FOLLOW US ON THE WAY FROM IDEAS TO PRODUCTS

inoTEX®

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

innovation from the source ...

COMPANY PROFILE

inoTEX®

INNOVATION FROM THE SOURCE

More as 70 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

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

inoTEX®

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

inoTEX®

TECHNOLOGY SUPPORT BY TAA

DYEING – PRE-CATIONIZATION for cellulosics (mainly cotton)

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

inoTEX®

inoTEX®

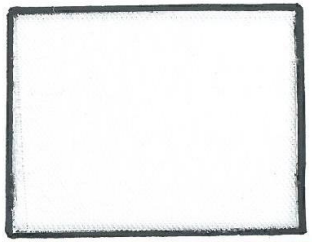
Test of cationization efficiency

material sample after cationization

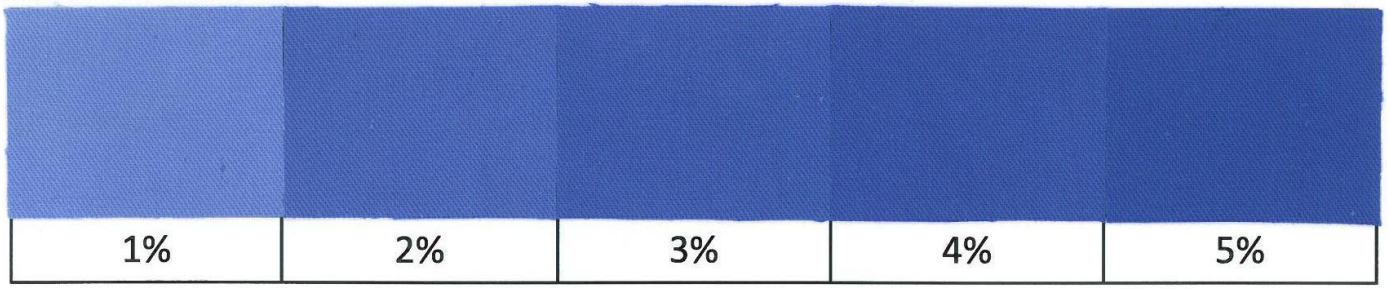
5% Reactive Blue C.I. 49
pH 6-7 liquor ratio 1:20

60°C — 20 min.
10 min.
20°C

overflow washing, cold water 5 min., drying



non-cationized sample



TEXAMIN ECE New

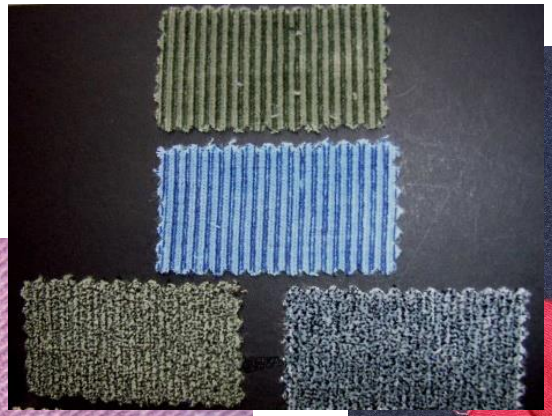
EXAMPLES OF TEXAMIN ECE new APPLICATION

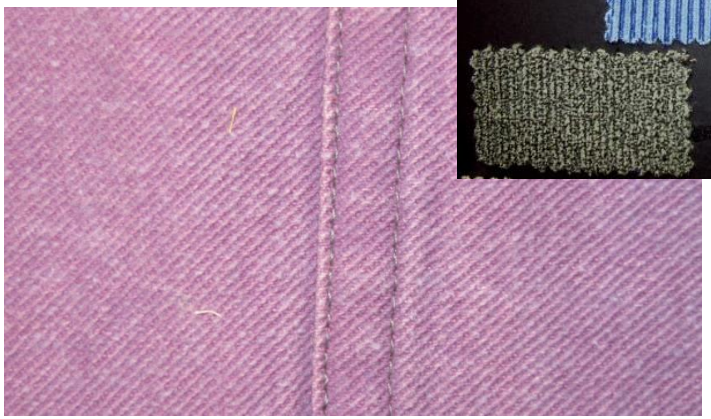
Garment Industry

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

  „Old fashioned“

  „Vagabond“ look





inoTEX®

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

inoTEX®

APPLICATION EXAMPLES OF TEXAMIN ECE New

Pre-cationization by printing

- Starts by padding of fabric by alkali and dry. **Pre-printing of Texamin ECE New** paste (special cationic (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.

inoTEX®

APPLICATION EXAMPLES OF TEXAMIN ECE New

Texamin ECE New by printing

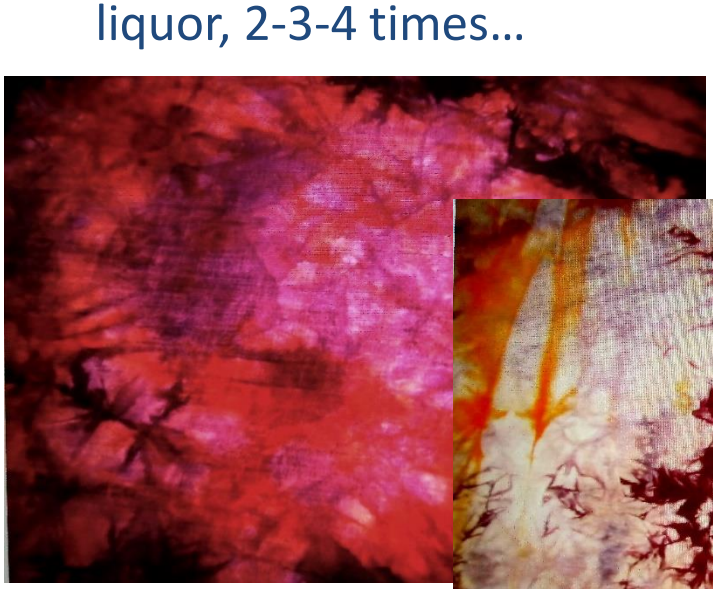
Printing in different concentration on cellulosics,
then dyeing with Metalcomplex dyestuffs

inoTEX®

APPLICATION EXAMPLES OF TEXAMIN ECE 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…



inoTEX®

APPLICATION EXAMPLES OF TEXAMIN ECE New

Dyeing of Co (cellulosics) with natural plant dyes

Natural dyes mostly need tanning with metal salts or cationic agents before dyeing. The dyeing tests were realised on pre-cationized 100% Co fabric with **TEXAMIN ECE new** and compared with coloration on the same – not cationized fabric. **Dyeing with natural indigo was realised after vatting by 50°C/30 min., the other dyes by 95°C/30min., 4% colour concentration.**

inoTEX®

LIMITATION
OF TEXAMIN ECE 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)

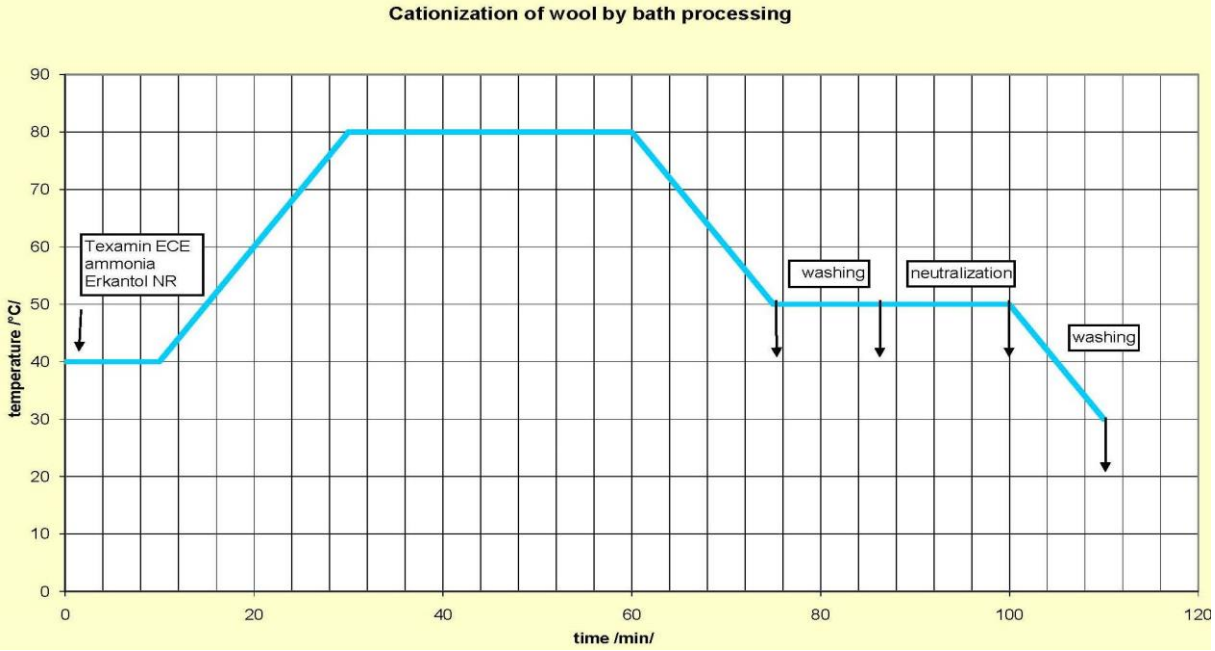
- No way to pre-cationize the synthetic fibers with TEXAMIN ECE-IN New

inoTEX®

CATIONIZATION OF WOOL

TEXAMIN ECE 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 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.

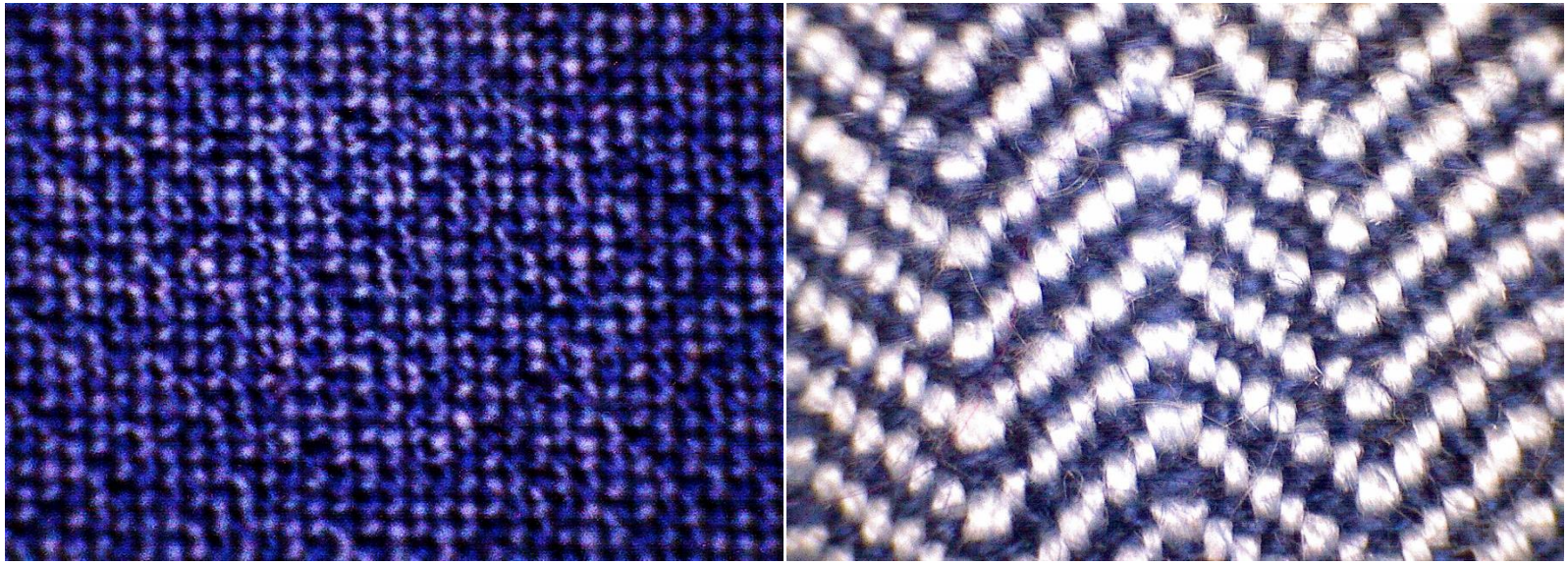


inoTEX®

CATIONIZATION OF WOOL

TEXAMIN ECE New

- Wool **tops pre-cationization**, spinning, blending with untreated yarn, weawing, 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

inoTEX®

CATIONIZATION OF WOOL

TEXAMIN ECE New

- **Antifelting and dimenssional 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**

inoTEX®

TEXAMIN ECE New

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

Licensed Marks

GREENSCREEN CERTIFIED SILVER ™

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

GreenScreen Certified™ Standard for Textile Chemicals Version 2.1

INOTEX spol s r.o.
Štefánikova 1208, 54401 Dvůr Králové nad Labem, Czech Republic

Product Certified
TEXAMIN ECE new

April 22, 2021
Issue Date

Signature

Use of Licensed Marks is subject to terms and conditions of the Trademark License Agreement. GreenScreen Certified™ is a trademark licensed by Clean Production Action, Inc. at 1310 Broadway, Suite 101, Somerville, MA 02144.

CLEAN PRODUCTION ACTION

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

inoTEX®

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

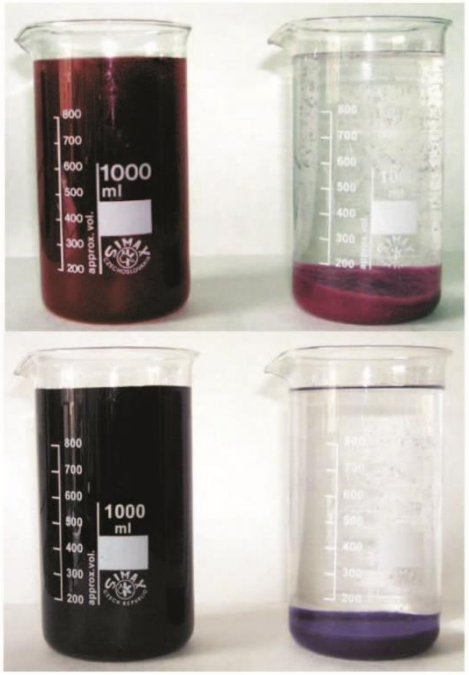
inoTEX®

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-precitate)
- dosage (1+9p water) into sewer system before bio
- sludge reduction – mix with comon inorg. flocculant



Cationic type of organic flocculant developed specially for textile wastewater decolorization

Soluble dyestuffs (reactive, direct, acid,..) change to insoluble compounds

Coagulating reaction is speedy in alkaline conditions

Texaflok DCL is able to decolorize:

- slightly colored water
- residual exhausted dyeing bath

Coagulate 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

inoTEX®

www.inotex.cz

marek@inotex.cz

Jointly towards the mutual business

inoTEX®