



BIO SCOUR CL



High Performance Biodegradable Enzymatic Scouring Agent

SALIENT FEATURES

- ▶ Biodegradable enzymatic preparation
- ▶ Does not increase COD levels, APEO free.
- ▶ High chelating action on calcium, magnesium & iron
- ▶ Stabilizes Hydrogen peroxide
- ▶ High cleaning & scouring actions
- ▶ Removes cotton wax, pectin & natural pigment
- ▶ Imparts excellent absorbency
- ▶ Prevents weight loss of cotton
- ▶ Shortening of pretreatment process
- ▶ High savings in water consumption
- ▶ Substantial savings in time, electricity, labour etc. & easy to handle

CHARACTERISTICS

Appearance	: White to off – white powder
Chemical Nature	: Synergistic blend of enzymes & surfactants
Ionic Nature	: Anionic / Nonionic
Solubility	: Easy to dissolve in water
pH (1% aq. Sol.)	: 11 – 12
Stability	: Good to hard water

APPLICATION

Substrate	: Cellulosic & their blends
Machines	: Circulatory & non- circulatory machines
Function	: Scouring & Bleaching
Guide Recipes	: Dilute with water then add

- Treatment of Cotton Woven Fabric on Jigger M/c :

(A) For Dark Shade & Black Shade :

BIO SCOUR CL	1.5 – 2.0%
Hydrogen Peroxide (50%)	1.0 – 1.5%
CAMAWET LFW	0.4 – 0.5%

Treat at 80 - 90°C for two hours, followed by wash & neutralization.

(B) For Light – Medium Shade :

BIO SCOUR CL	2.0 – 2.5%
Hydrogen Peroxide (50%)	2.0 – 3.0%
CAMAWET LFW	0.4 – 0.5%

Treat at 80 - 90°C for two hours, followed by wash & neutralization.



(C) For Full White :

1) Hypochlorite treatment with 2 g/l available chlorine solution along with **0.25%** anionic wetting agent (OT) at room temp. for 2 hours. Followed by rinsing at room temperature.

2) Treatment with

BIO SCOUR CL 1.5 – 2.0%

Hydrogen Peroxide (50%) 2.0 – 3.0%

CAMAWET LFW 0.4 – 0.5%

At 80-90°C for 2 hours, followed by wash & neutralization.

3) Treatment with **Optical Brightening Agent**.

• **Scouring – Bleaching of Cotton Knit's :**

BIO SCOUR CL 1.00 %

CAMAWET LFW 0.50 %

Hydrogen Peroxide (50%) 2.00 %

Caustic Flakes 0.75 %

Anti-creasing agent 0.50 %

Treat at 90°C for 45-60 min., followed by wash & neutralization.

Treatment with **Peroxide Killer** at 70°C for 20 minutes may be given to remove the traces of residual peroxide. Then drain, wash & neutralize.

• **Pretreatment of Polyester Fabric :**

Treatment with **1.0 - 1.5% BIO SCOUR CL** and **1.0% Nonionic Detergent** at boil for 30-60 min. rinse clear & neutralize.

(% on weight of material)

SPECIAL REMARKS

Storage Stability : Minimum 6 months under standard conditions of storage

Container : 25 kg bags

SAFETY & HANDLING: The product is developed for textile processes & should not be used in any other industry. Inhalation of the product – dust should be avoided. In case of contact with the eyes, promptly rinse with plenty of water. Industrial gloves, goggles & other protective equipment's are advised to be used while handling the product. In general, the product does not pose any grave pollution hazard in handling.

Disclaimer: All recommendations for the use of our products, whether given by us in writing, orally or to be implied from the results of trials, are based on our present state of knowledge & experience. Owing to the variation in local application conditions, they cannot be claimed to be complete. Hence, we cannot accept any responsibility thereof. All claims, liabilities – also with a view to claim of third parties – are excluded. It is advised to conduct lab & bulk trials before using in bulk production.



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1.0 Pretreatment of Cotton Woven Fabric

Machines: Jiggers / JT-10

- 1.1 Take water in the machine to minimum required level
- 1.2 Add to the bath **CAMAZYME HT**
- 1.3 Raise temperature to 80 – 90°C
- 1.4 Load the fabric
- 1.5 Run 1 end after loading on JT-10 & 4 ends on Jigger
- 1.6 Drain the bath
- 1.7 Fill fresh water without any intermediate wash
- 1.8 Raise temperature to 80 – 90°C
- 1.9 Add **BIOSCOUR CL** & Hydrogen Peroxide
- 1.10 Run 2-4 ends on JT- 10 & 8-10 ends on Jigger
- 1.11 Drain
- 1.12 Hot wash
- 1.13 Rinse clear & neutralize



2.0 One bath scouring–bleaching of Cotton Knits

Machine: Soft-flow

- 2.1 Fill water & load the fabric
- 2.2 Dose **CAMAWET LFW**
- 2.3 Dose **Caustic soda**
- 2.4 Dose **BIOSCOUR CL**
- 2.5 Dose **H₂O₂**
- 2.6 Raise temperature to 90 – 95°C
- 2.7 Run for 45 – 60 minutes
- 2.8 Drain
- 2.9 Hot Wash
- 2.10 Rinse clear & Neutralize

3.0 One bath scouring–bleaching of Cotton Yarn

Machine: Package Dyeing

- 3.1 Fill water & load the fabric
- 3.2 Dose **CAMAWET LFW**
- 3.3 Dose **Caustic soda**
- 3.4 Dose **BIOSCOUR CL**
- 3.5 Dose **H₂O₂**
- 3.6 Raise temperature to 90 – 95°C
- 3.7 Run for 45 – 60 minutes
- 3.8 Drain
- 3.9 Hot Wash
- 3.10 Rinse clear & Neutralize

4.0 Pretreatment of Polyester and P/C Fabrics

Machines: Jet / Soft-flow

- 4.1 Fill water in machine & Load the fabric
- 4.2 Raise temperature to 60°C
- 4.3 Add **BIOSCOUR CL** & **H₂O₂**
- 4.4 Raise temperature to 110°C
- 4.5 Run for 30 – 45 minutes
- 4.6 Drain, hot wash with **CAMOL NFSN**
- 4.7 Rinse clear & neutralize

5.0 Polyester Print Wash – off

Machine: Soaper / Jet

- 5.1 Take water & load the fabric
- 5.2 Add **BIOSCOUR CL** & raise temperature to 80°C
- 5.3 Treatment time is 20 – 30 minutes
- 5.4 Drain, hot wash with **CAMOL NFSN**
- 5.5 Rinse clear & neutralize



6.0 Recipes Tables (% on the weight of material)

6.1 Cotton Woven Fabric

Fabric Type ►	Cotton Woven fabric	
Contents	Grey Mercerized	Grey Unmercerized
CAMAZYME HT	0.50	0.75
BIOSCOUR CL	1.5 – 2.0	2.0 – 2.5
H ₂ O ₂ (50%)	2.0 – 4.0	2.0 – 4.0

6.2 Polyester & P / C Fabric

Fabric Type ►	100% Polyester	P / C Blend	Polyester Print Wash
Contents			
BIOSCOUR CL	0.5 – 1.0	0.50 – 0.75	1.0 – 2.0
H ₂ O ₂ (50%)	1.0 – 1.5	1.0 – 1.5	--
CAMOL NFSN	0.25	0.25	0.25

6.3 Cotton Knit & Yarn

Fabric Type ►	Cotton Knit	Cotton Yarn in Package form
Contents		
CAMAWET LFW	0.50	0.50
Caustic Soda Flakes	0.75 – 1.0	0.75 – 1.0
BIOSCOUR CL	1.0	1.0
H ₂ O ₂ (50%)	2.0 – 6.0	2.0 – 6.0

7.0 Useful Information

7.1 For scouring of cotton woven fabric quantity of **BIOSCOUR CL** & number of ends depend on the quality of fabric. Heavier the quality, higher the quantity & more number of ends.

7.2 Hypochlorite treatment may follow the **BIOSCOUR CL** treatment to obtain extra whiteness.

7.3 Quantity of hydrogen peroxide should be adjusted as per the requirement of whiteness

7.4 Optical brightener treatment should not be combined in **BIOSCOUR CL** bath.

7.5 Treatment with **BIOSCOUR CL** is sufficient for the fabrics which have water soluble size & to be scoured for deep shade dyeing only.

7.6 **CAMAZYME HAT** is not required for the fabrics which do not have starch size

7.7 For Polyester scouring, the quantity of **BIOSCOUR CL** & treatment time also depends on extent of soil, grease, oil etc on the fabric

7.8 For P/C (67/33) fabric, **BIOSCOUR CL** 0.5% treatment at 90°C for 45 minutes is sufficient to get good absorbency for dyeing.

7.8 **BIOSCOUR CL** is found to remove insect's / mosquito stains from the fabric

8.0 SHOP- FLOOR CASE STUDIES:



8.1 Substrate: Cotton woven (70 – 120 g/m) Grey Mercerized fabric

Machine: JT-10

Sr. No.	Customer's Process	No. of Ends		Camex Process
1.	Fill water			Fill water
2.	Load the fabric			Load the fabric
3.	Drain			X
4.	Fill water			X
5.	Caustic Soda boil at 80°C	2	2	CAMAZYME HT at 80°C
6.	Drain			Drain
7.	Fill water			Fill water
8.	Cold wash	1	3	BIOSCOUR CL + H2O2
9.	Drain			Drain
10.	Fill water			Fill water
11.	Hypo bleach	3		X
12.	Drain			X
13.	Fill water			X
14.	HCl treatment	3	2	HCl treatment
15.	Drain			Drain
	TOTAL ENDS	9	7	TOTAL ENDS
	TOTAL DRAINS	5	3	TOTAL DRAINS
	TOTAL WATER FILLINGS	5	3	TOTAL WATER FILLINGS

8.1.1 Comparative Savings in Camex Process:

- Water saving (2 water Fills lesser) – @ 2000 lit.
- Time saving (2 ends lesser) - @ 4 hr.
- Time saving (lesser water fills & drains) @ 1 hr.
- Power saving (running time reduced by 4 hr.)
- Indirect savings of labour
- More batches – increased productivity
- Lesser pollution load
- Total savings per month, converted in terms of money are substantial.

8.2 Substrate: Cotton woven (70 – 120 g/m) Grey Mercerized fabric

Machine: JT-10

Sr. No	Customer's Process	Ends		Camex Process
1.	Fill water & add Scouring Chemical - BIOSCOUR CL Temp. 80°C			Fill water & add CAMAZYME HT Temp. 80°C
2.	Load the fabric			Load the fabric
3.	Run for	1	1	Run for
4.	Drain half bath			Drain full bath
	Fill water			Fill water
5.	H ₂ O ₂ (50%) at 80 C.	2	2	BIOSCOUR CL + H ₂ O ₂ (50%) at 80 C.
6.	Drain			Drain
7.	Fill water			Fill water
8.	Hot wash	1	1	Hot wash
9.	Drain			Drain
10.	Fill water			Fill water
11.	Rinse Clear & Neutralize	1	1	Rinse Clear & neutralize



8.2.1 Comparative Savings in Camex Process:

Both the processes are identical in consumption of water & timings. However the major difference is in their respective COD values, as depicted below-

Process stage	Bath volume (liter)	COD in ppm	
		Customer's Process	Camex Process
1st	1000	29600	21600
5th	-500 + 500	23800	9200
8th	1000	11400	4800
11th	1000	3800	600
Total	--	68600	36200

- Camex Process enables the user to cut COD values drastically.

8.3 Substrate: Cotton woven (150–250 g/m) Grey fabric Machine: JT-10

Sr. No	Customer's Process	Ends		Camex Process
1.	Fill machine with water & raise temp to boil			Fill machine with water & raise temp to boil & Add 0.75% CAMAZYME HT pH 8.5 with Caustic Soda
2.	Load fabric in hot water			Load fabric in above liquor
3.	Drain		2	Run at 90°C
4.	Fill water			Drain
5.	Add Caustic Flakes 3% & CAMAWET LFW (Wetting Agent) 0.6%, Run at 90°C	6		Fill water
6.	Drain			Add BIOSCOUR CL 2% & H ₂ O ₂ (50%) 4%
7.	Fill water		4	Run at 90°C
8.	Hot Wash	1		Drain
9.	Drain			Fill water
10.	Fill water		2	Hot Wash
11.	Cold Wash	1		Drain
12.	Drain			Fill water
13.	Fill water			Add OBA 0.1 – 0.2% & H ₂ O ₂ (50%) 2%
14.	Hypo Bleach Treatment at Room temp	4	2	Run at 90°C, pH 8
15.	Drain			Drain
16.	Fill water			Fill water
17.	Add OBA 0.1-0.2% & H ₂ O ₂ (50%)0.75%		2	Acetic Acid to get pH 6
18.	Run at 90°C	4		Drain & Unload
19.	Drain			--
20.	Fill water			--
21.	Hot wash	1		--
22.	Drain			--
23.	Fill water			--
24.	Cold wash	1		--
25.	Drain			--
26.	Fill water			--
27.	Acetic acid to get pH 6	1		--
28.	Drain			--
29.	Fill water			--
30.	Cold wash	1		--
31.	Drain & unload			--
	TOTAL ENDS	20	12	TOTAL ENDS
	TOTAL DRAINS	10	5	TOTAL DRAINS
	TOTAL WATER FILLINGS	10	5	TOTAL WATER FILLINGS



8.3.1 Comparative Savings in Camex Process:

- Water saving (5 water Fills lesser) – @ 5000 lit.
- Time saving (8 ends lesser) - @ 12 hr.
- Time saving (lesser water fills & drains) @ 2 hr.
- Power saving (running time reduced by 12 hr.)
- Indirect savings of labour
- More batches – increased productivity
- Lesser pollution load
- Total savings per month, converted in terms of money will be huge.

8.4 Substrate: Cotton woven (70 – 150 g/m) Grey fabric

Machine: Jigger

Sr. No	Customer's Process	Ends		Camex Process
1.	0.25% Desizer + OTL at 60°C	4	4	0.25% Desizer + OTL at 60°C
2.	Drain			Drain
3.	Fill water			Fill water
4.	Cold wash	2	2	Cold wash
5.	Drain			Drain
6.	Fill water			Fill water
7.	Caustic Soda 3.0%, Soda ash 1.0%, Scouring Agent – BIOSCOUR CL 0.75%, CAMAWET LFW (Wetting Agent) 0.5%, Run at boil	6	4	OTL 0.25% Hypo Bleach Run at Room Temp.
	Drain			Drain
9.	Fill water			Fill water
10.	Hot wash	2	2	Cold wash
11.	Drain			Drain
12.	Fill water			Fill water
13.	Cold wash	2	6	H ₂ O ₂ (50%) 2.0%, BIOSCOUR CL , 2.0% Wetting Agent 0.25%, Run at boil
14.	Hypo Bleach	4		Drain
15.	Drain			Fill water
16.	Fill water		2	Hot wash
17.	Cold wash	2		Drain
18.	Drain			Fill water
19.	Fill water		2	Acetic acid wash
20.	H ₂ O ₂ (50%) 1.0%, Stabilizer 0.25%, Run at boil	4		Drain
21.	Drain			--
22.	Fill water			--
23.	Cold wash	2		--
24.	Drain			--
25.	Fill water			--
26.	Acetic acid wash	2		--
27.	Drain			--
	TOTAL ENDS	30	22	TOTAL ENDS
	TOTAL DRAINS	10	7	TOTAL DRAINS
	TOTAL WATER FILLINGS	9	6	TOTAL WATER FILLINGS



8.4.1 Comparative Savings through Camex Products & Process:

- **Water saving** (3 water Fills lesser) – @ 600 lit.
- **Time saving** (8 ends lesser) - @ 2.5 hr.
- **Time saving** (lesser water fills & drains) @ 1hr.
- **Power saving** (running time reduced) by @ 2hr.
- **Indirect savings of labour**
- **More batches – increased productivity**
- **Lesser pollution load**
- **Total savings per month, converted in terms of money will turn out to be substantial.**

SPECIAL REMARKS

Storage Stability : Minimum 6 months under standard conditions of storage
Container : 25 kg bags

SAFETY & HANDLING: The product is developed for textile processes & should not be used in any other industry. Inhalation of the product – dust should be avoided. In case of contact with the eyes, promptly rinse with plenty of water. Industrial gloves, goggles & other protective equipments are advised to be used while handling the product. In general, the product does not pose any grave pollution hazard in handling.

Disclaimer: All recommendations for the use of our products, whether given by us in writing, orally or to be implied from the results of trials, are based on our present state of knowledge & experience. Owing to the variation in local application conditions, they can not be claimed to be complete. Hence, we can not accept any responsibility thereof. All claims, liabilities – also with a view to claim of third parties – are excluded. It is advised to conduct lab & bulk trials before using in bulk production.
