	4	3
hitam	Washmatic 1	4	3
hitam	Washmatic 2	4	3
hitam	Washmatic 3	4	3
hijau	Neoclean 1	4	3
hijau	Neoclean 2	4	3
hijau	Neoclean 3	4-5	2
hijau	Washmatic 1	4-5	2
hijau	Washmatic 2	4-5	2
hijau	Washmatic 3	4-5	2

Pengujian beda warna

Warna	Konsentrasi zat (g/l)	Nilai Beda Warna	Peringkat
merah	Neoclean 1	0.26	3
merah	Neoclean 2	0.87	6
merah	Neoclean 3	0.96	6
merah	Washmatic 1	0.34	4
merah	Washmatic 2	0.59	6
merah	Washmatic 3	0.66	6
hitam	Neoclean 1	0.08	1
hitam	Neoclean 2	0.13	2
hitam	Neoclean 3	0.28	3
hitam	Washmatic 1	0.19	2
hitam	Washmatic 2	0.28	3
hitam	Washmatic 3	0.34	3
hijau	Neoclean 1	0.28	3
hijau	Neoclean 2	0.34	3
hijau	Neoclean 3	0.51	5
hijau	Washmatic 1	0.34	3
hijau	Washmatic 2	0.52	5
hijau	Washmatic 3	0.92	6

Ranking	Nilai
Rangking 1	100
Rangking 2	83,34
Rangking 3	66,67
Rangking 4	50
Rangking 5	33,33
Rangking 6	16,66

Pengujian	bobot (%)
gosokan	35
pencucian	35
beda warna	30

Pengujian														TOTAL NILAI
Warna	Konsentrasi (g/l)	Gosokan				Pencucian				Beda Warna				
		Rank	Nilai	Bobot (%)	Total	Rank	Nilai	Bobot (%)	Total	Rank	Nilai	Bobot (%)	Total	
Merah	Washmatic 1	3	66,67	35	23,3345	3	66,67	35	23,3345	3	66,67	30	20,001	66,67
Merah	Neoclean 1	4	50	35	17,5	4	50	35	17,5	3	66,67	30	20,001	55,001
Merah	Washmatic 2	2	83,34	35	29,169	3	66,67	35	23,3345	6	16,66	30	4,998	57,5015
Merah	Neoclean 2	3	66,67	35	23,3345	4	50	35	17,5	6	16,66	30	4,998	45,8325
Merah	Washmatic 3	2	83,34	35	29,169	3	66,67	35	23,3345	6	16,66	30	4,998	57,5015
Merah	Neoclean 3	2	83,34	35	29,169	3	66,67	35	23,3345	6	16,66	30	4,998	57,5015
Hijau	Washmatic 1	2	83,34	35	29,169	2	83,34	35	29,169	3	66,67	30	20,001	78,339
Hijau	Neoclean 1	3	66,67	35	23,3345	3	66,67	35	23,3345	3	66,67	30	20,001	66,67
Hijau	Washmatic 2	2	83,34	35	29,169	2	83,34	35	29,169	3	66,67	30	20,001	78,339
Hijau	Neoclean 2	3	66,67	35	23,3345	3	66,67	35	23,3345	3	66,67	30	20,001	66,67
Hijau	Washmatic 3	2	83,34	35	29,169	2	83,34	35	29,169	5	33,33	30	9,999	68,337
Hijau	Neoclean 3	2	83,34	35	29,169	2	83,34	35	29,169	6	16,66	30	4,998	63,336
Hitam	Washmatic 1	2	83,34	35	29,169	3	66,67	35	23,3345	2	83,34	30	25,002	77,5055
Hitam	Neoclean 1	4	66,67	35	23,3345	4	50	35	17,5	1	100	30	30	70,8345
Hitam	Washmatic 2	2	83,34	35	29,169	4	50	35	17,5	3	66,67	30	20,001	66,67
Hitam	Neoclean 2	3	66,67	35	23,3345	3	66,67	35	23,3345	2	83,34	30	25,002	71,671
Hitam	Washmatic 3	1	100	35	35	3	66,67	35	23,3345	3	66,67	30	20,001	78,3355
Hitam	Neoclean 3	2	83,34	35	29,169	3	66,67	35	23,3345	3	66,67	30	20,001	72,5045