

BEZAKTIV FX

ILLUSTRATIONS OF DISCHARGEABILITY
TO THE organIQ BLEACH SYSTEM

1. Introduction

BEZAKTIV FX dyes are selected reactive dyes for RFD (ready for dyeing) garments made of cellulose, cellulose regenerated fibers and their blends. Most of the BEZAKTIV FX elements can be used for subsequent fashionable bleach treatments.

Local bleach treatments with spray gun or paintbrush and/or superficial all-over bleach treatments using random- (blanket-, stracci-), acid- (moon-, marble-, snow-) and fog-technique lead to authentic used and old looks of the garments. The organIQ BLEACH System can be used for all these techniques but shows especially in the fog application unique possibilities. This brochure shows the sensitivity of each BEZAKTIV FX dye to several concentrations of organIQ BLEACH T and its additives.

The illustrated bleaching tests were made by applying the bleach solution superficially with a inox spray gun. For the illustrations 4, 5 and 6 the bleach solution was sprayed in a garment-finishing typical way, using 2 moves. The nozzle of the spray gun was therefore opened only slightly and the airflow greatly reduced.

Important

Please note that most aerosols are considered hazardous to health when inhaled. Contact with eyes, mucous membranes and the skin must be avoided. We strongly advise you to use optimal personal protective equipment (protective mask, suit and gloves) to safeguard workers. A professional spray booth with strong air exhaustion is a basic requirement. Please observe the regulations of your country for spraying aerosols.

If random-bleach, acid-wash or fog-bleach are used, the discolouring effect is usually stronger due to repeated application at the exposed fabric surface. To simulate this kind of bleaching method, we show in illustration 1, 2 and 3 the result of a repeated spraying. The test as shown in illustration 4, 5 and 6 was repeated 5 times. Inbetween each step the sprayed sample was left 15 min. to react and dry.

Strong bleaching solutions combined with high quantities of acid may attack besides dyes as well cellulose. Therefore we recommend to always carry out preliminary tests.

2. The organIQ BLEACH system

The organIQ BLEACH system is the first purely organic and completely degradable bleaching agent for denim and BEZAKTIV FX dyed fabrics. It is free of heavy metals, completely biodegradable and does not contain any persistent components. There is no danger for the environment and no pollution of the waste water with toxic substances. It complies with restricted chemical lists such as bluesign® and GOTS, and therefore meets as well legal regulations.

In case of CO/EL blends, the total applied quantity of organIQ BLEACH liquor should be sprayed in 2 – 3 intervals. This helps to keep the bleach solution more on the surface (far from the elastane in the centre) and reduces but does not exclude the risk of damage of the elastane fibre. Preliminary tests are therefore unavoidable. Please also note the further information given in the respective technical data sheets and flyer of organIQ BLEACH T and organIQ BUFFER AO. Fog-bleach and random-bleach show little risk in destroying the elastane fibre since the solution is absorbed constantly during the treatment at the fabric surface. organIQ ASSIST helps to colour the spray liquor in an intense yellow to have an optical control while doing local bleach effects. Depending of the shade of the dyed garments, it can be useful to add organIQ ASSIST to the bleaching liquor. Please observe the TDS of the organIQ BLEACH System.

		Illustration 1	Illustration 2	Illustration 3	Illustration 4	Illustration 5	Illustration 6
organIQ BLEACH T	g/l	270	150	40	270	150	40
organIQ BUFFER AO	g/l	112	62	16	112	62	16
Repeated application		5 times	5 times	5 times	-	-	-

organIQ is activated within 20 – 30 min at 40 °C in a tumbler or oven. Depending on climatic conditions the regular room temperature is often already sufficient. A cold rinsing bath is needed to remove the residuals of organIQ after the reaction. To completely remove the destroyed dyestuffs and potentially released heavy metal ions of BEZAKTIV FX dyes with a metal-complex structure, it is important to carry out 1 – 2 purification bathes with a strong sequestering agent:

2.0 g/l DENIMCOL DIS-NWS or DENIMCOL DIS-SF4
15 min at 50 – 75 °C
Enclosed rinsing cold



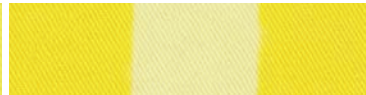
BEZAKTIV Yellow FX-7G 0.83 % [1/6 SD)

BEZAKTIV Yellow FX-7G 5.00 % [1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



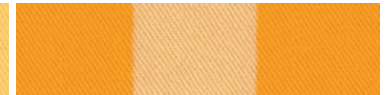
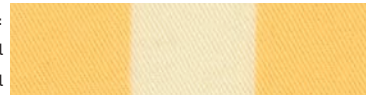
BEZAKTIV Yellow FX-RR 0.50 % [1/6 SD)

BEZAKTIV Yellow FX-RR 3.00 % [1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



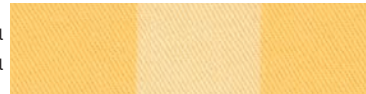
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



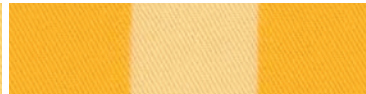
BEZAKTIV Yellow FX-NF 0.33 % [1/6 SD)

BEZAKTIV Yellow FX-NF 2.00 % [1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



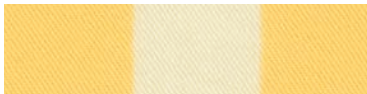
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



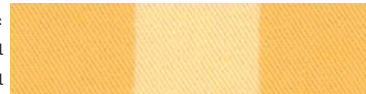
BEZAKTIV Yellow FX-DL 0.40 % [1/6 SD)

BEZAKTIV Yellow FX-DL 2.40 % [1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l

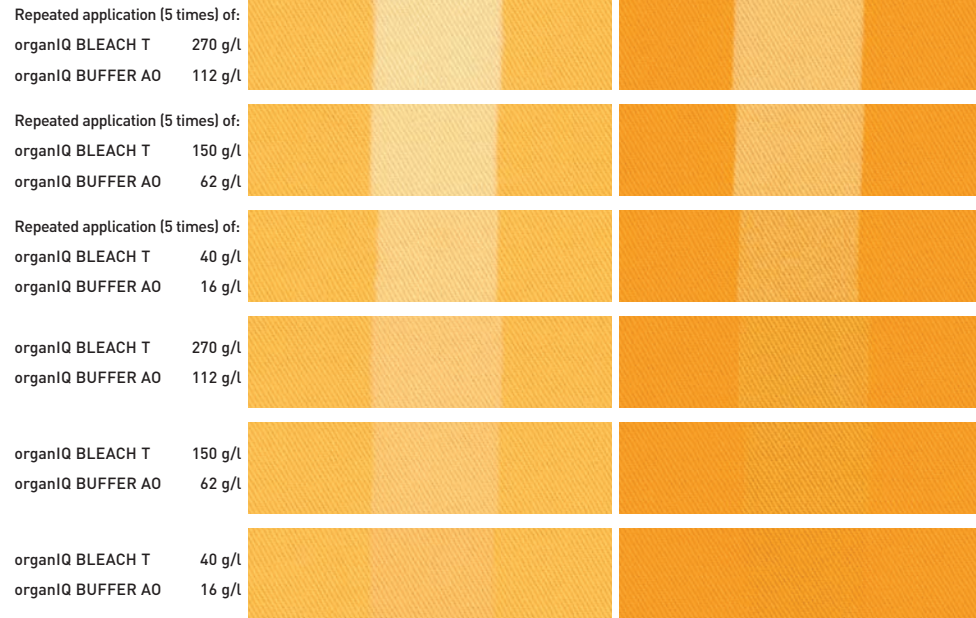


organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



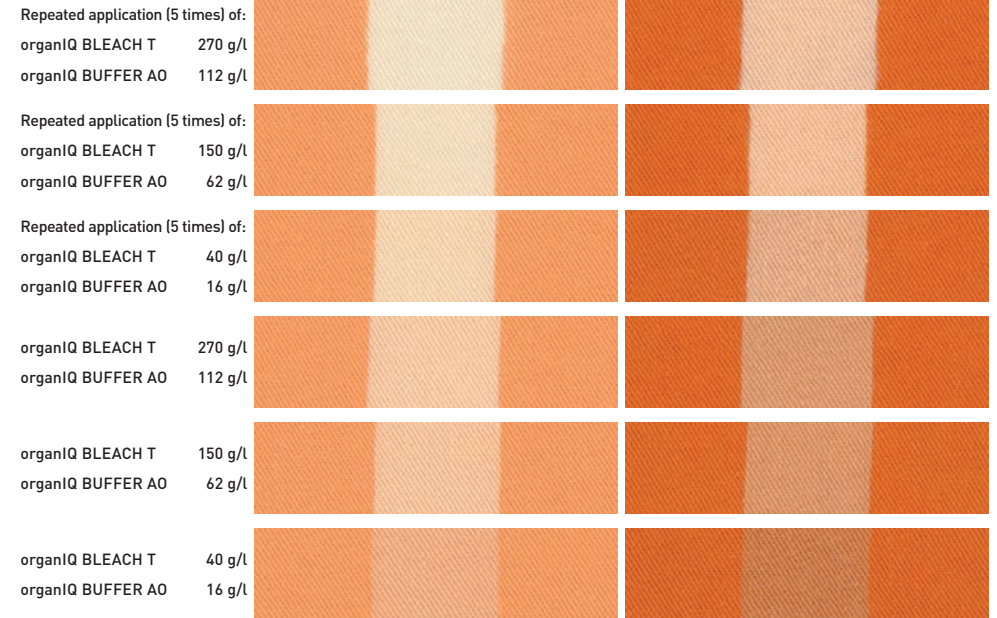
BEZAKTIV Yellow FX-CO 0.42 % (1/6 SD)

BEZAKTIV Yellow FX-CO 2.50 % (1/1 SD)



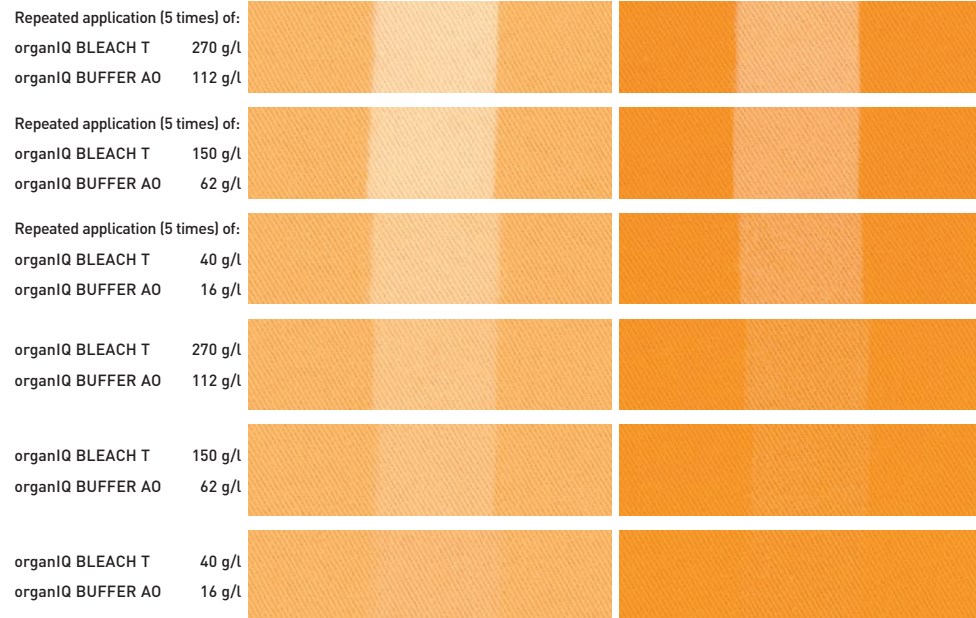
BEZAKTIV Orange FX-TH 0.33 % (1/6 SD)

BEZAKTIV Orange FX-TH 2.00 % (1/1 SD)



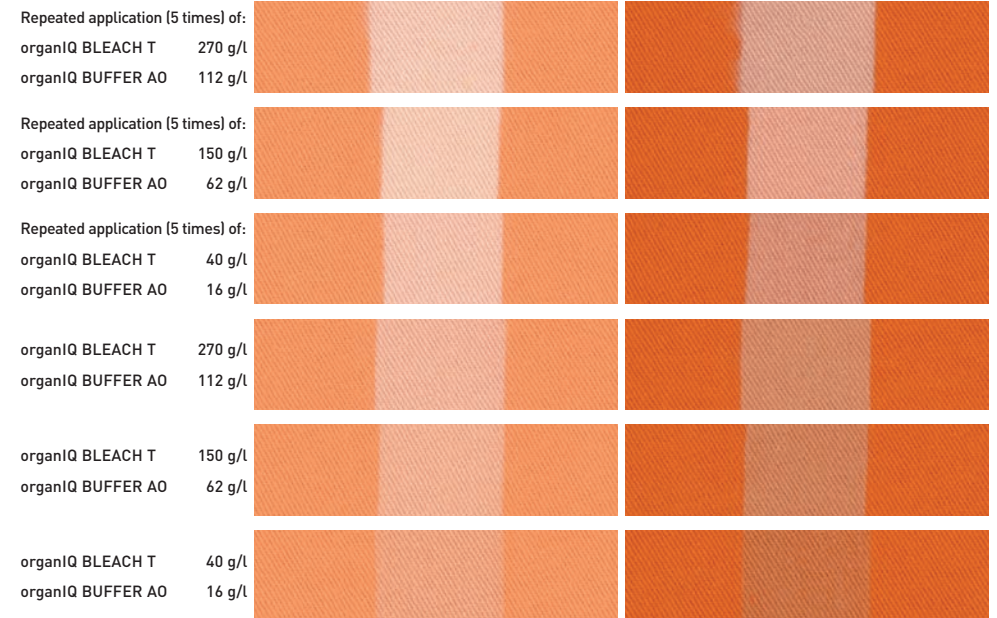
BEZAKTIV Yellow FX-MX 0.33 % (1/6 SD)

BEZAKTIV Yellow FX-MX 2.00 % (1/1 SD)



BEZAKTIV Orange FX-RS 0.20 % (1/6 SD)

BEZAKTIV Orange FX-RS 1.20 % (1/1 SD)



BEZAKTIV Scarlet FX-SB 0.58 % (1/6 SD)

BEZAKTIV Scarlet FX-SB 3.50 % (1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



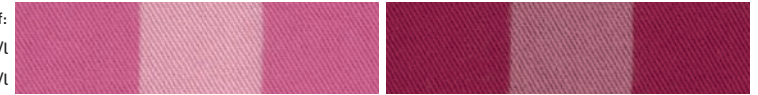
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



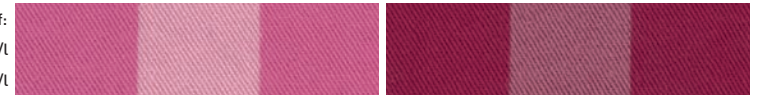
BEZAKTIV Red FX-DC 0.15 % (1/6 SD)

BEZAKTIV Red FX-DC 0.90 % (1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



BEZAKTIV Scarlet FX-2D 0.30 % (1/6 SD)

BEZAKTIV Scarlet FX-2D 1.80 % (1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



BEZAKTIV Red FX-PL 0.98 % (1/6 SD)

BEZAKTIV Red FX-PL 3.90 % (1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l

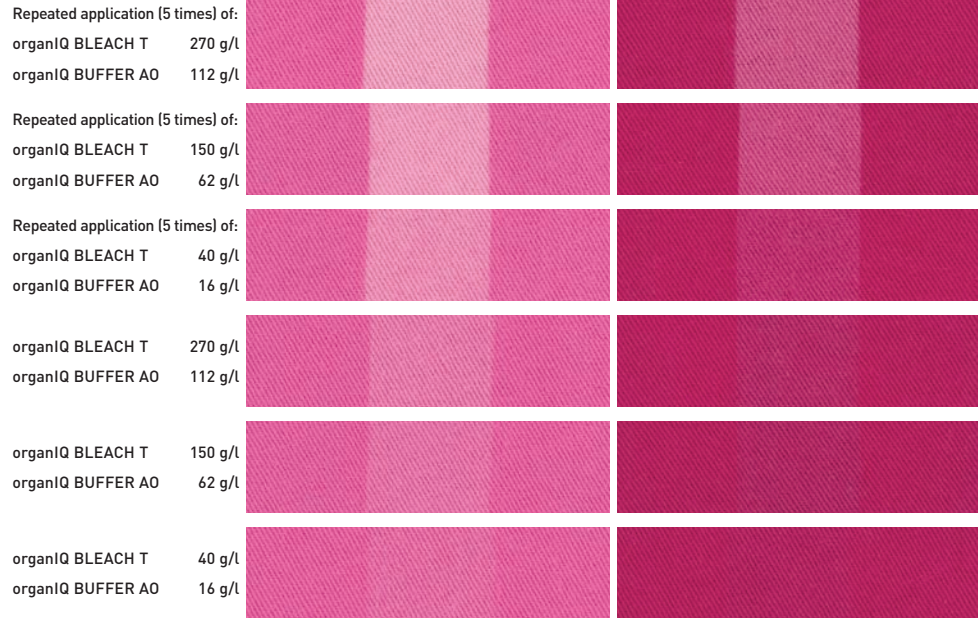


organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



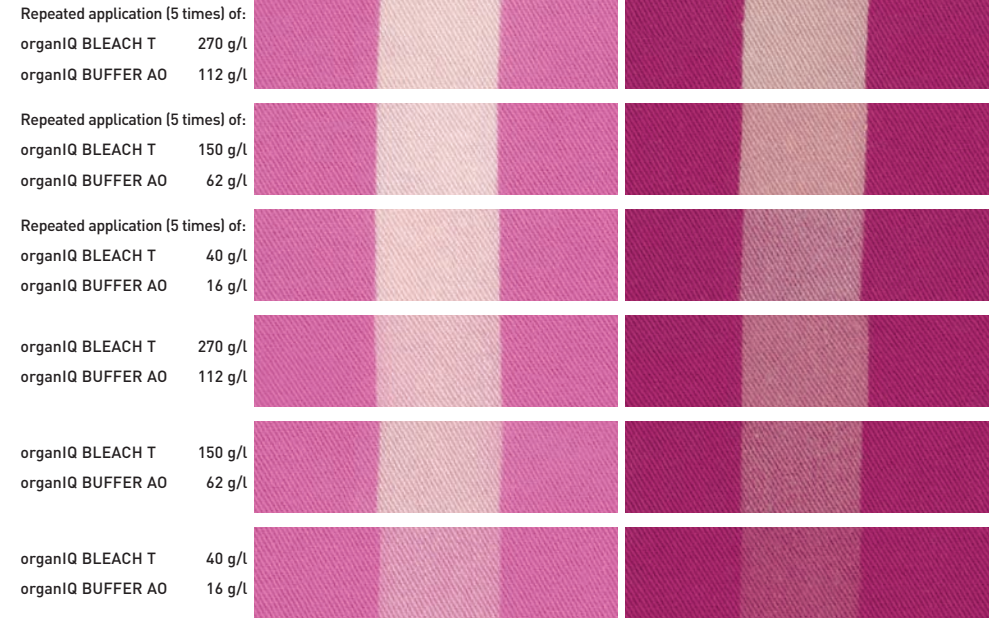
BEZAKTIV Red FX-B 0.40 % (1/6 SD)

BEZAKTIV Red FX-B 2.40 % (1/1 SD)



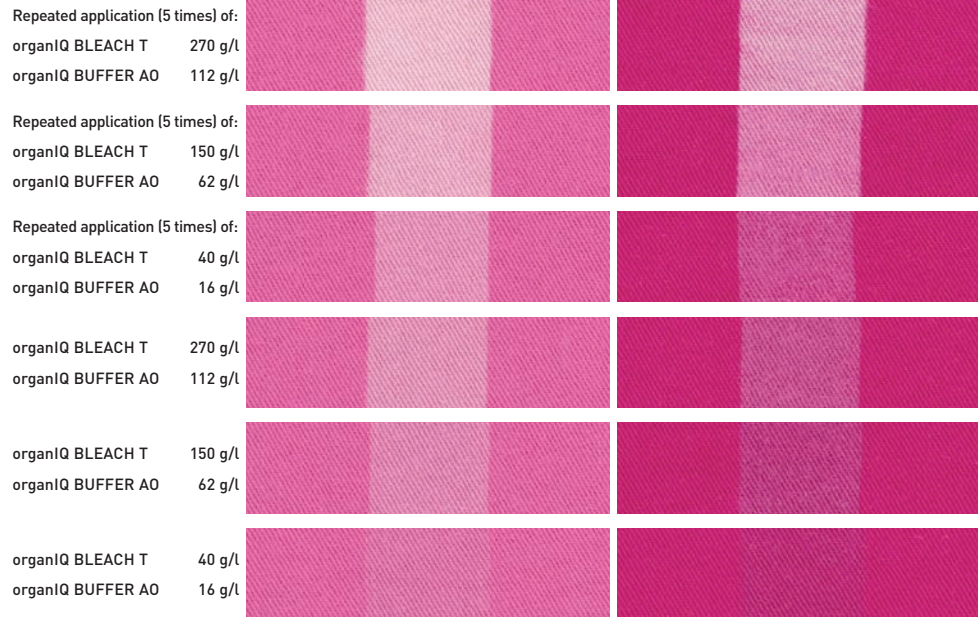
BEZAKTIV Red FX-3D 0.75 % (1/6 SD)

BEZAKTIV Red FX-3D 4.50 % (1/1 SD)



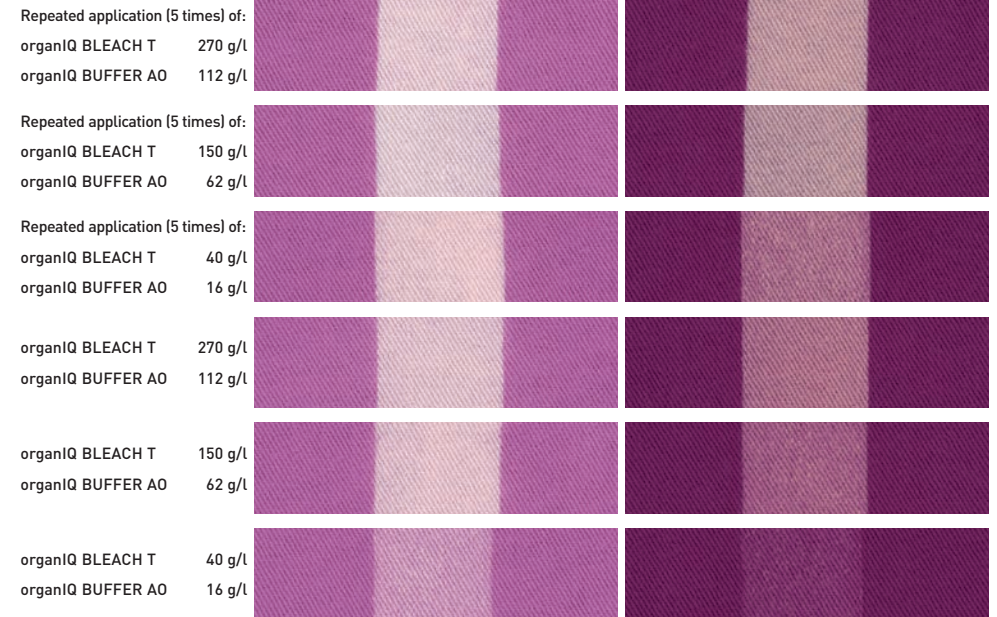
BEZAKTIV Red FX-3B 0.47 % (1/6 SD)

BEZAKTIV Red FX-3B 2.80 % (1/1 SD)



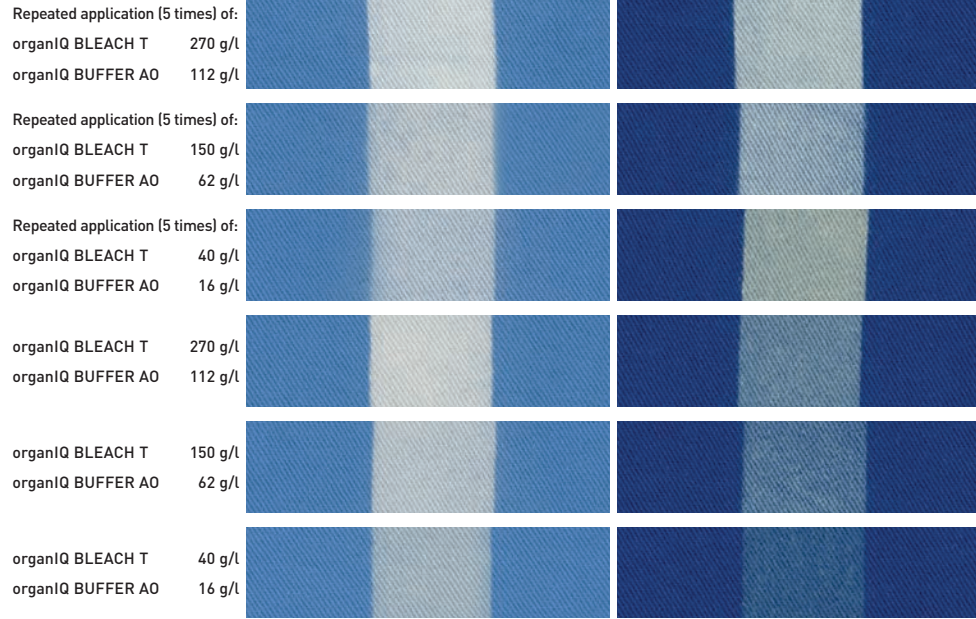
BEZAKTIV Bordeaux FX-2B 0.58 % (1/6 SD)

BEZAKTIV Bordeaux FX-2B 3.50 % (1/1 SD)



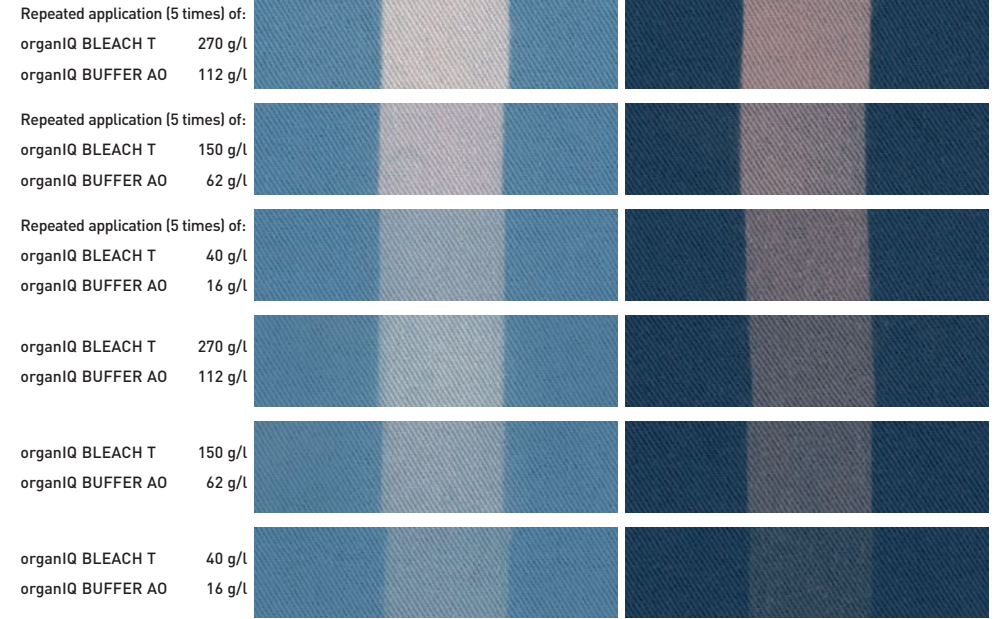
BEZAKTIV Blue FX-RD 0.57 % (1/6 SD)

BEZAKTIV Blue FX-RD 3.40 % (1/1 SD)



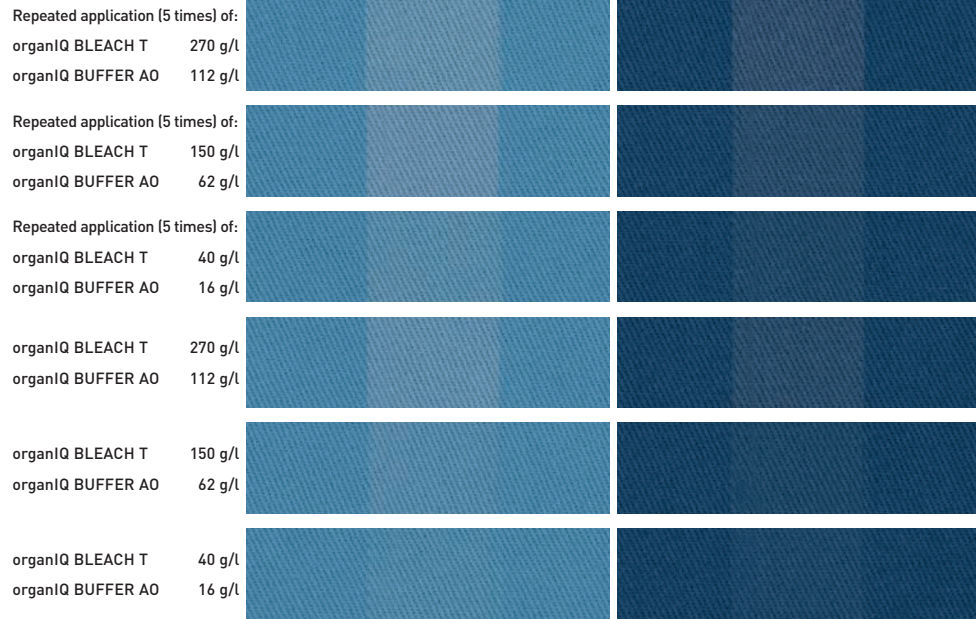
BEZAKTIV Blue FX-NN 01 0.33 % (1/6 SD)

BEZAKTIV Blue FX-NN 01 2.00 % (1/1 SD)



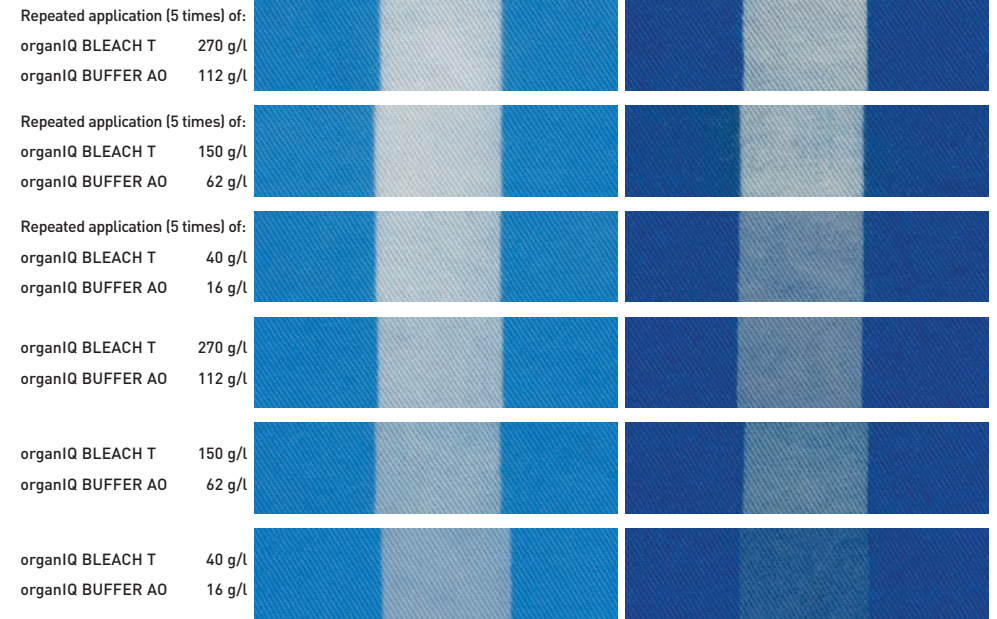
BEZAKTIV Blue FX-ON 0.52 % (1/6 SD)

BEZAKTIV Blue FX-ON 3.10 % (1/1 SD)



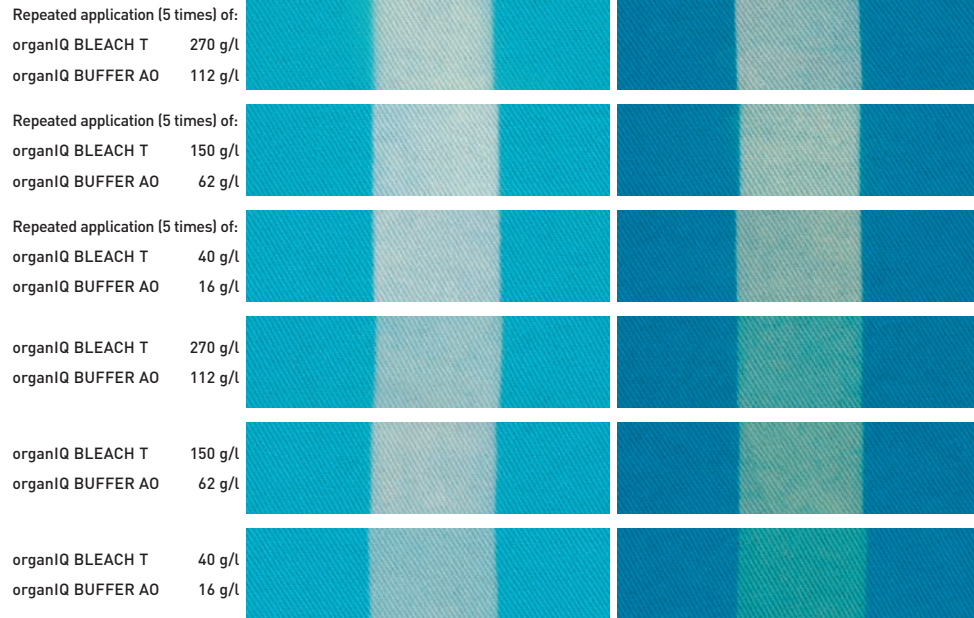
BEZAKTIV Blue FX-GG 0.83 % (1/6 SD)

BEZAKTIV Blue FX-GG 5.00 % (1/1 SD)



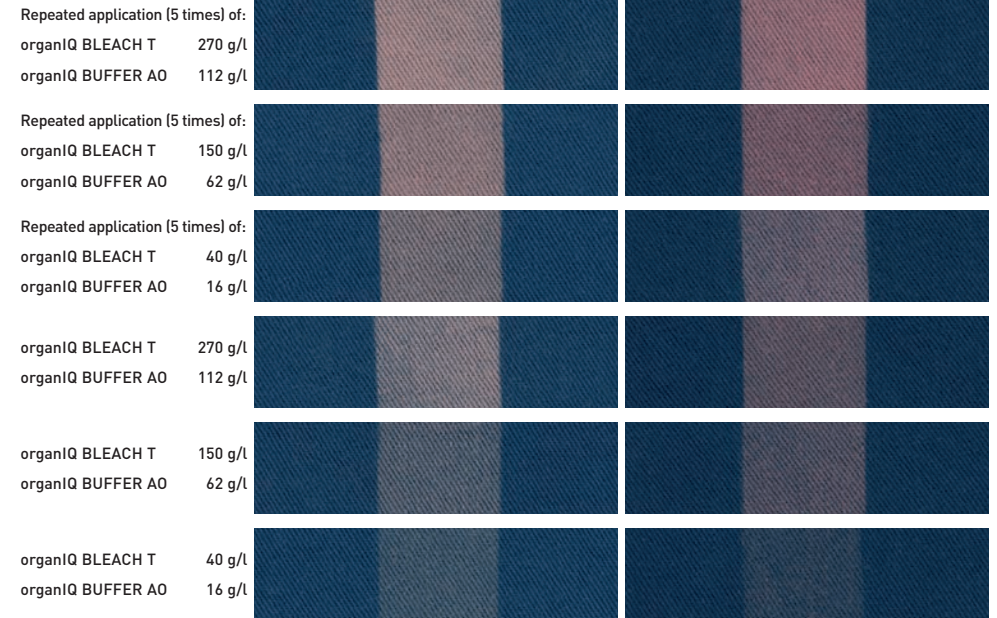
BEZAKTIV Turquoise FX-2G 0.83 % (1/6 SD)

BEZAKTIV Turquoise FX-2G 5.00 % (1/1 SD)



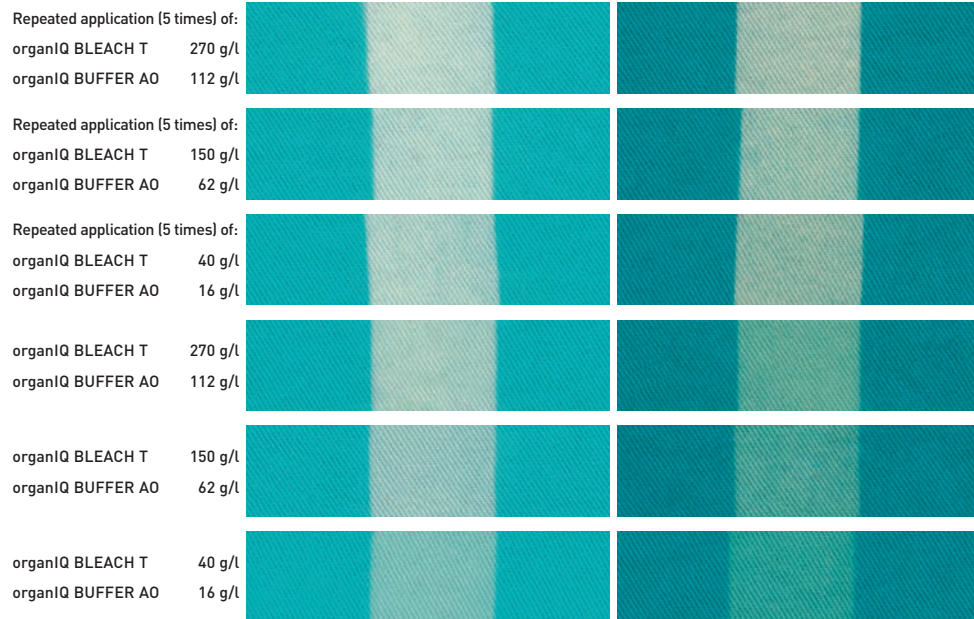
BEZAKTIV Dark Blue FX-5L 2.70 % (1/1 SD)

BEZAKTIV Dark Blue FX-5L 5.40 % (2/1 SD)



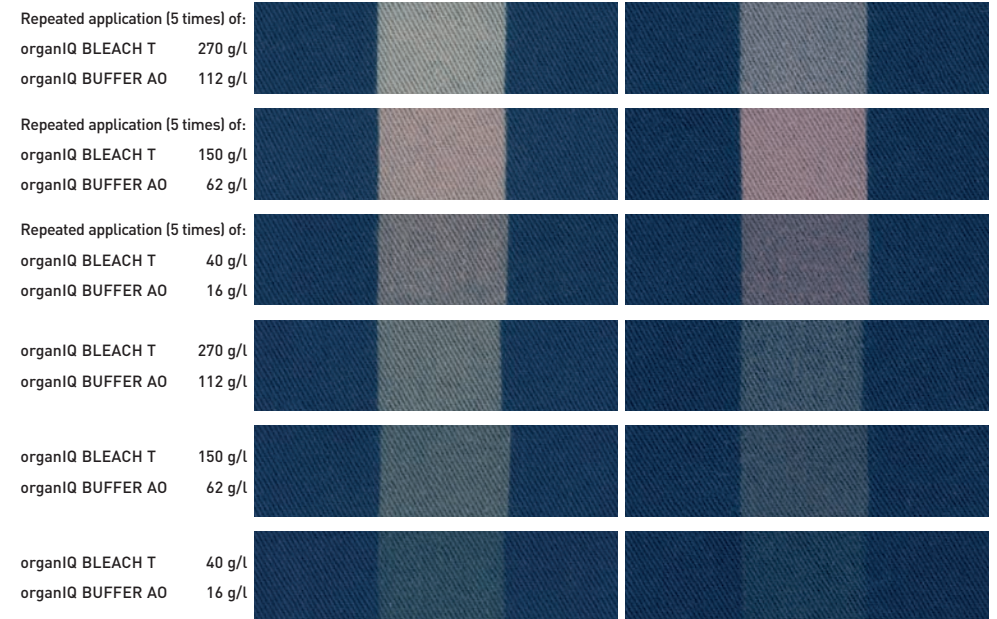
BEZAKTIV Green FX-4B 0.83 % (1/6 SD)

BEZAKTIV Green FX-4B 5.00 % (1/1 SD)



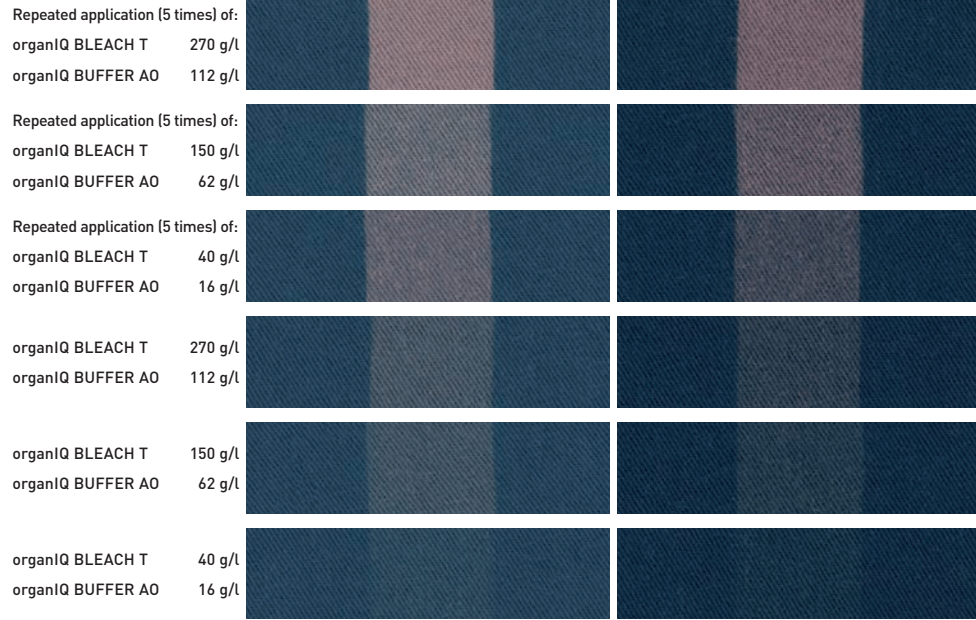
BEZAKTIV Dark Blue FX-WF 2.20 % (1/1 SD)

BEZAKTIV Dark Blue FX-WF 4.40 % (2/1 SD)



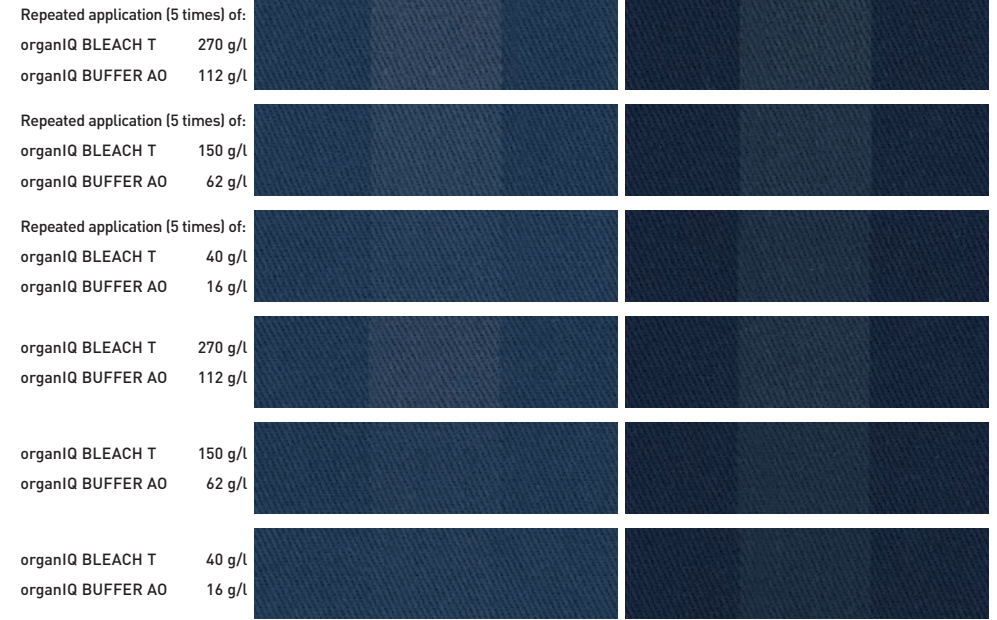
BEZAKTIV Navy FX-DN 1.50 % (1/1 SD)

BEZAKTIV Navy FX-DN 3.00 % (2/1 SD)



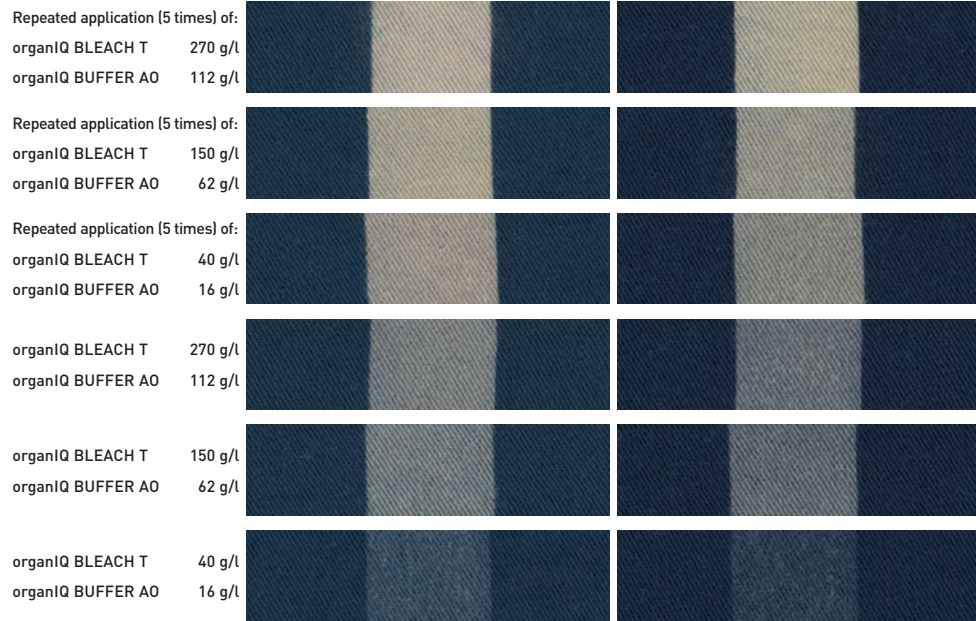
BEZAKTIV Navy FX-PS 1.50 % (1/1 SD)

BEZAKTIV Navy FX-PS 3.00 % (2/1 SD)



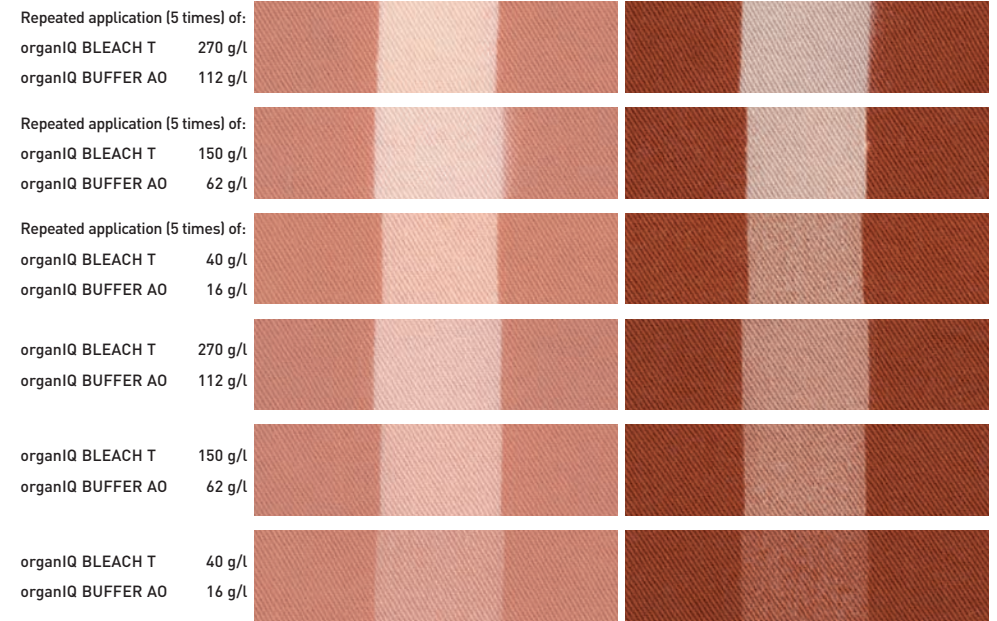
BEZAKTIV Navy FX-BR 3.70 % (1/1 SD)

BEZAKTIV Navy FX-BR 7.40 % (2/1 SD)



BEZAKTIV Brown FX-R 0.53 % (1/6 SD)

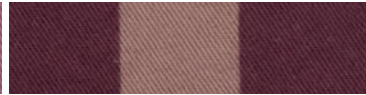
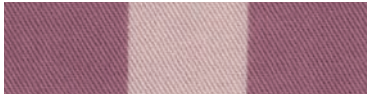
BEZAKTIV Brown FX-R 3.20 % (1/1 SD)



BEZAKTIV Brown FX-4R 0.57 % (1/6 SD)

BEZAKTIV Brown FX-4R 3.40 % (1/1 SD)

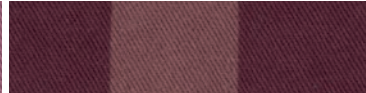
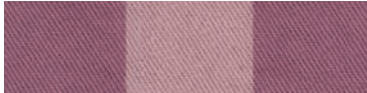
Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



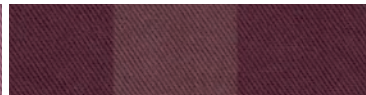
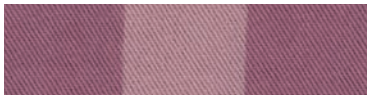
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



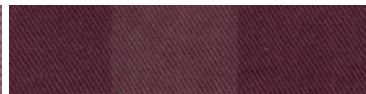
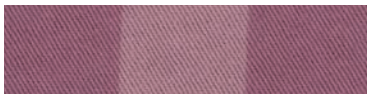
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



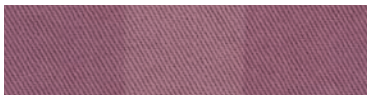
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



BEZAKTIV Black FX-5F 1.90 % (1/1 SD)

BEZAKTIV Black FX-5F 5.70 % (3/1 SD)

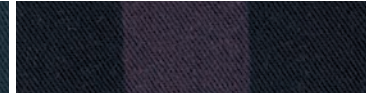
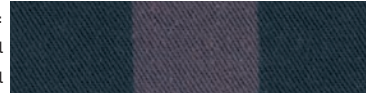
Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



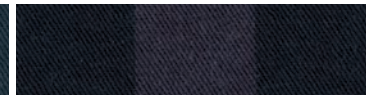
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



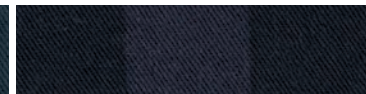
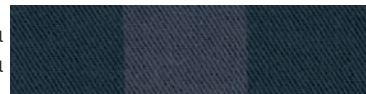
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



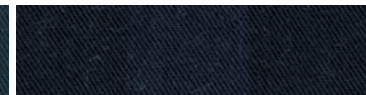
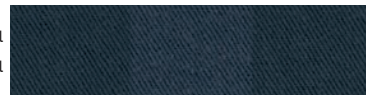
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



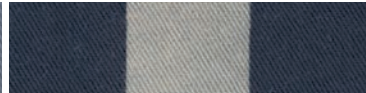
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



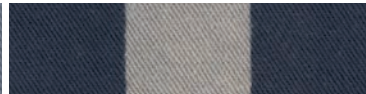
BEZAKTIV Grey FX-N 150 0.60 % (1/6 SD)

BEZAKTIV Grey FX-N 150 3.60 % (1/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



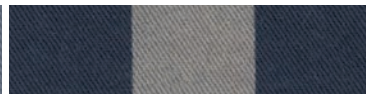
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



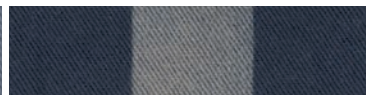
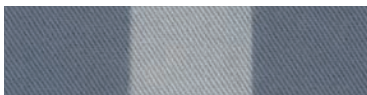
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



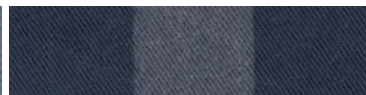
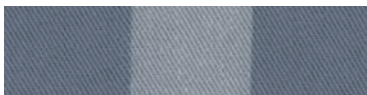
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



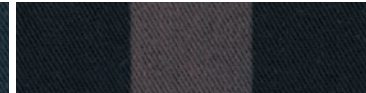
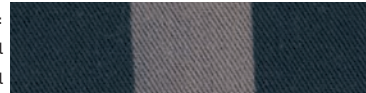
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



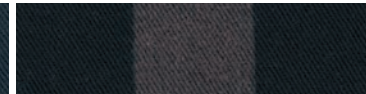
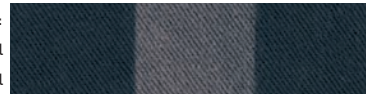
BEZAKTIV Black FX-SM 2.40 % (1/1 SD)

BEZAKTIV Black FX-SM 7.20 % (3/1 SD)

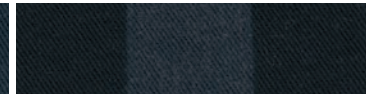
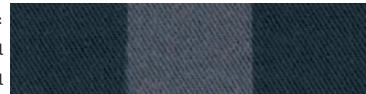
Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



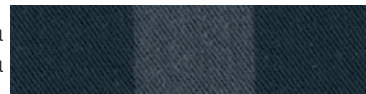
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



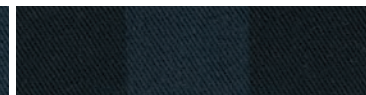
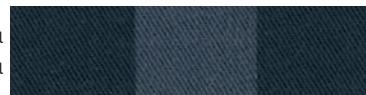
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



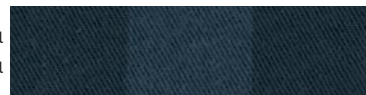
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



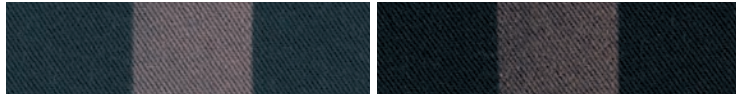
BEZAKTIV Black FX-ND 1.70 % (1/1 SD)

BEZAKTIV Black FX-ND 5.10 % (3/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



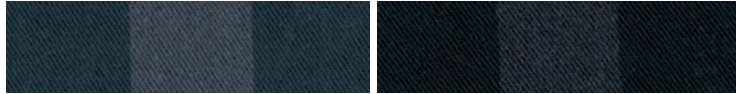
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



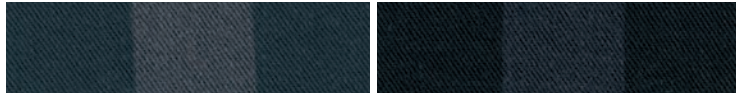
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



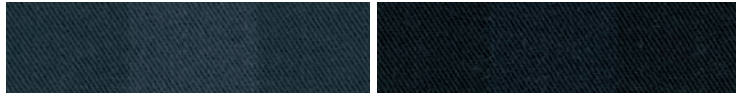
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



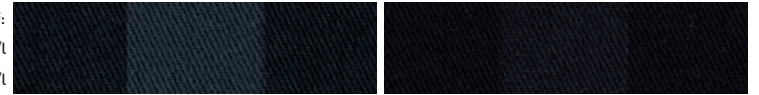
BEZAKTIV Black FX-IT 1.80 % (1/1 SD)

BEZAKTIV Black FX-IT 5.40 % (3/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



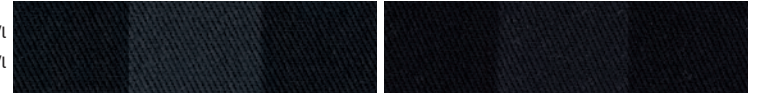
Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



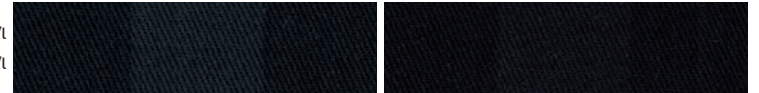
Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



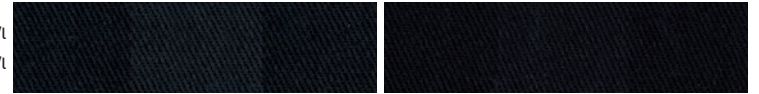
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



BEZAKTIV Black FX-UB 1.70 % (1/1 SD)

BEZAKTIV Black FX-UB 5.10 % (3/1 SD)

Repeated application (5 times) of:
organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



Repeated application (5 times) of:
organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



Repeated application (5 times) of:
organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l



organIQ BLEACH T 270 g/l
organIQ BUFFER A0 112 g/l



organIQ BLEACH T 150 g/l
organIQ BUFFER A0 62 g/l



organIQ BLEACH T 40 g/l
organIQ BUFFER A0 16 g/l





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