

**FOLLOW US ON THE WAY FROM IDEAS TO PRODUCTS**

**inoTEX<sup>®</sup>**

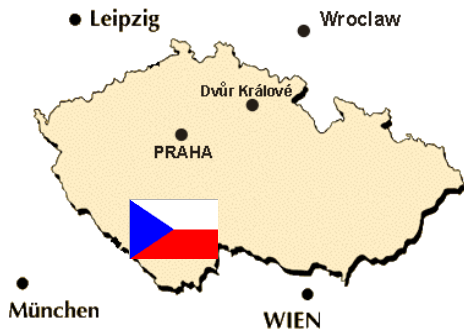
**YOUR PARTNER IN WET PROCESSING**

**Well experienced technology innovator and scale-up partner  
in EU R&D&I projects with daily contact to industry**

**Fast industrialization supported by own small lot productions  
(speciality chemicals, finishing/dyeing/coating)**

**Full colouristic service, colourmatching, distribution of dyes**





## COMPANY PROFILE

**inoTEX**<sup>®</sup>  
INNOVATION FROM THE SOURCE

**73 years experience in innovation  
for textile wet processing**  
**R&D – Technology Transfer –  
Special small-lot productions – Services**

### Key strategy:

**Implementation of tailored R&D into the  
practice by use of own speciality TAA production:**

- **textile chemistry and biotechnology, colouristic**
- **textile testing and analytical lab (EN ISO 17025)**
- **via cleaner production towards sustainability of resources**
- **eco-services and consultancy**

**WE OPERATE IN THE HEART OF EUROPE**



# TECHNOLOGY SUPPORT BY TAA

## ECO-DYEING BY CATIONIZATION

PREACTIVATION BEFORE DYEING

CATIONIZED SUBSTRATE (Co, Regenerated cellulose, Linen, Wo)

SIGNIFICANT INCREASE OF AFFINITY TO THE ANIONIC DYES

- HIGH YIELD OF DYES
- LESS SALT (SALT FREE)
- SHORTENING OF WASH-OFF PROCESS
- SPECIAL COLOURISTIC EFFECTS (DIFFERENTIAL DYEING)
- SPECIAL TREATMENT OF GARMENTS (WASH-OUT/VINTAGE ...)

REDUCTION OF COSTS-WATER-DYE CONSUMPTION

**TEXAMIN ECE New**

# ECO AND EFFICIENT / EFFECTIVE DYEING PROCESSES

## Improved conventional processes

Optimized dyeing process with reactive dyestuffs by use of **TEXALKON MS** + electrolyte / alkali calculation

Optimized aftertreatment of reactive dyeing by „bio-soaping“ – black shades – **TEXAPAL PR, TEXAZYM RBO**

**TEXAMIN ECE New** technology reduces colour of wastewater significantly

Reactive dyes – Bath utilization



Initial condition

Non modified

Cationized substrate

## Pre-modification of cellulose – anionic dye yield enhancement

### cationization of cellulosics – **TEXAMIN ECE New**

bath procedure – jigger

PAD-BATCH - foulard

PAD-DRY – foulard, hot flue

### dyeing step

exhaust bath procedure – jigger, drum device

PAD-BATCH - foulard

PAD-STEAM – foulard, steamer

PAD-DRY – foulard, hot flue

# CATIONIZATION – SPECIAL EFFECTS

**Diferencial dyeing –  
cotton, linen, viscose**

**Partially cationized woven  
structures cationized warp x  
weft non cationized**

Effect based on different  
dyeability by Re, metal complex  
dyes:  
- tone in tone  
- white x coloured

**Cationization by printing**

Effect:  
- tone in tone  
- white x coloured

**„wash-out“ effects**

**Padding process**

PAD DRY, PAD BATCH cationiz.  
garment production – washing  
out

**Exhaust process**

garment cationization  
drum dyeing device – dyeing  
pigment – washing out



# TECHNOLOGY SUPPORT BY TAA

DYEING – PRE-CATIONIZATION for cellulosics (mainly cotton)

Feasible application procedures	
<b>TEXAMIN ECE New</b>	
<b>BATH PROCESSING</b>	<b>very suitable</b>
<b>PAD BATCH</b>	<b>suitable</b>
<b>PAD DRY THERMOFIX</b>	<b>suitable</b>
<b>PAD DRY STEAM</b>	<b>suitable</b>
<b>PAD STEAM</b>	<b>limited suitability</b>

### Test of cationization efficiency

material sample after cationization



5% Reactive Blue C.I. 49

pH 6-7 liquor ratio 1:20

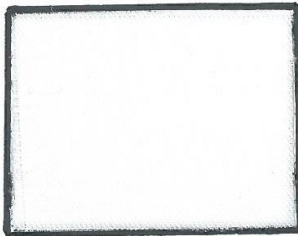
60°C

20 min.

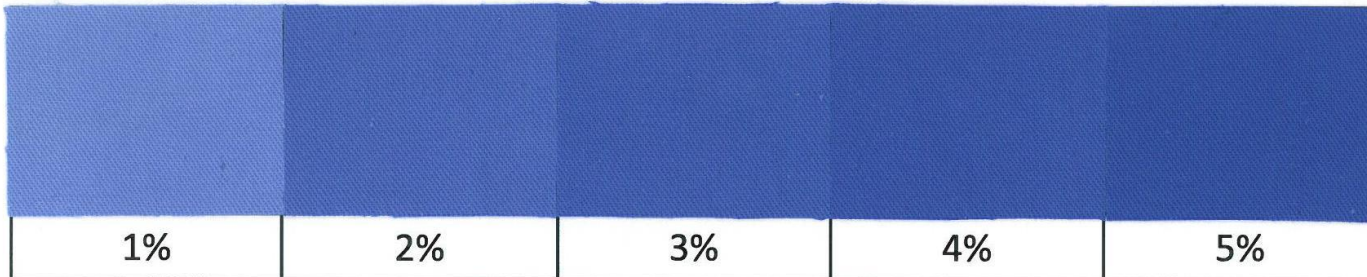
10 min.

20°C

overflow washing, cold water 5 min., drying



non-cationized sample

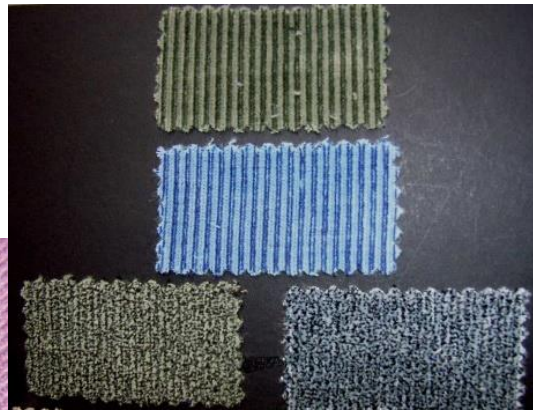
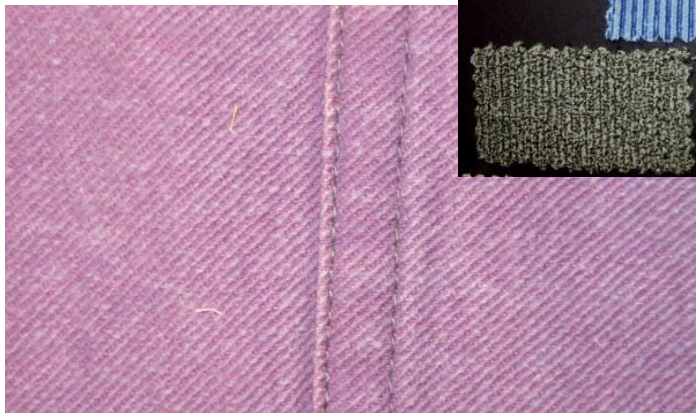


**TEXAMIN ECE New**

# EXAMPLES OF TEXAMIN ECE new APPLICATION

## Garment Industry

- conventional dyeing machinery or the modern tumbler Spray machinery (like Tonello) by **reduced consumption of Water**
- „Stone wash“ by enzyme  
„Old fashioned“  
„Vagabond“ look





# APPLICATION EXAMPLES OF TEXAMIN ECE new

## Differential dyeing

- Pre-cationization of yarns and then twisting with untreated one
- Final dyeing in order to reach Differential dyeing
- Stock of colours can be reduced



# APPLICATION EXAMPLES OF TEXAMIN ECE-IN New

## Pre-cationization by printing

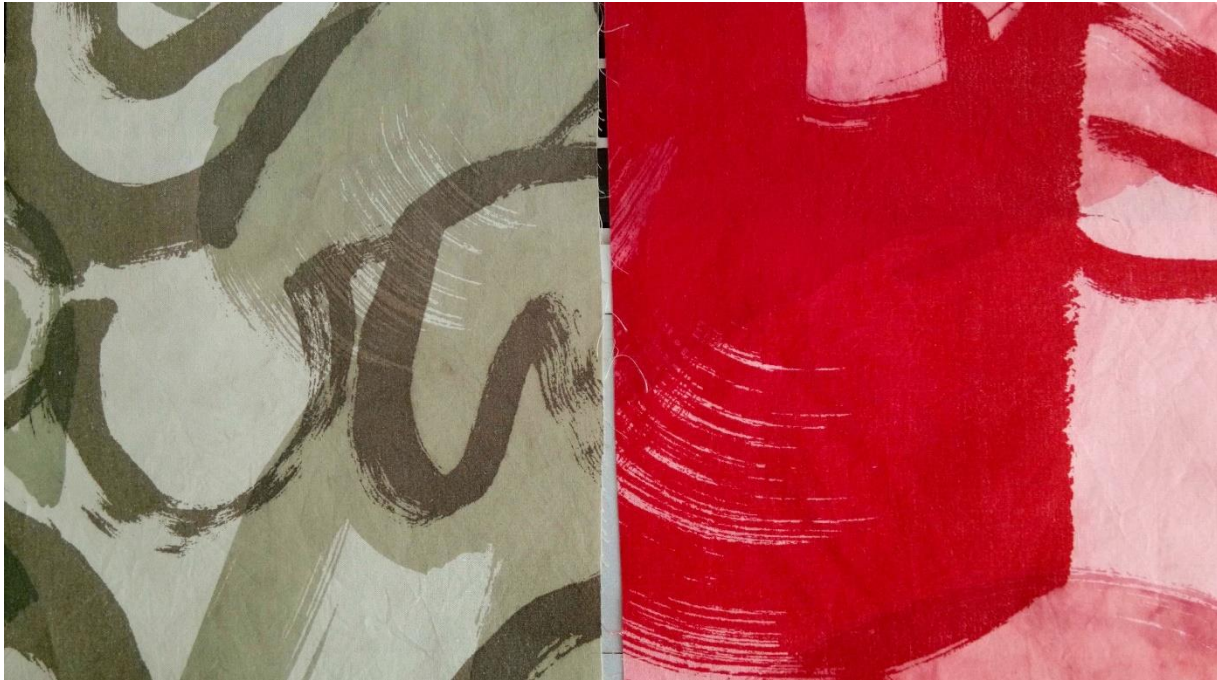
- Starts by padding of fabric by alkali and dry. **Pre-printing of Texamin ECE-IN New** paste (special Nio thickener for viscosity adjustment), design fixed by hot air or steam. Proper wash-out of thickener followed by Reactive dyeing. „Tone in tone“ motives occur.



# APPLICATION EXAMPLES OF TEXAMIN ECE-IN New

## Texamin ECE-IN New by printing

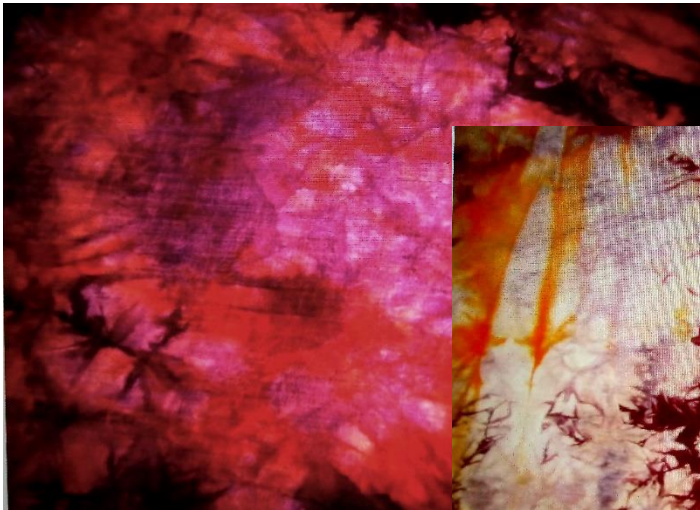
Printing in different concentration on cellulosics,  
then dyein with Metalcomplex dyestuffs



# APPLICATION EXAMPLES OF TEXAMIN ECE-IN New

## Batik-art imitation

- Cationized Goods in bags, bound in different points, short contact with medium-hot dyeing liquor, rinsing, re-bound and re-dyed in different new liquor, 2-3-4 times.



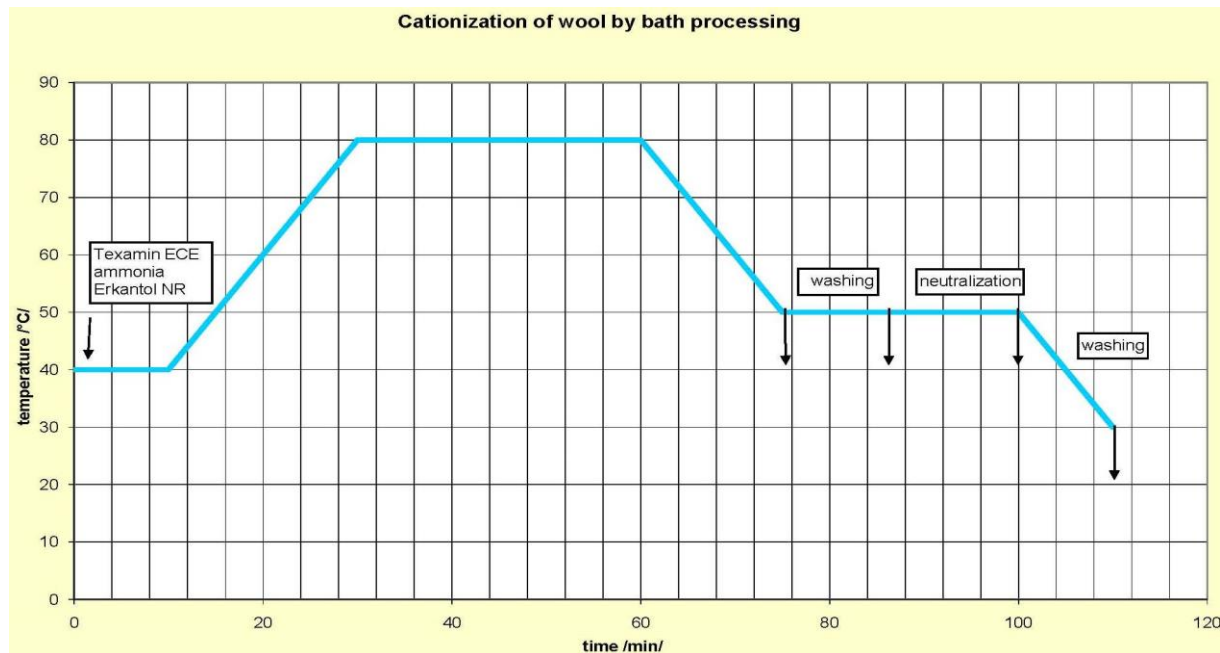
# LIMITATION OF TEXAMIN ECE-IN New APPLICATION

- The goods to be pre-cationized must be perfectly prepared, cleaned, no anionic residuals (soap, sizing agent, anionic spinn preparation), no residual hydrogen peroxyde
- By the application has to be avoided the addition of any anionic chemical (wetting agent for example)
- No way to influence the synthetic fibers with TEXAMIN ECE-IN New

# CATIONIZATION OF WOOL

## TEXAMIN ECE-IN New

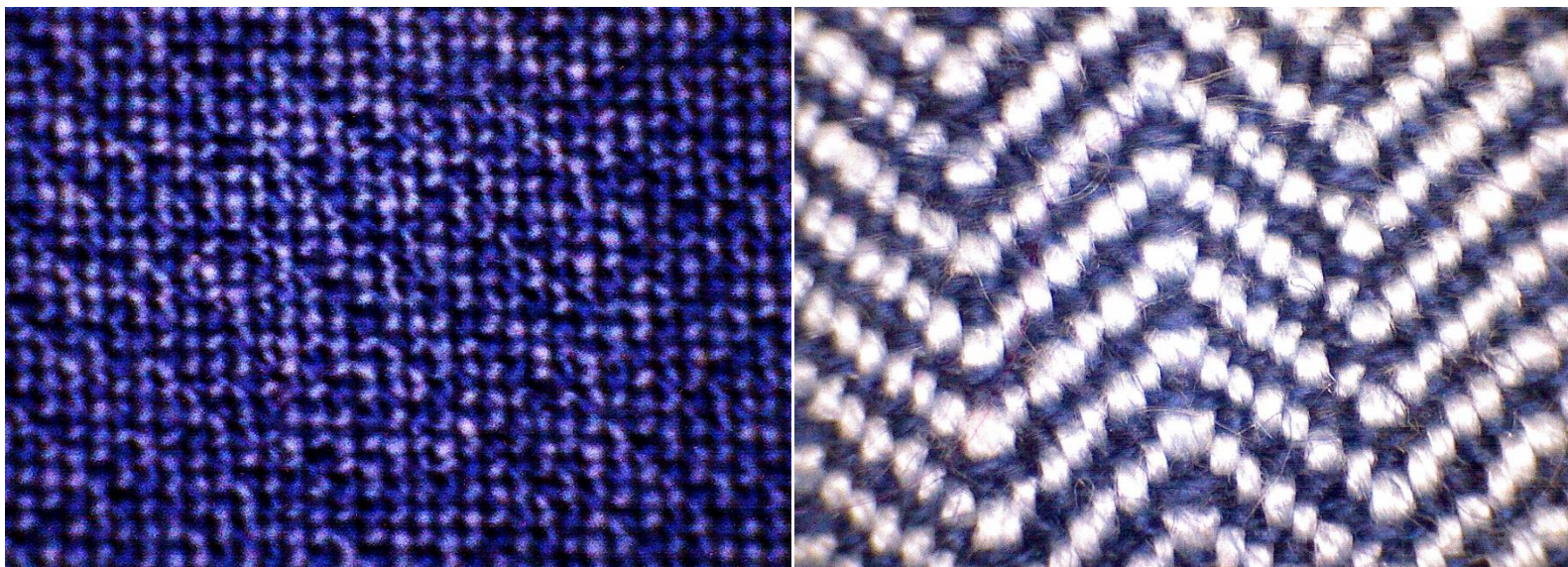
- Cationization of wool must be realised by **significantly reduced alkalinity**. The optimal effects can be achieved **by use of ammonia** - optimum temperature 80°C (Texamin ECE-IN New 3% o.w.f., Ammonia 25% 2ml/l, Nonionic wetting a. 1g/l)
- Reasonably higher affinity to the anionic dyestuffs - particularly to the **reactive dyes**. Higher affinity is accompanied by the possibility to reduce dyeing temperature of 20°C with no influence on the exhaustability and dyeing fastness properties.



# CATIONIZATION OF WOOL

## TEXAMIN ECE-IN New

- Wool **tops pre-cationization**, spinning, blending with untreated yarn, weaving, then single bath dyeing in piece
- Resulting effect (**pre-cationized weft yarn**) on the wool fabric  
– **single bath Re dyeing** (magnified 10x)



Of course the same can be done on cellulosics

# CATIONIZATION OF WOOL

## TEXAMIN ECE-IN New

- **Antifelting and dimensional stability effect** of wool cationization (effect confirmed on yarns as well as woven/knitted fabrics).

Below the combined effect demonstrated

- **higher dye affinity (reactive dyes) + antishrinking/antifelting effect** yarn cationized on the cone compared with the non cationized yarn. Both were coloured afterwards in the hank form in the same reactive dye bath.
- **No chlorine or (PU)resin used**





# TEXAMIN ECE New

**GreenScreen Certified™** - an independent, non-profit certification standard that promotes the use of inherently safer chemicals in products and manufacturing.

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**GreenScreen Certified™ Standard for Textile Chemicals Version 2.1**

**INOTEX spol s r.o.**  
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Product Certified  
TEXAMIN ECE new

20211139  
Certificate Number

April 21, 2026  
Expiration Date

GSC2021\_009  
Application Number

*Certified under Version 2.1 of GreenScreen Certified Standard for Textile Chemicals and ZDHC MRSL Version 2.0*

April 22, 2021  
Issue Date



Signature

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- Silver certification level prohibits chemicals of high concern as defined by the GreenScreen for Safer Chemicals benchmarking criteria.

# TECHNOLOGY SUPPORT BY TAA

## DYEING with Reactive dyes SAFETY (REPRODUCIBILITY) IMPROVEMENT TEXALKON MS

### 1. pH BUFFERING AGENT KEEPS DYEING BATH pH CONSTANT DURING THE FIXATION

- UNDERTAKES THE OPTIMUM DYE YIELD AND FIXATION
- SUBSTITUTES ALKALI (SODA ASH, BLEND SODA ASH/CAUSTIC SODA)

CUSTOMISED FOR: Conventional VS dyes (SUMIFIX type)  
Bifunctional dyes (SUMIFIX SUPRA type)  
Polyfunctional dyes (SUMIFIX HF type)

DOSING: Basic dose + colour shade correction

SW- calculator: optimum dose respecting the bath ratio – available for users

Opt. fixation temperatures: SUMIFIX, SUMIFIX SUPRA types 55-60°C  
SUMIFIX HF type 70-75°C

### 2. AFTERTREATMENT OF RE/VAT DYEING: 0,5 – 1,0 g/l TEXALKON MS

## VERY SUITABLE ALSO FOR PRE-CATIONIZED Co DYEING

TEXALKON MS makes the dyeing process much safer and immune against in bulk often existing risk of inaccuracy

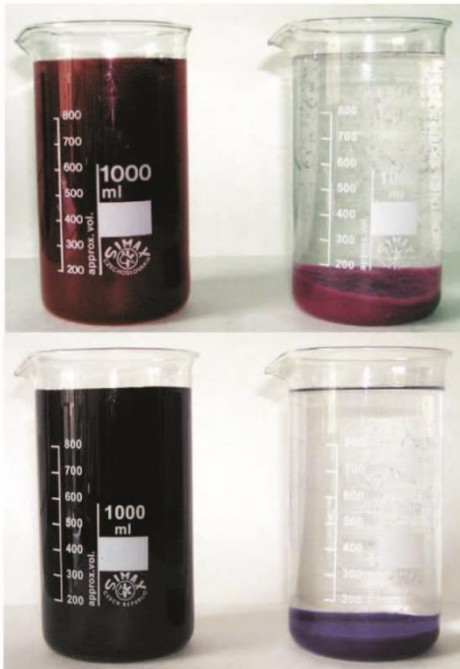
# BE ENVIRONMENT FRIENDLIER

## DYEHOUSE WASTE WATER DECOLORATION

### TEXAFLOK DCL 41

#### Simple conditions of use:

- pH above 8,5
- temperature below 40°C (possibly)
- anionic dyes presence (other classes co-precipitate)
- dosage (1+9p water) into sewer system before bio
- sludge reduction – mix with comon inorg. flocculant



**C**ationic type of organic flocculant developed specially for textile wastewater decolorization

**S**oluble dyestuffs (reactive, direct, acid,...) change to insoluble compounds

**C**oagulating reaction is speedy in alkaline conditions

#### Texaflok DCL is able to decolorize:

- slightly colored water
- residual exhausted dyeing bath

**C**oagulate is easy separable or it is possible to discharge into sewage clarification plant together with clarified water

Dosage of product and coagulate formation are both depend on wastewater color intensity



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towards the mutual business***

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