ANNUAL REPORT 2021 - 22

ISO 9001
nitra
ORGANISATION

QMS ISO 9001 Approved Company

JAS-ANZ

ANNUAL REPORT 2021-22

NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION

(Linked to Ministry of Textiles, Government of India)

Sector – 23, Raj Nagar, Ghaziabad – 201 002 (India)

ANNUAL REPORT
2021-22

NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION

(Linked to Ministry of Textiles, Govt. of India)

SECTOR-23, RAJ NAGAR, GHAZIABAD-201 002 (INDIA)

Phone: 0120-2807390 to 95, 2783586/592/095 **Fax: 0120-2783596**

E-mail: mail@nitratextile.org **Website: nitratextile.org**

CONTENTS PAGE No.

MESSAGE FROM THE CHAIRMAN
COUNCIL OF ADMINISTRATION

Dear Patron,

NITRA, the leading textile research association in the country has been providing R&D and other technical support to Indian Textile and Clothing Industry since its inception in 1974 and caters to a large no. of industrial units. The best part of NITRA is that without getting complacent for their achievements, their pursuit for excellence is continuous hence the organization is growing at a steady pace year after year. NITRA's esteemed patrons, valued clientele and efficient workforce deserve immense credibility for this. It is a proud privilege for me to be associated with NITRA

Friends, the fiscal 2021-22 has witnessed the steady turn-around of textile industry sector leaving behind the jolt it had suffered due to rapid spread of covid-19. It's a matter of great satisfaction that following the intensive vaccination drive, life gradually came back to normalcy. As a result of that, every industry, including the T&A industry, also came back to a steady recovery path.

During this fiscal, NITRA had many significant happenings. To begin with, a Long Staple Natural Fibre Pilot Plant is inaugurated in the campus. The main function of this lab is to spin yarns from long fibres such as Flax, Hemp, Ramie etc. This spinning system will help entrepreneurs in exploring potential in long fibers as the system consists of many sophisticated machines. This whole set up is established in NITRA to promote innovation and providing the right facilities and support to textile industry.

We are also happy to announce that the patent for '*An apparatus to determine smoothness of a sheeting material'* i**s** awarded to NITRA during this reported period. This is the result and acknowledgement of tireless efforts by our research scientists put on the project "Development of fabric smoothness tester" sponsored by MoT, GoI. Furthermore, NITRA has also filed two more patents during this period for new development. They are, '*A process for preparing water repellant milkweed floss/fibre for preserving thermo-regulatory property thereof'* and '*An apparatus to determine Air Pollutant Gas Adsorption Capability of Fabric'.*

Furthermore, during this reported period NITRA has signed two MoU with M/s. Crossroads Infotech, Common Facility Centre and M/s. Manmade Textile Research and Marketing Association, Common Facility Centre, both under One District One Product Common Facility. Both the MoU is signed in connection with providing testing service and exploring possibilities for helping them in setting up of testing laboratory and providing assistance in getting NABL accreditation for their testing laboratories located in Uttar Pradesh.

Friends, I feel happy to inform that during the reported period NITRA scientists have carried out eight R&D projects out of which five is completed and three in the pipeline. In addition to this, four need-based projects are also proposed to various GoI and other agencies. As many as nineteen research papers are published and presented by NITRA scientists during the reported period. The other activities of NITRA i.e. technical consultancy, material quality evaluation, third party inspection and manpower training have also been quite satisfactory during the last one year.

To add another feather to NITRA Technical Campus cap, following the successful conduction of two AICTE approved B.Tech. programs on Textile Technology and Computer Science & Engineering since 2012, AKTU, Lucknow has approved another full time B.Tech. program on Computer Science & Engineering (Artificial Intelligence & Machine Learning) beginning the academic year 2021-22. The program is popularly known as CSE (AI & ML). In this context, it is worth mentioning that this new program is one of the most emerging and happening fields of engineering education today. While expressing gratitude to both AICTE and AKTU, the college management also assures its students the very best quality of education that it has been providing since 2012.

NITRA Technical Campus has also done well during the reported period and successfully conducted B.Tech. programs on Textile Technology and Computer Science & Engineering. The sixth batch of students has also passed out with excellent results and is placed in renowned textiles and IT companies pan India. We are also happy that for the fifth consecutive year our students featured in university top ten for textile category and won honor medals.

Before concluding, I thank the Ministry of Textiles, Government of India and Ministry of Agriculture and Farmers Welfare, Government of India for sponsoring R&D projects and the textile and apparel industry, U.P. State Government and various para-military forces for utilizing NITRA's facilities. I assure that, NITRA would continue to serve all its stakeholders better in the coming days.

DINESH NOLKHA

FROM THE DIRECTOR GENERAL'S DESK

During the financial year 2021-22, NITRA has done commendable work to support the Indian textiles & garment industry. Following are the highlights:

Activities at a glance (2021-22)

R&D

Projects completed	05
Projects ongoing	03
Research papers	19

Consultancy services

Technical consultancies	140
Technical opinions & defect analysis	7

Testing services

Quality evaluation in NITRA labs	6361

Training services

Manpower training programs	28
Personnel trained by NITRA	821

Clientele

Clients served	1366
New clients inducted	310

PLSCs

Technical assistance/consultancies	85
Design developed	26
Liaison visits/Survey carried out (No. of units covered)	565
Sample tested	2811
Persons trained	288
Clients served	565
New clients added	210

1. Research & Development Cell

Govt. Sponsored completed Projects:

- Development of value added products from different fibres in Himalayan Region
- Development of air cleaner home textiles to reduce indoor air pollution

Government Sponsored On-going Project:

- Development of regenerated cellulosic fibres from Indian bamboo

Proposed Project submitted to Govt. Agencies:

- Socio economic development of SC/ST (submitted to Deptt. of Science & Technology, Govt. of India)

Publications: 4 (1 with CQE)

Training Programs: 2 (including with other divisions)

2. Chemical & Quality Evaluation Division

Govt. Sponsored Completed Project:

- New approaches to reduce water consumption in textile wet processing

Government Sponsored On-going Project:

- Development of molten metal splash resistant unique jute blend work wear for steel industry workers

Industry Sponsored Completed Projects:

- Development of antibacterial and antifungal properties in cotton and lotus fabric
- Development of FR knitted fabric for anti-flash hood for Indian army

Proposed Projects submitted to National Technical Textile Mission, Ministry of Textiles, Govt. of India:

- Cellulose based indigenous high Clo value and low density surface modified natural fibre for developing thermal layers of extreme cold weather clothing
- Development of Bio degradable and Sustainable Disposable Sanitary Napkin
- Development of indigenous Basalt fibre for high performance applications

Publications :6 (1 with R&D Cell)

Technical Consultancy : 3 (including with other divisions)

3. Engineering Division

Publications : 2

Technical Consultancy : 26 (including with other divisions)

Training Program : 1

4. Environmental Engineering Division

Technical Consultancy : 2 (including with other divisions)

Training Program : 1

5. Garment Centre

Technical Consultancy :11 (including with other divisions)

Training Programs : 21(including with other divisions)

Publications : 3 (including with other divisions)

6. Marketing & Publication Division

Publication : 1 (including with other divisions)

7. Mechanical Processing (Spg. & Wvg.) Division

Technical Consultancy : 101 (including with other divisions)

8. Physics & Quality Evaluation Division

Technical Consultancy : 83 (including with other divisions)
Training Program : 1 (including with other division)

9. Polymer & Technical Textile Division

Government Sponsored On-going Project:

- Development of Jute composite for automotive acoustic insulation and other uses

Training Program : 1 (including with other division)

10. Software Development Centre

Publications : 7

Training Program : 3

Quality Evaluation at NITRA Laboratories

Altogether 6,361 samples were tested at NITRA's NABL accredited laboratories during 2021-22. Following is the laboratory-wise break up for the same:

Physical Quality Evaluation Laboratory	-	2382 samples
Chemical Quality Evaluation Laboratory Heat & Flame Testing Laboratory	-	3050 samples
Polymer & Technical Textiles Laboratory and Microbiology Laboratory	-	761 samples
Environment Laboratory & Eco Laboratory	-	168 samples

In addition to above, 7 fabric defect/damage analysis was carried out in various NITRA laboratories. More than 250 R&D samples were also tested in PQE and CQE labs.

Publications

In the year under review, 19 research & technical papers are published/ presented in technical journals and forums.

Memorandum of Understandings Signed

NITRA has signed MoU with Crossroads Infotech, Common Facility Centre (under One District One Product Common Facility) on dated 28th March 2022 in connection with providing testing service and exploring possibilities for helping them in setting up of

testing laboratory and providing assistance in getting NABL accreditation for the testing laboratory at Crossroads Infotech-CFC, Greater Noida, Gautam Budh Nagar, Uttar Pradesh.

NITRA has also signed MoU with Manmade Textile Research and Marketing Association, Common Facility Centre, MMTRMA-CFC, (under One District One Product Common Facility) on 12th January 2022 in connection with providing testing service and exploring possibilities for helping them in setting up of testing laboratory and providing assistance in getting NABL accreditation for the testing laboratory at MMTRMA-CFC Mau, Uttar Pradesh, India.

Power loom Service Centres

In order to strengthen the decentralized power loom sector, NITRA rendered various value added services through eight Power Loom Service Centres located at Tanda, Kanpur, Meerut, Gorakhpur, Varanasi (all in U.P.), Panipat (Haryana), Ludhiana (Punjab) and Bhilwara (Rajasthan). (For details refer chapter Power loom Service Centres).

Patents

Following patents were awarded/filed during the year:

Patent Awarded :

- An apparatus to determine smoothness of a sheeting material, Patent no. 380915, dated 29.10.2021 (Inventor: Dr. M. S. Parmar)

Patent Filed :

- A process for preparing water repellant milkweed floss/fibre for preserving thermo-regulatory property thereof, Patent Application No. is 202111055410 dt. 30.11.2021 (Inventor : Dr. M.S. Parmar)
- An apparatus to determine Air Pollutant Gas Adsorption Capability of Fabric, Patent Application No. is 202111062044 dt. 31.12.2021 (Inventors: Dr. Arindam Basu and Dr. M.S. Parmar)

Important Events and Happenings during 2021-22*

- NITRA Organized series of webinars for industry
- NITRA's 45th Annual General Meeting at NITRA
- Long staple natural fibre pilot plant Inaugurated at NITRA
- Virtual Research Advisory Committee Meeting at NITRA
- NITRA Participates at Techtextil India 2021, Mumbai
- Hon'ble Governor of U.P. Honours NITRA Scientist and NITRA Technical Campus Student
- BIS organizes a Session on Standards Development and Standardization in the field of Medical Textiles
- Virtual Session of Master Class on CAMPUS-PRENEUR by Dr. Vivek Bindra
- NITRA Celebrates International Women's Day

**For details please refer chapter Important Events and Happenings during 2021-22.*

Dr. ARINDAM BASU

NITRA's SERVICES TO ITS CLIENTS - AT A GLANCE

NITRA always believes in satisfying its clients. That is why it has been able to retain most of its existing clients and at the same time include new clients. Many clients have availed NITRA's services time and again. Data given below provides the information related to services rendered by NITRA to its clients during 2021-22.

Total clients served	:	1366
New Clients added	:	310

Approx. 20% of the clients at NITRA have availed services 5 times or more during the year.

- **Units availed services more than 100 times**

Unit	No. of Services
Tuv Sud South Asia Pvt. Ltd., Gurgaon	135

- **Units availed services more than 50 and less than or up to 100 times**

Unit	No. of Services
Arihant Spinning Mills, Malerkotla	69
G.M. Trading Co., Haridwar	60
Derpa Industrial Polymers Pvt. Ltd., Loni, Ghaziabad	55
Ordnance Clothing Factory, Shahjahanpur	52

- **Units availed services more than 30 and less than or up to 50 times**

Unit	No. of Services
Shiv Shakti Spinners, Panipat	46
U.S. Industries, Delhi	39
Amar India Woollen Mills, Amritsar	33
K.K.K. Mills, Ludhiana	31

- **Total number of services availed by clients at NITRA**

Testing	3053
Consultancy/Training etc.	124
Total Services availed	3177

ORGANISATION : FINANCIAL PERFORMANCE & MEMBERSHIP

Government Grant

Ministry of Textiles (MoT), Govt. of India, deserves special thanks for helping NITRA by releasing timely grant for recurring expenditure. MoT released a grant of Rs.200.00 lacs towards recurring expenditure. NITRA have received grant of Rs. 117.50 lacs from Office of the Textile Commissioner, Mumbai for continuing the activities of Power Loom Service Centres at Tanda, Meerut, Ludhiana, Kanpur, Gorakhpur, Panipat, Bhilwara & Varanasi.

NITRA received Rs.29.86 lacs grants for two projects namely "Development of jute composite for automotive acoustic insulation and other uses" and "Development of a molten metal splash resistance unique jute blended work wear for steel foundry workers" from National Jute Board.

Council of Administration

The management of the Association is entrusted to the Governing Council. At the 45th Annual General Meeting of the Association held on 25th September 2021, the new Council of Administration was constituted as given in Annex-1. The Council met three times during the year.

Finance & Administrative Sub-committee

The Finance & Administrative Sub-Committee continued to look into the administrative and financial matters. All matters relating to administrative procedures, staff, matters relating to the members of association and financial matter were brought before this committee for discussion, guidance and approval. This committee met twice during this period. A list of the members of Finance & Administrative Sub-Committee is given in Annex-2.

Research Advisory Committee

Research Advisory Committee virtual meeting was held on 4th December 2021. This is an annual event at NITRA with a view to assess the progress of NITRA's ongoing R&D projects and to make necessary modification on those, if required. The committee also suggests areas to be considered for NITRA's future R&D activities. A list of the members of Research Advisory Committee is given in Annex-3.

NITRA Membership

As on 31st March 2022, 125 textile and garment units have registered as NITRA members. The list of members is given in Annex-4.

RESEARCH & DEVELOPMENT ACTIVITIES

As a policy matter, the aim for NITRA's research and development activities is to help the industry. So, at NITRA, ideas for most of the R & D projects are conceived only after interaction with the industry. Need based projects are earmarked for carrying out research and special emphasis is given to those projects which have industry acceptance as well as commercial viability.

In the year 2021-22, NITRA worked on eight projects. Out of which five have been successfully completed during the period whilst work is in progress for the three projects.

Work done in the area of R&D during the year 2021-2022 is categorized as below:

1. GOVERNMENT SPONSORED PROJECTS

1.1 Completed projects

(i) Project title : New Approaches to Reduce Water Consumption in Textile Wet Processing (Sponsored by Ministry of Textiles, Govt. of India)

Objectives :
- To conduct preliminary trials to test suitability for various dyes, used for textile material
- Designing and fabrication of equipment for dyeing and standardization
- Conducting dyeing trial on various types of textile materials
- To compare dyed material out of new approach and conventional dyeing method in terms of quality and consumption of water

Research outcome :
- Water conservation/consumption study has been carried out in various mills
- Various approaches were used to dye textile materials to conserve water
- A water saving hank dyeing machine for dyeing textile yarns has been designed and developed
- Patent has been filed for the development of water saving hank dyeing machine
- Project has been completed and report has been sent to Ministry of Textiles, Govt. of India

A brief write-up of various approaches adopted is given below:

Approach-1: Exploring Possibilities of Dyeing Cotton Hank Using Soft Flow Dyeing Machine

Cotton dyeing is one of the most water-consuming processes in the dyeing industry. As the consumption of water is very high in cotton dyeing, the load for treatment of effluent on ETP is also very high. The conventional cabinet Hank dyeing machine consumes water in the range of 1:15 to 1:20 MLR. The salt, soda. and other

chemical auxiliaries are used as per the MLR of the machine. If MLR is high, the consumption of chemicals will also be on the higher side. It was thought to be used on soft flow dyeing machine for dyeing cotton hank so the MLR can be reduced to 1:6 to 1:10. It will not only reduce consumption of water but also reduce chemical auxiliaries' consumption and load on ETP. Some of the dyeing trials taken using soft flow dyeing machine to dye cotton yarn in hank form are given below in the Table-1:

Table 1: Results of some of the Dyeing trials

Trial	Material to liquor ratio	Total water consumption (liter/kg)	Observation
Trial 1	1:15	161	Even shade, high entanglement
Trial 2	1:10	107	Even shade, high entanglement
Trial 3	**1:8**	**88.5**	**Achieved even dyeing**
Trial 4	1:7	77.5	Due to poor liquor circulation dyeing was uneven, entanglement

This study shows (Trial 3) that cotton hank can be dyed in soft flow dyeing machine using 1:8 MLR as shown in Fig.1 and Fig.2.

Fig.1: Soft flow dyeing machine used for cotton hank dyeing

Fig.2 : Dyed Cotton hanks

Approach-2: Dyeing Cotton Fabric in Solid Shade Using Disperse Dye

To dye cotton fabric, reactive dye is one of the popular class of dyes. It also gives good fastness properties as required. Cotton dyeing with reactive dye requires 5 to 6 washes after dyeing to remove the unfixed dye. Due to high colour discharge and chemicals in effluent, it increases the load on ETP and the cost of treatment. In this approach, we have tried to develop a solid shade using disperse dye on cotton fabric.

In disperse dyeing the amount of colour and chemicals in the effluent is comparatively less than in dyeing with reactive dye. It also saves time during dyeing and required less number of washes to remove unfixed dye. The dyed sample developed in the lab trials are shown below in Fig.3:

Fig.3 : Cotton Fabrics dyed in solid shades using disperse dye

Approach-3: Creating Denim Effect using Disperse Dye on Cotton Fabric

Denim industry is one of the most water consuming industry. Mostly vat (Indigo) and sulphur dyes are used to produce denim fabric. It has a limitation to produce different shades. In this approach we use Pad-Cure-Dyeing method to produce denim effect using Disperse dye on different twill fabrics. Results are shown in Fig.4.

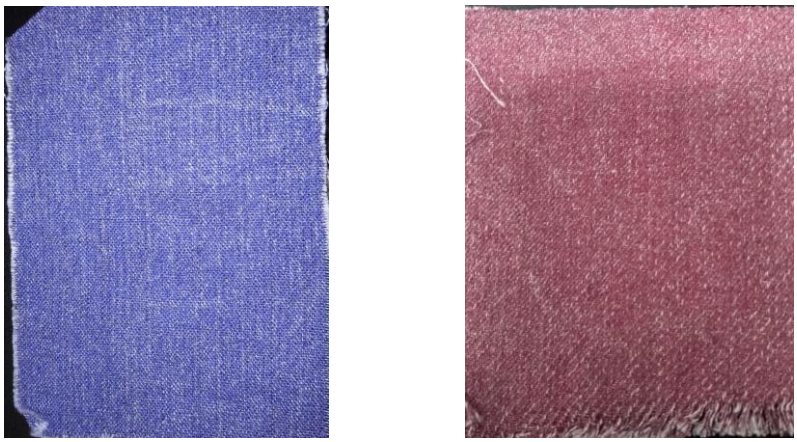


Fig.4 : Cotton Fabrics having denim effect created by using disperse dye

Approach-4: Fabrication of Hank Dyeing machine working in Low material to liquor ratio

Under this approach, a pilot model hank dyeing machine is developed (shown in Fig.5). With this machine, yarn in hank form can be dyed in 1:8 MLR. A patent has been filed for this machine.

Fig.5 : Pilot model of newly developed Hank Dyeing Machine

(ii) Project title : Development of value added product from different Fibres in Himalayan Region (Sponsored by Ministry of Textiles, Govt. of India)

Objectives :

- To standardize a method for extraction of fibers from Pine Needles, Indian Flax, Nettle etc.
- Development of machines for extraction of fibres
- To produce yarn with pure fibres and blends by optimizing mechanical parameters
- To develop various kinds of fabric utilizing those yarns
- To develop final value added products / home textile using these fabrics

Research outcomes

- Cultivation of flax fibres has been done
- Extraction of fibre from Pine leaves has been standardized
- The machines identified for the project has been erected & commissioned at NITRA premises
- Machinery manufacturer has been identified and purchase process has been completed. Machinery procured is shown in Fig. 6
- A patent has been filed regarding extraction of textile grade fibre from pine needles
- Natural long fibre pilot plant consisting of Hackling Machine, Draw Frames, Speed Frames and Wet Spinning Ring Frames has been established and started
- Project has been completed and report has been sent to the Ministry of Textiles, Govt. of India
- Products have been developed (Refer Fig.7)

Fig.6 : Machinery procured

Fig. 7 : Some of the value added products developed

Background:

Life in hills is not easy-going due to limited sources of income. As a result of the same there is considerable migration of people from hills to plains in search of livelihood. As per report of Economic times (06.05.2018) approx 4 lakh people have migrated in past 10 years from their native villages of Uttarakhand.

In fact the Himalayan region has been bestowed with enormous nature's fibre wealth, including pine needles. These have been used by the locals for their general needs. The pine needles (perul), falling down on the earth in abundance, are highly inflammable when dry and catch fire leading to forest fires causing huge losses to the eco-system.

NITRA took an initiative to extract textile grade fibre from Pine needles and other such resources to develop value added products using these extracted fibres such as Ramie (Boehmeria Nivea), Flax (Linumusitatissimum) and Hemp (Cannabis sativa), etc. It has been observed that the products developed from these fibres have very high probability of domestic and export demand. Indigenous flax fibres have quite satisfactory properties and can reduce / replace import of flax fibres from European countries.

Experimental work:

Experiments were carried out for exploring the possibilities of using natural fibres abundantly available in Himalayan region. Brief details of experiments are given below.

The pine needles were collected from the ground of Almora, Uttarakhand and neighbouring areas where Pine forests are abundantly available. Those needles were brought to NITRA, Ghaziabad and extraction of fibres was attempted. Various chemical combinations were tried to get the best textile grade fibres. Sodium hydroxide (NaOH) solution was used for preliminary treatment and then Aluminium chloride ($AlCl_3$) solution was used for final treatment. After a number of trials, optimum time, temperature and concentration (gpl) were finalised. Then the fibres were extracted by mechanically rubbing the treated leaves and dried.

For producing Indian Flax proper seeds were required. It was observed that Central Research Institute for Jute & Allied Fibres (CRIJAF) under ICAR had undertaken some trials and they have developed a variety of JRF2 which gives good result in Indian atmosphere. But large scale trials were not been taken for commercialization. NITRA procured seeds from them and planted in around 7 acres of land during 2017-18. Five acres of land was at G.B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand and around 2 acres of land was at NITRA, Ghaziabad. The sowing time was November end to beginning December 2017 and the plants were harvested during April, 2018. Fibres were extracted after retting and scutching was done.

Results & Discussion:

The properties of the extracted pine needle fibres were assessed. These are shown in Table-2 “Physical properties of Pine needle fibres”. As the fibres have low tenacity value it was blended with cotton fibre and yarns were spun. The SEM photographs of the cross section of the pine needle fibres and longitudinal structure have been shown in Fig. 8 to Fig.11. Both Fig.8 and Fig.9 show the cross-sectional view of pine needle fibres at different magnifications. The figures show a hollow structure which is different from conventional natural fibres used in common. The Fig.10 and Fig.11 show the longitudinal view of pine needle fibres which are not fully cylindrical and somehow looks rough. It was observed that it has high moisture regain value (around 12%). It is expected that this hollow structure will result in products with high thermal resistance value and good water absorbency.

Table 2: Physical Properties of Pine needle fibres

Parameters	Pine needles
Tenacity (g/den)	1.10
Min.	0.32
Max.	3.63
Average	1.10
CV%	66.80
Elongation%	5.94
Min.	0.80
Max.	10.10
Average	5.94
CV%	41.25
Count (Denier/Ne)	87.69/60.61
Bundle strength (g/tex)	5.64
Elongation%	6.9

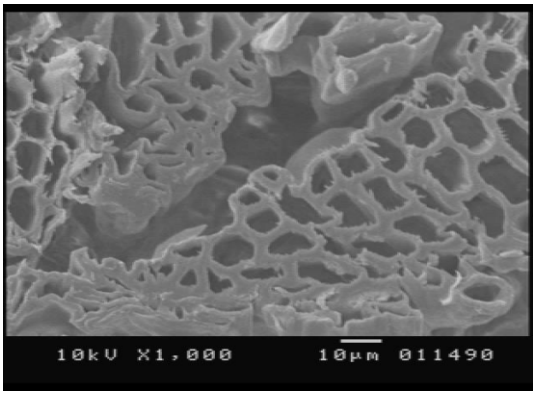


Fig.8

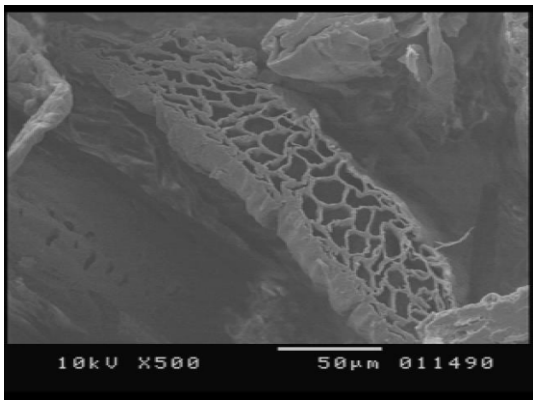


Fig.9

Fig.8 and Fig.9 show the cross-sectional view of pine needle fibres at different magnifications

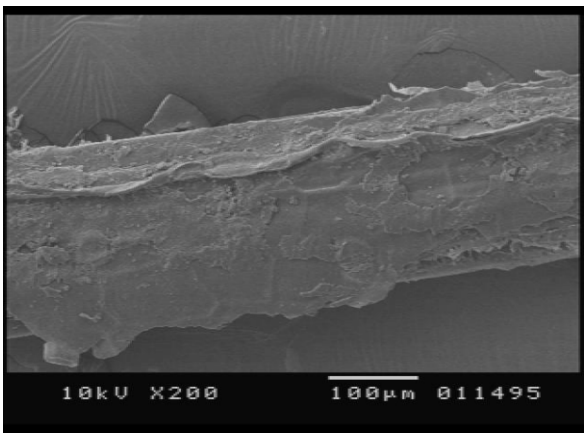


Fig. 10

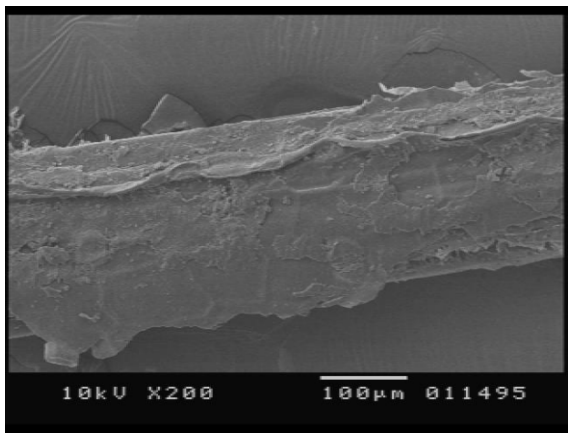


Fig. 11

Fig.10 and Fig.11 show the longitudinal view of pine needle fibres

The flax fibres, produced in India, were assessed for their various properties and the same were compared with the some of the European flax, sourced from a commercial fabric manufacturer. The SEM photographs of the flax fibres are shown in Fig. 12 to 15. Both Fig.12 and Fig.13 show the cross sectional view of the flax fibres and different magnification. It can be seen that the fibres are mature and similar to available fibres elsewhere. The Fig.14 and Fig.15 show the longitudinal view of Indigenous flax fibres at different magnifications. The properties are shown in Table-3. It can be seen from the Table that there is no significant difference in properties of these fibres. However, single fibre tenacity of Indian flax is lower than imported fibre, but the bundle strength of Indian fibre is higher. The appearance shows small difference and the Indian variety looks little harsher. This may be the reason for having higher bundle strength as compared to the bundle strength of imported fibres.

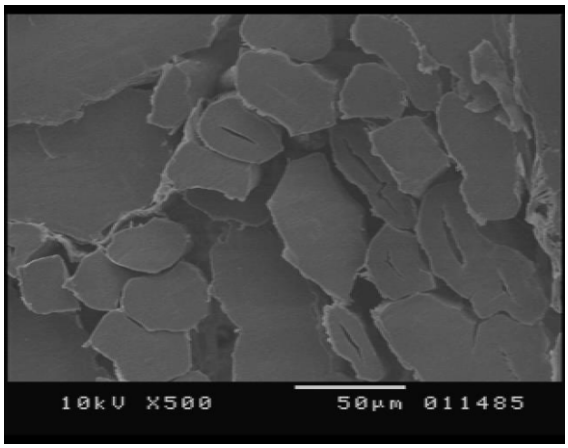


Fig. 12

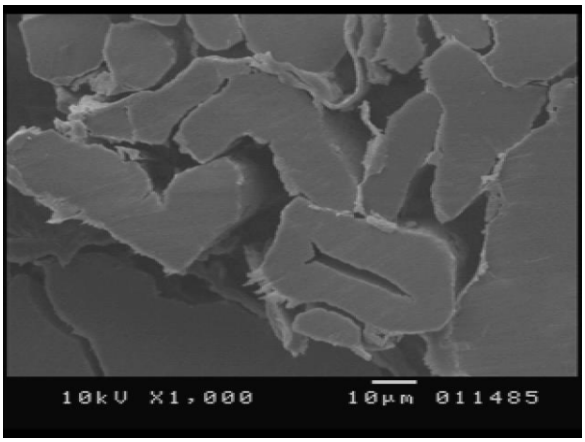


Fig. 13

Fig.12 and Fig.13 show the cross sectional view of the flax fibres and different magnification.

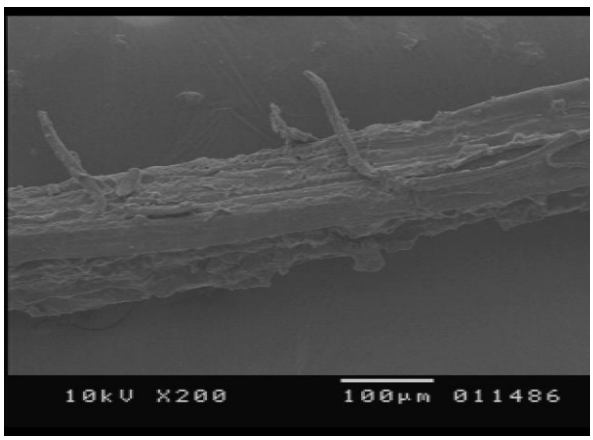


Fig. 14

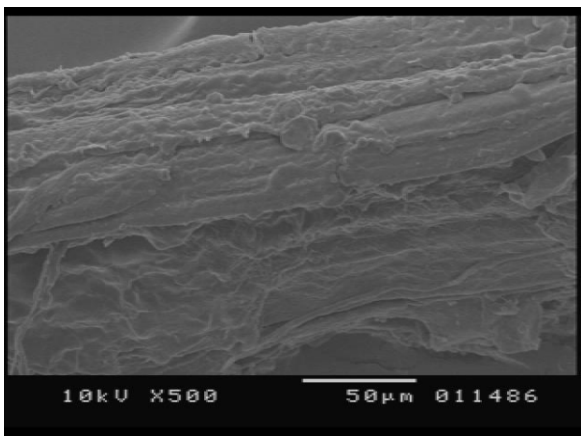


Fig. 15

Fig.14 and Fig.15 show the longitudinal view of Indigenous flax fibres at different magnifications

Table 3: Physical Properties of Flax fibres

Parameters	Indian flax	Imported flax
Tenacity (g/den)	3.43	4.18
Min.	0.56	0.86
Max.	7.34	7.19
Average	3.43	4.18
CV%	48.77	42.05
Elongation%	2.11	2.26
Min.	0.70	0.70

Max.	4.50	4.40
Average	2.11	2.26
CV%	41.38	35.12
Count (Denier/Ne)	40.81/130.24	38.52/137.98
Bundle strength (g/tex)	63.49	40.82
Elongation%	0.61	0.75

The pine needle fibres (PNF) have been blended with cotton in different ratios and it was found difficult to spin yarn as the percentage of PNF fibres increases. Also it is observed that there is preferential loss of PNF in carding, resulting in less PNF percentage in resultant yarn. The yarns with 70:30 Cotton: PNF (actual in yarn stage) was successfully spun and yarns were sized and woven into fabrics using loom. The fabrics have unique look and it will be useful to produce home textiles and apparels.

The Indian flax fibres were processed in very small scale in a commercial company in Eastern India which is the leader in flax processing. The fabric produced in small scale was found as good as that of produced from imported flax fibre. This preliminary small scale trial showed that yield is much lower (to the extent of 50%) during spinning operation. This is due to improper extraction of fibre and scutching of Indian flax fibre. The scutching was done using crude manual method which needs to be improved to get better yield of yarn from fibre.

Findings of experiment:

The results show that there is a very good possibility of producing high value textile products using Pine needles which are abundantly available as plant waste and can help improve the economy of Himalayan region. Also it will help in reduction of forest fire which is the cause of huge loss of human and animal life.

Flax fibre produced in India can replace the use of imported flax fibre, thereby, reducing import and generating income for the people living in the Himalayan region.

(iii) Project title : Development of air cleaner home textiles to reduce Indoor air pollution (Sponsored by Ministry of Textiles, Govt. of India)

Objectives :

- Understanding nature of air pollutions in the indoor places using primary and secondary data and preparing research design
- To evaluate various finishing chemicals/materials having characteristics to absorb/reduce air pollution
- To select suitable fabrics and apply selected finishing chemicals using various techniques
- To evaluate finished fabrics for various physico-chemical and performance properties
- To take field trial of developed fabric in actual practice and modify, if required

Research outcome :

- Detailed information of the air pollutants present in indoor air using primary and secondary data has been collected
- Identification of finishing chemicals required to reduce indoor pollution have been identified and procured
- Application of various finishing chemicals on fabric has been done.
- Trials of application of finishing chemicals have been done in large scale.
- Studies have been completed with identified chemicals which were used in different concentrations.
- Evaluation of treated fabric samples have been done for adsorption of air pollutant gases. Results have been encouraging.
- An apparatus to determine Air Pollutant Gas Adsorption Capability of Fabric has been designed and developed and patent has been filed (Refer Fig. 16).
- Project has been completed and report has been sent to Ministry of Textiles, Govt. of India.

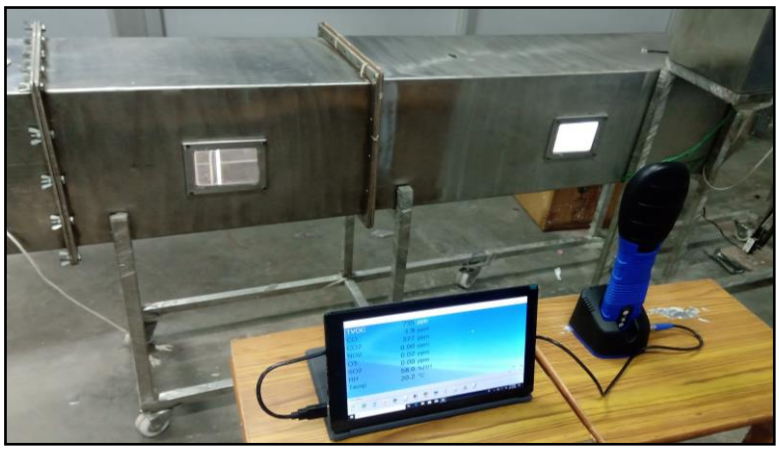


Fig.16: An apparatus to determine Air Pollutant Gas Adsorption Capability of Fabric

1.2 Ongoing projects

(i) Project title : Development of regenerated cellulosic fibres from Indian bamboo (Sponsored by Ministry of Agriculture & Farmers Welfare, Govt. of India)

Objectives :

- To collect data of all bamboo species available in India
- To collect bamboo of each species available in different part of India
- To Extract fiber from each type of collected bamboo
- To compare and study fiber property of each specie of bamboo fiber including silica content

- To develop a process for removing silica from extracted fiber
- Product development from the extracted fiber

Progress of work :

- Data regarding the bamboo production in different states of India and regarding bamboo varieties has been collected.
- Pulping unit has been setup.
- Bamboo pulping has been done.
- Microbiological analysis of bamboo chips and bamboo pulp has been done..
- Bamboo of different varieties procurement has been done and comparative study to find the optimum one for fiber production from Indian varieties has been done.
- Wet spinning machine has been commissioned.
- Developed regenerated fibres have been evaluated for chemical and physical properties.
  Refer Fig.17 to Fig.20.

Name of bamboo species		Name of bamboo species	
Bambusa Vulgaris		Bambusa Tulda	
Bambusa Balcooa		Dendrocalamus Strictus	

Fig. 17: Species of bamboo procured from Uttrakahd and Assam

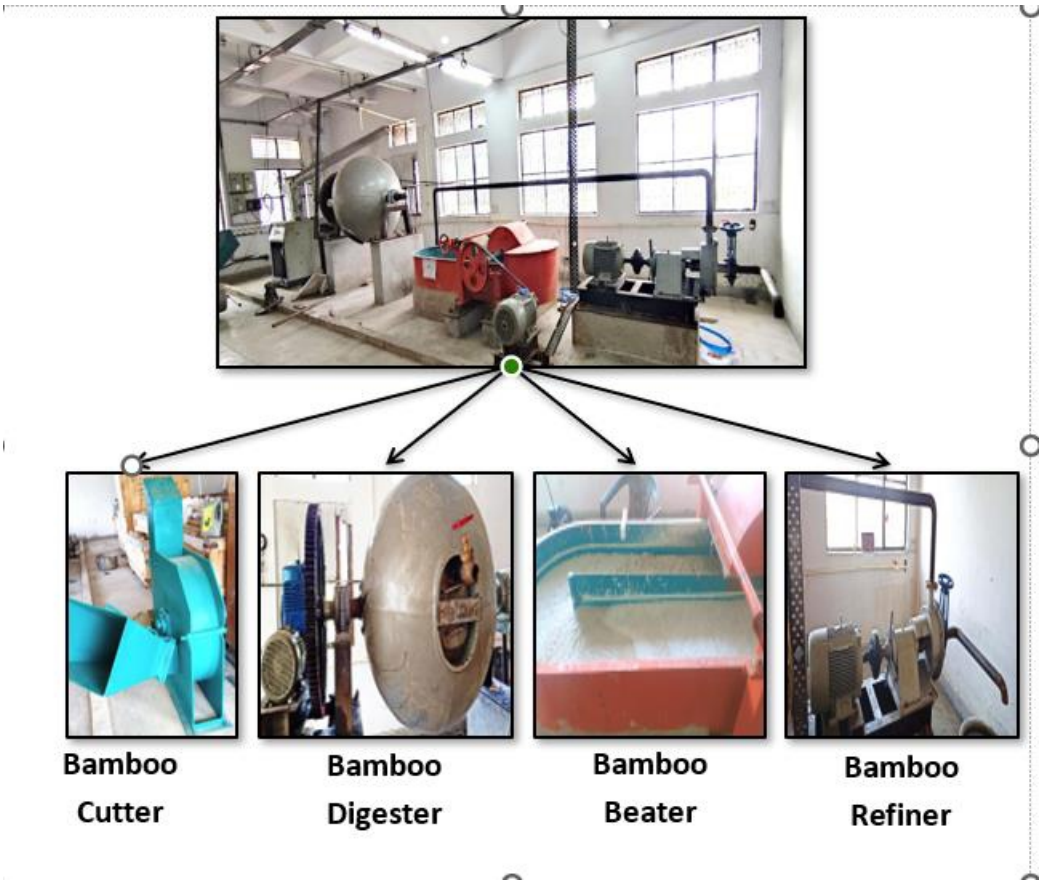


Fig.18: Pulping unit at NITRA

Fig.19: Wet Spinning Machine

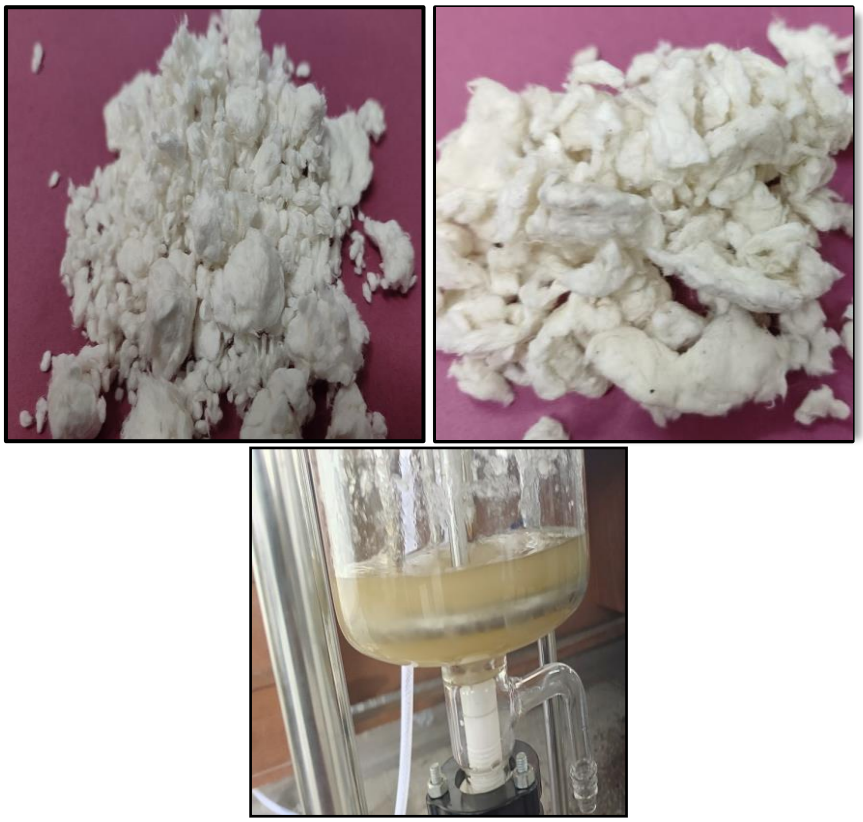


Fig. 20: Dissolvable bamboo pulp

(ii) **Project title** : Development of a molten metal splash resistance unique Jute blended work wear for steel foundry workers

Objectives :

- To develop or procure Jute and its blended fabrics having various weaves and weight
- To finish these fabrics with durable FR chemicals and their analysis
- To determine chemical, mechanical and safety performance properties
- To compare existing work-wear fabric with newly developed fabric for safety performance and other properties
- Techno-commercial feasibility through field trials in the user industry

Progress of work :

- Review of literature
- Procurement of yarn & chemicals
- Procurement of various softeners, Flame-Retardant chemicals
- Procurement of Existing FR protective fabric

(iii) Project title : Development of Jute composite for automotive acoustic insulation and other uses (Sponsored by National Jute Board, GoI)

Objectives :

- To design and develop composite material for automotive acoustic insulation
- To conduct trials in real life situation
- To standardize fibre component and process parameters for this specific use
- To attempt for use of jute non-wovens and composites in other automotive parts

Progress of work:

- Samples collected from the used vehicles and automotive workshops.
- Technical publications and literature related to acoustic textiles and automotive textiles were reviewed.
- Discussion with our industry partner for the initial development of the samples.
- Samples were tested for sound absorption and other physical characteristics such as weight per unit area, tensile properties etc.
- Preliminary samples have been developed.

2. INDUSTRY SPONSORED PROJECTS

2.1 Completed Project

(i) Development of FR knitted fabric for anti-flash hood for Indian Navy

(ii) Development of antibacterial and antifungal properties in cotton and lotus fabric

3. PROPOSED PROJECTS

Submitted to National Technical Textile Mission, Ministry of Textiles, Govt. of India:

Project titles:

- Cellulose based indigenous high Clo value and low density surface modified natural fibre for developing thermal layers of extreme cold weather clothing
- Development of Bio degradable and Sustainable Disposable Sanitary Napkin
- Development of indigenous Basalt fibre for high performance applications

Submitted to Deptt. of Science & Technology, Govt. of India:

Project title:

- Socio-economic development of SC/ST by providing training, technology and market to convert local resources to industrial products

CONSULTANCY SERVICES

Technical consultancy is another important aspect of NITRA's multifarious activities. NITRA provides assistance to the industry in the form of technical consultancy for resolving their operational problems. The areas of expertise where NITRA offers consultancy solutions are third party inspection, feasibility study, system certification, infrastructure set up, valuations, manpower rationalization, energy audits, water audit, inspection and product/process & design development etc.

Major areas of consultancy services offered during the period 2021-22 are given below:

Areas of Consultancies

- Third party inspection of blankets, T-shirts, Gabardine, Coat combat, Serge/BD, Woolen Jersey, Thermal vest, Angola shirtings, Cloth disruptive, Sleeping Bag, Under pant thermal, Full Body Protector, PPE Kits, Nycofabric, Cotton tape newar, Rucksack, Anklet Synthetics, Cloth Cotton drill, Light weight ground sheet, Coat parka, Mattresses etc.
- Energy audit of Dairy Farm
- Manpower Rationalization of Spinning Division
- Study on Dynamics of Social Auditing Process in the Global Apparel Supply Chain: From Indian Apparel industry
- Study of Process waste in Manufacturing blankets made out of Egyptian cotton
- Technical consultancy on Pashmina Yarn
- Technical evaluation of Process loss in a Madeup unit
- Evaluation of Reflective Safety Jacket and Vests
- Energy audit
- Green Energy audit
- Harmonics Study
- Preparation of Operating Manual for Ajrakhpur Hastkala Vikas Sangathan (CETP)
- Environment Laboratory Installation at Ajrakhpur Hastkala Vikas Sangathan (CETP)
- Energy audit of textile units of Varanasi Textile Cluster
- Power quality audit
- Study on performance assessment of card using new card clothing development
- Technical Feasibility due diligence study of a Dairy Firm
- Melange Yarn Development
- Revision of Technical Specifications for Undergarments
- Evaluation of High Visibility Warning Clothings for Design and Manufacturing Specifications

*Consultancy projects undertaken in the year 2021-22 are given in Annex-8.

TESTING SERVICES

Testing or quality evaluation is one of the most important activities in the entire value chain of textile and garment industry. NITRA offers a wide range of testing facilities for fibre, yarn, fabrics, garments, dyes, chemicals and effluent in its well equipped NABL accredited six laboratories i.e. Physical lab, Chemical lab, Heat & Flame Testing lab, Polymer & Technical Textiles lab, Eco lab and Environment lab. NITRA continues to emphasize on doing accurate evaluation and delivering time-bound test results to its clients.

PHYSICAL QUALITY EVALUATION LABORATORY

No. of Commercial Samples Tested: 2382

In addition to this, around 100 R&D samples were also tested.

Type of Samples Received:

Cotton, Polyester, Viscose, Nylon, Polypropylene, Jute, Bichhue Ghas, Hollow Fibres, Wool, Polyester wetting, Leaf & bark fibres, Silk, Cotton and Blended yarn, Sliver, Cord, Ropes, Filament yarn, Sewing threads, Industrial threads, Kite flying thread, Lycra belt, Tape, Cotton & Blended fabric. National flags, Canvas, Automotive fabrics, Laminated fabrics, T-shirts, Vest, Drawers, Biref, Blanket, Jersey, Serge, Sarees, Cardigan, Gloves, Mosquito net, Pillow, Quilt, Furnishing fabric, Socks, Jacket, Felton cloth, Carpet, Webbing, Towel, Bed sheets, Wool top, Mat, Rain coat, Garments, Protective, Non-woven fabrics, Lycra yarn, Topper pad, Scarf, Pile fabric, Felt, Rugs, Foam, Laminated foam fabric, Caps, Geo grid, Filter fabrics, 3 layer breathable fabric, Composites, Geo-textiles etc.

Type of Tests Conducted:

Fibre length, Denier, Strength, Tenacity, Crimp%, Fibre shrinkage, Fibre diameter, Fineness, Trash%, Neps/gm., Elongation, Cotton, Maturity, Fused Fibre, Yarn count, Yarn CSP, Twist, RKM, Hairiness, Uster Imperfections, Appearance Grade, Co-efficient of friction of yarn to yarn and yarn to metal surface, No. of filaments in yarn, Thermal shrinkage, Fabric/Garment's dimensional measurement, Thickness, GSM, Yarn count, Ends/picks, Coarse/Wales, Base/Biase, Fabric strength, Elongation, Tear & bursting strength, Stretch & Recovery, Puncture resistance, Seam strength/Seam slippage, Bond & Peel strength, Weave analysis, Stiffness, Abrasion, Pilling, Yarn on yarn abrasion, Yarn slub analysis, Crease recovery angle, Drape, Snagging, Pore size of filter media, Air permeability, Constant/variable load Elongation, Spirality in garments, Wool fineness, Fineness Grade of wool fibre, Fibre hollowness, Fabric streak analysis, Fabric sheet friction, Wide width tensile, strength, Blade cut resistance, Yarn/fabric type identification, Fabric defect analysis Resistance to penetration by synthetic blood/ Splash resistance for surgical mask; Differential pressure, mm H_2O/cm^2 for surgical mask etc.

CHEMICAL QUALITY EVALUATION (CQE), HEAT & FLAME LABORATORY (H&F) AND MICROBIOLOGY LAB

No. of Commercial Samples Tested: 3050

In addition to this, around 150 R&D samples were also tested.

Type of Samples received:

CQE: Fibres, Yarns, Fabrics, Garments, Technical Textiles (Protec h, Nonwoven, Automotive etc.), Dyes & Chemical Auxiliaries, PPEs/ Coveralls/ Shoe cover, Surgical Mask & Gowns etc.

H&F: Personal protective clothing, Upholsteries, Automotive fabrics, Floor coverings, Fabric for Railways etc.

MICROBIOLOGY: Fibres, Yarns, Fabrics, Garments, Technical Textiles (Protech, Nonwoven, Automotive etc.), Polymers, Helmets, Chemicals and Finishes etc.

Type of Tests Conducted:

CQE:

- Colour Fastness properties
- Wax Content/ Oil Content/ Blend composition etc.
- Total Colour difference, Yellowness/ Whiteness Index & Dye powder strength evaluation by Computer Colour Matching System/ UV - Spectrophotometer
- Various properties for automotive fabric
- Fluoroscent & reflective tape, Flammability fabric, Waterproof material
- Synthetic Blood Penetration-Fabric/ Coverall/ Shoe cover
- Flammability for surgical mask, etc.

H&F Lab:

Ease of ignition of vertically oriented specimen, Flame spread properties of vertically oriented specimen, 45^{o} (inclined) Flammability, Vertical flammability test, Horizontal flammability test, Limited flame spread test, Convective heat test, Radiant heat test, Molten metal splash test, Contact heat test, Impact of spatter test, Electrical resistance, High visibility, Ignitability of vertically oriented specimen, Flame spread vertically, Smoldering cigarette test, Match flame test PTTD, Oxygen index, Methanamine table test, Hot metal nut test, Vertically oriented specimen etc.

MICROBIOLOGY:

Antimicrobial Evaluation:

Antimicrobial Finishes on Textile materials: Assessment Staphylococcus aureus ATCC No 6538, - Klebsiella pneumonia ATCC No 4352; Antimicrobial Activity Assessment of Textile Materials: Parallel Streak method; Antimicrobial Activity Assessment of new carpet -Qualitative assessment/ Quantitative assessment; Antibacterial activity assessment of textile materials: Agar plate method; Determination of antibacterial activity of textile product; Measurement of antibacterial activity on plastics and other non-porous surface; Determination of antibacterial activity of textile product- Agar diffusion plate test; To

evaluate the antibacterial efficacy of antibacterial finished textile product; To determine the resistance to dry bacterial penetration; Resistance to dry microbial penetration Bacterial Filtration Efficiency etc.

Antifungal Evaluation:

To determine the degradability of textile materials-Part-1; To evaluate the susceptibility of textile specimen against fungal Chaetomium globsum-Part-2; To evaluate the susceptibility of textile specimen against fungal like Aspergillus niger.-Part-3; Standard practice for determining resistance of synthetic polymeric materials to fungi; Detection of mildew /rot proofness etc.

POLYMER & TECHNICAL TEXTILES LABORATORY

No. of Commercial Samples Tested: 761

Type of Samples received:

Coated / Laminated, Formed fabrics, Garments, Rubber, Plastic, Leather, Polymer products, Zipper, Slide fastener, Adhesives and Polishes, Buttons and Tapes, Canvas, Leather, Rubber, Plastic and Safety shoes, Composites, Medical Textiles, Geo-textiles, Automotive materials, Protective clothing, Wooden block, Rubber block etc.

Type of Tests Conducted:

Adhesion strength, Ash content, Bending resistance, Bound organic substances, Chromium content, Compression set, Adhesion tests for shoes, Cut growth, Degree of tannage, Differential number, Dimensional change, Flammability test, Smoke visibility test, Fire resistance, Flexing endurance, Hydrogen sulphide resistance, Ignitability test, Melt flow index, Nitrogen content, Proofing content, Resistance to damage by flexing, Polymer content, Stretch test of elastic tape, Tensile strength & elongation, Tear strength, Thermal conductivity, UV protection factor, Performance test on zipper, Water vapour permeability of leather. Seam fatique test, Toxicity index, FTIR, Melting point, Ash content, Crib test, Smoke visibility test, Toxicity index, Fire resistance test etc.

ECO LABORATORY

Number of samples analyzed: 98

Type of samples received:

Fabric, Yarn, Fibers, Thread, Garment, Carpet, Blanket, Bath Rugs, Rain Capes, Melt Sheet, Automobile Components, Research samples etc.

Type of analyses conducted:

- Carcinogenic Aromatic Amines released from Azo dyes
- Hazardous Substances- Cd, Pb, Hg & CrVI
- Free and released Formaldehyde
- Toxic Heavy Metals- Cd, Cu, Co, Cr, Hg., Ni, Pb, Zn etc.
- Other metals- Fe, Mn, Ca, Mg, Na, K, etc.

- Residual Chlorine
- Penta Chloro Phenol (PCP)
- pH of Aqueous Extract etc.

ENVIRONMENT LABORATORY

Number of samples analyzed: 70

Type of samples received:

Raw Water, Treated Water, De-mineralized Water, Drinking Water, RO Feed Water, RO Treated and Reject Water, UF Feed and Treated Water, Process House Water, Condensate Water, Industrial Effluents, ETP Inlet, Intermediate and Outlet water, STP Inlet and Outlet Water, Research and Consultancy Samples etc.

Type of analyses conducted:

- Physicochemical analysis of water including Color, Odor, Turbidity, pH, Conductivity, Total solids, TDS, TSS, Alkalinity, Hardness, Ca, Mg, Na, Cl, SO_4, NO_3, PO_4, HCO_3, CO_3, SiO_2, Fe, B, F, Residual Cl_2 etc.
- Drinking water parameters including bacteriological analysis (MPN Coliform/100 ml) and heavy metals like Cd, Co, Cu, Cr, Pb, Hg, Ni, Zn etc.
- Effluent parameters like pH, TDS, TSS, COD, BOD, O/G, SAR, NH_3, S, Cr, Res. Cl_2 and heavy metals etc .
- pH, Solids, Moisture content and Heavy Metals (Cd, Cu, Co, Cr, Hg., Ni, Pb, Zn etc.) in ETP Sludge etc.

New Clients Added in Testing Services:

M/s. Mangalam Ventures Ltd.; Faridabad; M/s. S.M. Exports, Kolkata; M/s. Contitech India Pvt. Ltd., Sonepat (Haryana); M/s. Ajit Fabrics, Chennai; M/s. Jalaram Enterprises, Ghaziabad; M/s. Nabco Microtech, Loni; M/s. Adhoc Creations, Ghaziabad; M/s. Rakesh Hosiery (U.P.); M/s. Bunkar Gramodyog Samiti, Aligarh; M/s. Sristi Trading, Jharkhand; M/s. Mahalaxmi Khadi gramodyog Sansthan, Saharanpur; M/s. Sarvodaya Khadi Ashram, Aligarh; M/s. Suhail Textiles, Meerut; M/s. JSK Enterprises, New Delhi; M/s. Chhattisgarh Gramodyog Garments, Bhilai (Chhatisgarh); M/s. QVC Certification Services Pvt. Ltd., Ambala; M/s. Global Enterprises, New Delhi; M/s. Traditions and Modernity, Noida; M/s. Live Green Clothing Co. Ludhiana; M/s. M.S. Textiles, Muradnagar; M/s. Kaulini Industries Pvt. Ltd., Kolhapur; M/s. Manuzir Fabricator, Delhi; M/s. Haryana Khadi Gramodyog Karnal; M/s. Aerocom Cushios Pvt. Ltd., Nagpur; M/s. Saraf Gartex Ltd., Jaipur; M/s. Madaan INC-Delhi; M/s. Vidhya Corp., Delhi; M/s. Tapovan Khadi Gramodyog, Delhi; M/s. OM Shakti Textiles, Panipat; M/s. Vinoba Gramodyog Vikas Sansthan, Banda; M/s. London Luxuway (Best Buy India), Panipat; M/s. Vega Auto Accessories Pvt. Ltd., Belgaun; M/s. Tirupati Khadi Gramodyog Samiti, Panipat; M/s. Harwali Khadi Gramodyog Aashram, Bijnore; M/s. Bennet Pharmaceuticals Ltd., Himachal Pradesh; M/s. New Age Lamination Pvt. Ltd., Alwar; M/s. Saify Healthcare and Medi Devices India Pvt. Ltd., Indore; M/s. Daoming Reflective Material India Pvt. Ltd., Gurugram; M/s. OM Namah Shivaya Enterprises, Baddi; M/s. Adventure Compass, Dehradun; M/s. Kuhu Enterprises, Dehradun; M/s. M.N. Fashion, Ludhiana; M/s. Glorious

Industries, Mumbai; M/s. Khadi Gramodyog Vikas Mandal, Dhampur; M/s. Krishna Metallurgical Laboratories Pvt. Ltd., Gurugram; M/s. Mishti Industries Pvt. Ltd., Gwalior; M/s. Krishna Sale, Delhi; M/s. SPN Rugs, Panipat; M/s. Sushila Gramodyog Sansthan, Ghaziabad; M/s. Avadh Yuva Kalyan Gramodyog, Moradabad; M/s. Kaladhari Handloom Udyog, Muradnaar, Ghaziabad; M/s. Gayatri Khadi Avem Gramodyog Samiti, Karnal; M/s. Kshetriya Khadi Ashram; M/s. Bijnor, Bhikshu Garments, Delhi; M/s. Sarvodaya Khadi gramodyog Sangh, Karnal; M/s. Mahila Gramodyog Mandal, Ambala; M/s. Khadi Udyog Jathlana, Ambala; M/s. Footwear (Klick) India Pvt. Ltd., New Delhi; M/s. Novex Industries, New Delhi; M/s. Knitwell Industries, Gurgoan; M/s. Krishna Sales, East Delhi; M/s. Adventure Compass, Dehradun; M/s. Rehman Builders Pvt. Ltd.; M/s. ALPS, Industries; M/s. K.I.E.T. Group of Institutions; M/s. IMT Ghaziabad; M/s. Jalaram Enterprises; M/s. Orden Platz India Pvt. Ltd.; M/s. Skylrk Dyeing Pvt. Ltd. ; M/s. Delhi Agricultural Marketing Board; M/s. Jindal Fibers Pvt. Ltd. ; M/s. Dimond Varun Thread Mills Pvt. Ltd.; M/s. Classic Silvocrafts; M/s. Compat Equipment; M/s. Title Products Pvt. Ltd.; M/s. Punjab Wool Syndicate; M/s. Mozart H.R. Fabriks Pvt. Ltd.; M/s. Pulkit Prints; M/s. Vidhi Exports India; M/s. Vin Corporation; M/s. Mahaveer Udyog Textile ; M/s. Marco Industries; M/s. Bajaj Dyechem; M/s. Prachi International;

Participation of Labs in Inter-lab and Proficiency Test Program:

- NITRA, Ghaziabad
- BTRA, Mumbai
- SASMIRA, Mumbai
- TRADC, Bharuch
- SITRA Coimbtore
- SCSENIRO, Rajasthan
- MANTRA, Surat
- SPECTRO, Greater Noida
- ATHARWA, Noida
- AROMA, New DelhiWRA, Mumbai (Thane)
- RELIANCE, Gujarat
- ATIRA, Ahmedabad

TRAINING SERVICES

Keeping in view the ever increasing demand for trained manpower in textile and garment industry, NITRA offered several job-oriented training programs in regular and distance learning mode (for working professionals) to help the textile and apparel industry source trained manpower. Regular programs are meant for young graduates and 12th Pass students aspiring to make their career in the garment industry. These programs cater to meet the needs of different departments such as Production, Quality Control, Merchandising and Industrial Engg.

Job-Oriented short term programs:

Since 2002, NITRA has been conducting job-oriented professional training programs for the textile and apparel sector. During the year 2021-22, following full time programs were offered. A total of 54 students were admitted in these programs. Details are given below.

Sl. No.	Program Title	Min. Qualification	Duration	No. of students trained
1	Fashion Marketing and Merchandising (FMM)	Graduation/ Diploma	12 months	38
2	Apparel Design & Quality Control (ADQC)	12th Pass	12 months	08
3	Apparel Production and Industrial Engg (APIE)	12th Pass	12 months	08

Distance Learning Programs for Working Professionals:

Since 2003, NITRA is conducting distance learning programs for the working executives of textile and apparel sector. During the year 2021-22, following distance learning programs were offered.

S.No	Name of the Program	Duration	No. of persons trained
1	Textile Technology & Management (TTM -DLP)	12 months	18
2	Apparel Manufacturing and Merchandising (AMM-DLP)	12 months	15
3	Quality Evaluation of Textiles and Garment (QETG-DLP)	12 months	13

Contact sessions are conducted twice in a month on alternate Sundays in NITRA campus.

Summer Training Programs:

Every year, NITRA conducts one month summer training programs for the students of textile universities, colleges and polytechnics pursuing Post Graduation/Graduation/ Diploma level courses. During the year 2021-22, summer training programs were offered in following areas in Virtual Mode:

S. No	Title	No. of participants
1	Textile Manufacturing and Testing (TMT)	06
2	Apparel Manufacturing and Merchandising (AMM)	36

A total of 42 students of following institutes/organizations were trained in the above programs.

S. No	Name of the Institute/Organizations
1	Birla Corporation Limited, WB
2	CCS Haryana Agricultural University, Hisar
3	College of Community Science, Punjab Agricultural University, Ludhiana
4	College of Community Science, UAS, Dharwad, Karnataka
5	GBPUAT, Pantnagar
6	Government College of Engineering and Textile Technology, Berhampore
7	Hamidia Girls Degree College, Prayagraj
8	IIM, Kozhikode
9	Jawaharlal Nehru Government Engineering College (Sundernagar)
10	Kumaun University
11	Park College of Engineering & Technology
12	Rural Engineering College, Hulkoti
13	The Maharaja Sayajirao University of Baroda
14	University of Allahabad
15	Vishveswaraya Technological University

Webinars:

In view of COVID- 19 pandemic, NITRA conducted a series of webinars for the professionals working in textile and apparel industry, faculty members from academia and the student community in the months of May and June 2021.

The webinars were attended by close to 100 senior and middle management level professionals working in textile and apparel industry. Speakers for the webinar included senior experts from NITRA and Industry.

S.No.	Topic	Speakers
1	Webinar on Quality Assurance in Apparel Manufacturing	Vivek Agarwal Shweta Saxena Geeta Sharma
2	Webinar on Shade Variation in Textile Fabric Processing, Root Cause Analysis & Rectification	Pankaj Kumar Dr. Nidhi Sisodia
3	Webinar on Quality Gate Effectiveness in a Textile Unit	Pankaj Kumar S. K. Som (Raymond)
4	Webinar on Applications of Industrial Engg. Techniques for Productivity Measurement and Improvement	Vivek Agarwal Shweta Saxena

Placements of Short term Students, Batch 2020-21

A total of 09 garment and home textiles export houses and buying houses recruited NITRA students. List of units where the students got placed is given below.

S.No	Name of the Company
1	Alps Industries, Sahibabad
2	C & R Textiles, Noida
3	CTA Apparels, Noida
4	Emar Design, Delhi
5	International Sourcing Co, Noida
6	Orient Fashions, Noida
7	Paramount Products, Noida
8	RMX Joss, Greater Noida
9	Tandi, Noida

Starting salary offered varies between Rs. 1.44 lac and Rs. 1.92 lac per annum.

NITRA Technical Campus: The Academic Wing to Support Training Activities

NITRA Technical Campus was established during 2011-12 for conducting AICTE, MHRD approved and AKTU, Lucknow affiliated B. Tech. programs. It provides students a unique opportunity to undergo comprehensive training on world class facilities, all available under one roof, to make them industry ready.

Placement of sixth batch of B. Tech. students of NITRA Technical Campus has been very impressive. Till 31st March, 2022, 42 students of Textile Technology, Textile Chemistry and Computer Science & Engg. Branches have been placed in renowned companies like M/s. Brij Design, M/s. Tata Consultancy Services (TCL), M/s. Innobit Systems (P) Ltd., M/s. Bureau Veritas, M/s. Chelsea Mills, M/s. Avanti Overseas, Noida, M/s.Star Safety Hub, Faridabad, M/s. Vardhman Textiles Ltd., M/s. Nahar Industrial Enterprises, M/s. Youngman Woollens Pvt Ltd, M/s. Shahi Exports, M/s. Mount Blue Technologies Pvt. Ltd., M/s. Planetcast Media Services Ltd., M/s. The Unified Cloud (P) Ltd., M/s. Control Case International (P) Ltd., M/s. Ingeuity Gaming, M/s. HIKE Education, M/s. Mobiloitte Technologies India Pvt. Ltd., M/s. ProAscend Consulting Pvt Ltd., M/s. Wipro, M/s. Datopic Technologies Pvt. Ltd.

Please refer Annex-7 for training program details.

Please refer Annex-13 for placement details of NITRA Technical Campus (NTC) students.

LIBRARY AND INFORMATION SERVICES

NITRA library is enriched with printed and digital resources. It has dedicated computers to provide on-line access to library resources.

Resources

The library has developed an adequate collection of Books, Journals, Reports, Thesis and Bound Volume Journals with specialized focus on textiles and allied subjects. The collection is as under:

Books	9590
Journals	24
(For list of journals refer Annex-11&12)	
Project reports	253
Thesis (M.Sc./Ph.D., B.Tech - CSE/TT/TC)	173
Journals (Bound Volumes)	4954

Library Services

***Online Public Access Catalogue (OPAC)*:**

- Library collection is computerized and the online catalogue provides bibliographic information about 10,000 holdings of books, journal volume (bound), thesis, project reports etc. of the library
- Online Public Access Catalogue informs users about new books and journals added to the library collection
- Members can check details of the borrowed books
- Wi-Fi networking provides its users, access to internet

***Photocopying Services*:**

Photocopy of the library documents are made available mainly for academic purpose.

NITRA has taken up Institutional Membership of:

- Bureau of Indian Standards, New Delhi
- The Textile Institute, Manchester

Centre for Academic Partnership (CAP)

The library continues to promote its academic interaction with academic institutions by making its resources and services available under “Centre for Academic Partnership” scheme. Ten Institutions have become the members of library so far.

New Arrivals of Books at Library

1. New Product Development in Textiles Edited by L Horne.
2. Textile and Clothing Design Technology Edited by Tom Cassidy and Parikshit Goswami
3. Flame Retardant for Textile Materials By Asim Kumar Roy Choudhury
4. Textile Design : Product and processes By Michael Hann
5. Fibre to Smart Textiles: Advances in Manufacturing Technologies and applications By Asis Patnaik, Shweta Patnaik
6. Natural Fibre Textile Composite Engineering By Magdi Ei Messiry
7. The Pashmina By Sailen Kumar Choudhuri
8. Industrial Engineer's Digest : Learn, Practice and Improve Factory Performance By Prasanta Sarkar
9. AATCC Technical Manual of International Test Method and Procedure (PDF) by AATCC
10. SITRA Norms for Textile Mills by SITRA
11. Green Chemistry for Sustainable Textiles : Modern design and approaches By Nabil Ibrahim and Choudhary Mustansar Hussain
12. Entrepreneurship by Rajeev Roy
13. Text Book of Project Management by P. Gopalakrishnan & V. E. Roma Moorthy
14. Let Us Python by Yashwant Kanetkar & Aditya Kanetkar
15. Quantitative Aptitude by Dr. R. S. Agarwal
16. Introduction to Artificial Intelligence by Rajendra Akerkar

IMPORTANT EVENTS AND HAPPENINGS DURING 2021-22

NITRA Organized series of webinars for industry

NITRA organized four webinars namely (1) Quality Assurance in Apparel Manufacturing (2) Shade variation in textile fabric processing and root cause analysis (3) Quality Gate effectiveness in a textile unit and (4) Application of Industrial Engineering Techniques for Productivity Measurement and Improvement during May-June, 2021. Webinars were attended by close to 100 top and middle management professionals from industry and academic institutions.

NITRA's 45th Annual General Meeting Held

The 45th Annual General Meeting (AGM) was held on 25th September 2021 at NITRA Campus, Ghaziabad. The members met to form NITRA's Council of Administration for the year 2021-22. They have unanimously consented to continue with the existing leadership team for the year 2021-22. As a result of that, Mr. Dinesh Nolkha, MD, Nitin Spinners Ltd. will be continuing his charge as the Chairman of NITRA. Similarly, Sh. Raj Kumar Jain, MD, Zonac Knitting Machines (P) Ltd. and Sh. Vidit Jain, Joint. MD, Pasupati Spg. & Wvg. Mills Ltd. will also be continuing as Dy. Chairman and Vice Chairman of NITRA respectively. The Chairman and his team thanked everybody while taking over the charge for the second consecutive time.

Long staple natural fibre pilot plant Inaugurated at NITRA

A Long Staple Natural Fibre Pilot Plant at NITRA was also inaugurated on 25th September, 2021. Hon'ble Chairman of NITRA Sh. Dinesh Nolkha, MD, Nitin Spinners Ltd. performed the Ribbon Cutting Ceremony along with Sh. Raj Kumar Jain, Dy. Chairman, NITRA & MD, Zonac Knitting Machines (P) Ltd. and a host of dignitaries. Also present on the occasion were other council members, noted academicians and industry stalwarts such as Sh. Sandeep Hora, Prof. R. Chatopadhyay, Sh. R. C Kesar, Sh Arindev Sarpal, Sh. Tarun Gaur, Sh. Gaurav Nagpal, Sh. Rajeev Agarwal, and Sh. Santosh Singh. Dr. Arindam Basu, Director General, NITRA, took invitees to a round of the new plant and demonstrated some hi-tech machines that are installed. These machines have been procured under the Ministry of Textiles sponsored R&D project, 'Development of value added products from different fibres produced in Himalayan region'.

The main function of this plant is to spin yarns from long fibres such as Flax, Hemp, Ramie etc. This system will help entrepreneurs in exploring potential in long fibers like flax, hemp, ramie, nettle etc. This spinning system consists of sophisticated machines such as hackling machine for short fiber removal and individualization of fiber, a series of 5 draw frames for parallelization and drafting, roving frame for drafting and twisting, ring frame for final yarn conversion. This whole set up is established in NITRA to promote innovation and providing the right facilities and support to textile industry.

Virtual Research Advisory Committee Meeting at NITRA

NITRA organized its virtual Research Advisory Committee (RAC) meet on 4th December 2021 under the chairmanship of Sh. Vidit Jain, Vice Chairman, NITRA Council of Administration and Joint MD, Pasupati Spg. & Wvg. Mills Ltd. Due to Covid 19, the members met virtually. Dr. Arindam Basu, Director General welcomed the participants whilst the Chairman delivered a brief key-note address and inaugurated the program. This year a total of 11 projects that included completed, on-going and proposed were taken up for presentations and discussions. RAC members and special invitees had intensive interactions during presentations, suggested many fruitful points and shared ideas to set a guideline for future projects. Since NITRA has always been working for the industry, hence RAC meet is held to determine NITRA's direction for conducting R&D that would benefit the industry. NITRA is thankful to the RAC members for participation in the meeting and offering valuable suggestions.

NITRA Participates at Techtextil India 2021, Mumbai

NITRA showcased its prominent developments particularly in the field of technical textiles, commercialization, publications and other activities in the 8th edition of Techtextil India 2021 held at Bombay Exhibition Centre Goregaon, Mumbai from 25th to 27th November 2021. It was organized by Messe Frankfurt Exhibitions India Pvt Ltd. Dr. Arindam Basu, DG; Dr. M.S. Parmar, Director (Labs) and Mr. Vineet Tyagi, Senior Manager – Business Development participated in the Techtextil India 2021 exhibition.

Many big names including Dr. M.K. Talukdar, Kusumgar Corporate; Mr. Sufal Som, Director, Raymond Ltd.; Mr. A.K. Pal, General Manager, ICC; Mr. Anjani Prasad, MD, Archroma, dignitaries from Aditya Birla Group, Welspun India, LNB Group and other renowned companies visited NITRA stall and have discussions with DG NITRA and his team on technical textiles and NITRA's developments.

Hon'ble Governor of U.P. Honours NITRA Scientist and NITRA Technical Campus Student

It is a matter of great pride for NITRA that Hon'ble Governor of Uttar Pradesh Her Excellency Smt. Anandiben Patel conferred Ph.D degree to Dr. Nidhi Sisodia, a scientist with NITRA as well as a faculty of textiles in its academic wing NITRA Technical Campus. On the same occasion, the Hon'ble Governor also conferred NITRA Technical Campus student Shivangi Chaudhary (Textile Technology branch) the B.Tech degree. Shivangi has clinched the coveted silver medal in Carpet & Textile Group for the year 2017-21.

It is also very satisfying that the institute students have brought this laurel for the fifth consecutive time! The degrees and medal were conferred during the 19th AKTU Convocation Ceremony at Lucknow on 16th Dec.'21. The college management congratulates both of them for making the institute proud.

BIS organizes a Session on Standards Development and Standardization in the field of Medical Textiles

NITRA in collaboration with Bureau of Indian Standard organised a special session on "Standards Development and Standardization in the field of Medical Textiles" for the students of its academic wing NITRA Technical campus. The session was conducted by Mr. J. K. Gupta, Head Textiles and Mr. Dharmbeer, Scientist-C, from Bureau of Indian Standards (BIS), New Delhi on 18th Feb. 2022 at NTC campus. The session was attended by B.Tech Textile Technology students of 2nd, 3rd and final year.

The session covered in-depth understanding of importance of standards, types of standards, stages of standard development, classification of medical textiles (Meditech), their importance & specifications, and standards formulated by BIS on Meditech. The program was highly informative and interactive in nature and the students found it very useful and interesting.

Virtual Session of Master Class on CAMPUS-PRENEUR by Dr. Vivek Bindra

Dr. Vivek Bindra, the internationally renowned Business-cum-life coach conducted a 2-hour Virtual Session for the students of NITRA TECHNICAL CAMPUS on 16th Feb. 2022 on the topic CAMPUS - PRENEUR. During the 2-hr long session he dealt with wide range of topics on Entrepreneurship. He explained the concepts of Entrepreneurship citing large number of case studies from corporate world which made the entire session very lively and interesting. Close to 200 students attended the session. Overall it was a highly motivating session for the students.

NITRA Celebrates International Women's Day

NITRA organized a webinar at NITRA on "Women Empowerment in Textile and Apparel Industry" on the eve of International Women's Day on March 8, 2022.

"If you have built castles in the air, your work need not be lost, that is where they should be. Now put the foundations under them". Mrs. Mridula Jain, Managing Director, Shingora Textiles Limited was invited as eminent speaker to resonate this thought and inspire our students.

Mrs. Mridula had shared her entrepreneurial journey, where she started with 8 handlooms and today how she is able to transform Shingora Textiles as a leading exporter in Textile Industry. She is an active contributor to several NGOs for the girl child development and had won several prestigious awards for her noble work.

She emphasized on the how gender equality should be respected within the organizations by illustrating some case studies from her own experience and guided the students to self administered and ethically capitalize the opportunities they come across. She was kind enough to answer many questions to keep the webinar interactive.

At the end of the Webinar, Dr. Arindam Basu, Director General, NITRA had expressed his gratitude for the valuable time and her motivational talk with the students and faculty members of NITRA Technical Campus.

POWERLOOM SERVICE CENTRES

Ministry of Textiles, Government of India, has established 45 Power Loom Service Centres across the country. High priority is given to these projects as these centres help in local entrepreneurship development, employment generation and economic development of states and country.

Out of these 45 centres, administrative control of 8 Power Loom Service Centres (PLSCs) is assigned to Northern India Textile Research Association, Ghaziabad. These Centres are functioning at the following locations:

1. In Uttar Pradesh
   (i) Meerut
   (ii) Kanpur
   (iii) Tanda
   (iv) Gorakhpur
   (v) Varanasi
2. In Haryana - Panipat
3. In Punjab - Ludhiana
4. In Rajasthan - Bhilwara

These centres are serving decentralised power loom sector to achieve the objectives as given below:

OBJECTIVES OF POWER LOOM SERVICE CENTRES

(1) To impart practical training to weavers for improving their efficiency, skill and productivity. Side by side, quality up-gradation and product-mix diversification are also emphasized, keeping in view of the present need of national and international markets

(2) New design development and diversification of power loom products for improving the economy and scale of operation of power loom weavers

(3) To provide testing facilities to decentralised power loom sector and make them aware of need and importance of testing required for meeting forthcoming changes in reference to the globalisation trends

(4) To provide technical consultation facilities related to operational difficulties faced by powerloom weavers

(5) To co-ordinate developmental activities of powerloom industry with state Governments

(6) To motivate decentralised power loom industry towards upgrading / modernising their units and take advantage of government schemes, viz. TUFS, Group Workshed Scheme and Weaver's insurance etc. and organize seminars/workshops

(7) To collect and compile statistical information of power loom industry

ACTIVITIES

In order to achieve above mentioned objectives, Power Loom Service Centres carried out following activities during the year 2021-2022:

1.	Liaison visits/survey carried out (No. of units covered)	-	565
2.	Technical assistance/consultations provided	-	85
3.	Design developed	-	26
4.	Samples tested	-	2811
5.	No. of persons trained	-	288

TEXTILE TESTING LABORATORIES

All eight Power Loom Service Centres are having testing facilities capable to meet basic requirements of the decentralised power loom sector in normal course. In addition to it, special testing facilities are also available at following four centres. These centres are:

1. Meerut (Uttar Pradesh)
2. Panipat (Haryana)
3. Bhilwara (Rajasthan)
4. Varanasi (Uttar Pradesh)

At these locations, samples related to fibre, yarn, fabric and chemical based requirements were tested. Details of these testing assignments carried out during the year are mentioned below :

Activity	Varanasi	Meerut	Panipat	Bhilwara	Kanpur	TOTAL
No. of samples tested	116	144	1266	1092	193	2811

COMPUTER AIDED DESIGN (CAD) CENTRES

As additional feather in the cap, there are five CAD centers, which are located at Panipat, Bhilwara, Ludhiana, Tanda and at head office, Ghaziabad. The activities of CAD centers functioning under administrative control of NITRA are as mentioned below:

Activity	Tanda	Bhilwara	Total
No. of Designs developed	22	4	26

At Power Loom Service Centre, Tanda, Computer Aided Dobby and Jacquard design systems are available where as at CAD Centre, Ghaziabad dobby, jacquard, printing and embroidery design systems are available.

These CAD Centres develop new designs and provide training to the person working in decentralised Power Loom Sector.

At the 45th AGM (L-R): Dr. Arindam Basu, Director General, NITRA,
Sh. Dinesh Nolkha, Chairman, NITRA and Sh. Raj Kumar Jain, Dy. Chairman, NITRA

Sh. Dinesh Nolkha, Chairman, in company with Sh. Raj Kumar Jain,
Dy. Chairman inaugurates Long Staple Natural Fibre Pilot Plant at NITRA

Sh. Raj Kumar Jain, Dy. Chairman, operates a machine at Long Staple Natural Fibre Pilot Plant in presence of Dr. Arindam Basu, Director General, Sh. Dinesh Nolkha, Chairman, Dr. R. Chattopadhya, Prof., IIT, Delhi and other visitors

Sh. Sandeep Hora, CEO Aeronav Safety Appliances operates a machine at Long Staple Natural Fibre Pilot Plant while Director General, Chairman and Dy. Chairman, NITRA look on

ANNEXES

ANNEX– 1

MEMBERS OF THE COUNCIL OF ADMINISTRATION 2021-2022

1.	Shri Dinesh Nolkha (Chairman)	Managing Director Nitin Spinners Ltd. 12, Badal Textile Market, Pur Road Bhilwara - 311 001 (Raj.)
2.	Shri Raj Kumar Jain (Deputy Chairman)	Managing Director Zonac Knitting Machines Pvt. Ltd. D-1, D-2, Site B, Surajpur Industrial Area Greater Noida – 201 306 Distt. Gautam Budh Nagar
3.	Shri Vidit Jain (Vice Chairman)	Jt. Managing Director Pasupati Spg. & Wvg. Mills Ltd. 127, 128 Tribhuvan Complex Nehru Place, Mathura Road Ishwar Nagar New Delhi - 110 065
4.	Shri S.K. Kapoor	Managing Director Surya Processors Pvt. Ltd. 619, Bisrakh Road, Village Chhapraulla, Distt. Ghaziabad - 201 001
5.	Shri Sanjay Kumar Jain	Managing Director T.T. Ltd. 879, Master Prithvi Nath Marg Opp. Ajmal Khan Park, Karol Bagh New Delhi - 110 005
6.	Shri Ramesh Kumar Jain	Chairman-cum-MD Pasupati Spg & Wvg Mills Ltd. 127, 128 Tribhuvan Complex Nehru Place, Mathura Road Ishwar Nagar New Delhi - 110 065
7.	Shri R.L. Nolkha	Chairman Nitin Spinners Ltd. 16-17 KM Stone, Chittor Road Hamirgarh – 311 025 Bhilwara (Rajasthan)
8.	Shri H.M. Vashisth	Executive President Sutlej Textiles & Industries Ltd. (Unit: Rajasthan Textile Mills) Pachpahar Road Bhawanimandi - 326 502 (Raj.)

9.	Shri S.N. Modani	Managing Director & CEO Sangam (India) Ltd. Atun, Chittorgarh Road Bhilwara – 311 001 (Raj.)
10.	Shri Sanjay Garg	President – NITMA Managing Director Longowalia Yarns Ltd. 43, Mall Enclave, Civil Lines Ludhiana – 141 012 (Punjab)
11.	Shri Mukesh Kumar Tyagi	Vice President – NITMA Director BST Textile Mills Pvt. Ltd. 309, 3rd Floor, Woodrow Building Veera Desai Road Mumbai – 400 023 (Maharashtra)
12.	Shri Rajiv Garg	Managing Director Garg Acrylics Ltd. Kanganwal Road, P.O. Jugiana Ludhiana – 141 120 (Punjab)
13.	Representative	NTC Ltd. Core IV, Scope Complex 7, Lodhi Road, New Delhi – 110 003
14.	Representative	NTC Ltd. Core IV, Scope Complex 7, Lodhi Road, New Delhi – 110 003
15.	Dr. S.K. Tiwari	Sr. Principal Scientist Council of Scientific and Industrial Research Anusandhan Bhawan, 2, Rafi Marg New Delhi – 110 002
16.	Shri Pratik R. Bachkaniwala	Chairman, TMMA (I) & Managing Director Palod Himson Machines Pvt. Ltd. B-102, International Trade Centre Majuragate, Surat – 395 001
17.	Dr. Arindam Basu	Director General NITRA Sector 23, Raj Nagar Ghaziabad – 201 002

18.	Shri Pragnesh Shah	Director Ahmedabad Textile Industry's Research Association P.O. Ambawati Vistar Ahmedabad – 380 015 (Gujarat)
19.	Dr. Prakash Vasudevan	Director The South India Textile Research Association 13/37, Avanashi Road Coimbatore – 641 014
20.	Dr. T.V. Sreekumar	Director The Bombay Textile Research Association Lal Bahadur Shastri Marg Ghatkopar (West) Mumbai – 400 086
21.	Chairman/Addl. Secretary General	Apparel Export Promotion Council Apparel House, Institutional Area Sector 44 Gurgaon - 122 003 (Haryana)
22.	Prof. R.S. Rengasamy	Professor & Head Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
23.	Dr. S. Sunanda	Secretary General CITI, 6th Floor, Narain Manzil 23, Barakhamba Road New Delhi – 110 001
24.	Dr. R.K. Gaur	Sr. Vice President (Corporate Affairs) Ginni Filaments Ltd. D-196, Sectr-63 Noida – 201 307
25.	Shri Ashish Bagrodia	Chairman & Managing Director Winsome Textile Industries Ltd SCO 191-192, Sector 34 A Chandigarh – 160 022
26.	Shri Sandeep Hora	Partner/CEO Aeronav Industrial Safety Appliances C-36, 3rd Floor, Panchsheel Enclave New Delhi – 110 016

27.	Shri Sanjay Gulati	Managing Director Growel Impex Pvt. Ltd. E-16, Greater Kailash Part-II New Delhi – 110 048
28.	Prof. Manjeet Jassal	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016
29.	Prof. Ravishankar Chattopadhyay	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
30.	Dr. J.V. Rao	Former DG & Advisor – NITRA No.2, Second Street Bakthavatchalam Nagar, Adyar Chennai - 600 020
31.	Shri R.C. Kesar	PNC 024 The Pinnacle DLF City Phase V Sector 43 Gurgaon - 122 009 (Haryana)
32.	Shri Dilip Gianchandani	Country Manager, India The Wool Mark Company 806, 8th Floor, C wing, One BKC Bandra Kurla Complex Bandra East Mumbai – 400 051
33.	Shri Pawan Mangal	Sr. Vice President (Spg.) Banswara Syntex Limited Banswara Syntex Staff Colony Qtr. No. A-5, Industrial Area Dahod Road, Banswara - 327 001
34.	Shri Rajeev Agarwal	CEO Geo Sys India Infrastructures P. Ltd. C-56A/28, Sector-62 Noida – 201 309 (U.P.)
35.	Shri L.N. Jhunjhunwala	LNJ Bhilwara Group Bhilwara Towers A-12 Sector-1 Noida – 201 301

36.	Shri Sharad Jaipuria	Chairman & Managing Director Ginni International Ltd. 2nd Floor, Shanti Chamber 11/6B, Pusa Road New Delhi – 110 005
37.	Shri Shishir Jaipuria	Managing Director Ginni Filaments Ltd. H-6, Sector-63 Noida – 201 301
38.	Dr. Rikhab Chand Jain	Chairman T.T. Limited 879, Master Prithvi Nath Marg Opp. Ajmal Khan Park, Karol Bagh New Delhi – 110 005
39.	Representative	Federation of Hosiery Manufacturers' Association of India Metro Towers, 8th Floor 1, Ho Chi Minh Sarani Kolkata – 700 071
40.	Representative	The Cotton Corpn. of India Ltd. Kapas Bhawan, Plot No. 3/A Sector-10, CBD – Belapur Navi Mumbai - 400 614

ANNEX – 2

MEMBERS OF THE FINANCE & ADMINISTRATIVE SUB-COMMITTEE 2021-2022

1.	Shri Raj Kumar Jain (Chairman - FAC)	Managing Director Zonac Knitting Machines Pvt. Ltd. Plot No.18&19, Ecotech Part-1 D-2, Site-B, Surajpur Industrial Area Greater Noida – 201 306 Distt. Gautam Budh Nagar
2.	Shri Dinesh Nolkha	Managing Director Nitin Spinners Ltd. 12, Badal Textile Market Pur Road Bhilwara - 311 001 (Raj.)
3.	Shri Vidit Jain	Jt. Managing Director Pasupati Spg. & Wvg. Mills Ltd. 127, 128, 1st Floor, Tribhuvan Complex Ishwar Nagar Nehru Place, Mathura Road New Delhi - 110 065
4.	Shri S.K. Kapoor	Managing Director Surya Processors Pvt. Ltd. 619, Bisrakh Road Village Chapraula Distt. Ghaziabad - 201 001
5.	Shri Sanjay Kumar Jain	Managing Director T.T. Ltd. 879, Master Prithvi Nath Marg Opp. Ajmal Khan Park, Karol Bagh New Delhi - 110 005
6.	Shri Ramesh Kumar Jain	Chairman-cum-MD Pasupati Spg & Wvg Mills Ltd. 127, 128, 1st Floor, Tribhuvan Complex Nehru Place, Mathura Road Ishwar Nagar New Delhi - 110 065
7.	Shri R.L. Nolkha	Chairman Nitin Spinners Ltd. 16-17 KM Stone, Chittor Road Hamirgarh – 311 025 Bhilwara (Rajasthan)

8.	Shri Shishir Jaipuria	Managing Director Ginni Filaments Ltd. H-6, Sector-63 Noida – 201 301
9.	Dr. Rikhab Chand Jain	Chairman T.T. Limited 879, Master Prithvi Nath Marg Opp. Ajmal Khan Park, Karol Bagh New Delhi – 110 005
10.	Dr. S. Sunanda	Secretary General CITI, 6th Floor, Narain Manzil 23, Barakhamba Road New Delhi – 110 001
11.	Dr. Arindam Basu	Director General NITRA Sector 23, Raj Nagar Ghaziabad – 201 002
12.	Dr. J.V. Rao	Former DG & Advisor – NITRA No.2, Second Street Bakthavatchalam Nagar, Adyar Chennai – 600 020
13.	Shri R.C. Kesar	PNC 024 The Pinnacle DLF City Phase V Sector 43 Gurgaon-122 009 (Haryana)
14.	Prof. R.S. Rengasamy	Professor & Head Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
15.	Prof. Ravishankar Chattopadhyay	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
16.	Shri Sanjay Gulati	Managing Director Growel Impex Pvt. Ltd. E-16, Greater Kailash Part-II New Delhi – 110 048

17.	Shri Sandeep Hora	Partner/CEO Aeronav Industrial Safety Appliances C-36, 3rd Floor, Panchsheel Enclave New Delhi – 110 016
18.	Dr. R.K. Gaur	Sr. Vice President (Corporate Affairs) Ginni Filaments Ltd. D-196, Sector-63 Noida - 201307
19.	Shri Ashish Bagrodia	Chairman & Managing Director Winsome Textile Industries Ltd SCO 191-192, Sector 34 A Chandigarh – 160 022
20.	Shri Rajeev Agarwal	CEO Geo Sys India Infrastructures P. Ltd. C-56A/28, Sector-62 Noida - 201309 (U.P.)
21.	Dr. S.K. Tiwari	Sr. Principal Scientist Council of Scientific and Industrial Research Anusandhan Bhawan\ 2, Rafi Marg New Delhi - 110002

ANNEX – 3

MEMBERS OF THE RESEARCH ADVISORY COMMITTEE 2021-2022

1.	Shri Vidit Jain (Chairman - RAC)	Jt. Managing Director Pasupati Spg. & Wvg. Mills Ltd. 127, 128, 1st Floor Tribhuvan Complex, Mathura Road Ishwar Nagar New Delhi - 110 065
2.	Shri Dinesh Nolkha	Managing Director Nitin Spinners Ltd. 12, Badal Textile Market Pur Road Bhilwara - 311 001 (Raj.)
3.	Shri Raj Kumar Jain	Managing Director Zonac Knitting Machines Pvt. Ltd. D-1, D-2, Site B Surajpur Industrial Area, Greater Noida – 201 306 Distt. Gautam Budh Nagar
4.	Shri S.K. Kapoor	Managing Director Surya Processors Pvt. Ltd. 619, Bisrakh Road, Village Chhapraulla, Distt. Ghaziabad - 201 001
5.	Shri Sanjay Kumar Jain	Managing Director T.T. Ltd. 879 Master Prithvi Nath Marg Opp. Ajmal Khan Park, Karol Bagh New Delhi - 110 005
6.	Dr. Arindam Basu	Director General NITRA Sector 23, Raj Nagar Ghaziabad – 201 002
7.	Shri Abir Chakrabarti	Head (TRADC) Textile Research & Application Development Centre, Birla Dham Kharach, Kosamba (R.S.) Distt. Bharuch – 394 120 (Gujarat)

8.	Dr. T.V. Sreekumar	Director BTRA Lal Bahadur Shastri Marg Ghatkopar (West) Mumbai – 400 086
9.	Shri Arvind Yadav	Chairman cum Managing Director Arikav Textiles Ltd. C-4, Site-IV, UPSIDC Indl. Area Kasna Road, Greater Noida Gautam Budh Nagar (U.P)
10.	Dr. Amit Rawal	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
11.	Prof. Ashwini Kumar Agrawal	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
12.	Prof. Abhijit Majumdar	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi - 110 016
13.	Commander Arun Samal (Retd.)	General Manager Integrated Defence Products 140-141, Toy City, Ecotech III Greater Noida 201 306 (U.P.)
14.	Prof. B.S. Butola	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016
15.	Dr. B.S. Yadav	General Manager Mahima Fibres Pvt. Ltd. 406, Corporate House, 4th Floor Opp. Jhabua Tower, 169 RNT Marg Indore – 452 001 (M.P.)

16.	Prof. Deepti Gupta	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016
17.	Dr. J.V. Rao	CEO Textile Skill Sector Council CITI, 6th Floor, Narain Manzil 23, Barakhamba Road New Delhi – 110 001
18.	Prof. Mangala Joshi	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016
19.	Prof. Manjeet Jassal	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016
20.	Dr. N.N. Mahapatra	Business Head Dyes Shree Pushkar Chemicals and Fertilizer Ltd., Atlanta Centre, Goregaon (East) Mumbai
21.	Shri Pragnesh Shah	Director ATIRA P.O. Ambawati Vistar Ahmedabad – 380 015 (Gujarat)
22.	Dr. Prakash Vasudevan	Director SITRA 13/37, Avanashi Road Coimbatore Aerodrome Coimbatore – 641 014 (T.N.)
23.	Shri Prasanta Kumar Deka	Vice President – Sales & Marketing Rieter India Pvt. Ltd. Karegaon Bhima, Pune
24.	Prof. R.S. Rengasamy	Professor & Head Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi – 110 016

25.	Prof. Ravishankar Chattopadhyaya	Professor Deptt. of Textile Technology Indian Institute of Technology Hauz Khas New Delhi 110 016
26.	Shri R.C. Kesar	Director General Okhla Garment and Textile Cluster (OGTC) Y-29, Okhla Indl. Area Phase-2 New Delhi-110 020
27.	Shri Sanjay Gulati	Managing Director Growel Impex Pvt. Ltd. E-16, Greater Kailash, Part-II New Delhi - 110 048
28.	Shri Sandip Hora	C.E.O. Aeronav Industrial Safety Appliances E-24, Secor-7, Noida-201 301
29.	Shri S.M. Dwivedi	Chief Executive Officer Sara Textiles Ltd. Sara House, B-8, Sector-4 Noida, Distt. G.B. Nagar

ANNEX – 4

LIST OF MEMBER UNITS

A. Units in Rajasthan

1. Arham Spinning Mills
2. Ginni International Ltd.
3. J.C.T. Limited
4. Modern Threads (India) Ltd.
5. Modern Suitings
6. Nitin Spinners Ltd.
7. Orient Syntex
8. Prerna Syntex Ltd.
9. RSWM (Bhilwara unit)
10. RSWM (Banswara unit)
11. RSWM (Rishabdev unit)
12. Rajasthan Textile Mills Ltd.
13. Shree Rajasthan Syntex Ltd.
14. Shree Rajasthan Texchem Ltd.
15. Swatantra Bharat Mills, Tonk
16. Udaipur Cotton Mills -NTC
17. Banswara Syntex Ltd.

B. Units in Haryana

1. Bhiwani Textiles
2. Bhiwani Synthetics Ltd.
3. CMS Impex India Pvt. Ltd.
4. D.C.M. Textiles
5. H.P. Cotton Textile Mills
6. Haryana Text Prints (Overseas Ltd.)
7. HRS Fibres Ltd.
8. H.P. Spg. Mills
9. K.C. Textiles Ltd.
10. Mittal Processes Pvt. Ltd.
11. National Woollen & Finishers
12. Pasupati Spg. & Wvg. Mills Ltd.
13. R.K. Dyeing Industries Ltd.
14. Sheena Exports
15. Swastika Woollen Mills
16. The Technological Institute of Textiles & Science
17. Jasch Industries Ltd., Sonepat
18. Chelsea Mills, Gurgaon
19. Tex Corp. Limited
20. Protech Textiles & Trims (P) Ltd.
21. Star Safety Mills
22. Keshav Exports

C. Units in U.P.

1. ACI Oils Pvt. Ltd.
2. Alps Industries Ltd.
3. Awadh Textwood (P) Ltd.
4. Bureau Veritas Consumer Products Services (India) Pvt. Ltd.
5. Dewan Textiles
6. Ginni Filaments Ltd.
7. Gajroula Spinning Mills (T.T. Limited)
8. J.K. Synthetics Ltd.
9. Nirmal Fibres (P) Ltd.
10. Pasupati Acrylon Ltd.
11. Pawan Exports Pvt. Ltd.
12. Pasupati Fabrics
13. Shamken Multifab Ltd.
14. Shamken Spinners Ltd.
15. Sogo Fashions Pvt. Ltd.
16. Surya Processors Pvt. Ltd.
17. Mahavir Spinfab Pvt. Ltd.
18. Jayshree International
19. Orient Craft Limited
20. Sybly Industries Ltd.
21. Aeronav Industrial Safety Appliances
22. Radnik Auto Exports
23. Shahi Exports Pvt. Ltd.
24. Pilkhuwa Water Proofing Co. Pvt. Ltd.
25. Zonac Knitting Machine (I) Ltd.
26. Derpa Industrial Polymers (P) Ltd.
27. Icon Designs
28. Geosys India Infrastructures Pvt. Ltd.
29. Integrated Defence Products Pvt. Ltd.
30. Nexgen Fabrics Pvt. Ltd.
31. G.D. International

N.T.C. Ltd.

1. Swadeshi Cotton Mills (Naini)
2. Swadeshi Cotton Mills (Mau)

D. Units in Delhi

1. Gold Rock World Trade Ltd.
2. Indian Arts & Crafts Syndicate
3. J.P.C.
4. Neelam Threads Pvt. Ltd.
5. R.K. Silk Mills India Pvt. Ltd.
6. Radiant Exports, New Delhi
7. Growel Impex Pvt. Ltd.
8. Kay Tent Industries

E. Units in Punjab

1. Abhishek Industries Ltd.
2. Adhinath Dyg. & Fsg. Mills
3. Abhinav Cotspin Ltd.
4. Bhandari Exports
5. J.C.T. Ltd.
6. Kharar Textile Mills
7. Malwa Cotton Spg. Mills Ltd.
8. Malwa Cotton Mills Ltd.
9. Nahar Fibres Ltd.
10. Nahar Industrial Enterprises Ltd.
11. Nahar Exports Ltd.
12. Nahar Fabric Ltd.
13. Oswal Cotton Spg. Mills Ltd.
14. Rishab Spg. Mills
15. Rainbow Denim
16. Suraj Textile Mills
17. Vardhman Textiles Ltd.
18. Nahar Spinning Mills

F. Units in Himachal Pradesh

1. GPI Textiles (India) Ltd.
2. Himachal Fibres Ltd.
3. Malwa Cotton Spg. Mills Ltd.
4. Winsome Textile Ltd.

G. Units in J&K

1. Chenab Textile Mills

H. Units in Madhya Pradesh

1. Indo-Rama Textiles Ltd.
2. Maral Overseas Ltd.
3. Mid India Industries
4. Vikram Woollens Ltd.
5. Mahaveer Udyog
6. Kailadevi Traders

I. Units in Maharashtra

1. Surya Lakshmi Cotton Mills
2. Alok Industries Ltd.
3. Kusumgar Corporate India Pvt. Ltd.
4. Sunil Industries Ltd.
5. Continental Surface Solutions India Pvt. Ltd.

J. Unit in Andhra Pradesh

1. Shree Manufacturing Co. Ltd.

K. Unit in West Bengal

1. Jayashree Textiles
2. Frontier Protectivewear Pvt. Ltd.
3. Arruth Technical Performance Wear Pvt. Ltd.

L. Unit in Karnataka

1. Bhoruka Textile Ltd.

M. Units in Tamil Nadu

1. Shubh Swasan India Pvt. Ltd.

N. Unit in Thailand

1. Thai Acrylic Fibre Co.

O. Units in Gujarat

1. Arvind Ltd.
2. Reliance Industries Ltd.
3. Adient Arvind Automotive Fabrics India Pvt. Ltd.

P. Units in Uttrakhand

1. Kashi Vishwanath Textiles Mill Pvt. Ltd.

Total Member Units

State-wise:

Andhra Pradesh	-	01	Punjab	-	18
Delhi	-	08	Rajasthan	-	17
Gujarat	-	03	Tamil Nadu	-	01
Haryana	-	22	Uttar Pradesh	-	33
Himachal Pradesh	-	04	West Bengal	-	03
Jammu & Kashmir	-	01	Uttrakhand	-	01
Karnataka	-	01	**Overseas:**		
Madhya Pradesh	-	06	Thailand	-	01
Maharashtra	-	05			

Total No. of Member Units = 125

ANNEX – 5

STAFF MEMBERS

(As on 31.03.2022)

NAME	DESIGNATION	QUALIFICATION
Dr. Arindam Basu	**Director General**	**B.Sc. Tech. (Text. Tech.), M.Text., Ph.D., PGDBIM, FIE, FSAB, FTA**
Mechanical Processing Division (Spg. & Wvg.):		
Mr. Abhijit Pal	Officiating Director Head of Department	B.Sc.Tech. (Text. Tech.), MS (by Research), FIE, FIV
Mr. M.K. Bansal	S.S.O.	Dip. in Text. Tech., MBA
Mr. Kushagra Prakash*	S.S.O.	B.Text. (Text. Tech.) M.F. Tech.
Mr. Lalit Giri Goswami*	S.S.O.	B.E. (Textile Tech.)
Mr. A.K. Pandey*	Project Manager Flax Spinning	B.Text. (Tech.)
Mr. Ravi Sonkar*	Scientific Officer	Dip. in Text. Tech., B.Tech. (Text. Engg.), M.Tech. (Text. Tech.)
Mr. Satyanarayana V.	S.T.A.	SSC, ITI, ATA
Environmental Engineering Division:		
Ms. Niranjana G.*	Technical Officer (Env.)	B.E. (Env.Engg.), M.E. (Env. Engg.)
Mr. Harendra Singh	Sr. Investigator	M.Sc. (Chem.)
Physics & Quality Evaluation Division:		
Mr. Sanjeev Shukla	Asstt. Director Head of Department	B.Sc., B.Text., M.Tech., PGDBM
Mrs. Seema Sharma	S.T.A.	M.Sc.
Mr. R.P. Tripathi	Sr. Investigator	B.A.
Mr. G.C. Bajpai	Sr. Investigator	B.Sc. (Chem.)

NAME	DESIGNATION	QUALIFICATION
Mr. Jaswant Singh	S.T.A.	Intermediate
Mr. Deepak Jangra*	Technical Assistant	Dip. in Textile Design
Chemical & Quality Evaluation Division:		
Dr. M.S. Parmar	Director (Laboratories) Head of Department	M.Sc., Ph.D, PGDMM, DCPA
Dr. Nidhi Sisodia*	Sr. Scientific Officer	M.Sc., M.Tech. (Text. Chem.) , Ph.D.
Mr. Durgesh Raj Maurya*	Scientific Officer	B.Tech. (Carpet & Textile Tech.), M.Tech. (Textile Chemistry)
Mr. Kuldeep Singh	S.T.A.	M.Sc., PG Dip. in QC & ISO 9000, ATA
Mr. Swami Sharan	S.T.A.	M.Sc. (Chem.), ATA
Ms. Anjali Yadav*	Research Assistant	B.Sc. (Biotechnology), M.Sc. (Biotechnology)
Mr. Sonu Kushwaha*	Research Assistant	B.Sc. Hons. (Biotechnology), M.Sc. Hons. (Microbiology)
Mr. Devendra Singh	Sr. Investigator	B.A.
Mr. Dushyant Kumar	Sr. Investigator	B.Sc.
Mr. Shaju Kumar T.P.*	Data Processor	B.A. (Sociology)
Research & Development Cell:		
Mr. Prakash Arun Khude*	Sr. Scientific Officer	B.Text. (Textile Tech.), M.Tech. (Textile Engg. & Mgt.)
Mr. Pankaj Kumar*	Scientific Officer	B.Tech. (Textile Chemistry), M.Tech. (Textile Chemistry)

NAME	DESIGNATION	QUALIFICATION
Polymer & Technical Textiles Division:		
Mrs. Neha Kapil	P.S.O. Head of Department	M.Sc. (Textile & Clothing)
Mr. Yogesh Kumar	S.T.A.	M.Sc. (Chem.), ATA
Mr. Prakash	Sr. Investigator	B.Sc., ITI
Marketing & Publications:		
Mr. Rajendra Kumar Gaur*	Asstt. Director Head of Department	B.Text., PG Dip. in Mktg. Mgmt., Dip. in TQM & ISO 9000, Dip. in Prodn. Mgmt., MIE
Mr. Vineet Tyagi*	Senior Manager (Business Development)	B.Sc., PG Dip. in Retail Management
Mr. Partha Basu	Public Relations Officer	B. Com, PGD in Advtg. & Mktg. Mgmt.
Garment Centre:		
Mr. Vivek Agarwal	Deputy Director	B.Tech, PGDBM, MS (by Research)
Mr. M.M.Tiwari*	Asstt. Director	B.Sc., Dip. in Text.
Mr. Neeraj Aggarwal	Asstt. Director	B.Text., MS (by Research)
Mrs. Shweta Saxena	P.S.O.	M.Sc. (Textile & Clothing)
Mr. Sanjay Gupta	J.S.O.	M.Sc.
Mrs. Geeta Sharma*	Faculty	Dip. in Fashion Designing & Garment Tech., B.A., AMEIM
Engineering Division:		
Mr. Vikas Sharma	P.S.O. Head of Department	B.E.(Mech.), Adv. Dip. in MM & CM, BEE Cert. Energy Auditor
Mr. Raj Kumar Saini*	Asstt. Engineer (Elect.)	Diploma (Electrical), BEE Cert. Energy Manager

NAME	DESIGNATION	QUALIFICATION
Software Development Centre:		
Dr. B.K.Sharma	Asstt. Director Head of Department	M.Sc., M.Tech., Ph.D., SMCSI, FIETE, MIAE, MCSTA, SMIACIT
Mr. Krishan Kumar Dewan	P.S.O.	B.A., BHM, e-Commerce, PGDBM, M.Sc. (Comp. Sc.)
Mr. Avnish Kumar Sharma	S.S.O.	M.Sc., PGD in Computer Programming, Diploma in Operations Management, MCA
Library:		
Mr. Abbas Raza	Asstt. Librarían	B.Sc., M.A., DPA, PGDCA, MLISC
Administration & Accounts:		
Mr. Atul Baijal*	Dy. Manager (Accounts) Head of Department	M.Com, L.L.B., MBA
Mr. Puneet Agrawal	Dy. Manager (Accounts)	B.Com., ACA
Mr. N. Govindaraj*	Data Processor	SSLC
Mr. S.A.A. Rizvi	Sr. Supervisor (Purchase)	B.Sc., PG Dip. in Computer Science & Application, MBA
Mr. Amit J. Singh	Sr. Supervisor (Accounts)	M.Com., MBA
Mr. Rajeev Singh Rawat	Sr. Supervisor (Accounts)	B. Com.
Mr. V.K. Singhal	Sr. Supervisor (Accounts)	M.Com.
Mr. P.K. Butola*	Store & Purchase Sup.	M.A.
Mrs. Saraswathi Devi*	Receptionist	B.A., Cert. in Computer Application, Cert. in Typewriting Lower & Higher
Directorate:		
Mr. Hari Om Sharma*	PA to Director General	B.A., LL.B., PG Dip. in Personnel Mgt., Dip. in Stenography

NAME	DESIGNATION	QUALIFICATION
NITRA Technical Campus:		
Dr. Meghna Tyagi	Asstt. Prof. (Mathematics)	M.Sc., Ph.D.
Mr. R.C. Yadaw	Asstt. Prof. (Mechanical)	B.Tech. (Mech. Engg.), M.Tech. (Machine Design)
Mr. A.P. Srivastava*	Asstt. Prof. (CSE)	B.Tech. (IT), M.Tech. (CS), PGDBM
Mr. Nitin Kumar Sharma*	Asstt. Prof. (CSE)	B.Tech. (CSE), M.Tech . (CSE)
Mr. Sourabh Jain*	Asstt. Prof. (CSE)	B.E. (ECE), M.Tech. (Aerospace Engg.-D&C)

SUPPORTING STAFF (TECHNICAL)

Environmental Engineering Division:

Jr. Investigator:
Mr. D. Chakraborty*

Physics & Quality Evaluation Division:

Laboratory Assistant:	*Peon:*	*Lab Attendant:*
Mr. Vipin Jindal *	Mr. Ranveer Singh	Mr. Mohd. Nazim*
Mr. Muhd. Asif*		
Mr. Saurabh Dhar*		
Ms. Prachi Raj*		
Mr. Shantanu Kumar Ojha*		

Chemical & Quality Evaluation Division:

Jr. Investigator:	*Lab Instructor:*	*Lab Asstt.:*	*Lab Attendant:*
Mr. Umesh Pathak	Mr. Sumit Kumar*	Mr. Nirbhay Katiyar*	Mr. Sandeep Kumar*

Polymer & Technical Textiles Division:

Jr. Investigator:	*Laboratory Assistant:*
Mr. Mohit Pandey*	Ms. Tanu Walia*

Mechanical Processing Division (Spg. & Wvg.):

Weaver Helper:
Mr. V. Ramesh

Garment Centre:

Trainer Apparel Manufacturing:
Mr. Asif Ali

Engineering Division:

Electrician:
Mr. Sandeep Sharma*
Mr. Sachin Kumar*

R&D Cell:

Lab Trainee
Mr. Rajkumar Gautam*

NITRA Technical Campus:

Laboratory Instructor:
Mr. Madan Gopal Pal*
Mr. Rohitash Singh*

Laboratory Assistant:
Mr. Dharmendra Kumar*
Mr. Shiva Choudhary*
Mr. Vinay Pratap*

Computer Maintenance Asstt.:
Mr. Raju Yadav*

SUPPORTING STAFF (NON-TECHNICAL)

Administration:

Sewing Machine Technician:
Mr. Mukesh Kumar Tomar

Driver:
Mr. Ganesh Lal

Office Attendant:
Mr. Narender Singh

Peon:
Mr. Sukh Pal Sharma

Accounts:

Accounts Assistant:
Mr. Manjeet Singh Sachdeva*

Assistant:
Mr. Hemand Kumar*
Mrs. Santoshi Rana*

Library:

Draughtsman:
Mr. M.K. Tomar

Peon:
Mr. Govind Ram*

Directorate:

Daftari:
Mr. Dharamveer Singh

Driver:
Mr. Anil Kumar

Peon:
Mr. Ramveer Singh

NITRA Technical Campus:

Peon:
Mr. Rajpal Singh*

Caretaker Boys' Hostel cum Supervisor:
Mr. Yogesh Kumar Tiwari*

*On Contract

SENIOR OFFICERS AT POWER LOOM SERVICE CENTRES / TESTING LABORATORIES

NAME	STATUS	QUALIFICATION	DIVISION
Mr. Kushagra Prakash*	S.S.O.	B.Text. (Text. Tech.) M.F. Tech.	PLSC, Meerut
Mr. Tejpratap Singh *	Technical Officer	B.Tech. (Text. Tech.)	PLSC, Kanpur
Mr. V.S. Khoiwal*	Scientific Officer	B.E. (Text. Tech.), M.Tech. (Text. Engg.)	PLSC, Bhilwara
Mr. Atul Kr Sharma	J.S.O.	B.Sc.	PLSC, Gorakhpur
Mr. S.K. Pathania	T/F	High School	PLSC, Ludhiana
Mr. S. Ansari	Resident Manager	Dip. in Hand. Tech.	PLSC, Tanda
Mr. Dharmesh Dubey*	Officer-in-charge	B.Tech. (Text.Tech)	PLSC, Panipat
Mr. Atul Kr Sharma	J.S.O.	B.Sc.	PLSC, Varanasi

*On Contract

RESIGNATIONS / EXPIRY OF CONTRACTS, RETIREMENTS AND DEATH DURING THE PERIOD APRIL 2021 TO MARCH 2022

S.No.	NAME	DIVISION	DESIGNATION
A)	**Resignations / Expiry of contract**:		
1.	Mr. Rahul Srivastava*	Env. Engg.	Env. Engineer
2.	Mr. Lokandra Singh*	Engineering	Electrician
3.	Mr. Jai Narain*	PLSC, Panipat	Resident Manager
4.	Mrs. Renu Singh*	CQE	Research Assistant
5.	Mr. Dinesh Kumar*	PLSC, Panipat	Officer-in-charge
6.	Ms. Shweta Yadav*	PQE	Laboratory Assistant
7.	Mr. R.S. Yadav	MPD (Spg.&Wvg.)	Assistant Director
8.	Mr. Rajendra Kumar*	NTC	Office Assistant
9.	Mrs. Shweta Chauhan*	R&D Cell	Scientific Officer
10.	Mr. Vishal Singh*	CQE	Laboratory Assistant
11.	Mr. Netrapal*	PQE	Laboratory Assistant
12.	Mr. Adarsh Agarwal*	NTC	Laboratory-cum-Office Asstt.
13.	Mr. Dushyant Pandit*	Directorate	Peon
14.	Mr. Sukumar Halsana*	Directorate	Admission Counsellor cum PA
15.	Mr. Sachin Kumar Singh*	R&D Cell	Trainee
16.	Mr. Abhinav Verma*	NTC	Computer Lab Asstt.
17.	Mr. Amit Kushwaha*	PTTD	Laboratory Assistant
B)	**Retirements**:		
1.	Mrs. Anjula Sharma	CQE	Data Processor
2.	Mr. M.K.S. Rathore	PLSC, Kanpur	Technical Officer
C)	**Death**:		
1.	Dr. A.A. Ansari	Env. Engg.	Assistant Director

*On Contract

ANNEX - 6

RESEARCH PAPERS PUBLISHED AND PRESENTED

S.No.	Title	Author(s)	Publication/Place	Date
1.	Energy efficiency opportunities in textile sector February 22 2022	Vikas Sharma	Presentation in Workshop on "Energy efficiency and conservation Opportunities in energy intensive textile SME cluster" organized by New and Renewable Energy Department & HAREDA, Panchkula	Feb. 22, 2022
2.	Home textiles abating indoor air pollution	Arindam Basu, Pankaj Kumar, M.S.Parmar, and R.K.Gaur	Asian Textile Journal p 25-28	January-February 2022,
3.	Development of Software Defect Data Collection Framework for Github	Vikas Suhag, S.K. Dubey and B.K. Sharma	12th International Conference on Cloud Computing and Data Science Engineering Organized by Amity University, Noida.	27th -28th January, 2022
4.	Software Defect Data Collection Framework For Github	Vikas Suhag, S.K. Dubey and B.K. Sharma	IEEE Sponsored International Conference-CONFLUENCE' 2022, ISBN: 978-1-6654-3701-1/IEEE No. CFP 2269Y-ART	January, 2022
5.	Dyeing of surface-modified cotton with disperse dye to conserve water: Preliminary study	M.S.Parmar, Durgesh Raj Maurya and Nidhi Sisodia	Asian Dyers Magazine	December 2021-January 2022
6.	Sustainability in textile & apparel industry – role of fibres as raw material	Arindam Basu	Tantu Annual Journal	December 2021

S.No.	Title	Author(s)	Publication/Place	Date
7.	NITRA's initiative to develop protective work wear for cement porters	Shweta Saxena, M.S. Parmar and Sangita Saini	Fashion Era Magazine	December 2021
8.	Few-shot Learning : Towards Localization and classification of objects	Jaswinder Singh and B.K. Sharma	Turkish Journal of Computer and Mathematics Education, Vol 12 No. 14 (2021), ISSN 1309-4653	December 2021
9.	Quantification of blend ratio of cotton and hemp blended fabric: A new approach	M.S.Parmar, Indu Gupta & Shalini Juneja	Journal of the Textile Association	Nov-Dec 2021
10.	An Automated Financial Recommender System to Gain from Risk Free Investment using Machine Learning	Analp Pathak and B.K. Sharma	Indian Patent Journal No. 44/2021, Patent Application No. 202111046114	October, 2021
11.	New product development in textile & apparel industry	Arindam Basu	International Journal of Engg Science Technologies	October 2021
12.	Sustainable growth in textiles (sgt-2021) - application of coverall, shoe cover & facemask waste in the development of composites for construction material	Nidhi Sisodia	International E-Conference	August 19-21, 2021
13.	Need of protective work-wear for the workers of Indian cement	Shweta Saxena, M.S. Parmar, Sangita Saini and Vasundhara Verma	NICMAR - Journal of Construction Management. Vol. XXXVI	Jul-Sep. 2021
14.	Protective work wear: fire retardant textiles and their evaluation	M.S. Parmar	Lecture delivered during webinar on protective textiles organized by Dept. of Apparel and Textile Science, COCSE, Pau, Ludhiana	July 24, 2021

S.No.	Title	Author(s)	Publication/Place	Date
15.	An Evaluation on Collaborative Collective Filtering Using Sentiment Analysis	Analp Pathak and B.K. Sharma	Journal of Design Engineering, ISSN: 0011-9342, Issue-6,Page No. 13-20	June, 2021
16.	Importance of IT in Textile Industry for Effective Decision Making	B.K. Sharma	International Conference on Recent Trends in Science and Engineering, Seth Gyaniram Bansidhar Podar College, Nawalgarh, Rajasthan	June18 -19, 2021
17.	Converting textile waste in to designer wall and floor tiles: a new approach to recycle textile waste	Nidhi Sisodia and M.S. Parmar	International virtual conference on sustainability in fashion design and manufacturing (SIFDM) 2021	June 11-12, 2021
18.	Research and Development by Textile Research Associations (TRAs) and their contribution in the growth of Indian Textile Industry	Arindam Basu and Mr. Vivek Agarwal	Textile Times Magazine, Vol - XVII, No. 08	May 2021
19.	Machine Learning and its Application	B.K. Sharma	International Conference on Emerging Trends in Engineering and Science, Madhyanchal Professional University, Bhopal (M.P.)	May 21-22, 2021

ANNEX-7

TRAINING PROGRAMS, WORKSHOPS AND SEMINARS CONDUCTED

S. No.	Nature of Program	Venue	Division	No. of batches	No. of trainees
1.	Apparel Manufacturing & Merchandising*	NITRA, Ghaziabad	Garment Centre	01	13
2.	Textile Manufacturing & Testing*	NITRA, Ghaziabad	Garment Centre	01	42
3.	Training Program for Shuttle-less Loom Weavers	NITRA, Ghaziabad	Garment Centre	01	16
4.	Fabric checking methods - Based on the 4-point inspection system	NITRA, Ghaziabad	Garment Centre	01	18
5.	Training Program on testing of Environmental Parameters (CETP) conducted at Ajrakhpur Hastkala Vikas Sangathan (CETP)	Ajrakhpur Hastkala Vikas Sansthan	Environment Division	01	02
6.	Testing of the fibre properties	GBTL, Bhiwani	PQE	01	02
7.	Quality Assurance and Quality Control	NITRA, Ghaziabad	Garment Centre	01	36
8.	Sewing Machine Maintenance	NITRA, Ghaziabad	Garment Centre	01	14
9.	How to achieve excellence in IT industry	NITRA Technical Campus	SDC	01	52
10.	How to Crack GATE and PSU for Computer Science students	NITRA Technical Campus	SDC	01	55

S. No.	Nature of Program	Venue	Division	No. of batches	No. of trainees
11.	Quality Parameters for Fiber, Yarn, Fabric, Garment Finishing & Packaging	NITRA, Ghaziabad	PTTD	01	45
12.	Energy Efficiency in Textile Sector	Skylark Hotel, Panipat	Engineering Division	01	25
13.	Fashion Marketing and Merchandising	NITRA Ghaziabad	Garment Centre	01	38
14.	Apparel Design and Quality Control	NITRA Ghaziabad	Garment Centre	01	08
15.	Apparel Production and Industrial Engg	NITRA Ghaziabad	Garment Centre	01	08
16.	Textile Technology and Management (DLP)	NITRA Ghaziabad	Garment Centre	01	18
17.	Apparel Manufacturing and Merchandising (DLP)	NITRA Ghaziabad	Garment Centre	01	15
18.	Quality Evaluation of Textiles and Garments (DLP)	NITRA Ghaziabad	Garment Centre	01	13
19.	Summer Training programs for College and University Students	NITRA Ghaziabad	Garment Centre	01	42
20.	Webinar on Quality Assurance in Apparel Manufacturing*	NITRA Ghaziabad	Garment Centre	01	10
21.	Webinar on Shade Variation in Textile Fabric Processing, Root Cause Analysis & Rectification*	NITRA Ghaziabad	Garment, R&D, Raymond	01	22
22.	Webinar on Quality Gate Effectiveness in a Textile Unit *	NITRA Ghaziabad	Garment Centre	01	17
23.	Webinar on Applications of Industrial Engg. Techniques for Productivity Measurement and Improvement*	NITRA Ghaziabad	Garment Centre	01	38

S. No.	Nature of Program	Venue	Division	No. of batches	No. of trainees
24.	Training Program on Quality Assurance and Quality Control	NITRA Ghaziabad	Garment Centre	01	36
25.	Quality Control Reports & Formats in Apparel Industry#	NITRA Ghaziabad	Garment Centre	01	45
26.	Women Empowerment In Textiles & Apparel Industry*	NITRA Ghaziabad	Garment Centre	01	58
27.	Technical Talk on Protective Clothing for Workers of Cement Industry *	NITRA Ghaziabad	Garment Centre	01	63
28.	How to Stay Safe on Internet	NITRA Technical Campus	SDC	01	70

#On-line presentation in 5-day FDP on "Sustainability and quality management in apparel industry" organized by Dayalbagh Education Institute, Agra, & ATAL Academy, Govt. of India
**Webinars/ on-line training program*

ANNEX - 8

CONSULTANCIES PROVIDED

S.No.	Type of Consultancy	Division	No. of Units
1.	Third party inspection of Woolen Jersey	MPD (Spg& Wvg)/ PQE	09
2.	Third Party Inspection of Cloth Serge	MPD (Spg & Wvg)	04
3.	Third Party Inspection of Full Body Protector	MPD (Spg & Wvg)/ PQE	07
4.	Third Party Inspection of cloth Gabardine	PQE/MPD(Spg & Wvg)	06
5.	Third Party Inspection of Terry Towel	PQE/MPD(Spg & Wvg)	02
6.	Third party inspection of Cotton Tape Niwar	PQE/MPD(Spg & Wvg)	01
7.	Third Party Inspection of Underpants Thermal	MPD (Spg & Wvg)	03
8.	Third Party Inspection of Rucksack/Combat Backpack	PQE/MPD (Spg & Wvg)	02
9.	Third Party Inspection of Undergarment Vest thermal (1 unit),	MPD (Spg & Wvg)	02
10.	Third Party Inspection of T Shirt	MPD (Spg & Wvg)/ PQE	17
11.	Third Party Inspection of Shirt Angola Cloth	PQE/MPD(Spg & Wvg)	15
12.	Third Party Inspection of Blanket	MPD(Spg & Wvg)/PQE	08
13.	Third Party Inspection of Anklet Synthetic	MPD(Spg & Wvg)/PQE	01
14.	Third Party Inspection of cloth cotton Drill Dyed	MPD (Spg & Wvg)	01
15.	Third Party Inspection of Light Weight Ground Sheet	MPD (Spg & Wvg)	01
16.	Third Party Inspection of Cloth Camouflage (NYCO)	MPD(Spg & Wvg)/PQE	01

S.No.	Type of Consultancy	Division	No. of Units
17.	Third Party Inspection of Twill Weave Battle Serge Dress	MPD(Spg & Wvg)/PQE	01
18.	Third Party Inspection of Cloth Disruptive Poly Cotton	MPD(Spg & Wvg)/CQE	03
19.	Third Party Inspection of Coat Parka	MPD(Spg & Wvg/ PQE	04
20.	Third Party Inspection of Coat Combat disruptive	MPD (Spg & Wvg/ PQE	05
21.	Third Party Inspection of Light Weight Sleeping Bag	MPD(Spg & Wvg)/PQE	01
22.	Third Party Inspection of Mattresses	MPD (Spg & Wvg)	01
23.	Study of Process waste in Manufacturing blankets made out of Egyptian cotton	PQE/MPD(Spg & Wvg)	01
24.	Technical consultancy on Pashmina Yarn	PQE/ MPD(Spg &Wvg)	01
25.	Technical evaluation of Process loss in a Madeup unit	Garment Centre	01
26.	Energy audit of Dairy Firm	Engineering Division	04
27.	Evaluation of Reflective Safety Jacket and Vests	Garment Centre	03
28.	Energy audit	Engineering Division	09
29.	Green Energy audit	Engineering Division	02
30.	Harmonics Study	Engineering Division	02
31.	Preparation of Operating Manual for Ajrakhpur Hastkala Vikas Sangathan (CETP)	Environmental Division	01

S.No.	Type of Consultancy	Division	No. of Units
32.	Environment Laboratory Installation at Ajrakhpur Hastkala Vikas Sangathan (CETP)	Environmental Division	01
33.	Energy audit of textile units of Varansi Textile Cluster	Engineering Division	07
34.	Power quality audit	Engineering Division	01
35.	Production, Machine health condition and Manpower study in Knitting Division	MPD (Spg & Wvg)	01
36.	Manpower Assessment in Spinning Division	MPD (Spg & Wvg/ PQE	01
37.	Study on performance assessment of card using new card clothing development	MPD (Spg & Wvg)	01
38.	Technical Feasibility due diligence study of a Diary Firm	Engineering Division	01
39.	Melange Yarn Development	MPD (Spg & Wvg)	01
40.	Dynamics of Social Auditing Process in the Global Apparel Supply Chain: From Indian apparel industry perspective	Garment Centre	01
41.	Revision of Technical Specifications for Undergarments	Garment Centre	01
42.	Evaluation of High Visibility Warning Clothings for Design and Manufacturing Specifications	Garment Centre	04
43.	Third Party Inspection for PPEs	Garment Centre	01

ANNEX - 9

STAFF PARTICIPATION IN HRD PROGRAMS

Sl. No.	Details of the program	Venue	Date	Participants status
1.	International Conference on Emerging Trends and Technologies on Intelligent System (ETTIS 2022)	CDAC, Noida	March 22-23, 2022	Dr. B.K. Sharma (as Technical Program Committee Member)
2.	Workshop on " Build Back Wiser Engineering the Future" by The Institute of Engineers (India), Ghaziabad Local Centre	NITRA Technical Campus, Ghaziabad	March 4, 2022	Mr. R.K. Gaur Dr. B.K. Sharma Mr. Vivek Agarwal Mr. Vikas Sharma Mr. Avnish Sharma & other technical officers (As Delegates)
3.	12th International Conference on Cloud Computing and Data Science Engineering	Amity University, Noida	Jan 27-28, 2022	Dr. B.K. Sharma (As Speaker)
4.	Techtextil 2021	Organised by Messe Frankfurt at NESCO Exhibition Centre Goregaon East Mumbai	November 25-27, 2021	Dr. Arindam Basu, Dr. M.S. Parmar & Vineet Tyagi
5.	India Tex In Srilanka	Virtual Mode-Organized by FICCI	August 26-28, 2021	R.K. Gaur, Vineet Tyagi & K.K. Dewan
6.	Xinjiang Impact on T&A Industry	On Line (Organized by Social OGTC)	August 24, 2021	Vivek Agarwal (as participant)
7.	Social Compliance in Apparel Industry	On Line (Organized by The Institution of Engineers)	August 21, 2021	Vivek Agarwal (as participant)
8.	AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Computational Foundation for Data Science"	Banaras Hindu University Varanasi	July 26-30, 2021	Mr. Anand Prakash Srivastava (As Delegate)
9.	Webinar on Soft Computing Techniques	AICTE	July 15, 2021	Dr. B.K. Sharma (As Delegate)

Sl. No.	Details of the program	Venue	Date	Participants status
10.	Seminar on Training and Skilling	On Line (Organized by TEXPROCIL)	June 24, 2021	Vivek Agarwal, M.M. Tiwari & Shweta Saxena (as participants)
11.	5-day Virtual faculty development program on Inculcating Universal Human Values in Technical Education	On Line (Organized by All India Council for Technical Education)	June 21-26, 2021	Partha Basu, Meghna Tyagi & R.C. Yadav (as participants)
12.	AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Blockchain"	The LNM Institute of Information Technology	June 14-18, 2021	Mr. Anand Prakash Srivastava (As Delegate)
13.	AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Emerging Trends In Internet of Things"	Acropolis Institute of Technology And Research - AITR	June 7-11, 2021	Mr. Anand Prakash Srivastava (As Delegate)
14.	Preparing for a post-covid market by rethinking productivity capacity measurements	On Line (Organized by Social Accountability International)	April 21, 2021	Shweta Saxena (as panel expert)

ANNEX–10

ADDITIONAL SERVICES TO NITRA MEMBERS

NITRA has been providing laudable services to member units since its inception in 1974. Besides offering services to meet their ever changing needs, it also offers substantial benefit package to member units to strengthen the mutual relationship. Following is a spectrum of additional services provided to individual member units:

1. Centre for Academic Partnership Scheme (CAPS)

In a bid to diversify our activities and to intensity interaction with academic institutions and to augment techno-education base of the country as a whole, NITRA offers library & information service to the students, faculty and researchers of various colleges and institutions through participation in "Centre for Academic Partnership Scheme (CAPS)". Institutions interested to avail this unique service may obtain membership at a nominal admission fee of Rs.20,000/- only. Apart from this, a nominal sum of Rs.500/- per year will be charged to the individual user to issue his/her library card. For further details please contact the Asstt. Librarian.

2. Concessional Enrolment Fee in Workshops/ Seminars/ Conferences/ Training Programmes etc.

The enrolment fee for participating in Training Programmes/Workshops/Seminars/ Conferences conducted by NITRA is much less for member units as compared to non-member units.

3. Discount on Testing Charges

Testing charges for NITRA's member units in various testing labs are 30% (for Ordinary members) and 10% (for Associate members) discounted as compared to non-member units.

4. Discount on Publications

10% discount is offered on the purchase of NITRA publications to its member units.

5. Free Library Service

Member units can reap rich harvest by consulting the vast and well stocked NITRA library, services during any working day.

ANNEX - 11

JOURNALS SUBSCRIBED BY NITRA LIBRARY

S. No.	Name of Journal	Frequency
1.	AATCC Review	Monthly
2.	Asian Dyer	Monthly
3.	Asian Textile Journal	Monthly
4.	Asian Technical Textile Journal	Quarterly
5.	Apparel Online	Fortnightly
6.	Colourage	Monthly
7.	Digit	Monthly
8.	Competition Success Review	Monthly
9.	IETE Journal of Research	Bimonthly
10.	India Today (English)	Weekly
11.	Indian Journal of Fibre & Textile Research	Quarterly
12.	Indian Textile Journal	Monthly
13.	Journal of the Institution of Engineers (India):Section B	Bimonthly
14.	Journal of Textile Institute	Bi-monthly
15.	Textile Progress	Quarterly
16.	The Textile Magazine	Bi-monthly
17.	Textiles Magazine	Quarterly

ANNEX - 12

JOURNALS RECEIVED ON COMPLIMENTARY BASIS

S.No.	Name of Journal	Frequency
1.	Apparel India	Monthly
2.	Apparel Views	Monthly
3.	BTRA Scan	Quarterly
4.	Garmentline	Monthly
5.	Textile Times	Monthly
6.	CSTRI News Letter	Qarterly
7.	Knitting Views	Bi-Monthly

ANNEX - 13

PLACEMENT OF STUDENTS OF NITRA TECHNICAL CAMPUS
(As on 31.03.2022)

Branch : Textile Technology

S.No.	Student Name	Name of Company
2020-21		
	None	
2021-22		
1.	Saurabh Mishra	Bureau Veritas
2.	Vikas Pal	Bureau Veritas
3.	Ashutosh Yadav	Bureau Veritas
4.	Saubhagya Ranjan Behera	Brij Design, Gurgaon
5.	Mayank Katiyar	Brij Design, Gurgaon
6.	Nikita Katara	Chelsea Mills
7.	Priya Chauhan	Avanti Overseas, Noida
8.	Anuradha Yadav	Avanti Overseas, Noida
9.	Rohan Bose	Star Safety Hub, Faridabad
10.	Sumit Kumar	Vardhman Textiles Ltd
11.	Abhinay Kumar	Nahar Industrial Enterprises
12.	Aditya Singh	Nahar Industrial Enterprises
13.	Ashutosh Tripathi	Nahar Industrial Enterprises
14.	Gaurav Tripathi	Nahar Industrial Enterprises
15.	HritickChaurasia	Nahar Industrial Enterprises
16.	Ujjawal Chauhan	Nahar Industrial Enterprises
17.	Divyank Singh	Nahar Industrial Enterprises
18.	Ravi Kumar Mishra	Nahar Industrial Enterprises
19.	Sangesh Pratap	Nahar Industrial Enterprises
20.	Yash Gupta	Nahar Industrial Enterprises
21.	Kaushtubh	Youngman WoollensPvt Ltd
22.	Suraj Mishra	Youngman WoollensPvt Ltd
23.	Utkarsh Paliwal	Youngman WoollensPvt Ltd
24.	Manjusha Verma	Shahi Exports

Branch : Textile Chemistry

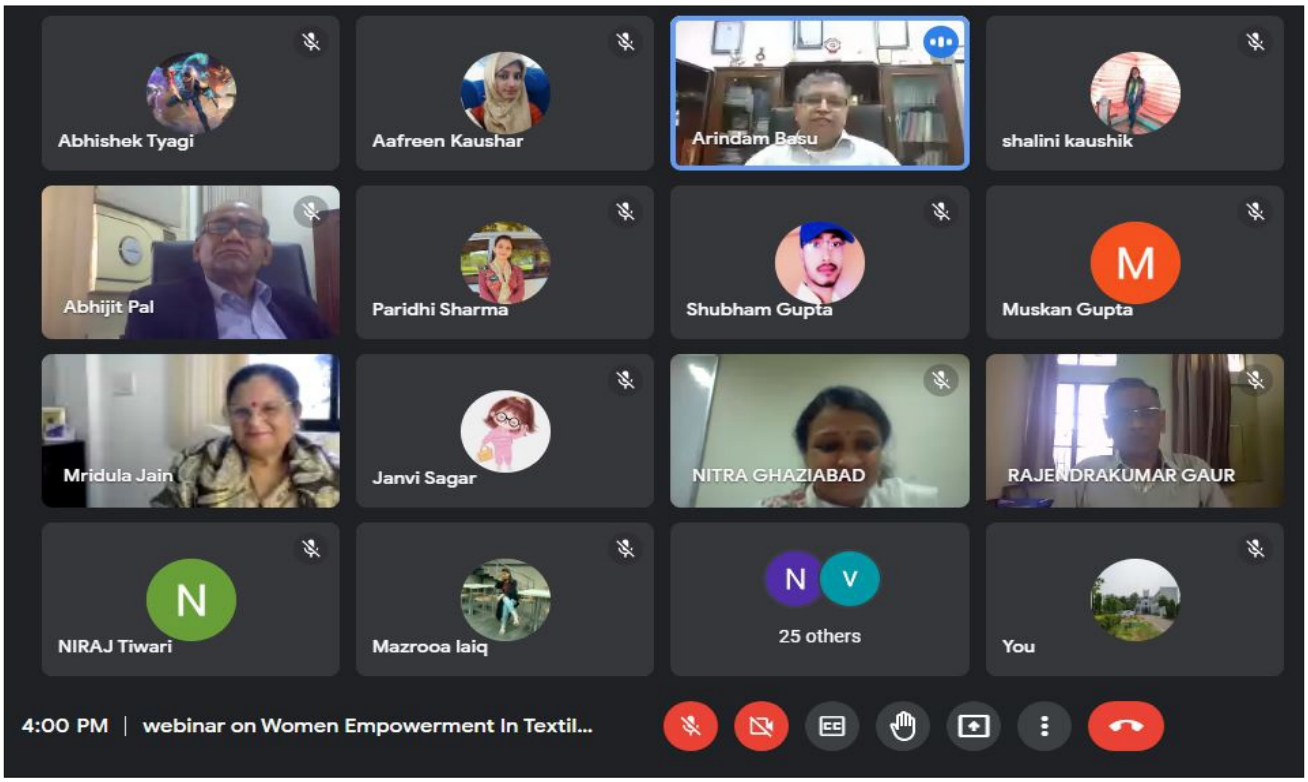
S.No.	Student Name	Name of Company
2020-21		
	None	
2021-22		
1.	Sahil Srivastava	Avanti Overseas, Noida

Branch : Computer Science & Engineering

S.No.	Student Name	Name of Company
2020-21		
1.	Abhisekh Tyagi	Mount Blue Technologies Pvt. Ltd.
2.	Krishn Kumar Yadav	ATL Foundation, Delhi
2021-22		
3.	Alok Tiwari	The Unified Cloud (P) Ltd.
4.	Mayank Chauhan	Control Case International (P) Ltd.
5.	Ahsaan Iqbal	Ingeuity Gaming
6.	Renu Verma	HIKE Education
7.	Anchal Pal	Innobit Systems Pvt. Ltd.
8.	Anurag Yadav	Innobit Systems Pvt. Ltd.
9.	Prateek Dubey	Innobit Systems Pvt. Ltd.
10.	Santosh Kumar Pandey	Innobit Systems Pvt. Ltd.
11.	Manjari Verma	Innobit Systems Pvt. Ltd.
12.	Ritesh Kumar	Tata Consultancy Services (TCS)
13.	Saurabh Kumar	Mobiloitte Technologies India Pvt. Ltd
14.	Roop Chand Chauhan	Mobiloitte Technologies India Pvt. Ltd
15.	Ritik Rawat	ProAscend Consulting Pvt Ltd
16.	Ashish Tripathi	Wipro
17.	Atul Kumar	Datopic Technologies Pvt. Ltd.

Dr. Arindam Basu, Director General, Dr. M. S. Parmar, Director (Laboratories) and Sh. Vineet Tyagi, Sr. Manager (Business Development) from NITRA being seen with visitors at NITRA Pavilion during 8th Techtextil India Exhibition in Mumbai

NITRA Scientist Dr. Nidhi Sisodia being conferred Ph.D by Hon'ble Governor of UP Her Excellency Smt. Anandiben Patel at the 19th AKTU Convocation Ceremony at Lucknow



NITRA celebrates International Women's Day with a webinar on “Women Empowerment in Textile & Apparel Industry” where Mrs. Mridula Jain, MD, Shingora Textiles Ltd. joins as guest speaker

NITRA Technical Campus student Shivangi Chaudhary, recipient of silver medal in Carpet & Textile Group for the year 2017-21, being awarded B. Tech degree by Hon'ble Governor of UP Her Excellency Smt. Anandiben Patel at the 19th AKTU Convocation Ceremony at Lucknow

AUDITOR'S REPORT

&

BALANCE SHEET

B.K. KAPUR & COMPANY
CHARTERED ACCOUNTANTS

17, NAVYUG MARKET, GHAZIABAD -201001
PHONE: 0120-2790947, 2790951

AUDITOR'S REPORT

1. We have audited the attached Balance Sheet of NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION, Ghaziabad as at 31st March, 2022 and Income and Expenditure Account for the year ending 31st March, 2022 annexed thereto. These financial statements are the responsibility of the Association's Management. Our responsibility is to express an opinion on these financial statements based on our audit.
2. We conducted our audit in accordance with auditing standards generally accepted in India. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.
3. We report that :
    a) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.
    b) The Balance Sheet and Income & Expenditure A/c referred to in this report are in agreement with the books of Account.
    c) In our opinion and to the best of our information and according to the explanation given to us, the account read with accounting policies and notes on accounts give a true and correct view;
        i. In case of balance sheet, of the state of Affairs of the Association as at 31st March, 2022, and
        ii. In the case of Income and Expenditure A/c of the Excess of Income over Expenditure for Accounting year ending on that date.

For B.K. KAPUR & COMPANY
CHARTERED ACCOUNTANTS
FRN-000852C
Sd/-
(CA M.S. KAPUR)
PARTNER
Membership No. 074615
UDIN No. 22074615AOAWJY4598

Place: Ghaziabad
Date : 23rd July 2022

NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION, GHAZIABAD
SOURCES OF FUNDS AND MANNER OF EMPLOYMENT AS AT 31 st MARCH 2022

(Amount in Rs.)

Sources of Funds	SCH. No.	As at 31.3.2022	As at 31.3.2021
Capital Funds:			
i) Corpus	1	83,82,219	83,47,219
ii) Assets created out of Grants	2	52,24,54,831	51,22,39,517
Reserves & Surplus	3	42,07,335	41,24,568
Depreciation Fund	4	10,69,90,738	10,40,87,199
R & D Reserve	5	6,80,61,589	5,11,61,589
Current Liabilities	7	1,93,46,022	1,55,12,250
Total :		**72,94,42,734**	**69,54,72,342**
Manner of Employment			
Grant Receivable's	6	4,08,56,967	3,24,89,863
Fixed Assets	8	59,38,13,617	58,26,49,781
Current Assets, Loans & Advances	9	9,47,72,150	8,03,32,698
Total:		**72,94,42,734**	**69,54,72,342**

Significant accounting policies & notes to the accounts - Schedule- 16.

Sd/-	Sd/-	Sd/-	Sd/-
CHAIRMAN Governing Council	**CHAIRMAN Finance & Adm Committee**	**DIRECTOR GENERAL**	**DY. MANAGER ACCOUNTS**

Subject to our report of even date.
For **B.K.KAPUR & CO.**
Chartered Accountants

Firm Registration No. 000852C

Sd/-
(C.A. M.S. KAPUR)
(PARTNER
Membership No. 074615
UDIN No. 2074615AOAWJY4598

Place : GHAZIABAD

Date : 23/07/2022

STATEMENT OF INCOME GENERATION AND ITS UTILISATION FOR THE YEAR ENDING 31ST MARCH, 2022

(Amount in Rs.)

INCOME GENERATION	SCH. No.	As at 31.3.2022	As at 31.3.2021
Grant-in-Aid to meet Recurring Expenditure (Non Plan)		2,00,00,000	1,50,00,000
Industry Contribution (Testing, Training, Inspection, Consultancy, Membership Subscription) and Educational services	10	6,60,71,838	6,59,95,778
Other Income	11	59,00,455	82,81,346
Grant-in-Aid to meet Expenditure on Projects	13	98,74,396	32,48,536
Grant-in-Aid to meet Expenditure at Powerloom Service Centres	14	1,30,34,000	1,32,14,860
Total :		**11,48,80,689**	**10,57,40,520**
UTILISATION			
Expenditure of Establishment	12	5,18,12,079	5,47,11,480
Expenditure on Projects	13	98,82,695	35,78,610
Expenditure on Powerloom Service Centres	14	1,44,59,801	1,52,84,480
Expenditure on General Administration	15	1,88,09,548	1,80,77,435
Transfer to Depreciation Fund		29,33,799	29,92,284
Total :		**9,78,97,922**	**9,46,44,289**
Balance available for Appropriation		1,69,82,767	1,10,96,231
Transfer to R&D Reserve		1,69,00,000	1,10,00,000
Surplus transferred to Balance Sheet		82,767	96,231

Significant accounting policies & notes to the accounts – Schedule-16.

Sd/-	Sd/-	Sd/-	Sd/-
CHAIRMAN	**CHAIRMAN**	**DIRECTOR**	**DY. MANAGER**
Governing Council	**Finance & Admn. Committee**	**GENERAL**	**ACCOUNTS**

Subject to our report of even date
For **B.K.KAPUR & CO.**
Chartered Accountants

Firm Registration No. 000852C
Sd/-
(C.A. M.S. KAPUR)
(PARTNER
Membership No. 074615
UDIN No. 2074615AOAWJY4598

Place : GHAZIABAD

Date : 23/07/2022

SCHEDULE – 1

(Amount in Rs.)

CAPITAL FUNDS	As at 31.3.2022	As at 31.3.2021
Capital		
Corpus		
a) Admission Fees (Members)		
Balance at the beginning	25,31,779	25,11,779
Receipts during the year	35,000	20,000
Sub Total:	**25,66,779**	**25,31,779**
b) Capital Contribution		
Balance at the beginning	34,13,530	34,13,530
Receipts during the year	-	-
Sub Total :	**34,13,530**	**34,13,530**
c) Donations		
Balance at the beginning	24,01,910	24,01,910
Receipts during the year	-	-
Sub Total :	**24,01,910**	**24,01,910**
Total :	**83,82,219**	**83,47,219**

SCHEDULE – 2

CAPITAL FUND - ASSETS CREATED OUT OF GRANTS RECEIVED FROM GOVERNMENT AGENCIES	**Balance As on 31.3.2021**	**Additions / Write-off during the year**	**Balance As on 31.3.2022**
Capital Reserve: I - (Non Plan)	32,76,379	-	32,76,379
Sub Total :	**32,76,379**	**-**	**32,76,379**
Capital Reserve : II (Sponsored Projects)-MOT	6,82,72,304	1,02,49,103	7,85,21,407
Sub Total :	**6,82,72,304**	**1,02,49,103**	**7,85,21 ,407**
Capital Reserve : III (Other Agencies) - National Jute Board DST	38,60,698	-	38,60,698
Sub Total :	**38,60,698**	**-**	**38,60,698**
Capital Reserve : IV (Power Loom Service Centres)	78,50,034	-	78,50,034
Sub Total :	**78,50,034**	**-**	**78,50,034**
Capital Reserve : V **(PLSC's income)**	5,32,175	41,700	5,73,875
Sub Total :	**5,32,175**	**41,700**	**5,73,875**
Capital Reserve : VI Government of Rajasthan for Bhilwara Centre	3,51,052	-	3,51,052
Sub Total :	**3,51,052**	**-**	**3,51,052**

(*Amount in Rs.)*

CAPITAL FUND - ASSETS CREATED OUT OF GRANTS RECEIVED FROM GOVERNMENT AGENCIES	**Balance As on 31.3.2021**	**Additions / write-off during the year**	**Balance As on 31.3.2022**
Capital Reserve : VII Testing Lab Bhilwara, Panipat, Meerut & NITRA, Ghaziabad.	1,71,60,660	**-**	1,71,60,660
Sub Total :	**1,71,60,660**	**-**	**1,71,60,660**
Capital Reserve : VIII (CAD Centres at Bhilwara, Panipat & NITRA Ghaziabad)	72,26,565	**-**	72,26,56 5
Sub Total :	**72,26,565**	**-**	**72,26,565**
Capital Reserve : IX Modernisation of PLSC's	1,51,09,628	-	1,51,09,628
Sub Total :	**1,51,09,628**	**-**	**1,51,09,628**
Capital Reserve : X - (CAD Tanda)	4,13,482	**-**	4,13,482
Sub Total :	**4,13,482**	**-**	**4,13,482**
Capital Reserve ; XI - (COE Protech)	15,59,39,236	**-**	15,59,39,236
Sub Total :	**15,59,39,236**	**-**	**15,59, 39,236**
Capital Reserve ; XII - (ASIDE) (U.P. Govt. & Nitra)	8,43,87,200	**-**	8,43,87,200
Capital Reserve ; XIII - (ISDS)	11,88,31,627	**(75,489)**	11,87,56,138
Capital Reserve ; XIV - FIC (COE)	2,90,28,477	**-**	2,90,28,477
GRAND TOTAL:	**51,22,39,517**	**1,02,15,314**	**52,24,54,831**
Previous year	**50,94,03,367**	**28,36,150**	**51,22,39,517**

SCHEDULE-3

(Amount in Rs.)

RESERVES AND SURPLUS	As at 31.3.2022	As at 31.3.2021
Surplus accumulated: Excess of Income over Expenditure		
Balance at the beginning of Financial Year	41,24,568	40,28,337
Surplus for the year as per Account annexed	82,767	96,231
Total :	**42,07,335**	**41,24,568**

SCHEDULE – 4

(Amount in Rs.)

DEPRECIATION FUND	As at 31.3.2022	As at 31.3.2021
Opening Balance	10,40,87,199	10,12,40,308
	(30,260)	(1,45,393)
Depreciation for the year	29,33,799	29,92,284
Total :	**10,69,90,738**	**10,40,87,199**

SCHEDULE – 5

(Amount in Rs.)

R & D RESERVE		As at 31.3.2022	As at 31.3.2021
a) Opening Balance		5,11,61,589	4,01,61,589
+ Transfer to R&D Reserve		1,69,00,000	1,10,00,000
- Deficit Adjusted		6,80,61,589	5,11,61,589
b) Income from PLSCs'	8,75,700		
(-) Spent under capex	41,700		
Less : Adjustment during the year	8,34,000	-	-
Total :		**6,80,61,589**	**5,11,61,589**

SCHEDULE – 6

(Amount in Rs.)

S. No.	GRANTS PENDING UTILISATION / (Receivables)	Balance at the beginning	Receipts During the year	Adjust-ment during the year	Utilised during the year		Balance carried forward
					Cap. Exp.	Rec. Exp.	
I.	**NON-PLAN (Ministry of Textiles)**						
	Non-plan (Ministry of Textiles)	-	2,00,00,000	-	-	2,00,00,000	-
	NON-PLAN Previous Year	-	1,50,00,000	-	-	1,50,00,000	-
II.	**Plan (Ministry of Textiles & other Agencies)**						
1.	Designing a compressed air monitoring system optimize energy consumption in a textile mill.	(14,59,245)	-	-	-	-	(14,59,245)
2.	Development of specialty embroidery yarn for application in stretchable fabric like knitted fabrics	(8,64,000)	-	-	-	-	(8,64,000)
3.	Study to Enhance Indian Apparel Exports	(13,38,750)	-	-	-	-	(13,38,750)
4.	Development of Multi Layered Flame & Thermal Resistance Fabric for Fire Fighter Clothing	(13,85,444)	-	-	-	-	(13,85,444)
5.	Development of Protective Work Wear for Cement Porters	(14,67,819)	-	-	-	-	(14,67,819)
6.	Development of Fabric Smoothness Tester	(9,95,484)	-	-	-	-	(9,95,484)

S. No.	GRANTS PENDING UTILISATION / (Receivables)	Balance at the beginning	Receipts During the year	Adjust-ment during the year	Utilised during the year		Balance carried forward
					Cap. Exp.	Rec. Exp.	
7.	New approaches to reduce water consumption in textile wet processing	(25,41,720)	-	-	-	-	(25,41,720)
8.	Development of value added product from different fibres prod uced in Himalayan Region (Basic research)	(2,02,20,385)	-	-	9,80,487	41,85,947	(2,53,86,819)
9.	Development of Air cleaner home textiles to reduce indoor air pollution	(12,41,469)	-	-	-	-	(12,41,469)
10.	Common Effluent Treatment Plant (CETP) Azrakpur, Bhuj	(5,79,802)	36,50,000	-	27,40,852	26,23,457	(22,94,111)
11.	Development of regenerated cellulosic fibre Indian Bamboo	(14,49,351)	-	-	47,000	22,57,574	(37,53,925)
12.	Development of Jute composite for automotive acoustic insulation & other uses	-	16,86,300	-	-	4,07,060	12,79,240
13.	Development of a molten metal splash resistance unique Jute blended workwear for steel foundary workers	-	13,00,200	-	-	2,57,430	10,42,770
	Sub Total:	**(33,54,34,69)**	**66,36,500**	**-**	**37,68,339**	**97,31,468**	**(4,04,06,776)**
	Previous Year:	**(2,88,64,942)**	**20,00,000**	**-**	**39,29,991**	**27,48,536**	**(3,35,43,469)**
III.	**POWER LOOM SERVICE CENTRES**						
1.	TANDA	-	12,00,000	1,17,050	-	13,17,050	-
2.	MEERUT	-	17,00,000	10,000	-	17,10,000	-
3.	LUDHIANA	-	15,00,000	7,200	-	15,07,200	-

S. No.	GRANTS PENDING UTILISATION / (Receivables)	Balance at the beginning	Receipts During the year	Adjust-ment during the year	Utilised during the year		Balance carried forward
					Cap. Exp.	Rec. Exp.	
4.	KANPUR	-	17,00,000	2,04,700	-	19,04,700	-
5.	GORAKHPUR	-	12,00,000	28,500	-	12,28,500	-
6.	PANIPAT	-	17,00,000	66,000	-	17,66,000	-
7.	BHILWARA	-	17,00,000	9,600	-	17,09,600	-
8.	VARANASI	-	10,49,809	3,90,950	-	18,90,950	**(4,50,191)**
	Sub Total:	-	**1,17,49,809**	**8,34,000**	-	**1,30,34,000**	**(4,50,191)**
	Previous Year:	-	**1,22,00,000**	**10,14,860**	-	**1,32,14,860**	-
IV	**PLSC Varanasi**	**9,10,678**	-	9,10,678	-	-	-
V	**Swach Bharat Abhiyan**	**1,42,928**	-	-	-	1,42,928	-
	Grand Total:	**(3,24,89,863)**	**3,83,86,309**	**8,34,000 (9,10,678)**	**37,68,339**	**4,29,08,396**	**(4,08,56,967)**
	Previous Year:	**(2,78,11,336)**	**2,92,00,000**	**10,14,860**	**39,29,991**	**3,09,63,396**	**(3,24,89,863)**

SCHEDULE – 7

(Amount in Rs.)

S.NO.	CURRENT LIABILITIES	As at 31.3.2022	As at 31.3.2021
1.	Sundry Creditors	21,79,567	20,08,513
2.	Outstanding Liabilities	38,35,167	7,36,587
3.	Security, Deposits & Advances	1,33,31,288	1,27,67,150
Total :		**1,93,46,022**	**1,55,12,250**

SCHEDULE - 08

(Amount in Rs.)

S. No.	FIXED ASSETS	Total cost as on 31.3.2021	Additions / writeoff during the Year	Total cost as on 31.3.2022
1.	Building*	2,62,99,861	-	2,62,99,861
2.	Air conditioning Plant & Room Air-Conditioners	4,02,015	-	4,02,015
3.	Furniture A/c	19,47,098	-	19,47,098
4.	Fixture & Fittings	14,26,985	86,764	15,13,749
5.	Office Equipments	80,91,243	6,62,056 (33,725)	87,19,574
6.	Cooler (Room & Water)	6,46,384	-	6,46,384
7.	Vehicles	20,03,390	-	20,03,390
8.	Fire Extinguisher	1,36,288	-	1,36,288
9.	Intercom, Telephones	2,84,542	-	2,84,542
	Machinery & Equipments: A. In House R&D	2,43,24,544	5,99,671	2,49,24,215
	B. Sponsored Projects**	8,03,76,658	98,82,859	9,02,59,517
	C. CAD & Powerloom Service Centres**	3,13,56,548	41,700	3,13,98,248
	D. Testing Lab, Panipat Bhilwara & Meerut**	1,23,89,045	-	1,23,89,045
	E. Testing Lab, NITRA, Ghaziabad**	47,78,640	-	47,78,640
	F. Centre of ** Excellence Protech	15,59,39,236	-	15,59,39,236
	G. Focus Incubation ** Centre (CoE)	2,90,28,477	-	2,90,28,477
10.	ASIDE Govt. share ** NITRA share	5,77,20,000 2,66,67,200	- -	5,77,20,000 2,66,67,200
11.	ISDS Project **	11,88,31,627	(75,489)	11,87,56,138
	Grand Total :	**58,26,49,781**	**1,12,73,050 (1,09,214)**	**59,38,13,617**
	Previous Year:	**57,74,66,951**	**54,97,638 (3,14,808)**	**58,26,49,781**

NOTE:

* The Building stands on leasehold land measuring 49.80 Acres from GDA for 90 years from 25.3.1980, the premium amounting to Rs. 47.15 lakhs was paid by the U.P.Government.

** No depreciation provided on items acquired in Powerloom Service Centres, CAD, Sponsored Projects, Testing Labs, COE, ASIDE & ISDS to the extent of the Grant given by the sponsor.

SCHEDULE-09

(Amount in Rs.)

S.No.	CURRENT ASSETS & LOANS AND ADVANCES	As at 31.3.2022	As at 31.3.2021
1.	Sundry Debtors	33,62,858	33,25,293
2.	Advance	2,29,652	1,62,413
3.	Sundry Deposits	19,00,707	18,90,084
4.	Prepaid Expenses	8,11,638	6,63,333
5. a)	Cash in Hand	1,63,479	89,986
b)	Balance with Banks	1,15,47,330	(16,18,384)
6.	Other Receivables	1,65,06,028	1,76,04,923
7.	FDR with Banks (It includes earmarked deposits)	5,86,35,354	5,59,82,916
8.	Accrued Income	16,15,104	22,32,134
Total :		**9,47,72,150**	**8,03,32,698**

SCHEDULE - 10

(Amount in Rs.)

S.No.	INDUSTRY CONTRIBUTION & EDUCATIONAL		Current Year	Previous Year
1.	**Training & Consultancy**			
a)	Foreign assignments	-		
b)	ISDS & other Educational / Training Prog.	47,57,948		
c)	Inspection & Other Services	84,26,000		
d)	Other consultancy	31,29,585	4,29,21,938	4,29,15,704
e)	NTC	2,66,08,405		
2.	**Sample Testing Fees**		2,15,48,950	2,12,25,299
3.	**Income Testing Lab Bhilwara, Panipat & Meerut**		7,80,950	9,79,775
4.	**Membership Subscription**		8,20,000	8,75,000
Total :			**6,60,71,838**	**6,59,95,778**

SCHEDULE-11

(Amount in Rs.)

S.No.	OTHER INCOMES	Current Year	Previous Year
1.	Overhead Recovery on Projects	25,90,446	27,83,786
2.	NITRA Publications	1,06,652	13,183
3.	Income from Investments	23,03,065	40,66,116
4.	Waste field cotton & Yarn & Income from land utilization	7,92,967	8,30,106
5.	Application Forms	48,000	23,000
6.	Miscellaneous Income	59,325	5,65,155
Total :		**59,00,455**	**82,81,346**

SCHEDULE-12

(Amount in Rs.)

EXPENDITURE ON ESTABLISHMENT	Current Year	Previous Year
NITRA	5,83,39,622	5,85,48,154
Sub Total :	**5,83,39,622**	**5,85,48,154**
Less : Transferred to Expenditure on Projects	65,27,543	38,36,674
Total:	**5,18,12,079**	**5,47,11,480**

SCHEDULE-13

SPONSORED PROJECTS EXPENDITURE AND GRANT- IN-AID TO MEET THE EXPENDITURE

(Amount Rs.)

Sl. No.	Name of the Sponsored Project	2021-2022		2020-2021	
		Recurring Expendi ture	Amount Transferred from Grant-in-Aid A/c to meet sponsored Project Exp.	Recurring Expendi-ture	Amount Transferred from Grant-in-Aid A/c to meet sponsored Project Exp.
1.	New Approaches to Reduce Water Consumption in Text Wet Processing.	-	-	5,00,000	5,00,000
2.	Development of Air cleaner home textiles to reduce indoor air pollution	-	-	11,00,246	7,70,172
3.	Development of value added product from different fibres produced in Himalayan Region (Basic research)	41,85,947	41,85,947	3,50,000	3,50,000
4.	Common Effluent Treatment Plant Azrakpur, Bhuj	26,23,457	26,23,457	2,47,212	2,47,212
5.	Development of regenerated celluloses fibre from Indian Bamboo (Dept. of Agriculture National Bamboo Mission)	22,57,574	22,57,574	13,81,152	13,81,152
6.	Swach Bharat Abhiyan	1,51,227	1,42,928	-	-
7.	Development of Jute composite for automotive acoustic insulation & other uses	4,07,060	4,07,060	-	-
8.	Development of a molten metal splash resistance unique Jute blended workwear for steel foundary workers	2,57,430	2,57,430	-	-
	Total :	**98,82,695**	**98,74,396**	**35,78,610**	**32,48,536**

SCHEDULE-14

POWERLOOM SERVICE CENTRES EXPENDITURE AND GRANT-IN-AID TO MEET THE EXPENDITURE

(Amount in Rs.)

S.No	Place of the Centre	2021-		2020-2021	
		Recurring Expenditure	Amount Transferred from Grant-in-Aid A/c & income to meet PLSC exps.	Recurring Expenditure	Amount Transferred from Grant-in-Aid A/c to meet PLSC exps.
1.	TANDA	14,01,091	13,17,050	15,19,657	13,44,800
2.	MEERUT	18,24,648	17,10,000	19,97,702	17,08,400
3.	KANPUR	20,35,486	19,04,700	21,13,728	21,03,110
4.	LUDHIANA	15,25,294	15,07,200	16,96,194	15,98,600
5.	GORAKHPUR	12,76,440	12,28,500	16,03,738	12,34,500
6.	PANIPAT	22,80,312	17,66,000	25,47,777	17,60,000
7.	BHILWARA	21,73,589	17,09,600	18,97,530	17,54,000
8.	VARANASI	19,42,941	18,90,950	19,08,154	17,11,450
TOTAL :		**1,44,59,801**	**1,30,34,000**	**1,52,84,480**	**1,32,14,860**

SCHEDULE – 15

(Amount in Rs.)

EXPENDITURE ON GENERAL ADMINISTRATION	Current Year	Previous Year
Electricity Charges & DG Running	30,06,680	25,89,152
Traveling & Conveyance	6,49,021	6,20,571
Building Maintenance & Housekeeping	8,13,075	7,18,750
Repairs Plant & Machinery, Computer, Building & others	20,43,063	17,56,504
Legal & Professional Exps.	8,41,039	5,85,884
NABL Calliberation Exps.	7,18,539	4,04,724
Security Arrangement	17,69,897	16,27,257
Books, Periodicals & Publication	1,88,195	1,95,30 7
Advertisement exps	9,92,268	11,45,891
Insurance	3,94,867	3,37,390
Cultivation / Horticulture Exps.	7,20,512	6,60,493
Postage & Telephone Exps.	5,99,939	4,84,806
Car Running & Maintenance	2,65,624	2,61,670
Printing & Stationery	7,86,674	7,06,230
Chemicals, Glassware and Spares Stores Consumed	8,16,573	9,14,452
Training & Seminar Exps.	85,787	1,26,400
Meeting Exps.	1,42,224	1,85,473
In House Project Exps.	7,31,927	5,29,131
Amount Write Off.	9,31,770	12,43,160
Audit fees	80,000	80,000
Testing lab exps., - Panipat, Bhilwara & Meerut Previous Year Exps·	1,24,186 14,210	2,94,934 10,15,149
Other Expenses	8,15,263	4,82,381
Rates & Taxes	12,78,215	11,11,726
Total :	**1,88,09,548**	**1,80,77,435**

SCHEDULE – 16

Significant Accounting Policies and Notes to the Accounts

A. BASIS OF ACCOUNTING

The Financial Statements are prepared on Historical cost convention and on Mercantile Accounting system.

B. FIXED ASSET

Depreciated Fixed Assets are stated at cost, which include expenditure incurred on acquisition of assets concerned such as freight, duties, Taxes and incidental expenses up to the installation of assets. Assets acquired in Power Loom Service Centre's, CAD, Sponsored Projects and Testing Labs are stated at Revalued amount.

C. DEPRECIATION

During the year the Society has charged depreciation on fixed assets on Written down Value method as per the rates & manner prescribed in the Income Tax Act 1961.

D. INVESTMENT

Investments are stated at cost.

E. FOREIGN CURRENCY TRANSACTION

Transactions in Foreign Currency are accounted at the exchange rate prevailing on the date of the transaction.

F. REVENUE RECOGNITION

(a) All incomes are accounted for on accrual basis except for membership subscription which has taken on receipt basis.

(b) Government grants are accounted on the basis of sanction letter from the government department.

NOTES ON ACCOUNTS:

1. Figures in Balance Sheet are rounded off to the nearest rupee.

Previous year figures have been regrouped or rearranged wherever considered necessary to make them comparable with those of Current year.

AUDITOR's REMUNERATION

	CURRENT YEAR	PREVIOUS YEAR
Audit Fees	80,000	80,000.00

NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION

(Linked to Ministry of Textiles, Government of India)

Sector – 23, Raj Nagar, Ghaziabad – 201 002 (India)

Phone Numbers : 0120-2807390-95, 2783586/592/095, Fax : 0120-2783596

E-mail : mail@nitratextile.org Website : www.nitratextile.org