



Textile Technical Center

LABORATORY

Accredited since 2001

Certified since 2022

Analysis – Expertise - Training



Analysis and Tests

CETTEX laboratory conducts analysis, tests and control according to national and international standards (NT, ISO, EN, DIN, ASTM, AATCC...):

- Physical tests
- Chemical tests
- Toxicological analysis.

CETTEX Laboratory analysis and tests cover all types of fibers, yarns, fabrics, clothing and accessories, allowing to define their characteristics, their quality and their compliance with defined requirements.

Technical Expertise

Customized technical support services are offered:

- Elaboration of technical specifications
- Technical assistance to institutions in matter of public procurement of textile & clothing
- Compliance control during production and at delivery
- Assistance for the implementation of laboratories in industrial companies
- Expertise and analysis of defects on textiles

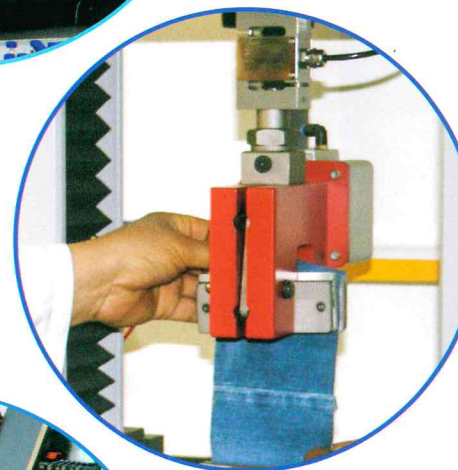
Training

The laboratory offers to industrial companies and to public and private organizations, tailored training subjects such as choice of raw textile materials, initiation to testings and analysis of defects, etc.

***CETTEX Laboratory,
an advanced expertise
for the quality of your products***

Recognition and accreditation

- INNORPI certification according to ISO 9001.
- TUNAC accreditation according to ISO/CEI 17025 standard.
- Member of the National Committee of Technical Normalization and Regulation.
- Recognized third-party laboratories on a national and international level.
- Recognition by international labels: **CELIO, LACOSTE, CARREFOUR, KARIBAN, JENNYFER**, etc
- High credibility with Ministries and public organisms.
- More than 200 institutions and companies trust the CETTEX laboratory.



Competitive advantages

- Developed infrastructure with three laboratories (Physical, Chemical, Consumer Health and Safety).
- Proven know How with highly-qualified engineers and technicians having more than 20 years of experience.
- Advanced technology.
- More than 100 types of laboratories analysis and tests.
- Tailored support.
- Reactivity, confidentiality, respect of deadlines and proximity.
- A full package offer including other CETTEX services (modeling, quality certification...).
- Preferential price offer to contracted customers.

CETTEX laboratory offers an extended list of physical tests:

- **Construction characteristics of fabrics :** Type of weave, mass per unit area, texture ...
- **Mechanical resistance of fabrics :** Tensile strength, tearing strength, bursting strength, resistance and seam slippage...
- **Ability to use :** pilling, spirality after laundering, dimensional stability, abrasion resistance, impermeability to air and water....
- **Particular tests on certain articles :** accessories and furniture (buttons pullout, zipper testing...).
- Tests on **threads** (Yarn number, tenacity, torsion, Rkm...).
- Tests on **fiber** (fiber diameter...).
- Textile behavior in contact **with fire.**





Tests & Methods:

Construction of fabrics

Determination of mass per unit length and mass per unit area	ISO 3801/ NF EN 12127
Determination of the number of threads per unit length	ISO 7211-2 / NF EN 1049-2
Knitted fabrics - Determination of number of stitch/stitch length and yarn linear density	NF EN 14971/ NF EN 14970

Mechanical properties

Determination of bursting strength and bursting distension	ISO 13938-1/ISO 13938-2
Determination of maximum force and elongation at maximum force using the strip method	ISO 13934-1 / ISO 13934-2
Determination of tear force using ballistic pendulum method (Elmendorf)	ISO 13937-1 / ISO 13937-2 / ISO 13937-3
Determination of the elasticity of fabrics- part1: Strip tests	EN 14704-1
Determination of maximum force to the pullout of buttons	EN 71-1
Determination of maximum force to seam rupture using the strip method	ISO 13935-1 / ISO 13935-2
Determination of the slippage resistance of yarns at a seam in woven fabrics	ISO 13936-1 / ISO 13936-2 / ISO 13936-3
Determination of tensile strength and elongation at break of rubber or plastics coated fabrics	ISO 1421

Ability to use

Determination of fabric propensity to surface fuzzing and to pilling	ISO 12945-1 / ISO 12945-2 / ISO 12945-3
Determination of the abrasion resistance of fabrics by the Martindale method	ISO 12947-2 / ISO 12947-3 / ISO 12947-4
Determination of flex resistance by the flexometer method	ISO 32100
Method for assessing appearance of apparel and other textile end products after domestic washing and drying	ISO 15487
Determination of spirality after laundering	ISO 16322-2
Assessment of the appearance of fabrics after washing	NF G 07-137
Determination of dimensional change in washing and drying	ISO 5077 / ISO 6330 / ISO 3759
Determination of the permeability of fabrics to air	ISO 9237
Determination of resistance to water penetration - Hydrostatic pressure test	ISO 811 / NF EN 20811
Spray Test	ISO 4921
Méthod for determination of drape of fabric	NF G07-109 / ISO 9073-9 / BS 5058
Measurement of thermal and water-vapour resistance	ISO 11092
Determination of the dimensional stability of fabrics to ironing presses	NF G07-212 /DIN 53894-2

Behavior of textile on fire

Burning behaviour - Measurement of flame spread	NF EN 13772 / NF EN 13773 / 16 CFR part 1610
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Tests on fibers and yarns

Determination of linear density / stitch length and yarn linear density	ISO 2060 / ISO 2061
Determination of single-end breaking force and elongation at break	ISO 2062
Determination of fibers diameter- Projection microscope method	ISO 137
Determination of linear density	NF G 07-316

Specific tests on different articles

Dimension of blankets (for beds)	NF EN 14
Terry towels and terry towel fabrics (determination of absorption time)	BS EN 14697

(*) Tests list is not exhaustive

CETTEX laboratory offers a large variety of chemical analysis:

- **Composition of textile** (fibers, threads and fabrics).
- **Colour fastness to washing** : perspiration, sea water, dry cleaning, light ...
- **Colorimetric measure** : degree of whiteness, color differences, retroreflection ...





Tests & Methods:

Testing composition

Identification of fibres	ISO 11827
Quantitative chemical analysis of fibers (binary/ternary)	Family of ISO 1833

Colour fastness

Colour fastness to hot pressing	ISO 105-X11
Colour fastness to rubbing	ISO 105-X12
Colour fastness to domestic and commercial laundering	ISO 105-C06
Colour fastness to washing with soap or soap and soda	ISO 105-C10
Colour fastness to water	ISO 105-E01
Colour fastness to sea water	ISO 105-E02
Colour fastness to chlorinated water (swimming-pool water)	ISO 105-E03
Colour fastness to perspiration	ISO 105-E04
Colour fastness to spotting: Acid	ISO 105-E05
Colour fastness to spotting : Alkali	ISO 105-E06
Colour fastness to spotting: Water	ISO 105-E07
Colour fastness to bleaching: Hypochlorite	ISO 105-N01
Colour fastness to drycleaning using perchloroethylene solvent	ISO 105-D01
Colour fastness to artificial light : Xenon arc fading lamp test	ISO 105-B02
Colour fastness to artificial weathering: Xenon arc fading lamp test	ISO 105-B04
Colour fastness to organic solvents	ISO 105-X05
Assessment of the potential to phenolic yellowing of materials	ISO 105- X18
Detection and assessment of photochromism	ISO 105-B05
Colour fastness to nitrogen oxides	ISO 105-G01

Colorimetric measurements

Instrumental assessment of relative whiteness	ISO 105-J02
Calculation of colour differences	ISO 105-J03
Determination of retroreflection	EN 471 et CIE 54.2

(*) Tests list is not exhaustive





Consumer Health and Safety Laboratory

CETTEX's consumer health and safety laboratory detects carcinogenic substances, allergenic and heavy metals transferred to textile and clothing products during processing stages (dyeing, printing and finishing). These substances also present in accessories (metal, leather and plastic) and packaging, are harmful to human health (toxicity, skin irritation, infertility, cancer...)



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Tests & Methods

Azo dyes

Determination of certain aromatic amines derived from azo colorants ISO 14362-1

Determination of certain aromatic amines derived from azo colorants 4-aminoazobenzene ISO 14362-3

Formaldehyde

Free formaldehyde dosage ISO 14184-1

Allergen and carcinogenic colorants

Detection of dispersed colorants(allergen and carcinogenic) DIN 54231

Phthalate

Determination of phthalate content ISO 14389

Heavy metals

Determination of total metals content (microwave digestion) EN 16711-1

Determination of extractible metals content (perspiration solution) EN 16711-2

Cadmium

Cadmium dosage EN 1122

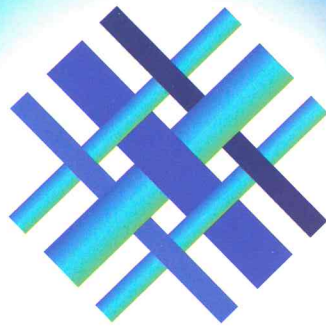
pH of aqueous extract

Determination of pH of aqueous extract ISO 3071

Protection's mask

Particle filtration efficiency (PFE) EN 149





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