



Tti Testing Laboratories

OVER 30 YEARS OF EXCELLENCE IN QUALITY ASSURANCE



SERVICES • TESTING

Accredited testing

Chemical, microbiological, physical and environmental testing in one laboratory network.

Faster market access through ISO/IEC 17025 accredited testing: 544 accredited methods, 378 accredited parameters and a 3-day standard turnaround, for manufacturers, exporters and brand owners.

ISO/IEC 17025 • PNAC LAB 022

U.S. IAC certified microbiology

U.S. CPSC accepted

ZDHC approved



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11 786 001

www.ttilabs.net



PNAC LAB 022

544**The largest PNAC-accredited, multi-sector testing scope.**

544 accredited methods and 378 accredited parameters on one ISO/IEC 17025 scope.

SINCE 1995 • LAHORE

Defensible data for every buyer question.

Tti Labs supports manufacturers, exporters and brand owners with data that reduces regulatory risk. Chemical, microbiological, mechanical and environmental testing run in one laboratory network, so nothing waits on an outside lab.

Analytical scientists, microbiologists and QA/QC specialists run the laboratories. LIMS and disciplined data control keep every result traceable, verifiable and audit-ready.

600+

SAMPLES A DAY

1,500+

TESTS A DAY

3DAYS, STANDARD
TURNAROUND**1,500+**GLOBAL BRANDS
SERVED

- ▲ ISO/IEC 17025 accredited testing laboratory, PNAC LAB 022
- ▲ ISO/IEC 17020 accredited inspection body, PNAC IB-006 (Tti Inspections Pvt Ltd)
- ▲ U.S. IAC certified microbiology laboratory
- ▲ U.S. CPSC accepted, Lab ID 1168
- ▲ EPA Punjab certified environmental laboratory
- ▲ 25,000 sq ft headquarters in Lahore; offices in Karachi, Faisalabad and Sialkot



Testing



Inspection



Certification



Reports



ISO/IEC 17025 · PNAC LAB 022

Six disciplines, one coordinated **system.**

Programmes run to internal specifications, brand-specific protocols or global regulatory requirements.



Chemical & analytical

- ▲ Nutritional & food chemistry
- ▲ Regulatory & RSL analysis
- ▲ Instrumental analysis

ZDHC MRSL V3.1 certifier, Level 1



Microbiological

- ▲ Pathogens
- ▲ Indicator organisms
- ▲ Environmental microbiology

U.S. IAC certified



Physical & mechanical

- ▲ Structural integrity & strength
- ▲ Dimensional stability & appearance
- ▲ Child safety & mechanical hazards

U.S. CPSC accepted



Performance & functional

- ▲ Colour performance
- ▲ Environmental resistance
- ▲ Moisture & surface performance



Materials

- ▲ Composition & identification
- ▲ Construction parameters
- ▲ Authenticity verification

OCA-recognised GM cotton screening



Environmental

- ▲ Soil & sludge analysis
- ▲ Wastewater & effluent testing
- ▲ Environmental monitoring programmes

ZDHC approved wastewater laboratory

Integrated domains

Chemical, microbiological, mechanical and environmental, with no outsourcing delays.

Complex matrices

Analytical approaches designed, optimised and validated for complex compliance cases.

Testing and oversight

An accredited laboratory and an independent inspection body, in one group.

Interpretation

Specialists find underlying causes and give technically grounded recommendations.

REGULATORY & RSL ANALYSIS

Restricted substances, found at the limits buyers set.

Proactive identification of restricted substances such as PFAS and azo dyes, for ZDHC MRSL V3.1, EU REACH, Prop 65, CPSIA, Bluesign and OEKO-TEX requirements.

Restricted-substance groups

- ▲ Restricted dyes & colorants
- ▲ Processing auxiliaries
- ▲ Plasticizers & bisphenols
- ▲ Organotin compounds
- ▲ Solvents, VOCs & residuals
- ▲ Heavy metals
- ▲ Chlorinated organic compounds

SIGNATURE ANALYSIS	TECHNIQUE	ACCREDITED METHOD
Total fluorine	CIC	ASTM D7359 · EN 14582 · EN 17813
PFAS in wastewater	LC-MS/MS · GC-MS	DIN 38407-42 · BS EN 12673
Disperse dyes	LC-MS	DIN 54231:2022-09
Organic solvents (DMAC, DMFa, NEP, NMP)	GC-MS	ISO/TS 16189 · USEPA 5021A
Chromium VI in chemicals	IC	Tti/INORG/SOP-23
Heavy metals in chemicals	ICP · AAS	Tti/INORG/SOP-008a



First in Pakistan. Tti Labs offers the first TOF screening capability in Pakistan, powered by combustion ion chromatography (CIC).



LC-MS/MS

PFAS in wastewater



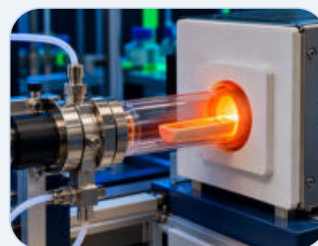
Headspace GC-MS

Organic solvents



ICP

Heavy metals



CIC

Total fluorine

U.S. IAC CERTIFIED • SINCE 2021

A U.S. IAC certified microbiology laboratory.

Controlled lab environments and advanced detection systems across food, pharma, water and environmental applications. Methods follow BAM-FDA and ISO and, for water, APHA and EPA.

Pathogens

- ▲ *Salmonella* spp.
- ▲ *Listeria monocytogenes*
- ▲ *Staphylococcus aureus*
- ▲ *Bacillus cereus*
- ▲ *Clostridium perfringens*
- ▲ *Campylobacter* spp.
- ▲ *Vibrio cholerae*
- ▲ *Vibrio parahaemolyticus*

Hygiene & indicators

- ▲ Total plate count
- ▲ Coliforms & faecal coliforms
- ▲ *E. coli*
- ▲ Yeast & mould count
- ▲ Faecal streptococci
- ▲ *Pseudomonas aeruginosa*



First in Pakistan

IAC (International Antimicrobial Council) certified, 2021.

BSL-2+

A controlled, stainless-steel microbiology environment.

ISO Class 5 & 7

Approved for ISO Class 5 and 7 standards.

Food, pharma, water

And environmental applications, in one laboratory.

PHYSICAL, MECHANICAL & FUNCTIONAL

How a product holds up in use, measured.

Structural strength, dimensional stability and colour performance, tested to ISO, EN, ASTM and AATCC methods.



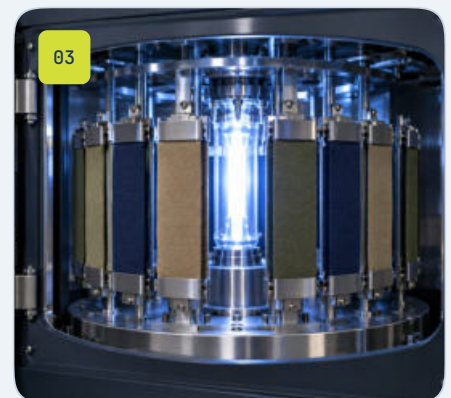
Tensile and tear strength

Grab and strip tensile; Elmendorf and wing-rip tear; bursting strength



Abrasion and pilling

Martindale and Taber abrasion; ICI and random-tumble pilling



Colour fastness to light

Xenon arc, AATCC TM16.3 · ISO 105-B02



Colour performance

Crocking, perspiration, laundering, water and dry cleaning



Moisture and surface

Water and oil repellency, hydrostatic head, wicking, air permeability



Child safety & mechanical hazards

U.S. CPSC accepted: lead 2009, flammability 2010, phthalates 2018



Colour fastness on the PNAC scope: crocking AATCC TM8 · ISO 105-X12, perspiration TM15 · 105-E04, light TM16.3 · 105-B02, laundering TM61 · 105-C10, water TM107 · 105-E01 and dry cleaning TM132 · 105-D01.

Dimensional stability after washing or dry cleaning, spirality, crease recovery and appearance after care complete the physical scope.



COMPOSITION · AUTHENTICITY · DISCHARGE

Proof of what a material is, and of what a site discharges.

01 Materials

- ▲ Fibre composition, qualitative and quantitative
- ▲ Organic cotton verification
- ▲ GM cotton screening, recognised by OCA
- ▲ GMO screening to ISO/TS 5354-1 & -2
- ▲ Genuine leather verification by FTIR and microscopy
- ▲ Yarn count and twist, fabric weight and stitch density

02 Environment

- ▲ Soil and sludge analysis
- ▲ Wastewater and effluent testing
- ▲ Environmental monitoring programmes
- ▲ EPA Punjab certified laboratory, certificate No. 132, across five PEQS categories
- ▲ ZDHC approved wastewater laboratory; tests to Guidelines V2.2
- ▲ ISO/IEC 17025 accredited environmental testing since 2017



Fibre identification
Microscopy



FTIR
Material identification



Wastewater
COD digestion



Soil and sludge
Digestion for metals

ANALYTICAL INFRASTRUCTURE

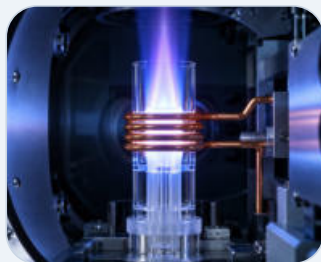
Eleven instrument families behind every result.

Chromatography, mass spectrometry, plasma and atomic spectroscopy, molecular biology and infrared, in one laboratory in Lahore.

FAMILY	USED FOR
HPLC	RSL and chemical analysis, pharma assays, food and nutritional chemistry, dye identification
LC-MS/MS	Pesticide residues, pharma impurities (NDMA, NDEA), mycotoxins, allergens
GC suite	GC-MS, HS-GC-MS, GC-EI/CI, GC-FID: VOCs, restricted substances, petroleum, residual solvents
GC-MS-MS	Complex matrices and new brand requirements added 2025
ICP-OES	Heavy metals in textiles, leather, food, pharma, water and soil
ICP-MS	Ultra-trace heavy metals added 2025

FAMILY	USED FOR
AAS	Heavy metals in textiles, leather, water and food
IC / CIC	Chromium VI (EN ISO 17075-2); total organic fluorine by CIC
Real-time PCR	GMO screening, allergen detection, pathogen identification
ELISA	Mycotoxins (aflatoxin, ochratoxin A, aflatoxin M1), allergens, rapid food-safety screening
FTIR	Material identification, genuine leather, fibre composition, pharma actives

ppb and ppt. ICP-MS reaches parts-per-billion and parts-per-trillion levels for ultra-trace metals.



ICP-OES

Multi-element metals



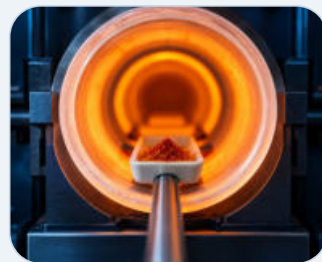
Real-time PCR

GMO, allergens, pathogens



ELISA

Mycotoxins, allergens



Combustion IC

Total organic fluorine

ISO/IEC 17025 - 544 METHODS

600+ samples a day, reported in 3 days.

Methods aligned with ASTM, ISO, EN, AATCC, AOAC, BAM-FDA, EPA and APHA.

544

Accredited methods

378

Accredited parameters

600+

Samples a day

1,500+

Tests a day

2,000+

Tests offered across sectors

3

Days, standard turnaround

Sample received

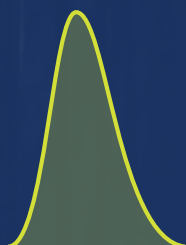
chain of custody starts



DAY 0

Testing

accredited methods

**Report**

ISO/IEC 17025 accredited



DAY 3

STANDARD TURNAROUND: 3 DAYS. EACH QUOTATION CONFIRMS ITS OWN TURNAROUND.

Receipt-to-report control

Every sample follows a fully traceable workflow with secure chain-of-custody controls and disciplined pre-analytical handling.

Reliable results across batches

Structured cross-verification and layered quality controls give repeatable results across operators, programmes and testing environments.

Interpretation that drives action

Specialists analyse results, identify underlying causes and give technically grounded recommendations.

17 DIVISIONS · ONE ACCREDITED BACKBONE

Seventeen divisions, one accredited scope.

From textiles to petroleum, each division tests to its own sector's standards on one ISO/IEC 17025 accredited scope.



01

Textiles & apparel

Performance, mechanical, chemical and RSL testing to ISO, EN, ASTM and AATCC



02

Leather & footwear

Serving the leather industry since 2012, with a liaison office in Sialkot



03

PPE

13 EN standards across gloves, garments and footwear



04

Food & agriculture

WFP partner laboratory; U.S. IAC certified microbiology



05

Pharmaceutical

ISO, FDA, WHO and DRAP aligned; DRAP-accepted test reports



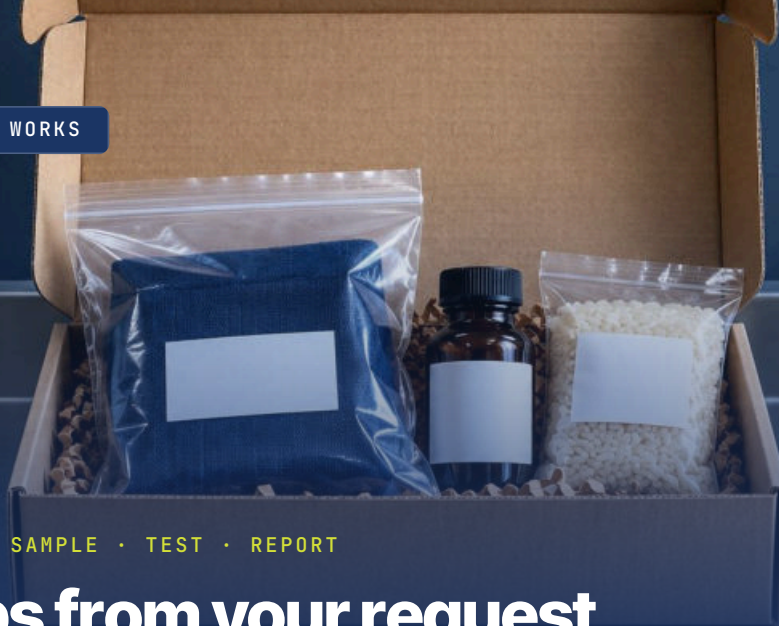
06

Petroleum

OGRA approved; ASTM, ISO and IP methods



The other ten divisions: dyes & chemical auxiliaries · institutional · paper & packaging · sports goods & toys · environment · surgical devices · metals & materials · sustainability services · inspections & audits · the Tti Labs Training Institute.



REQUEST · QUOTE · SAMPLE · TEST · REPORT

Five steps from your request to an accredited **report**.

01

Request

For a quote, tell us:

- ▲ product and quantity
- ▲ test standard or buyer requirement
- ▲ destination market
- ▲ your deadline

You

02

Quote

Each test and its charge in writing, with the turnaround confirmed, before any work starts.

Tti Labs

03

Send sample

Drop it off at our laboratory in Lahore, or customer service arranges collection.

You

04

Testing

A fully traceable workflow with secure chain-of-custody controls.

Tti Labs

05

Report

An ISO/IEC 17025 accredited report, within the turnaround in your quotation.

Tti Labs

NOMINATED AND APPROVED BY 41 GLOBAL BRANDS

Absolute Apparel · ASDA · Basic Resources Inc · C5 Group · Caplait · Carhartt · Créaprim · DeFacto · DiBella Longlife Textiles · DRT · F&F · Fanatics · FBB · FOXA OY · GAP · HEMA · Isa-Traesko · J. Junaid Jamshed · Kettelhack · KiK Textil-Diskont · Krayons · Levi's · Lipsy London · Majid Al Futtaim · Manto · Next · PPresent Team · Scandia · Sheet Street · Socks World · SOK · Sol's · Stooker · Sweet Home · Tally Weijl · Tape A L'Oeil · TCC · Tom Tailor · Williams Sonoma · Woman Within · Wünsche Group

Also served: Levi's, global approval partner since 2003 · Walmart and Target, vendor testing 2019–2021 · Carrefour Pakistan, approved vendor 2022–2024 · World Food Programme, partner laboratory.

Quotations

quotations@ttilabs.net

Customer portal

etrfttilabs.net: submit requisitions, track samples, retrieve reports

Call

UAN 111 786 001

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www.ttilabs.net



Tti Testing Laboratories

One laboratory for every test your buyer asks **for**.



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www.ttilabs.net
quotations@ttilabs.net
marketing@ttilabs.net

Lahore Office
Headquarters & Laboratories
347-S Quaid-e-Azam
Industrial Estate,
Kot Lakhpat, Lahore-54770
(92-42) 111 786 001

Karachi Office
3rd Floor, Plot No. 7c,
Sunset Commercial St.
No. 1, Phase 4, DHA,
Karachi-75500
(92-21) 111 786 001

Faisalabad Office
Office # 145, 1st Floor
Centre Point Plaza,
Jaranwala Road,
Faisalabad-38000
(041) 8733001

Sialkot Office
Opposite Mag Town Masjid,
Kashmir Road, Sialkot-51310
(052) 3573367

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