



COST Action ENFiber | CA24111

D2 - Infrastructure & Expertise Database

All Working Groups (WG1-WG7)

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Executive Summary

This deliverable (D2) presents the ENFiber COST Action (CA24111) Infrastructure and Expertise Database, compiled from survey responses submitted by Action participants. The database documents the laboratory infrastructure, key technical expertise, available equipment, and preferred research contributions of 160 researchers from 40 countries in Europe and beyond. The information is intended to facilitate collaboration, Short-Term Scientific Missions (STSMs), joint publications, and coordinated experimental activities across the seven Working Groups (WG1-WG7) of the ENFiber Action. This document fulfils the D2 deliverable requirement as specified in the Action Memorandum of Understanding (MoU).

1. Introduction

1.1 Background and Context

The ENFiber COST Action (CA24111) - European Network for Valorizing Food Processing Waste into Sustainable Fibers - aims to build a European research network dedicated to sustainable fiber valorization from food processing waste streams. A foundational step in achieving this goal is identifying and documenting the research infrastructure and technical expertise available within the network.

1.2 Objectives of this Deliverable

Deliverable 1 aims to establish a comprehensive and structured overview of the capabilities within the ENFiber network. This includes compiling detailed information on the laboratory and pilot-scale infrastructure available across the participating institutions, as well as mapping the key areas of technical expertise represented within the network. In addition, the deliverable seeks to catalog the relevant equipment for fiber extraction, characterization, and valorization. Together, this information will serve as a foundation for collaboration, enabling effective matchmaking between partners and supporting the strategic development of joint research activities.

1.3 Scope and Structure

This report covers all 160 survey responses received from ENFiber Action members. Section 2 describes the methodology. Section 3 lists the contributors, and Section 4 presents the complete database. Section 5 summarizes the findings by country and working group, Section 6 links the deliverable to the MoU objectives, and Section 7 presents the conclusions and next steps.

2. Methodology

An online survey was distributed to all registered ENFiber Action members. Participants were asked to provide information on their institutional affiliation and country, working group(s) they belong to, laboratory infrastructure and facilities, key technical expertise, available equipment, preferred contribution to the Action, and any additional notes. Responses were collected using Google Forms and compiled into a database. All participants confirmed their consent for processing their data for ENFiber COST Action activities in compliance with the GDPR.

2.1 Participating Countries and Institutions

A total of 160 responses were received from researchers affiliated with institutions in 40 countries: Albania, Algeria, Argentina, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Egypt, France, Georgia, Germany, Greece, Hungary, Ireland, Israel, Italy, Kosovo, Latvia, Lithuania, Malta, Morocco, North Macedonia, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Tunisia, Türkiye, Ukraine, and the United Kingdom. The number of contributors per country is given in Table 1 and mapped in Figure 1A.

Table 1. Number of contributors per country.

Country	Number of Contributors
Albania	2
Algeria	1
Argentina	1
Austria	1
Belgium	1
Bosnia and Herzegovina	3
Bulgaria	1
Croatia	1
Cyprus	1
Czechia	2
Denmark	1
Egypt	1
France	1
Georgia	1
Germany	4
Greece	3
Hungary	1
Ireland	3
Israel	1
Italy	10
Kosovo	1
Latvia	2
Lithuania	2
Malta	3
Morocco	2
North Macedonia	3
Norway	1
Poland	4
Portugal	3
Serbia	14
Slovakia	1
Slovenia	3

Country	Number of Contributors
South Africa	1
Spain	10
Sweden	1
Switzerland	1
Tunisia	1
Türkiye	61
Ukraine	2
United Kingdom	4

3. Contributors

Table 2 lists all the researchers who contributed data to the D2 database.

Table 2. Contributors to the D2 database: affiliation, country and Working Group membership.

Name	Institution	Country	Working Groups
Mustafa Çiçekler	Kahramanmaraş Sütçü İmam University	Türkiye	WG1, WG2, WG3, WG5, WG6
Davut Karahan	Bingöl University	Türkiye	WG1, WG2, WG4, WG6, WG7
Furkan Türker Sarıcaoglu	Bursa Technical University	Türkiye	WG1, WG3, WG4, WG6
Özlem Pelin Can	Sivas Cumhuriyet University	Türkiye	WG1
Oya Irmak Şahin	Yalova University	Türkiye	WG1, WG2, WG4
Marco T Tejada	Nasekomo	Bulgaria	WG2, WG6
Emre Hastaoğlu	Sivas Cumhuriyet University	Türkiye	WG4, WG5, WG6
Ayla Mumcu	Olive Research Institute	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Pınar Bozbeyoğlu	Gümüşhane University	Türkiye	WG3
Elif Turabi Yolacanar	Hacettepe University	Türkiye	WG2, WG3, WG4
Serpil Aydın	Ondokuz Mayıs University	Türkiye	WG2, WG5, WG6, WG7
Şeyma Şişik Oğraş	Atatürk University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Gulsen Betül Aktas	Istanbul Bilgi University	Türkiye	WG1, WG3, WG7

Name	Institution	Country	Working Groups
Sebahat Öztekin	Atatürk University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Llesh Lleshaj	University of Tirana	Albania	WG5
Ali Oguz Buyukkileci	İzmir Institute of Technology	Türkiye	WG2, WG4
Dilhun Keriman Arserim Uçar	Bingöl University	Türkiye	WG1, WG2, WG3, WG4, WG6
Elina Dace	Baltic Studies Centre	Latvia	WG1, WG5
Özgün Güzdemir	Aydın Adnan Menderes University	Türkiye	WG3, WG6
Alejandro Bacigalupe	National Institute of Industrial Technology (INTI)	Argentina	WG3, WG6
Christos Athanassiou	University of Thessaly	Greece	WG2, WG3, WG5
Nataliia Smyk	Taras Shevchenko National University of Kyiv	Ukraine	WG3
Ayaz Mukarram Shaikh	University of Debrecen	Hungary	WG4, WG6
Zehra Ayhan	Sakarya University	Türkiye	WG6, WG7
Carolina Oliveira Pandeirada	Société des Produits Nestlé S.A.	Switzerland	WG3
Vincenzo Disca	Università del Piemonte Orientale	Italy	WG4, WG6
Manu Thundathil	University of Limerick	Ireland	WG6
Foteini Pavli	University of Malta	Malta	WG7
Maciej Guzik	Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences	Poland	WG2
Mustafa Topkafa	Konya Technical University	Türkiye	WG4
Maria Dimopoulou	Teesside University	United Kingdom	WG2, WG3, WG4, WG6
Barçın Karakaş-Budak	Akdeniz University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Mónia Martins	Mountain Research Center – Polytechnic Institute of Bragança	Portugal	WG2
Miguel Vega-Castellote	University of Córdoba	Spain	WG3
Sevgin Dıblan	Tarsus University	Türkiye	WG2, WG3, WG4, WG7
Maria Tarapoulouzi	University of Cyprus	Cyprus	WG7
Huriye Gözde Ceylan	Adıyaman University	Türkiye	WG4, WG5, WG6
Ece Surek	Istanbul University-Cerrahpaşa	Türkiye	WG2, WG3, WG4
Siva Kaylasa Sundari Saravanamuthu	Kompetenzzentrum Holz GmbH	Austria	WG3, WG5, WG6, WG7
Pelin Salum	Adana Alparslan Türkeş Science and Technology University	Türkiye	WG2, WG3, WG4
Fahriye Ceyda Dudak	Hacettepe University	Türkiye	WG2, WG3, WG4

Name	Institution	Country	Working Groups
Natasha Ristovska	Association Green Growth Platform (GGP)	North Macedonia	WG5, WG7
Khadija Ramzan	Lithuania Research Centre for Agriculture and Forestry (LAMMC)	Lithuania	WG2, WG4
Filipa A. Vicente	National Institute of Chemistry	Slovenia	WG2, WG4, WG6, WG7
Hamza Boulouka	USMBA	Morocco	WG1
Sara Di Lonardo	CNR-IRET	Italy	WG1, WG2, WG3, WG4
Karen Attard	BKEA Ltd (BioKimika Extrakta Analytika Ltd)	Malta	WG2, WG4
Frederick Lia	BKEA Ltd (BioKimika Extrakta Analytika Ltd)	Malta	WG2, WG3, WG4, WG5, WG6
Sonia Calligaris	University of Udine	Italy	WG1, WG2, WG3
Hyrie Koraqi	University for Business and Technology (UBT)	Kosovo	WG1, WG2, WG3, WG4
Cansu Aras	Bursa Uludağ University	Türkiye	WG3, WG4, WG6
Hacer Gürkan	İnönü University	Türkiye	WG2, WG3, WG4
Grant Campbell	University of Huddersfield	United Kingdom	WG2, WG3, WG6, WG7
Irakli Chkhikvishvili	Lado Baxutashvili Institute of Medical Biotechnology, TSMU	Georgia	WG4
Türkan Uzlaşır	Alanya University	Türkiye	WG2, WG4
Kateřina Hájková	Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague	Czechia	WG1, WG2, WG3, WG6
Ismail Tontul	Necmettin Erbakan University	Türkiye	WG2, WG6
Suneela Sardar	University of Lincoln	United Kingdom	WG2, WG3, WG7
Mohammad Alyassin	University of Huddersfield	United Kingdom	WG2, WG3, WG6
Manuel Amador Cervera	University of Deusto	Spain	WG5
Belén Garcíá	PACKNET – Spanish Packaging Technology Platform	Spain	WG6
Sibel Uluata	İnönü University	Türkiye	WG4, WG6
Amra Bratovic	University of Tuzla	Bosnia and Herzegovina	WG4, WG6, WG7
Göksel Tırpancı Sivri	Tekirdağ Namık Kemal University	Türkiye	WG1, WG2, WG4, WG6
Irem Deniz	Manisa Celál Bayar University	Türkiye	WG1, WG2, WG7
Ayşe Neslihan Dündar	Bursa Technical University	Türkiye	WG2, WG3, WG4, WG6
Vladimir Filipović	University of Novi Sad, Faculty of Technology Novi Sad	Serbia	WG6

Name	Institution	Country	Working Groups
Duygu Özmen	Yıldız Technical University, Food Engineering Department	Türkiye	WG1, WG2, WG3, WG6
Marina Antic	Institute of Genetic Resources, University of Banja Luka	Bosnia and Herzegovina	WG1, WG5, WG6, WG7
Oskars Platnieks	Riga Technical University	Latvia	WG2, WG3
Leonidas Matsakas	Luleå University of Technology	Sweden	WG2, WG6
Itamar Yadid	Tel Hai University	Israel	WG1, WG2, WG6
Nada Grahovac	Institute of Field and Vegetables Crops	Serbia	WG1, WG2, WG3, WG4, WG5, WG6
Gulum Sumnu	Middle East Technical University	Türkiye	WG4
Mahfuz Elmastaş	University of Health Sciences	Türkiye	WG4
Ahmet Faruk Yesilsu	Central Fisheries Research Institute (SUMAE)	Türkiye	WG4
Gülşah Çalışkan Koç	Uşak University	Türkiye	WG5, WG6, WG7
Özgür Tarhan	Uşak University	Türkiye	WG4, WG6
Gökhan Görgişen	University of Health Sciences, Gülhane Faculty of Medicine	Türkiye	WG4
Pablo José Arauzo Gimeno	University of Hohenheim	Germany	WG1, WG2
Danijela Šuput	Faculty of Technology Novi Sad	Serbia	WG3
Anders E. Daugaard	Technical University of Denmark	Denmark	WG6
Nilgün Başak Tecer	Ankara University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6
Maja Čič	National institute of chemistry - Center for Development, Demonstration and Training for Carbon-Free Technologies	Slovenia	WG1, WG2, WG3
Ana Momcilovic Ristanovic	Academy of Applied Studies Polytechnic Belgrade	Serbia	WG7
Marena Manley	Stellenbosch University	South Africa	WG1
Elif Çavdaroğlu	İzmir Institute of Technology	Türkiye	WG2, WG3, WG4, WG6
Özlem Özmutlu	HSWT – Hochschule Weihenstephan-Triesdorf, Institute of Food Technology	Germany	WG2, WG3, WG4
Seda Ersus	Ege University	Türkiye	WG2, WG3
Jose Coelho	Instituto Superior de Engenharia de Lisboa / IPL	Portugal	WG2, WG4, WG7
Ayhan Çiğdem	İğdır University	Türkiye	WG1, WG2, WG3
Lucie Veselá	Mendel University in Brno, Faculty of Business and Economics – Consumer Lab	Czechia	WG5, WG7
Florian Zikeli	University of Perugia	Italy	WG2, WG3, WG6
Mauro Carraro	University of Padova	Italy	WG2, WG6

Name	Institution	Country	Working Groups
Özge Güven	Middle East Technical University	Türkiye	WG1, WG2, WG3, WG4, WG6
Zafer Erbay	Adana Alparslan Türkeş Science and Technology University	Türkiye	WG2, WG3, WG4
Milena Zuza Prastalo	Institute for Medical Research, National Institute of the Republic of Serbia, University of Belgrade	Serbia	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Ezgi İnal	Sakarya University, Faculty of Engineering, Department of Food Engineering	Türkiye	WG6, WG7
Sara Baldassano	University of Palermo	Italy	WG4
Ulku Dagdelen	Atatürk University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Biljana Lončar	Faculty of Technology Novi Sad	Serbia	WG2, WG6
Jolanta Sereikaite	Vilnius Gediminas Technical University	Lithuania	WG4, WG6
Carine Le Bourvellec	INRAE	France	WG1, WG2, WG3, WG4, WG5
Lola Pérez Marín	University of Córdoba	Spain	WG1, WG3, WG7
Miroslava Kačániová	Slovak university of Agriculture in Nitra	Slovakia	WG4, WG5, WG6
Nourhene Boudhrioua	University of Manouba	Tunisia	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Batuhan Öztürk	Ankara Medipol University - Ankara University	Türkiye	WG2, WG3, WG5, WG6
Hande Tahmaz Karaman	Ankara University, Faculty of Agriculture, Department of Horticulture	Türkiye	WG1, WG4
Lubna Ahmed	Dundalk Institute of Technology, Department of Agriculture, Food and Animal Health	Ireland	WG3, WG4, WG5
Latife Sakallı Aktürk	Uludağ Beverage	Türkiye	WG6
Hilmi Eriklioğlu	Middle East Technical University	Türkiye	WG1, WG2, WG3, WG5, WG6, WG7
Giordano P. Bernardes	ATU Sligo	Ireland	WG3
Gianni Zoccatelli	University of Verona	Italy	WG1, WG2
Marina Sokovic	Institute for Biological Research 'Siniša Stanković', University of Belgrade	Serbia	WG4
Beatrice Zonfrillo	University of Florence, NEUROFARBA Department	Italy	WG2, WG3, WG4
Nazende Günday-Türel	MyBiotech GmbH	Germany	WG2, WG5, WG6, WG7
Zafer Ömer Özdemir	University of Health Sciences Türkiye, Hamidiye Faculty of Pharmacy	Türkiye	WG4, WG5, WG6
Sanda Stanivukovic	Faculty of Agriculture, University of Banja Luka	Bosnia and Herzegovina	WG7

Name	Institution	Country	Working Groups
Arda Yıldırım	Tokat Gaziosmanpaşa University, Faculty of Agriculture, Department of Animal Science	Türkiye	WG1, WG2, WG4, WG6, WG7
Biljana Cvetković	Institute of Food Technology	Serbia	WG3, WG4, WG6
Sena Nur Karabekiroglu	Yıldız Technical University	Türkiye	WG1, WG2
Mamdouh Daoud	Food Technology Research Institute (FTRI), Agricultural Research Center (ARC)	Egypt	WG4, WG6
Marija Čorović	Faculty of Technology and Metallurgy, University of Belgrade	Serbia	WG1, WG2, WG4
Geert Bruggeman	Nutrition Sciences	Belgium	WG5, WG6
Panagiotis Panopoulos	Rezos Brands SA	Greece	WG5, WG6
Marko Petković	Faculty of Agronomy in Čačak, University of Kragujevac	Serbia	WG6
Amina Selmanović	InnoRenew CoE, UP IAM & UP FAMNIT, University of Primorska	Slovenia	WG2, WG4
Marwa Mounni	Università Politecnica delle Marche	Italy	WG1, WG2, WG5, WG7
Ali Göncü	Aydın Adnan Menderes University	Türkiye	WG4, WG6, WG7
Anja Petrov Ivanković	Innovation Center of the Faculty of Technology and Metallurgy in Belgrade	Serbia	WG2, WG3, WG4, WG5, WG6
Patricia Morales	Complutense University of Madrid	Spain	WG1, WG3, WG4, WG5
Milica Veljković	Innovation Centre of Faculty of Technology and Metallurgy, Belgrade	Serbia	WG2, WG3, WG4, WG5, WG6
Hazal Özyurt	Muğla Sıtkı Koçman University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Rosa María Cámara Hurtado	Universidad Complutense de Madrid	Spain	WG1, WG5
Montaña Cámara	Complutense University of Madrid	Spain	WG1, WG4, WG6
Abdessadek Essadek	Mohammed First University	Morocco	WG4, WG5
Drita Abazi Bajrami	Mother Teresa University	North Macedonia	WG2, WG3
Pavlo Bekhta	Ukrainian National Forestry University	Ukraine	WG1, WG3, WG6
Zimere Saiti Musliji	Mother Teresa University	North Macedonia	WG3
Esra Capanoglu	Istanbul Technical University	Türkiye	WG1, WG5
Turkay Turkoglu	Muğla Sıtkı Koçman University	Türkiye	WG4, WG5, WG6, WG7
Virginia Fernández Ruiz	Complutense University of Madrid	Spain	WG1, WG4
María Ciudad-Mulero	Complutense University of Madrid	Spain	WG1, WG3, WG4, WG5

Name	Institution	Country	Working Groups
Milica Simović	Faculty of Technology and Metallurgy, University of Belgrade	Serbia	WG2, WG3, WG4, WG6
Hatice Kalkan Yıldırım	Ege University	Türkiye	WG1, WG2, WG3, WG4, WG5, WG6, WG7
Gary Chinga Carrasco	RISE PFI	Norway	WG2, WG3, WG4
Felista Manga	Wroclaw University of Science and Technology	Poland	WG2, WG3, WG6
Tezkratt Amar	Mouloud Mammeri University of Tizi Ouzou	Algeria	WG2, WG3
Nikolaos Nenadis	Aristotle University of Thessaloniki	Greece	WG2, WG4
Sidorela Vishkulli	University of Tirana	Albania	WG1, WG2, WG3
Alejandro Rodríguez	University of Córdoba (IQUEMA)	Spain	WG1, WG2, WG3, WG4, WG6, WG7
Tânia Bragança Ribeiro	Universidade Católica Portuguesa, CBQF – Centro de Biotecnologia e Química Fina	Portugal	WG2, WG3, WG4
Malgorzata Nowacka	Warsaw University of Life Sciences	Poland	WG4, WG6, WG7
Manfred Mudelsee	Advanced Climate Risk Education	Germany	WG5, WG7
Marina Vukoje Bezjak	University of Zagreb, Faculty of Graphic Arts	Croatia	WG1
Mehmet Cabuk	Mersin University	Türkiye	WG2, WG3, WG4, WG5, WG6
Meryem Göksel Saraç	Sivas Cumhuriyet University	Türkiye	WG6
Aleksandra Bajić	Institute of Food Technology, University of Novi Sad	Serbia	WG2, WG3, WG4, WG6
Gayathri Halder	University of Warmia and Mazury in Olsztyn	Poland	WG2, WG3, WG4
Gianfranco Romanazzi	Marche Polytechnic University, Ancona	Italy	WG4

4. Infrastructure & Expertise Database

The table below presents the full database of 160 ENFiber Action members, including their infrastructure, expertise, equipment and preferred contributions.

Table 3. Infrastructure and expertise database: one row per respondent (numbering follows Table 2).

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
1	Kahramanmaraş Sütçü İmam University	Türkiye	University laboratory specializing in pulp, paper, and lignocellulosic fiber research.	Strong expertise in pulp and paper technology, particularly in recycled fiber processing, laboratory-scale paper production, and characterization of paper properties. Experience with chemical additives, process optimization, and experimental analysis.	Laboratory-scale facilities for pulp and paper production and characterization, including handsheet preparation systems, optical measurement tools for fiber dimensions, standard paper testing instruments (tensile, burst, and compression strength), optical property analyzers (brightness and opacity), precision balances, mixers, and controlled treatment setups.	Leading experimental work on fiber production and advanced characterization of lignocellulosic materials, including the development and optimization of pulp processing and fiber treatment methods. The focus is on fiber morphology and cellulose-related parameters to establish structure–property relationships, as well as a systematic evaluation of processing variables and their impact on fiber performance.
2	Bingöl University	Türkiye	Food Science and Technology Laboratory within a university-based Bee and Natural Products R&D Center, supporting research on natural products, sample preparation, extraction and in vitro digestion studies.	Analysis of natural products with a focus on bee products; determination of bioactive compounds; antioxidant capacity assays (DPPH, CUPRAC, Folin–Ciocalteu); in vitro digestion models; extraction techniques; bioaccessibility evaluation; and general food analysis.	Spectrophotometer (UV-Vis), HPLC, GC-MS, centrifuge, incubator, pH meter, analytical balance, magnetic stirrer, water bath, vortex mixer, drying oven, basic extraction equipment and laboratory-scale digestion systems.	Collaborative research on natural products and sustainable food systems; participation in analytical studies, method development, and data generation; support in the characterization of bioactive compounds and functional properties.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
3	Bursa Technical University	Türkiye	A well-equipped food engineering laboratory with instrumentation for rheological, spectral, and structural analyses, as well as processing capabilities.	Food polymer science, rheology, protein and fiber characterization, encapsulation, and advanced processing technologies, including electrospinning and electro-blowing.	Rheometer, texture analyzer, FTIR, fluorescence spectrophotometer, UV-Vis spectrophotometer, LECO protein analyzer, SDS-PAGE, HPLC, electro-blowing system, electrospinning system, spray dryer, freeze dryer, rotary evaporator, and ohmic heating system.	Active contribution to all types of scientific activities within the COST Action.
4	Sivas Cumhuriyet University	Türkiye	Food product development and microbiology laboratory, including a dairy pilot unit and a sausage production pilot plant.	Food microbiology, animal-derived products, shelf-life studies, postbiotics, and development of new products from food waste.	Dairy product processing facility, microbiological analysis laboratory, and pilot-scale sausage production unit.	Development of probiotic microorganism applications using food waste.
5	Yalova University	Türkiye	The research laboratory focuses on food and algal biotechnology, covering protein, lipid, and fiber extraction processes and bioprocessing. It includes wet-lab infrastructure for biochemical analysis and microalgal cultivation, as well as units for extraction, encapsulation, and functional food development.	Design and optimization of functional biomaterials; protein–polyphenol interactions; lipid encapsulation; controlled release systems; sustainable bioprocessing strategies.	UV-Vis spectrophotometer, FTIR, GC, high-speed refrigerated centrifuges, freeze dryer (lyophilizer), homogenizer, and shaker incubators.	Collaborative research projects, joint publications, supervision of early stage researchers, method development, and participation in Short-Term Scientific Missions (STSMs).
6	Nasekomo	Bulgaria	Pilot facility for insect rearing and chitin extraction.	Applied entomology; insect rearing.	50 L bioreactor (with temperature control and atmospheric conditions) for extraction.	Collaborative development and exploitation of insect-based bioprocessing.
7	Sivas Cumhuriyet University	Türkiye	Facilities supporting sensorial analysis, quantitative analysis, multi-criteria decision-making methods (TOPSIS, SAW), product development, and color, texture, phenolic, antioxidant, and proximate analyses.	Food waste valorization; product development; food and beverage management.	A spectrophotometer, instrumental color analyzer, tray dryer, molecular gastronomy equipment, nutrient information system (BeBis), MAXQDA, grinder, and pilot-scale sausage production unit were used.	Valorization of food industry by-products and leftovers.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
8	Olive Research Institute	Türkiye	Raw material handling area (olive gardens), olive oil production plant, food technology laboratory, and pretreatment facilities (drying, grinding, destoning, centrifugation).	Functional properties (water-holding capacity, oil-binding, prebiotic activity); fermentation; solid-state fermentation; biomass fermentation; microbiological analysis; and applications in food formulation.	Dryer, centrifuge, grinding and sieving equipment, Ultra-Turrax, vacuum filtration units, autoclaves, incubators, freeze dryer, HPLC, rotary evaporator, pH meter, texture analyzer, UV-Vis spectrometer, and rancimat.	Contribution across all working groups, with a particular focus on the extraction of fiber from olive by-products and its application in food.
9	Gümüşhane University	Türkiye	Laboratory equipped for electrospinning, spectroscopic analysis, elemental analysis, and biochemical studies.	Electrospinning; UV-Vis spectrophotometry; ICP-MS; biochemical analysis.	Electrospinning system, UV-Vis spectrophotometer, ICP-MS, and biochemical analysis equipment.	Electrospinning-based fiber production and characterization, and biochemical and elemental analyses. In addition, it produces nanoparticles from agricultural biowaste using green synthesis methods and activated carbon via chemical activation. Composites can be fabricated by incorporating these adsorbents into nanofibers.
10	Hacettepe University	Türkiye	Research laboratory equipped for extraction and encapsulation studies.	Extraction of bioactive compounds and encapsulation technologies.	Homogenizers, ultrasound processors, vacuum-microwave assisted extractors, shaking water baths, and incubators.	Ultrasound- and microwave-assisted extraction; encapsulation of bioactive compounds.
11	Ondokuz Mayıs University	Türkiye	Computational intelligence and statistical modeling infrastructure, including high-performance computing units for Data Envelopment Analysis (DEA), Arena Simulation, and machine learning applications.	Statistics and operations research applied to process optimization and data-driven decision-making; Data Envelopment Analysis (DEA); simulation modeling; mathematical optimization; applied machine learning.	High-performance workstations and key software tools, including MaxDEA (performance benchmarking), Arena Simulation, Python, and R.	Providing expertise in statistical methodology and optimization, including Design of Experiments (DoE), data analysis, and process modeling support within the COST Action.

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12	Atatürk University	Türkiye	Analytical chemistry laboratory with GC instrumentation and data analysis facilities.	Chemical and physical analyses; Gas Chromatography (GC); data analysis using Excel and SPSS.	Gas chromatography (GC).	Literature review and data collection, analytical method development using GC, data analysis and interpretation, and support for quality control and laboratory processes.
13	Istanbul Bilgi University	Türkiye	Bioengineering laboratory with facilities for protein synthesis, cell culture, and biosensor development.	Biosensor development and characterization.	Flow cytometry, UV spectrophotometry, PCR, RT-PCR, western blotting, electrospinning, and QCM.	Cell culture studies and biosensor-related research activities were performed.
14	Atatürk University	Türkiye	Food engineering laboratories equipped for microbiological, chemical, and physicochemical analyses; facilities for postharvest technology, biocontrol studies, and the development of edible films and coatings.	Postharvest biology and technology, microbial biocontrol of plant pathogens, antifungal activity of yeasts and lactic acid bacteria, edible film and coating development, and valorization of agro-food by-products.	Incubators, laminar flow cabinets, autoclaves, UV-Vis spectrophotometers, FTIR spectrometers, colorimeters, pH meters, moisture analyzers, freeze dryers (lyophilizers), drying ovens, centrifuges, and homogenizers.	Collaboration in joint research projects, sharing expertise in biocontrol and food preservation, development of sustainable packaging materials, and supervision of Short-Term Scientific Missions (STSMs).
15	University of Tirana	Albania	University laboratories, offices and computing facilities, and access to institutional research resources.	Economic optimization, process optimization, sustainable resource management, industrial symbiosis, and circular economy strategies.	Computing resources with software for data analysis and modeling (SPSS, R, Python, Excel) and access to scientific databases (Scopus, Web of Science).	Contributed expertise in economic optimization, circular economy strategies, industrial symbiosis, data analysis, system design, and sustainability assessments.
16	İzmir Institute of Technology	Türkiye	University laboratories	Lignocellulosic fractionation, fiber extraction and hydrolysis, prebiotic production, prebiotic activity determination (in vitro and ex vivo), enzymatic hydrolysis, and microbial bioprocessing.	Pressure reactor (500 mL); bioreactors (1–5 L); and analytical chromatography systems.	Partnerships in research projects.

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17	Bingöl University	Türkiye	Elektrospinning	Bacterial cellulose nanofibers and nanocrystals, fiber characterization, FTIR, TGA, XRD, SEM, AFM, electrospun nanofibers, electrosprayed particles, ultrasonication, NADES-based extraction systems, antimicrobial studies.	Electrospinning system, SEM, TGA, and FTIR.	Project-based and paper-based collaboration; participation in summer schools and training events.
18	Baltic Studies Centre	Latvia	Software licenses for Life Cycle Assessment (LCA) tools.	Life Cycle Assessment (LCA); socio-technical system modeling.	LCA software.	Biomass side-stream quantification, environmental impact assessment, and social science expertise.
19	Aydın Adnan Menderes University	Türkiye	Food Engineering Instrumentation Laboratory, Packaging Laboratory and Unit Operations Laboratory.	Fiber composites, biopolymer-based material development, material characterization, and rheology.	DSC, texture analyzer, viscometer, UV spectrophotometer, microwave system, centrifuge, and electrospinning system.	Physicochemical, thermal, mechanical, and rheological characterization of the composites.
20	National Institute of Industrial Technology (INTI)	Argentina	Department of Composite Materials with laboratory-scale facilities for the design, processing, and characterization of polymeric and composite materials.	Rheological characterization of polymeric systems (rotational and oscillatory); curing kinetics and viscoelastic behavior of thermoset resins; development of bio-based and formaldehyde-free adhesives.	The following instruments were used: Anton Paar MCR 301 oscillatory rheometer, Monsanto R-100 rheometer, Alpha Technologies MDR2000 rheometer, Rubber Process Analyzer Alpha Technologies RPA 2000, and Mooney viscometer Alpha Technologies MV 2000.	Material characterization (rheology, mechanical, and chemical analyses); development and optimization of bio-based materials and adhesives; support in formulation design and processing of composite systems.
21	University of Thessaly	Greece	Insect rearing units, greenhouses, pilot facilities for grain storage and treatment, and experimental fields are also available.	Entomology, waste management, insects for food and feed, crop protection, chemical and non-chemical control, stored product protection, and post-harvest protection.	GC-MS, HPLC, PCR, qPCR, NIR, ELISA, incubator chambers, walk-in chambers, stereoscopes, microscopes, pilot nitrogen units, and phosphine sensors.	Valorization of different fiber and related sources through insect farming.
22	Taras Shevchenko National University of Kyiv	Ukraine	Research laboratory with facilities for data collection, material characterization, and analytical measurements.	Spectroscopy, colorimetry, and electrochemistry.	FTIR, UV-Vis spectrophotometry, AAS, and luminescence photometry.	Primary data collection, material characterization, and participation in collaborative publications.

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23	University of Debrecen	Hungary	Food Science Institute with a well-developed laboratory infrastructure supporting molecular biology, microbiology, food chemistry, elemental analysis, and physicochemical quality evaluations.	Molecular and microbiological analyses; elemental analysis; food chemistry; physicochemical quality evaluation.	FluorChem M gel documentation system, Bio-Rad T100 Thermal Cycler, ICP-MS, refrigerated incubator, benchtop vertical autoclave, and additional analytical instruments.	Active contribution to WG4 (Bioactive Potentials of Extracted Fiber) and WG6 (Product Development and Industrial Application).
24	Sakarya University	Türkiye	Food packaging laboratory, food engineering department laboratories (microbiology, R&D, biotechnology, chemistry), and university central laboratory (SEM, DSC, XRD).	Food packaging; new generation packaging materials (nanomaterials, active materials); packaging technologies (MAP, active and intelligent packaging); micro- and nanofiber reinforced materials; cellulose-based nanomaterials.	Vacuum and modified atmosphere packaging equipment, gas analyzers, texture analyzers, climate chambers, autoclaves, Stomachers, ultrasonic baths, homogenizers, color analyzers, UV-Vis spectrophotometers, centrifuges, and sealing equipment.	Leveraging experience in valorizing agro-food waste into cellulose-based micro- and nanofibers and nanomaterials for sustainable packaging.
25	Société des Produits Nestlé S.A.	Switzerland	Analytical laboratory for carbohydrate research.	Chromatographic and MS analyses of carbohydrates.	LC-MS/FLD.	Sharing knowledge and analytical expertise in carbohydrate characterization.
26	Università del Piemonte Orientale	Italy	Dipartimento di Scienze del Farmaco (DSF, Novara), providing a multidisciplinary environment aligned with the objectives of the COST Action.	Sustainable valorization of agro-food by-products; green extraction technologies; dietary fiber characterization; monomeric sugar and oligomer quantification.	HPLC-DAD-RID; LC-HRMS; GC-MS; Fibertech system (dietary fiber characterization); pilot-scale subcritical water extractor (2.5 L); ultrasonic extraction systems (1 mL – 1 L).	Dietary fiber characterization: quantification of monomeric sugars and oligomers.
27	University of Limerick	Ireland	University-designated engineering facilities.	Design of consumer products and fabrication of prototypes as technology demonstrators.	Design, engineering, prototyping equipment, and infrastructure.	Collaboration on manuscripts, design of potential material applications (product design), visualization (graphics), and prototyping (objects).

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28	University of Malta	Malta	Microbiology and Food Chemistry Laboratory.	Food Microbiology	Ultrasonic processors, spectrophotometers, water activity meters, and chroma meters.	Broad support across relevant COST Action activities is required.
29	Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences	Poland	Modern research facilities focus on bioprocess development, downstream processing, analytical chemistry, and biological evaluation, supporting work from early stage experiments to pilot scales.	Development, optimization, and scale-up of microbial bioprocesses for producing biopolymers, bio-based small molecules and recombinant proteins.	Microbioreactor systems for high-throughput screening; stirred-tank bioreactors at multiple scales, including pilot scale.	Hosting or sending scientists for STSMs, participation in EU and national-level project consortia, and joint publications.
30	Konya Technical University	Türkiye	Food and Analytical Chemistry Laboratory.	Antioxidant capacity determination (DPPH, Trolox, FRAP); free and hydrolyzed phenolic compounds; total phenolic and flavonoid content; and phenolic and flavonoid compound profiling.	GC, HPLC, UV-Vis spectrophotometry, and FTIR.	Antioxidant capacity analyses, total phenolic compound determination, and phenolic and flavonoid compound profiling.
31	Teesside University	United Kingdom	Sustainable Net Zero Center and Business Management Team.	Valorization of agri-food wastes, food sustainability, food chemistry, functional applications, and green extraction methods (ultrasound, microwave, green solvents) of polysaccharides, pectins, and proteins.	Analytical equipment; physicochemical characterization instruments (DSC, TGA, XRD, SEM, intrinsic viscosity); texture and barrier properties testing; extraction equipment (conventional, ultrasound, microwave).	Research collaboration, experimental design, scientific writing, STSM and conference participation, and data sharing.
32	Akdeniz University	Türkiye	Institutional infrastructure suitable for the analysis of various aspects of purified fiber and fiber components of foods.	Food science, biochemistry, fermentation, biotechnology, and cultivation of fungal mycelial biomass.	The available equipment includes AAS, DSC, FTIR, GC, GC-MS/MS, GC-MS, ASE, ICP-MS, IC, IR-MS, a microwave sample preparation system, LC-FAIMS-MS/MS, LC-MS/MS, LC-HR-FT-MS, UV-Vis spectrophotometer, and HPLC.	Active contribution to publication preparation and co-authorship of reviews; volunteering to host young researchers for STSM visits.

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33	Mountain Research Center – Polytechnic Institute of Bragança	Portugal	A thermodynamics-focused research facility dedicated to the characterization, selection, and application of green solvents, supporting both experimental and computational work.	Green solvent design, selection, and screening; measurement and modeling of solubility (solid-liquid, liquid-liquid equilibria); determination of activity coefficients; phase equilibria.	HPLC, GC (equipped for inverse gas chromatography), UV-Vis spectrophotometer, and Differential Scanning Calorimeter (DSC).	Experimental determination of thermodynamic and physicochemical properties; generation of high-quality solubility and phase equilibrium data; and screening and evaluation of green solvents for industrial applications.
34	University of Córdoba	Spain	Food Engineering and Technology Laboratory.	High-pressure processing; food quality determination.	High-pressure processing system; food quality assessment technology (texturometer, colorimeter, water activity device, and refractometer).	Collaboration, networking, and resource sharing. Open to receiving STSM research exchanges.
35	Tarsus University	Türkiye	The Food Science and Technology Laboratory focuses on active packaging systems, antimicrobial films, and controlled-release materials. It includes microbiology laboratories with biosafety cabinets and incubators.	Active and intelligent food packaging systems, antimicrobial and antioxidant films, controlled-release systems (e.g., pH-responsive compounds), food microbiology, and edible coatings.	UV-Vis spectrophotometer, incubators, laminar flow cabinet, autoclave, pH meter, drying oven, magnetic stirrers, film-forming and coating equipment, and microbiological analysis tools were used.	Collaborative research on active packaging, participation in joint projects, sharing laboratory expertise, supporting experimental design and microbiological analysis, and STSM participation.
36	University of Cyprus	Cyprus	Nanoscience and Spectroscopy Laboratory.	Data-driven approaches for material characterization.	Microscopy and Raman Spectroscopy Imaging Systems.	Material characterization and dissemination activities.
37	Adıyaman University	Türkiye	Access to Food Engineering Department laboratories, shared faculty laboratory facilities, the central research laboratory, and collaborative analytical equipment.	Food analysis and basic food production techniques; film characterization and analysis (mechanical, physical, and barrier properties); physicochemical and microbiological analysis.	A light microscope, water bath, vacuum evaporator, Soxhlet extraction system, heating plate, refrigerated centrifuge, rheometer, incubator, refrigerated incubator, and UV-Vis spectrophotometer were used.	Experimental studies, including food production processes and laboratory-based analyses, physicochemical, microbiological, and film characterization, data collection, and analysis support.

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38	Istanbul University-Cerrahpaşa	Türkiye	Experimental animal laboratory, cell culture analysis facility, and instrumental analysis laboratory.	Carbohydrate and bioactive compound analyses.	Scanning electron microscopy (SEM), spectrophotometry, Fourier-transform infrared spectroscopy (FTIR), high-performance liquid chromatography (HPLC-C18), and incubators.	Extraction, analysis, and review writing were performed.
39	Kompetenzzentrum Holz GmbH	Austria	Research laboratories with characterization facilities.	Polymer and materials chemistry, sustainability analysis.	TGA, DSC, microscopy, and FTIR.	Fiber extraction, sustainability and circularity studies through LCA and LCC, product development, and industrial applications.
40	Adana Alparslan Türkeş Science and Technology University	Türkiye	University research laboratories.	Encapsulation and drying technologies.	Spray dryer, high-pressure homogenizer, sonicator, rotor-stator homogenizer, viscometer, and microscope with camera attachment.	Manuscript preparation, peer review, dissemination of research outputs and scientific communication activities.
41	Hacettepe University	Türkiye	Wet lab and setups for extraction and processing of bioactive compounds and fibers; clean room for microbiological studies.	Fiber extraction; determination of functional properties (antioxidant, antimicrobial); fiber characterization (SEM, NMR, FTIR, DSC).	GC-MS, LC-MS, DSC, and FTIR.	Research collaboration; scientific writing; STSM participation; dissemination; activity organization; data collection; and sharing.
42	Association Green Growth Platform (GGP)	North Macedonia	Hybrid office-based model combining dedicated office space, high-speed Internet, and IT infrastructure for collaborative and research activities.	NGO focused on connecting research, policy, practice, and stakeholders to accelerate sustainable transition; expertise in Agri-Food and Rural Development.	Computers, printing and scanning tools, and cloud-based collaboration platforms.	In WG5, support for environmental and economic sustainability assessments; and in WG7, dissemination and exploitation of results through stakeholder engagement and communication.
43	Lithuania Research Centre for Agriculture and Forestry (LAMMC)	Lithuania	Research Centre Laboratory.	Total phenolic content (TPC), total flavonoid content (TFC), and antioxidant activity assays (DPPH, FRAP, ABTS).	Spectrophotometer, CO ₂ extraction system, and UAE extraction system.	Analytical work and participation in research articles.

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44	National Institute of Chemistry	Slovenia	Laboratory and pilot-scale infrastructure for chemical reaction engineering, bioprocessing, and sustainable materials development.	Sustainable downstream processing and biomass valorization; green solvents (deep eutectic solvents, biosolvents); fiber processing and fractionation.	Laboratory- and pilot-scale reactors (bench-scale to ~30 L), tubular reactors, and related processing equipment.	Contribution to sustainable fiber processing and biomass valorization using green extraction and fractionation approaches; support for dissemination activities.
45	USMBA	Morocco	Laboratory equipped with standard analytical instruments for physicochemical characterization.	Preparation of activated carbon from lignocellulosic biomass (thermal and chemical activation) and synthesis of photocatalytic composites.	UV-Vis spectrophotometer and FTIR spectrometer.	Demonstrating the preparation of activated carbon from lignocellulosic biomass; presenting case studies on adsorption and photocatalytic applications.
46	CNR-IRET	Italy	IR spectroscopy laboratory.	Fiber extraction and analysis.	4300 Handheld FTIR Spectrometer, a and PerkinElmer Spotlight 400 FTIR Imaging system.	Fiber characterization and standardization.
47	BKEA Ltd (BioKimika Extrakta Analytika Ltd)	Malta	Specialized laboratory infrastructure designed for applied research in analytical chemistry and bioprocessing.	Green extraction technologies, analytical method development and validation, and bioactivity evaluation.	Advanced analytical and processing instrumentation supports extraction, characterization, and bioactivity testing.	Integrating advanced extraction technologies with the bioactivity evaluation of fiber-derived compounds within WG2 and WG4.
48	BKEA Ltd (BioKimika Extrakta Analytika Ltd)	Malta	Specialized laboratory infrastructure designed for applied research in analytical chemistry and bioprocessing.	Green extraction technologies, analytical method development and validation, and bioactivity evaluation.	Advanced analytical and processing instrumentation supporting extraction, characterization, and bioactivity testing.	Contribution spanning WG2-WG6 by integrating extraction innovation, advanced characterization, bioactivity assessment, and translation to industrial applications.
49	University of Udine	Italy	Laboratory for chemical and physical analysis of food, laboratories for pilot-scale food production, and sensory analysis laboratory.	Food technology; food structure; evaluation of polymer functionalities for food applications.	Pilot plant for innovative food processing: ultrasonication, high-pressure homogenization, pulsed electric field, supercritical CO ₂ drying.	Identification of materials of interest; process design for extraction; and characterization for food application.

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50	University for Business and Technology (UBT)	Kosovo	Research is driven primarily by individual projects, and basic laboratory facilities are available for preliminary sample preparation and biochemical analysis.	Valorization of local agricultural by-products and food processing waste specific to the Western Balkans region.	Basic laboratory infrastructure for sample preparation and biochemical analyses.	Contributing to WG1, WG2, WG3, and WG4 by providing locally relevant data and expertise on byproduct valorization.
51	Bursa Uludağ University	Türkiye	Laboratory for nanofiber production, thermal analysis, particle size analysis, and microcapsule production.	Polymer and fiber science; biomaterials.	Nanofiber production system; DSC/TGA; particle size analyser; spray drying microcapsule production system.	Fiber characterization and standardization.
52	İnönü University	Türkiye	Food laboratory at Malatya Organized Industrial Zone Vocational School of İnönü University, supporting fiber extraction, characterization, and bioactive compound analyses.	Physicochemical characterization of food components, including moisture, ash, protein (Kjeldahl method), viscosity, color, and water activity; bioactive compound analysis.	UV-Vis spectrophotometer and supporting extraction, analysis, and characterization instruments.	Experimental research on fiber extraction, analytical characterization, and bioactive potential evaluation within WG2, WG3 and WG4.
53	University of Huddersfield	United Kingdom	Experimental systems for fiber extraction, characterization, and application in bread systems.	Arabinoxylan extraction and characterization; fiber behavior in bread systems; biorefinery applications.	HPAEC, SEC, and Chopin Mixolab analyses.	Practical and scientific contributions based on expertise in arabinoxylan extraction, characterization, and fiber behavior in bread systems.
54	Lado Baxutashvili Institute of Medical Biotechnology, TSMU	Georgia	Laboratory studies on biologically active substances in food plants and their effects on human health.	Qualitative and quantitative studies of bioactive substances in food plants and their impact on human health.	Biochemical laboratory (balance, thermostat, centrifuge, refrigerator, pH meter); laboratory equipped for cyto- and histological analyses.	Study of the effects of polyphenols in combination with plant fibers on human health.
55	Alanya University	Türkiye	Central Research Laboratory,	Phenolic profiling by HPLC, antioxidant potential analyses, physicochemical analyses, and microbiological analyses.	HPLC, GC, spectrophotometry, and microbiological analysis instruments.	Phenolic profiling, antioxidant potential analyses, physicochemical analyses, and microbiological analyses were performed.

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56	Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague	Czechia	Research infrastructure focused on biomass processing at the Faculty of Forestry and Wood Sciences.	Valorization of lignocellulosic biomass and agricultural/forestry residues, fiber extraction and modification, and sustainable materials development.	Laboratory-scale equipment for biomass fractionation and fiber extraction, microscopy (optical and SEM), and mechanical testing equipment.	Contribution to discussions and collaborative activities related to fiber extraction methods, biomass valorization, and sustainable materials development.
57	Necmettin Erbakan University	Türkiye	Pilot plants for bakery and fruit products, driers, and texture analyzers.	Active collaboration with large-scale industry partners, participation in national and international (bilateral) funded research projects, and experience in COST Actions.	Refractance Window dryer, InfraRWD, freeze dryer, evaporators, extraction units and ultrafiltration units.	Scientific studies; writing review papers and reports; and project applications.
58	University of Lincoln	United Kingdom	Well-equipped chemical engineering and materials laboratories with facilities for biomass processing, wet chemical treatment, and pilot-scale experimentation.	Biomass pretreatment, reaction engineering, separation processes, and process optimization for converting food-processing waste into functional materials.	Continuous reactors, enzymatic and chemical pretreatment systems, filtration and separation units, and drying equipment are also used.	Development and optimization of scalable fiber extraction routes from food-processing waste streams: support for harmonized characterization protocols.
59	University of Huddersfield	United Kingdom	University research laboratories.	Extraction and characterization of fibers and oligosaccharides.	Chromatography (HPLC, HPAEC, SEC, GC), spectroscopy (FTIR, NMR), and pilot-scale bioethanol plants for large-scale experimentation.	Fiber extraction, processing, characterization, applications and cost analysis.
60	University of Deusto	Spain	University faculty with offices, classrooms, and standard academic facilities.	Life Cycle Assessment (LCA); food loss and waste prevention; system dynamics.	Office and computing resources.	Life Cycle Assessment (LCA) studies.
61	PACKNET – Spanish Packaging Technology Platform	Spain	A non-profit public-private association that brings together participants across the packaging science-technology-industry chain, established in 2009.	Harnessing scientific and technological developments to ensure the competitiveness, sustainability, and growth of the packaging sector.	A network of over 100 members spanning the entire packaging value chain.	Knowledge dissemination and stakeholder engagement in the packaging sector.
62	İnönü University	Türkiye	Research laboratory.	Encapsulation, gel production, and characterization.	HPLC, GC, microfluidizer, pH-stat, and homogenizer.	Extraction of nanofibers, digestion studies, and product development.

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63	University of Tuzla	Bosnia and Herzegovina	Faculty of Technology laboratory with basic research equipment.	Synthesis; extractions; adsorption of heavy metals using biosorbents; soil and water analysis; and antioxidant activity determination.	UV-Vis spectrophotometer, pH meter, conductometer, atomic absorption spectrometer (AAS), Ostwald viscometer, and refractometer.	Synthesis of nanoparticles from bio-waste (fruit wastes such as orange and lemon peel) and learning and contributing to food processing waste valorization.
64	Tekirdağ Namık Kemal University	Türkiye	Food Research Laboratory.	Extraction techniques include cold plasma and ultrasound-assisted methods.	Air jet cold plasma system, ultrasound processor, GC-FID, HPLC, and rheometer.	Cold plasma and ultrasound-assisted extraction studies.
65	Manisa Celâl Bayar University	Türkiye	Conference rooms, laboratories and computing resources.	Bioengineering, PHB bioplastics, microorganisms, microalgae, lignin, and cellulose.	Bioengineering department laboratories and computers.	Involvement in Horizon projects; provision of meeting facilities; and database management.
66	Bursa Technical University	Türkiye	Research laboratory.	Biopolymer (dietary fiber, phenolic) extraction and functional characterization.	FTIR, rheometer, spectrophotometer, HPLC, texture analyzer, colorimeter	Fiber extraction methods and optimization, fiber characterization and standardization, functional characterization of fiber, and product development.
67	University of Novi Sad, Faculty of Technology Novi Sad	Serbia	Food Engineering and Food Processing Laboratory.	Osmotic dehydration and drying process optimization; mass transfer modeling; valorization of agro-industrial by-products.	Freeze dryer (lyophilizer), convective hot-air dryer, water activity meter, texture analyzer, incubator, and statistical analysis software.	Contribution to WG6 through expertise in sustainable food processing, by-product valorization into fiber-rich ingredients, and development of functional food products.
68	Yıldız Technical University, Food Engineering Department	Türkiye	Food Engineering Department's research facilities.	Rheology, texture, and structure determination.	Rheometer, HPLC, FTIR, Zeta Potential Malvern, DSC, Texture Analysis Device (TPA), and 3D food printer.	Rheological analysis and related characterization studies.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
69	Institute of Genetic Resources, University of Banja Luka	Bosnia and Herzegovina	University infrastructure with research and teaching facilities, including modern laboratories, office space, lecture halls, and IT infrastructure.	Plant biotechnology, molecular genetics, phytopathology, pomology, in vitro propagation techniques, genetic analysis, and plant disease assessment.	In Vitro Laboratory, Pollinator Laboratory, Pomology and Biotechnology Laboratory, Molecular Genetics Laboratory and Phytopathology Laboratory.	Comprehensive literature review and synthesis of existing knowledge related to valorization of food processing waste into sustainable materials.
70	Riga Technical University	Latvia	Laboratories for polymer synthesis, processing, extraction, and testing, including research on fibers, 3D printing technologies, thermosets, and thermoplastics.	Material preparation and testing.	Retsch ZM200 and SM300 grinders; Masuko grinder; Microfluidiser LM20; mixers (including high-shear and Speedmixer); and related processing equipment.	Collaboration in material characterization and sample preparation.
71	Luleå University of Technology	Sweden	Infrastructure for biomass fractionation and fiber extraction.	Biomass fractionation technologies: biomass and chemical characterization of isolated fractions.	Various batch reactors for biomass pretreatment and fractionation, including a 6 × 2.5 L multidigester reactor, 250 mL reactors, and a 50 L reactor.	Research collaboration with COST Action members, co-authoring papers, hosting STSMs, and conference and workshop participation.
72	Tel Hai University	Israel	Tel Hai College and MIGAL – Galilee Research Institute together form a multidisciplinary research ecosystem in northern Israel, integrating academic and applied agricultural research.	Protein expression, purification, and kinetic characterization of engineered enzymes; microbial synthesis of dietary fibers (especially β -fructans); and analytical fiber characterization.	HPLC, FPLC, spectrophotometric systems, mass spectrometry (LC-MS, GC-MS), and NMR spectroscopy.	Analytical characterization of natural and modified fibers, including compositional, structural, and functional analyses.
73	Institute of Field and Vegetables Crops	Serbia	Analytical laboratory equipped with chromatographic and spectroscopic instruments.	Analysis of lipids, fatty acids, and oxidative stability; spectroscopic and chromatographic methods; statistical analysis (PCA and ANOVA).	Shimadzu LC 2050 3D HPLC, Konik HRGC 4000B GC-FID, UV-Vis spectrophotometer, Bruker minispec NMR mq 20, centrifuges, incubators, and extraction/sample preparation equipment.	Contribution aligned with current expertise in oilseed crops and plant oil quality analysis, with strong interest in expanding into plant fiber characterization.

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74	Middle East Technical University	Türkiye	Microwave and food packaging and encapsulation laboratories.	Microwave extraction and baking, encapsulation of valuable components from waste, active and smart packaging, electrospinning, and centrifugal spinning.	Microwave oven, homogenizer, centrifugal spinning equipment, and electrospinning equipment.	Lectures at training schools and presentations at symposia.
75	University of Health Sciences	Türkiye	Laboratory for antioxidant activity assessment and chromatographic determination of phenolic compounds.	Phytotherapy and medicinal plant research; bioactivity-guided evaluation of medicinal plants; GC-MS analysis of volatile compounds; fatty acids.	UV-Vis spectrophotometry, HPLC-PDA, and GC-MS.	Technical expertise in phytochemical analysis, antioxidant activity assessment, chromatographic characterization, and research collaboration.
76	Central Fisheries Research Institute (SUMAE)	Türkiye	Food Biotechnology Laboratory.	Microencapsulation; Bacteriophages.	Electrospinning device.	Microencapsulation and bacteriophage-related research activities.
77	Uşak University	Türkiye	Food and Veterinary Laboratory.	Food science and technology.	Oven, centrifuge, microscope, microwave oven, shaker, and magnetic stirrer.	Literature review and information synthesis.
78	Uşak University	Türkiye	Research laboratories.	Micro/nanoemulsions, nanoparticles, protein nanotubes, electrospun nanofibers, hydrogels, casted films, extraction, purification, and downstream processing.	Ultrasound and mechanical homogenizers, texture analyzers, electrospinning systems (classical and centrifugal spinning), and lyophilisators.	Research activities regarding extraction, characterization, and application of bioactives from food by-products and waste; production of nanoparticles and nanofibers.
79	University of Health Sciences, Gülhane Faculty of Medicine	Türkiye	Well-equipped molecular biology and cell culture laboratories supporting advanced experimental cancer research and translational biotechnology studies, including facilities for mammalian cell culture (2D/3D models) and molecular genetics.	Molecular genetics, medical genetics, signal transduction, cancer biology, in vitro cancer models (2D/3D spheroids), cytotoxicity and bioactivity assessment, and cell signalling pathways (apoptosis and pyroptosis).	Mammalian cell culture systems (2D and 3D models); PCR and real-time PCR platforms for gene expression and polymorphism analyses; Western blot and immunofluorescence imaging systems.	Contribution through advanced in vitro cancer models, cytotoxicity and bioactivity assessment of food-derived fibers, and mechanistic studies of cell signalling pathways linking fiber structure and digestion-derived metabolites to cellular responses.

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80	University of Hohenheim	Germany	Laboratory- and technical-scale facilities for thermochemical processes, distillation units, and protein extraction from grass residues.	Thermochemical and separation processes.	Laboratory- and technical-scale thermochemical processing units, distillation equipment, and protein extraction setups for grass residues.	Participation in conferences, workshops, and other scientific activities.
81	Faculty of Technology Novi Sad	Serbia	The laboratory primarily focuses on the characterization of packaging materials.	Biopolymer materials, food packaging, waste valorization.	Micrometer, analytical balance, drying oven, annealing furnace, tensile testing machine (Instron), homogenizer (Silent Crusher), lab blender, water bath, pH meter, magnetic stirrer, water deionizer, FTIR, UV-Vis spectrophotometer, and Oxybaby gas analyzer.	Contribution to the harmonization and standardization of bio-based fiber characterization, including moisture content, swelling and solubility, tensile properties, chemical structure, optical properties, and water barrier performance; support for inter-laboratory comparisons and development of reproducible protocols.
82	Technical University of Denmark	Denmark	Polymer laboratory setup for materials chemistry, with a focus on preparing biopolymer-based composites from waste fibers.	Materials science and polymer chemistry.	Processing equipment for thermoplastic composites and chemical and structural testing instrumentation.	Evaluation and testing of fibers in existing polymer matrices; open to collaborative discussions on fiber exchange and application possibilities.
83	Ankara University	Türkiye	Ankara University Kalecik Vocational School, operating with a hybrid infrastructure combining physical laboratory facilities and digital systems, in collaboration with the Food Engineering Department.	Instrumental analysis, food chemistry, sample preparation techniques, physicochemical characterization, and nearly 12 years of professional experience in the food sector, including roles in food service and the wine industry.	Advanced analytical instruments, including HPLC, GC, and spectroscopic systems, along with controlled thermal and sample preparation equipment, are available through the collaborating faculty laboratory.	Engagement in industry-related collaborations and sector-linked organizations; support for literature reviews and analytical work as required.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
84	National institute of chemistry - Center for Development, Demonstration and Training for Carbon-Free Technologies	Slovenia	Advanced research infrastructure at the National Institute of Chemistry for process development, green extraction, and material characterization, including a Laboratory for Demonstration of H ₂ and CO ₂ Technologies.	Development of green extraction technologies (NADES, DES, ionic liquids, aqueous systems); process design and optimization for biomass valorization and biorefinery concepts; scale-up of extraction processes (lab to pilot scale); high-throughput screening of extraction conditions.	High-pressure/high-temperature reactors (10 mL–10 L), parallel reactors, supercritical fluid extraction systems, pilot-scale reactors (up to ~30 L), and advanced analytical and material characterization instrumentation.	Support in process scale-up from lab to pilot scale; contribution to method standardization and benchmarking of extraction techniques within WG2; analytical support and characterization of extracted fibers; participation in joint experiments, training schools, and short-term scientific missions.
85	Academy of Applied Studies Polytechnic Belgrade	Serbia	Academic institution focused on teaching and research in environmental management and circular economy. Activities are primarily conducted through theoretical research, modeling, and collaboration with external partners, with no dedicated laboratory infrastructure.	Environmental management, circular economy, waste management systems, sustainability assessment, system modeling, interdisciplinary research, policy analysis.	Standard office and computing facilities (PCs, software for data analysis, modeling, and documentation).	Science communication and dissemination activities include strategic communication planning, content development, visibility enhancement, and stakeholder engagement. Currently serving as a Science Communication Coordinator (SCC) for the COST Action CA23104.
86	Stellenbosch University	South Africa	Vibrational spectroscopic unit.	Identification and characterization of materials using spectroscopic techniques.	NIR spectroscopy and hyperspectral imaging systems.	Availability of vibrational spectroscopic facilities for fiber identification and characterization.
87	İzmir Institute of Technology	Türkiye	university research laboratories.	Green extraction approaches, thermal and pH-based modifications of polysaccharides, advanced characterization techniques (FTIR, rheology, texture analysis), and fiber valorization from underutilized food by-products.	FTIR, UV-Vis spectrophotometer and texture analyzer.	Pectin-related research activity.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
88	HSWT – Hochschule Weihenstephan-Triesdorf, Institute of Food Technology	Germany	Food Technology Department laboratory facilities, processing units and analytical devices.	Extraction, product development, sensory evaluation, and food processing technologies.	Grinders (café and grain), slicers, line cutters (vegetables and fruits), mixers, Thermomix, dough preparation and processing equipment (kneading machine, pasta maker), cutter, vacuum filler, ripening cabinet (meat processing), confectionery equipment (refiner, drum coating, enrober, tempering machine), and dairy processing equipment (homogenizer).	Project contributions within bachelor's and master's theses; small-scale projects in the areas of extraction, product development, and sensory testing.
89	Ege University	Türkiye	Ege University Research and Application Center for Drug Development and Pharmacokinetics.	Food engineering, food technology, food processing (pasteurization, sterilization, cooling, drying), food chemistry, fruit, vegetable, and nut technology, and food packaging.	Centrifuge (Nüve-NF 800), freeze dryer (Armfield HA-308/3), ultrasonic bath, probe-type ultrasonic homogenizer, extruder, HPLC (Shimadzu LC-20), UV spectrophotometer (Shimadzu 2600), GC-MS (Agilent 6890), GC-MS/MS (Shimadzu TQ 8050NX), LC-MS/MS (Shimadzu 8040), and texture analysis equipment (TA.XT Plus).	Fiber extraction methods and optimization, fiber characterization, and standardization.
90	Instituto Superior de Engenharia de Lisboa / IPL	Portugal	Laboratories are equipped with a range of instruments for extraction, separation, and analytical characterization.	Valorization of food by-products and biowaste through sustainable extraction (scCO ₂ , microwave, green solvents); optimization strategies for lipid fractions from biomass (DoE, mass transfer models).	Supercritical extraction unit (up to 690 bar and 120 °C), microwave reactor, FTIR, particle size analyzer, HPLC (with DAD, RI, and UV detectors), atomic absorption spectrophotometer with graphite furnace, microplate UV analyzer, and NMR.	Extraction, separation, and characterization of bioactive compounds and fibers.
91	Iğdır University	Türkiye	New Food Research and Development Centre.	HPLC method development, antioxidant analysis, molecular hydrogen extraction, functional juice production, and in vitro bioaccessibility studies.	HPLC with DAD, RID, and FLD detectors; ELISA; UV spectrometer; Minolta colorimeter; texture analyzer; shaker incubator; lyophilizer; amperometric dissolved hydrogen meter; centrifuge (18,000 RCF).	Fiber extraction using hydrogen gas extraction; secondary metabolite analyses by HPLC and ELISA, including method validation.

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92	Mendel University in Brno, Faculty of Business and Economics – Consumer Lab	Czechia	Consumer Lab: an interdisciplinary research infrastructure focused on analyzing consumer behavior using advanced experimental and neuromarketing methods, supporting quantitative and qualitative research.	Consumer behavior analysis (food waste, sustainable consumption, circular economy), behavioral economics and experimental design, design and evaluation of behavioral interventions, consumer segmentation and decision-making analysis, and public awareness communication.	Eye-tracking technology; electroencephalography (EEG); experimental software for behavioral studies; survey and data collection tools (online and offline).	Dissemination, stakeholder engagement, and societal dimensions of ENFiber outputs; translating scientific and technological findings into consumer-relevant insights; supporting communication strategies; and enhancing public acceptance.
93	University of Perugia	Italy	Material Science and Technology Laboratory.	Lignocellulose chemistry.	Solvent extraction systems, freeze dryers, HPLC (reversed phase and GPC in DMSO), TGA, DSC, SEM, and twin-screw extruders for film extrusion and injection molding.	Fiber extraction and characterization.
94	University of Padova	Italy	Organic Synthesis Laboratory,	Preparation of Deep Eutectic Solvents (DES) and screening for extraction of fibers and biopolymers (DoE approach); design of functional hybrid and composite materials.	Solid-state analysis instruments (XRD, XPS, SEM, HR-TEM, AFM, TGA, FTIR, and SS-NMR) and liquid-state analysis instruments (NMR, LC-MS, DLS, and rheometry).	Testing of new starting materials and application of recovered fibers for the synthesis of functional materials (textiles, biomedical, filtration, catalysis) and regularly organizes summer and winter schools on green chemistry and circular economy.
95	Middle East Technical University	Türkiye	METU Food Technologies Laboratory.	Bio-based aerogels; SC-CO ₂ extraction and drying, and physical and chemical characterization of biomaterials.	SC-CO ₂ extraction/drying setup, freeze dryer, and spray dryer.	Research collaboration; scientific writing; STSM participation; training schools, workshops, and conference participation and organization; data collection and sharing.

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96	Adana Alparslan Türkeş Science and Technology University	Türkiye	Research laboratory.	Encapsulation and emulsion technology, powder technology, drying technology, dairy technology, flavor generation, enzymatic modifications, probiotics, process optimization, and energy/exergy efficiency.	Spray dryers, freeze dryers, microwave vacuum dryers, rotor-stator homogenizers, ultrasound homogenizers, high-pressure homogenizers, GC/FID, GC-MS, spectrophotometers, and laser diffraction particle size analyzers.	Research project coordination and contribution: short-term research activities and visits.
97	Institute for Medical Research, National Institute of the Republic of Serbia, University of Belgrade	Serbia	Centre of Research Excellence in Nutrition and Metabolism at the Institute for Medical Research, hosting the Group for Nutritional Biochemistry and Dietology with fully equipped analytical facilities.	Advanced characterization of food and biological matrices, with a focus on dietary fibers, bioactive compounds, and food-derived components relevant to human health; application of gas chromatography, liquid chromatography, and mass spectrometry for qualitative and quantitative analyses.	Gas Chromatography; Liquid Chromatography; Mass Spectrometry, standard laboratory equipment, and facilities for extraction, centrifugation, and spectroscopic analysis.	Preparation and publication of high-quality scientific papers; dissemination of project results through peer-reviewed journals.
98	Sakarya University, Faculty of Engineering, Department of Food Engineering	Türkiye	Research laboratories are equipped for biopolymer extraction, film production, and material characterization studies.	Biopolymers; biomaterial characterization (mechanical, thermal, barrier, and surface properties); biopolymer extraction techniques.	Laboratory equipment for biopolymer processing and characterization (details available through the supervising research group).	Contributed to collaborative research activities and participated in workshops, training sessions, and events.
99	University of Palermo	Italy	Department of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), University of Palermo, with physiological laboratories dedicated to experimental research on nutrition and human health.	Human nutrition and physiology; chemical mediators in gastrointestinal function and food intake control; metabolic physiology; translational research including the action of GLP-1, GLP-2, and GIP in lipid metabolism and bone remodeling; and physiology of eating behavior.	Physiological laboratories for experimental research on nutrition and human health.	Academic research, experimental data collection, and expertise in physiological and nutritional sciences; collaborative networking.

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100	Atatürk University	Türkiye	Research and experimental infrastructure combining laboratory- and field-based animal production systems, including a university-managed sheep research farm (semi-open housing system) and fully equipped laboratories for molecular genetics, protein analysis, and animal product quality assessment.	Characterization of indigenous sheep breeds and production systems; growth and reproductive performance analysis; placental morphometry; colostrum composition and neonatal development; meat quality and sensory trait evaluation; molecular genetics (GH and PRL gene polymorphisms).	PCR systems (PCR-RFLP), DNA extraction and electrophoresis equipment, SDS-PAGE systems, ELISA kits and microplate reader, HPTLC for lipid analysis, Brix refractometer, and Minolta CR-400 colorimeter.	Interdisciplinary research on valorization of agricultural and livestock-derived waste streams for sustainable fiber production, compositional analysis, and characterization, and integration of animal production systems with circular bioeconomy approaches. This infrastructure offers strong potential for linking livestock-derived biomass to fiber valorization strategies.
101	Faculty of Technology Novi Sad	Serbia	Laboratory of the Faculty of Technology in Novi Sad.	Mathematical modeling, process optimization, food waste valorization.	Drying equipment (convective, microwave, and lyophilization).	Interdisciplinary collaboration has focused on fiber extraction, process optimization, and valorization of agri-food by-products, including ultrasound-assisted and green solvent methods.
102	Vilnius Gediminas Technical University	Lithuania	Laboratory infrastructure for fiber and bioactive compound isolation, characterization, and encapsulation.	Liquid and HPLC chromatography; antioxidant activity assays; INFOGEST protocol for bioaccessibility; encapsulation methods for bioactive compounds; and CD spectroscopy of proteins.	Freeze dryer, spray dryer, Äkta Prime Plus and Äkta Purifier, CD spectrometer, ultrasonic equipment, and capillary electrophoresis equipment.	Use of fiber for encapsulation of bioactive compounds; contribution to review writing; experimental support in the areas of chromatography, bioaccessibility and encapsulation.

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103	INRAE	France	National Research Institute (INRAE).	Fiber extraction and characterization of both soluble and insoluble fractions (neutral sugars, acidic sugars, methanol, acetic acid, lignin, and phenolic compounds); sequential extraction of polysaccharides; identification of phenolic compounds; interactions between phenolic compounds and fibers; non-destructive characterization methods.	HPSEC, GC-MS, GC-FID, HPLC-DAD, LC-MS, UV-Vis spectroscopy, mid-infrared, and NIR spectroscopy.	Contribution to WG3: inter-laboratory assays and method standardization.
104	University of Córdoba	Spain	Spectral sensors and chemical laboratories, sample bank facilities, and computer rooms.	Optimization of NIR and hyperspectral imaging (HSI) applications and development of multivariate prediction models.	Near-infrared sensors with various technical specifications (benchtop, online, and portable), hyperspectral cameras, and chemometric software.	Evaluation and application of non-destructive spectral sensors for fiber characterization.
105	Slovak university of Agriculture in Nitra	Slovakia	MALDI-TOF mass spectrometry facility for microbial identification; and microbiological laboratory with incubators, orbital shakers, autoclaves, and vacuum packaging equipment.	Microbiology of agricultural and environmental systems, microbial cultivation and identification (MALDI-TOF), analysis of microbial communities, evaluation of bioactive compounds, sample preparation, and microbiological analysis.	MALDI-TOF mass spectrometry system, incubators (Biosan), orbital shakers, autoclaves, and vacuum packaging equipment.	Collaborative research on the bioactive properties of natural fibers and sustainable applications; sharing expertise in microbiological analysis; and participation in joint publications, data sharing, and interdisciplinary cooperation.
106	University of Manouba	Tunisia	Facilities for dehydration of food co-products, proximate characterization, extraction of bioactives and fibers, and bioactivity assessment.	Eco-extraction; process optimization; in vitro bioactivity assessments.	Freeze dryer, oven, infrared drying system, ultrasound extraction unit, spectrophotometer, multiscan plate reader, and Soxhlet extraction apparatus.	Contribution across multiple working groups; particular interest in capacity building and knowledge exchange in WG3 and WG5.

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107	Ankara Medipol University - Ankara University	Türkiye	University research laboratory.	Analytical chemistry techniques, HPLC analysis, NMR spectroscopy, GC-MS, UV-Vis and fluorescence spectroscopy, capillary electrophoresis, electrochemical analysis (potentiostat), data analysis, and interpretation.	HPLC, potentiostat, NMR, GC-MS, fluorescence spectrometer, UV-Vis spectrophotometer, and capillary electrophoresis systems.	Application of expertise in the green synthesis of nanoparticles from plant-based waste materials; support for valorization of food processing waste into sustainable fibers; exploration of bio-derived nanoparticles to enhance fiber properties.
108	Ankara University, Faculty of Agriculture, Department of Horticulture	Türkiye	University laboratory; access to wineries and vineyards.	Viticulture oenology grape phenolic compounds.	Spectrophotometer and freeze dryer.	Research on grape stems and winery by-products in coordination with the project team.
109	Dundalk Institute of Technology, Department of Agriculture, Food and Animal Health	Ireland	Higher education institutions with fully equipped laboratory facilities for extraction, bioactivity analysis, and safety assessment.	Extraction methods and optimization; analysis of bioactive potentials of extracted samples; sustainability, regulation, standardization, and health and safety assessment.	Fully equipped laboratory facilities for extraction, bioactivity investigation, health benefit evaluation, and safety assessment are available.	Extraction methods and optimization; analysis of bioactive potentials; sustainability, regulation, standardization, and health and safety assessments.
110	Uludağ Beverage	Türkiye	Two production facilities with glass, can, and PET filling lines; flash and tunnel pasteurization for aseptic production; compound production facility in a free zone; aseptic drum filling at 1 ton/hour capacity.	Beverage formulation and product development; raw material evaluation and recipe optimization; R&D project management, including SAP-based formulation systems; regulatory compliance; and supplier evaluation.	Glass, can, and PET filling lines; flash pasteurization system; tunnel pasteurization system; aseptic drum filling system; pH meters; titration systems; refractometers; mixers; centrifuges.	Support for collaborative research in beverage innovation, particularly in formulation strategies, functional ingredients, sustainable raw material utilization, experimental studies, and industry-academia knowledge sharing.

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111	Middle East Technical University	Türkiye	METU Food Technologies Laboratory.	Non-destructive quality analysis, chemometrics, hyperspectral imaging (HSI), near-infrared (NIR) spectroscopy, and artificial intelligence applications in food quality.	Hyperspectral imaging (HSI) system, near-infrared (NIR) benchtop, and handheld spectrometers.	Quality analysis and material characterization using non-destructive spectral methods.
112	ATU Sligo	Ireland	Research laboratories.	Polymer testing.	TGA, DSC, XRD (available on request), tensile testing equipment, gas pycnometer, and extraction glassware.	Technical characterization of the polymer and fiber materials.
113	University of Verona	Italy	Department of Biotechnology and University Technological Platforms Centre, with capabilities for comprehensive instrumental chemical analyses of food molecules.	Analysis of food components; extraction and spectrophotometric and HPLC analysis of plant secondary metabolites (particularly phenolic compounds and carotenoids); and HPLC analysis of sugar composition.	Ionic Chromatographer Dionex ICS-6000 (Thermo Fisher Scientific); HPLC (Jasco Extrema LC-4000, analytical and preparative); DLS Litesizer 500 (Anton Paar); DLS Zetasizer Nano ZS (Malvern); fluorimeter; GC-MS; HPLC-DAD/MS; FTIR.	Setting up databases (WG1) and extraction methodologies (WG2).
114	Institute for Biological Research 'Siniša Stanković', University of Belgrade	Serbia	Established institute (1947) with 14 departments and over 350 members, including laboratories for animal and human cell cultures, plant tissue propagation, flow cytometry, sequencing, real-time PCR and Droplet Digital PCR, animal behavior, and hydrobiological studies.	Molecular biology (DNA/RNA isolation, PCR/qPCR, gene expression analysis, omics), microbiology, natural product research, and bioactivity of plant and microbial extracts.	Lyophiliser (Lyovac GT2, Frankendorf); incubator thermostat (Mettler); DEN-1 Densitometer (BioSan); heating magnetic stirrer (Velp Scientifica); shaking incubator (UNIMAX 1010, Heidolph); light microscope; additional standard laboratory instruments.	Research focused on natural products and bioactivity; active involvement in the design and implementation of experiments related to the extraction, isolation, and characterization of bioactive compounds from plant and microbial sources.

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115	University of Florence, NEUROFARBA Department	Italy	University Food Chemistry Laboratory.	Polysaccharide extraction, chemical characterization by NMR, monosaccharide composition (chemical hydrolysis), and LC-MS analysis of bound phenols and fermentation metabolites.	NMR, FTIR, DLS, ELS, HPLC-DAD-MS, spectrophotometer, ultrasonic extractor, and INFOGEST digestion equipment.	Within WG2: development and optimization of extraction protocols, including green and scalable techniques (ultrasound-assisted, DoE/RSM). Within WG3: evaluation and comparison of characterization methods. Within WG4: Analysis of bioactive compounds and fermentation metabolites.
116	MyBiotech GmbH	Germany	GMP-like R&D facility equipped for preparation, characterization, and pilot-scale production of innovative products. It includes a fully equipped GMP QC facility (100 m ²) and GMP production capabilities.	End-to-end CDMO services covering formulation development, process optimization, scale-up, and GMP-compliant production, including aseptic fill-and-finish, microbial fermentation, downstream processing, and extraction of bioactive compounds (e.g., omega-3 fatty acids).	GMP-like R&D: Tangential Flow Filtration (TFF), DLS, dissolution tester, HPLC, microreactors, homogenizer, fermenter (10 L). GMP QC and Production: lyophilizer, TFF, capsule filler, tablet press, and sterilization equipment.	This will be determined in collaboration with the Action.
117	University of Health Sciences Türkiye, Hamidiye Faculty of Pharmacy	Türkiye	Analytical Chemistry and Phytotherapy Research Laboratories.	Phytochemical analysis, preparative and analytical chromatography, and in vitro antioxidant capacity profiling (DPPH, ABTS, CUPRAC, and FRAP assays).	Flash HPLC (Büchi); Recycle HPLC (LaboACE LC-5060); UV-Vis spectrophotometer; FTIR; lyophiliser; microplate reader; rotary evaporator (20 L capacity) with vacuum system.	Open to hosting early career investigators and researchers for Short-Term Scientific Missions (STSMs) to utilize scale-up and purification facilities.
118	Faculty of Agriculture, University of Banja Luka	Bosnia and Herzegovina	Faculty building, laboratory complex, and experimental education center.	Protocols for pomological, sensory, and biochemical analyses of fruits.	Spectrophotometer, penetrometer, refractometer, and colorimeter.	Biochemical analyses of the fruit samples.

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119	Tokat Gaziosmanpaşa University, Faculty of Agriculture, Department of Animal Science	Türkiye	Animal nutrition laboratory, poultry and small ruminant experimental facilities, feed preparation and formulation unit, and basic microbiology and biochemical analysis infrastructure are available.	Animal nutrition (poultry and ruminants), feed formulation, evaluation of alternative feed resources, functional feed additives, digestion physiology, gut health, performance analysis, experimental design, and data interpretation.	Feed formulation and mixing equipment, drying oven, grinder, precision balances, proximate analysis equipment (moisture, ash, crude protein, and crude fat), centrifuge, incubators, and microscopes.	Collaboration in research projects; contribution to experimental design and animal trials; data analysis and interpretation; participation in working groups and training activities; and support for joint publications.
120	Institute of Food Technology	Serbia	Research laboratories and pilot-scale facilities for processing and valorization of plant-based materials and agri-food side-streams, including fermentation, drying, and formulation units, with integrated analytical and sensory evaluation capabilities.	Valorization of plant-based side-streams rich in dietary fiber; fermentation of non-conventional substrates; modification of techno-functional properties of fibers; development of fiber-enriched food systems.	Fermentation units, FTIR, texture and rheology analysis instruments, and sensory evaluation facilities.	Design and optimization of fiber-rich ingredients and products from underutilized biomass, linking processing with structural, functional, and sensory properties.
121	Yıldız Technical University	Türkiye	BET , SEM, ,XRD, UV-Spectrum.	Biomass-derived material processing, fiber production techniques, carbon-based material synthesis, thermal treatment processes, surface and structural characterization (FTIR, SEM, BET, XRD), and physicochemical analysis of materials.	FTIR, UV–Vis spectrophotometer, XRD, SEM, BET surface area analyzer, TGA, DSC, GC, HPLC, ICP-OES, particle size analyzer, zeta potential analyzer, pH meter, conductivity meter, furnace, muffle furnace, drying oven, incubator, shaker, centrifuge, vacuum pump, analytical balance, and ultrasonic bath.	Experience in experimental research and process simulations, including life-cycle and techno-economic assessments, enables effective contributions to feasibility studies and dissemination activities. Can actively support working groups on extraction, characterization, and application development, and contribute to scientific writing and collaborative publications aligned with ENFiber's goals.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
122	Food Technology Research Institute (FTRI), Agricultural Research Center (ARC)	Egypt	The laboratory supports physicochemical, microbiological, and sensory analysis of dairy and food products, with emphasis on applied formulation and product development, and the facility is equipped for studying the functional role of hydrocolloids as dietary fibers in structured food systems, including their effect on texture, stability, and overall product performance under cost-driven reformulation conditions	Experienced in dairy and dairy alternative product development, with expertise in processed cheese systems, formulation, and product optimization, including rheology, texture profile analysis, and meltability. Skilled in the use of hydrocolloids (xanthan, guar, carrageenan, locust bean gum) as dietary fiber sources to control texture, water binding, and stability in dairy systems, with experience in cost-constrained formulation using fiber-based stabilizers. Current PhD research focuses on nano-encapsulation of bioactive compounds in fermented foods, with additional interest in natural compounds and food preservation using plant extracts and essential oils. Proficient in proximate composition analysis, TVFA determination, and sensory evaluation using trained panels. Holds combined academic and industrial experience in dairy production and quality systems, including HACCP, GMP, GHP, ISO 22000, and ISO/IEC 17025. Has delivered lectures and practical training to agriculture and veterinary students.	1-Analytical Balance - Denver Instrument AC-400D (400g) 2-Analytical Balance - Scientech SA 310 (0.0001g) 3-pH Meter—Fisher Scientific Accumet 25 4-pH Meter - JENWAY 3510 5-UV-Visible Spectrophotometer -Peak Instruments C-7200 6-Muffle Furnace - Barnstead/Thermolyne F6010 7-Muffle Furnace -Thermolyne 6000 Series 8-Drying Oven -Fisher Scientific Model 750G 9-Incubator -TITANOX (general purpose) 10-Incubator/Oven -GFL (temperature-controlled) 11-Vacuum Oven -Heraeus 12-High-Speed Homogenizer -FSH-2A 13-Hot Plate Magnetic Stirrer -LK Lab Korea HS-20 14-Ultrasonic Cleaner -Taisite UC-D1 (11 L capacity) 15-Bench-top Centrifuge - Model 800 (max speed 4000 rpm) 16-Water Distillation Unit 17-Autoclave -Vertical Steam Sterilizer 18-Laminar Air Flow Cabinet (vertical type) 19-Texture Analyzer -TMS-Pro (Food Technology Corporation, USA) 20-ATP Monitoring System - Lumitester PD-30 (Kikkoman)	Can contribute to research on dietary fiber functionality in dairy systems, particularly the use of hydrocolloids to control texture and structural stability, with a focus on developing cost-conscious formulations where hydrocolloids serve as fiber-based ingredients to partially replace fat or protein while maintaining product quality. Able to support practical reformulation work with attention to texture balance, stability, and sensory acceptance under real processing conditions. Offers laboratory support for physicochemical, microbiological, and texture analyses of dairy and structured food products. Willing to contribute to training activities in dairy processing, product evaluation, and quality control. Open to participating in collaborative work within the ENFiber network, including joint studies, data exchange and shared outputs.

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123	Faculty of Technology and Metallurgy, University of Belgrade	Serbia	The Faculty of Technology and Metallurgy building has an area of 26,000 m², of which 5,100 m² represents laboratory space. Laboratories are equipped for experimental work by students and researchers from different departments in the fields of technology, chemistry, and engineering. The Department of Biochemical Engineering and Biotechnology has 162 m² of laboratory space equipped for experimental work in 54 workplaces.	Applied enzymology, including enzyme-assisted extraction and bioconversion of biomass; valorization of agro-industrial residues and plant-based waste into high-value products; recovery and characterization of bioactive compounds (phenolics, polysaccharides); in vitro analysis of antioxidant, antimicrobial, gut, and skin prebiotic properties; physico-chemical characterization of plant-derived fibers; development of sustainable and green extraction technologies; incorporation of bioactives into formulations and evaluation of preserved functional and diffusion properties; and experimental design and process optimization using response surface methodology.	Laboratories at the Biochemical Engineering and Biotechnology Department possess different instruments such as spectrophotometers, microplate readers, HPLC instruments with RI and UV-VIS detectors and fraction collector, microbiological safety cabinet, lyophilizer, shakers with thermostat, vacuum evaporator, vacuum concentrator, centrifuges, ball mill, anaerobic jar, ultrafiltration and nanofiltration devices with pumps, 3D printer, batch and oscillatory bioreactors, etc. The department maintains in-house microbial collections comprising skin and gut commensals and pathogenic strains, including well-characterized reference strains (ATCC, DSMZ) used for experimental research.	Active participation in all relevant COST Action activities, including scientific collaboration, experimental research and inter-laboratory exchange. Willingness to host and undertake STSMs (one STSM grant awarded in the first call), contribute to knowledge transfer, training activities, and stakeholder engagement. Engagement in dissemination through the preparation of research and review articles, participation in conferences and workshops, and contribution to writing future research proposals and collaborative projects. Active involvement in data sharing, methodological development, dissemination, and exploitation of results.
124	Nutrition Sciences	Belgium	Access to animal trial facilities and laboratory for functionality testing	Functional ingredients	Lab equipment for functionality testing of carbohydrates and fibers	Contributions to WG6 and WG5 activities

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125	Rezos Brands SA	Greece	Food Processing Line: A fruit juice production and processing line has been established, where citrus fruits are transformed into highly nutritious juices. All processes are designed in accordance with circular economy principles, focusing on effective food waste management	Extraction of bioactive compounds and essential oils	Microwave extraction system: Extraction of bioactive compounds and essential oils through a microwave selective heating mechanism. Ethos X Microwave Green Extraction of Natural Product	Map and review regulatory frameworks, including EFSA guidelines and relevant national (Greek) regulations, for food waste-derived fibers and propose guidelines for EU and international standards for market entry. Consumer Testing Sessions to gather feedback on the products.
126	Faculty of AGronomy in Čačak, University of Kragujevac	Serbia	Laboratory	Industrial Scale-up; Processing; Functional food formulation	NIR PERKIN ELMER DA 7250 PE, rotavapor rova 100	Product Development
127	InnoRenew CoE, UP IAM & UP FAMNIT, University of Primorska	Slovenia	InnoRenew CoE, Centre of Excellence, research institute at the University of Primorska	Renewable materials, wood science, lignocellulosic fibers, bio-based composites, material modification and functionalization, sustainable manufacturing and circular bioeconomy	FTIR / FTIR-ATR / FT-NIR spectrometers UV/VIS spectrophotometer LC-MS (Q-TOF) GC-MS Gel permeation chromatography (GPC) Elemental analyzer (CHNS/O) Differential scanning calorimeter (DSC) Thermogravimetric analyzer (TGA) Dynamic vapor sorption (DVS) BET surface area analyzer Zetasizer Flash chromatography system Photobioreactor / fermenter Microplate reader Extruder + Injection molding system Hot press (industrial scale) Chemical reactors (OptiMax, Polyclave) Tube furnace Vacuum pressure impregnation chamber Scanning electron microscope (SEM) FTIR microscope 3D digital microscope Universal testing machine (Zwick/Roell) Digital Image Correlation (DIC) system Thermal conductivity analyzers Plasma system (https://innorenew.eu/laboratories/)	Hosting of STSMs and research visits; providing access to research facilities and interdisciplinary expertise; support for training, workshops, and knowledge exchange activities; active participation in collaborative research and networking within the COST Action

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128	Università Politecnica delle Marche	Italy	Laboratory Infrastructure	Plant protection, phytopathology, Management of food loss and waste, natural compounds	PCR, RT PCR, ddPCR, NMR	Supporting collaboration
129	Aydın Adnan Menderes University	Türkiye	Laboratory	Functional gluten-free foods and cereal products	HPLC, GC, GC-MS, Texture analyser, HunterLab, pH meter, autoclave, ice maker, Soxhalet extractor, Ash oven, incubator	Undertaking analysis and contributing to the writing of academic manuscripts or chapters.
130	Innovation Center of the Faculty of Technology and Metallurgy in Belgrade	Serbia	ICTM provides laboratory facilities supporting research in chemistry, technology, engineering, and microbiology.	Green extraction of bioactive compounds (including polyphenols and pectin) from agro-industrial by-products (using enzymatic-assisted extraction and deep eutectic solvents); chemical characterization of extracted compounds; evaluation of antioxidant activity; assessment of antimicrobial and dermal prebiotic potential; and diffusion studies of active compounds from cosmetic formulations.	RP-HPLC with UV/VIS and RID detectors, Fraction collector, Spectrophotometer UV/VIS, FTIR, electrophoresis, PCR, Kjeldahl apparatus, fiber analyser, fat extractor, microscopes with image analyser, spray dryer, rotary vacuum evaporator, vacuum dryer, ball mill, different thermostats with orbital shaking, thermoshakers, rollershaker, centrifuges.	Research collaboration, co-authoring scientific publications, participation in STSMs, involvement in training schools, workshops, and conferences (including organization), dissemination activities, data collection, and sharing.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
131	Complutense University of Madrid	Spain	Research laboratories equipped for food analysis (nutritional composition, macro- and micronutrients) and the identification of bioactive compounds, as well as for carrying out small-scale extraction processes.	Food analysis including dietary fiber (total, soluble and insoluble, AOAC), oligosaccharides, arabinoxylans, pectins, resistant starch, vitamins, minerals, and secondary metabolites. Optimization of analytical methods (HPLC) and development of green extraction techniques. Experience in in vitro antioxidant assays (QUENCER methodology) and regulatory activities for EFSA compliance.	pH meter, analytical balance, orbital shaker, vortex, drying oven, muffle, thermostated bath, rotary evaporator, centrifuge, freezer (–80 °C), lyophiliser, incubator, concentrator, ultrasound system; UV-Vis spectrophotometer, ColorFlex colorimeter (HunterLab), texturometer, HPLC (UV-Vis, IR, fluorescence detectors), UHPLC (MS and DAD), Soxhlet, Kjeldahl, and microplate reader (UV and FL).	WG1 database development (as WG Leader); WG3 fiber characterization and standardization; WG4 bioactive potential evaluation (in vitro antioxidant activity); and WG5 sustainability, regulatory compliance, and commercialization (New Food Additive applications).
132	Innovation Centre of Faculty of Technology and Metallurgy, Belgrade	Serbia	Laboratories dedicated to biochemistry, biochemical engineering, and microbiology, with independent workspaces and offices supporting research activities.	Optimization and development of enzymatic processes for functional ingredient production for food, cosmetic, and pharmaceutical sectors; valorization of agro-industrial waste into high-value products; microbiological cultivation; in vitro assessment of prebiotic potential using gut commensal microorganisms; biological evaluation of bioactive compounds (antioxidant, antimicrobial, antidiabetic); membrane separation technologies.	HPLC, UV–Vis spectrophotometers, microplate readers, vacuum evaporators, incubators for microbial cultivation, pH meters and roller shakers.	Preparation of scientific and review papers; participation in workshops, training schools, and conferences; organization of scientific events and dissemination activities; collaboration within working groups; knowledge exchange; participation in STSMs.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
133	Muğla Sıtkı Koçman University	Türkiye	Pilot kitchen and experimental food processing units, sample preparation and extraction facilities, and sensory analysis laboratories.	Food chemistry, particularly the identification and analysis of bioactive compounds from plant-based materials and food by-products. Chromatographic techniques (HPLC, GC-MS), spectroscopic analysis (FTIR, UV-Vis), and method development for complex food matrices were used. Extraction techniques for fiber-rich and heterogeneous materials; valorization of food processing by-products into functional components.	Spectrophotometers, pH meters, analytical balances, and centrifuges.	Identification, extraction, and characterization of fiber-rich compounds from food processing by-products; development and validation of analytical methods; sustainable and functional food application development; joint publications; and STSMs.
134	Universidad Complutense de Madrid	Spain	Research laboratories equipped for food analysis (nutritional composition, macro- and micronutrients) and the identification of bioactive compounds, as well as for carrying out small-scale extraction processes.	Sustainable production of food from agricultural and forestry crops, regulatory aspects of the circular economy, dietary fiber analysis (total, soluble, and insoluble, AOAC), oligosaccharides (HPLC), and total and resistant starch. Experience in agri-food industry sustainability requirements and rural development strategies.	pH meter, analytical balance, orbital shaker, vortex, drying oven, muffle, thermostated bath, rotary evaporator, centrifuge, freezer (–80 °C), lyophiliser, incubator, concentrator, ultrasound system; UV-Vis spectrophotometer, ColorFlex colorimeter (HunterLab), texturometer, HPLC (UV-Vis, IR, fluorescence detectors), UHPLC (MS and DAD), Soxhlet, Kjeldahl, and microplate reader (UV and FL).	WG1: Database updates, analysis, and identification of new fiber sources from the agri-food industry. WG5: Sustainability assessment in agri-food processes, sustainability certificates, and regulatory requirements for agriforestry by-products as new fiber sources.
135	Complutense University of Madrid	Spain	Research laboratories equipped for food analysis (nutritional composition, macro- and micronutrients) and the identification of bioactive compounds, as well as for carrying out small-scale extraction processes.	Food composition analysis and analytical procedure development, including AOAC fiber analysis, oligosaccharides by HPLC, dietary fiber (total, soluble and insoluble, pectins, resistant starch), vitamins, minerals, organic acids, and phenolic compounds.	pH meter, analytical balance, orbital shaker, vortex, drying oven, muffle, thermostated bath, rotary evaporator, centrifuge, freezer (–80 °C), lyophiliser, incubator, concentrator, ultrasound system; UV-Vis spectrophotometer, ColorFlex colorimeter (HunterLab), texturometer, HPLC (UV-Vis, IR, fluorescence detectors), UHPLC (MS and DAD), Soxhlet, Kjeldahl, and microplate reader (UV and FL).	WG1: Development of the Database of Fiber Sources. WG4: Bioactive potential evaluation (in vitro antioxidant activity). WG5: Sustainability, regulatory compliance, and commercialization (Novel Foods or New Food Additive).

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
136	Mohammed First University	Morocco	University-based laboratory infrastructure dedicated to biochemistry, biotechnology, ethnopharmacology, and health-related research, with a specific focus on bioresource valorization, biomass processing, and in vitro bioactivity assessment.	Biochemical valorization of agro-food and livestock side-streams; bioresource processing and characterization; in vitro assessment of bioactive properties (antioxidant and antimicrobial activities); anaerobic co-digestion and process optimization; sustainability assessment using LCA and carbon-benefit indicators; and management of feedstock variability, seasonality, and traceability.	Standard laboratory facilities for biomass handling, sample preparation, biochemical analysis, and in vitro functional evaluation; computational resources (Python and MATLAB) for sustainability modeling and scenario analysis.	WG4: Harmonized evaluation of the bioactive potential of extracted fibers through antioxidant and antimicrobial assays and quality benchmarking. WG5: Sustainability and commercialization aspects through LCA, carbon-benefit indicators, and scenario analysis.
137	Mother Teresa University	North Macedonia	Laboratory infrastructure for extraction, sample preparation, and characterization techniques.	Extraction techniques, structural characterization (FTIR), and interpretation of analytical data.	UAE and FTIR.	Material characterization (FTIR), data interpretation, and writing papers.
138	Ukrainian National Forestry University	Ukraine	Laboratory for the manufacturing and testing of wood-based composite materials, including plywood and particleboard, supporting both pilot-scale production and standardized mechanical and physical testing.	Development and characterization of wood-based composites (plywood and particleboard); adhesive bonding performance; structure–property relationships; mechanical and physical property evaluation; processing parameter optimization; utilization of agricultural waste by-products for particleboards.	Two hot presses for panel production and a universal testing machine for mechanical performance evaluation (shear strength, bending strength, MOR, MOE, internal bond strength, thickness swelling, and water absorption).	Collaborative research on the development, manufacturing, and performance evaluation of wood-based composite materials using agricultural by-products; material testing, data analysis, and structure–property relationship interpretation.
139	Mother Teresa University	North Macedonia	Faculty laboratory.	Extraction.	Main laboratory equipment and FTIR analysis.	Extraction and writing papers.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
140	Istanbul Technical University	Türkiye	Research laboratories, including in vitro digestion, cell culture, food chemistry, and sensory analysis facilities.	Food digestion, food matrix interactions, antioxidant activity, in vitro bioavailability, Caco-2 cell culture model, functional foods, food bioactivity, sensory evaluation, and waste valorization.	Water bath, centrifuge, ultrasonic probe, microfluidizer, spray dryer, zetasizer, FTIR, fluorescence spectrophotometer, HPLC, LC-MS, and UV-Vis spectrophotometer were used.	Simulation of in vitro gastrointestinal digestion, Caco-2 cell culture model, functional food design and sensory analysis, spectrophotometric methods, and food matrix interaction studies.
141	Muğla Sıtkı Koçman University	Türkiye	Equipment is available for measuring the physical and mechanical properties of wood.	Wood properties characterization.	Color and brightness measuring device.	Contributed to data analysis and documentation activities.
142	Complutense University of Madrid	Spain	Research laboratories equipped for food analysis (nutritional composition, macro- and micronutrients) and the identification of bioactive compounds, as well as for carrying out small-scale extraction processes.	Sensory and chemical food analysis with expertise in macronutrients, micronutrients, and bioactive compounds, including dietary fiber (total, soluble, and insoluble, AOAC), oligosaccharides, arabinoxylans, pectins, vitamins, minerals, organic acids, and phenolic compounds. HPLC method optimization and green extraction development.	pH meter, analytical balance, orbital shaker, vortex, drying oven, muffle, thermostated bath, rotary evaporator, centrifuge, freezer (–80 °C), lyophiliser, incubator, concentrator, ultrasound system; UV-Vis spectrophotometer, ColorFlex colorimeter (HunterLab), texturometer, HPLC (UV-Vis, IR, fluorescence detectors), UHPLC (MS and DAD), Soxhlet, Kjeldahl, and microplate reader (UV and FL).	WG1: Database development. WG4: Bioactive potential evaluation (in vitro antioxidant activity).

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
143	Complutense University of Madrid	Spain	Research laboratories equipped for food analysis (nutritional composition, macro- and micronutrients) and the identification of bioactive compounds, as well as for carrying out small-scale extraction processes.	Analysis of food components, including macronutrients (proximal composition), micronutrients (minerals and vitamins), and bioactive compounds, such as dietary fiber (total, soluble and insoluble, AOAC, oligosaccharides, arabinoxylans), organic acids, and phenolic compounds. Development and optimization of green extraction techniques and in vitro bioactivity evaluation.	pH meter, analytical balance, orbital shaker, vortex, drying oven, muffle, thermostated bath, rotary evaporator, centrifuge, freezer (−80 °C), lyophiliser, incubator, concentrator, ultrasound system; UV-Vis spectrophotometer, ColorFlex colorimeter (HunterLab), texturometer, HPLC (UV-Vis, IR, fluorescence detectors), UHPLC (MS and DAD), Soxhlet, Kjeldahl, and microplate reader (UV and FL).	WG1: Database development. WG3: Fiber characterization and standardization. WG4: Bioactive potential evaluation (in vitro antioxidant activity). WG5: Sustainability, regulatory compliance, and commercialization.
144	Faculty of Technology and Metallurgy, University of Belgrade	Serbia	Faculty laboratory facilities for biochemical, microbiological, and food technology research, supporting fiber extraction and analysis, enzymatic reactions, and fermentation processes.	Valorization of agro-industrial by-products through enzymatic fiber extraction; production and characterization of oligosaccharides; carbohydrate profiling by chromatography; evaluation of bioactive properties (prebiotic and antidiabetic potential); process optimization; and kinetic analysis of enzymatic reactions.	HPLC (UV-VIS and RID detectors with fraction collector), UV-Vis spectrophotometers, microplate readers, laboratory-scale bioreactors, incubation systems, laboratory ball mill, centrifuges, vacuum evaporators, moisture analyzers, and pH meters.	Active participation in joint research activities; knowledge exchange and inter-laboratory validation; STSM hosting and undertaking; preparation of scientific and review papers; workshops, training schools and conferences.
145	Ege University	Türkiye	Food Biotechnology Laboratory and Facilities.	Fermented foods research and related food biotechnology applications.	Equipment for small-scale fermented products.	Contributions to activities at all levels across the relevant working groups.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
146	RISE PFI	Norway	National infrastructures — NorBioLab (biorefinery) and NorCellLab (cellulose research) — with mechanical testing, microscopy, and 3D printing laboratories.	Biorefinery, nanocellulose, fiber characterization, microscopy, 3D printing, and thermoforming.	HPLC (carbohydrate analysis); STA 449 F3 Jupiter Simultaneous Thermal Analyzer (TG-DSC/DTA); rheometer; texture analyzer and mechanical testing; zetasizer; SEM sample preparation and image analysis; 3D printing (resin printer, micro-extrusion, fused deposition modeling); and equipment for thermo-pressing, extrusion, compounding, and injection molding.	Contributions to publications and participation in project proposals.
147	Wroclaw University of Science and Technology	Poland	Chemical engineering and materials laboratories for biomass valorization, facilities for polysaccharide extraction and processing from food waste, controlled experimental setups (pH, ionic strength, temperature), and biopolymer fabrication and functional testing facilities.	Food processing waste valorization, polysaccharides and biopolymers, green extraction technologies, rheology and physicochemical characterization, biopolymer films and biomaterials, circular bioeconomy, structure–function relationships.	Heated reactors, stirrators, centrifuges, filtration units, rheometer/viscometers, surface tension analyzers, SEM, laser microscopes, FTIR, HPLC, pH meters, conductivity meters, and UV–Vis spectrophotometers.	WG2: Optimization of pectin and polysaccharide extraction from food processing waste. WG3: Development of standardized characterization methods (rheological, surface, and charge properties). WG6: Development of biopolymer fibers and films linking material structure to functional performance.
148	Mouloud Mammeri University of Tizi Ouzou	Algeria	Laboratory of Applied Chemistry and Chemical Engineering with state-of-the-art experimental facilities for the synthesis, characterization, and analysis of materials.	Synthesis and characterization of materials and biomaterials; structural, morphological, and chemical analysis; spectroscopic and diffraction techniques; electrochemical studies; surface and porosity analysis.	UV-Vis spectrophotometer, SEM, calcination furnaces, XRD system, FTIR spectroscopy, BET surface area and porosity analyzer, fluorescence spectrometer, AAS, and potentiostat for electrochemical studies.	Development and chemical modification of biosorbent materials; characterization using spectroscopic techniques; analysis of adsorption mechanisms for environmental remediation applications.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
149	Aristotle University of Thessaloniki	Greece	Academic laboratory for food chemistry and bioactive compound analysis, equipped for extraction, fractionation, and functional characterization of plant-derived materials. Additional facilities for advanced extraction and mechanochemical processing are available within the university.	Extraction, fractionation, and compositional analysis of plant bioactives (phenolic compounds and triterpenic acids from Mediterranean matrices); ultrasound-assisted extraction; thin-layer NIR drying; antioxidant activity assessment; powder quality evaluation.	Ultrasound bath and probe system for UAE; drying, milling, and centrifugation equipment; FTIR with diamond ATR; UV-Vis spectrophotometry; HPLC/UHPLC-DAD; ASE; and planetary ball milling (available within the University).	WG2: Extraction and fractionation strategies for fiber-rich, bioactive-containing fractions from food waste. WG4: Evaluation of the antioxidant activity (in vitro) of bioactive-rich fractions with emphasis on phenolic compounds and triterpenic acids.
150	University of Tirana	Albania	Digital infrastructure and computing resources for data analysis, modeling, and optimization.	Data analysis, modeling and optimization, statistical analysis, material testing, and operation of standard laboratory equipment.	FTIR, oven, thermostat, pH meter, conductometer, UV-Vis spectrophotometer, reactor, mixer, osmosis unit, turbidimeter, and extraction equipment were used.	Performing experiments and data analysis.
151	University of Córdoba (IQUEMA)	Spain	Two research laboratories and a pilot plant within the BioPrEn research group (RNM-940) and the University Institute of Chemistry for Energy and the Environment (IQUEMA).	Separation, characterization, and valorization of fibers from lignocellulosic residues; extraction of bioactive compounds.	15 L batch reactor, pulper, PFI mill, Sprout-Bauer refiner, sheet former and vacuum sheet former, freeze-dryer, homogenizer, flocculator, and membrane ultrafiltration unit; physical property testing (tear strength, elongation, burst strength); antimicrobial and antioxidant assays; deep eutectic solvent (DES) systems.	Flexible contribution according to the needs of the Action, drawing on experience with environmentally friendly processes for the valorization of lignocellulosic waste.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
152	Universidade Católica Portuguesa, CBQF – Centro de Biotecnologia e Química Fina	Portugal	Research university infrastructure with integrated laboratories for food biotechnology, analytical chemistry, bioactive compounds, and gut-health studies, supporting the extraction, physicochemical characterization, and functional evaluation of fiber-rich ingredients from agro-food by-products, including in vitro digestion, fermentation, and cell-based assays.	Valorization of agro-food by-products into fiber-rich functional ingredients (antioxidant dietary fiber, bound phenolics); extraction and stabilization of fiber ingredients; physicochemical and structural characterization; phenolic profiling; in vitro gastrointestinal digestion and fecal fermentation; antioxidant and prebiotic potential; structure–function relationships.	FTIR, NIR, HPLC, LC-MS/MS, GC-MS, HPAEC-PAD, rheological and viscometric tools, and standard sample preparation and extraction equipment; in vitro digestion and fecal fermentation set-ups; cell culture facilities for intestinal barrier and bioactivity assessment.	Characterization and standardization of food waste-derived fibers (physicochemical, structural, and functional); evaluation of bioactive potential and gut-modulating effects; comparative studies, protocol harmonization, and inter-laboratory activities on antioxidant activity, bound phenolics, and digestion/fermentation models.
153	Warsaw University of Life Sciences	Poland	Pilot-scale and laboratory facilities for food and biomass processing, including emerging physical processing technologies (PEF, ultrasound, pulsed light) and analytical equipment for dietary fiber characterization.	Sustainable processing and valorization of plant-based raw materials and food industry by-products using emerging technologies (PEF, ultrasound, pulsed light); physicochemical and functional characterization of dietary fiber; development of functional food ingredients and bio-based materials.	Fibertec™ 1023 automatic fiber analyzer, pulsed electric field (PEF) system, ultrasound probes and baths, pulsed light (PL) system for decontamination and material treatment, and standard equipment for physicochemical and functional analysis of dietary fiber and plant-based materials.	Development and optimization of scalable processing technologies for dietary fiber recovery and modification (PEF, ultrasound, pulsed light); support in fiber analysis and functional property assessment; sustainable applications of fiber-rich materials in food and non-food systems.
154	Advanced Climate Risk Education	Germany	Computational and analytical infrastructure for climate and environmental data analysis, including custom-developed statistical software, data-processing workflows, and online training facilities for advanced time-series analysis (no laboratory facilities).	Statistical analysis of time series with a focus on nonstationary processes; Monte Carlo bootstrap methods for uncertainty quantification; extreme value and correlation analysis; development of reliable inference methods for environmental and climate-related data.	High-performance desktop computing systems and specialized statistical software (Fortran-based and other analytical tools) for time-series analysis, uncertainty quantification, and numerical simulation.	Methodological support, statistical data analysis and interpretation, and co-authorship of publications and reports; contribution to training activities (workshops, courses) within sustainability and fiber-related research.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
155	University of Zagreb, Faculty of Graphic Arts	Croatia	Faculty-based academic infrastructure: graphic production laboratories, printing and prepress equipment, computer laboratories with design software, a photography studio, and research facilities for recycling, spectrometry, and mechanical testing.	Recycling and coating technologies; valorization of waste into sustainable coating materials.	Equipment for mechanical testing of paper, paper recyclability testing, and spectrophotometry.	Research and knowledge exchange on sustainable coating materials derived from food waste for protective surfaces and packaging; participation in collaborative projects, workshops, and interdisciplinary activities on the circular economy and bio-based materials.
156	Mersin University	Türkiye	Laboratory for polymer and composite synthesis and characterization and for colloidal dispersions, with institutional access to FTIR, SEM-EDS, XRD, UV, TGA, and TEM.	Polymer chemistry and materials science; electrokinetic properties and zeta potential; electrorheological activity; antimicrobial activity; natural polymers and their nanocomposites.	Zetasizer, electrorheometer, polymer synthesis equipment, electrical conductivity measurement, and antimicrobial activity testing set-ups.	Zeta potential analysis of materials in aqueous and oil media; electrorheological characterization of colloidal dispersions; antimicrobial testing; additional characterization (FTIR, SEM-EDS, XRD, UV, TGA, TEM) through institutional facilities.
157	Sivas Cumhuriyet University	Türkiye	Departmental laboratory with basic equipment for food product development.	Application of dietary fiber in product development; rheological and textural characterization of final products; sensory analysis and evaluation; final product characterization.	Basic laboratory equipment, including various drying devices (air fryers, fruit dehydrators, ovens), refractometers, spectrophotometers, and colorimeters.	Active role in new product development within collaborative projects, including through outsourcing of analyses where required.

#	Institution	Country	Infrastructure / Facilities	Key Expertise	Equipment	Preferred Contribution
158	Institute of Food Technology, University of Novi Sad	Serbia	FINSLab, the Institute's laboratory accredited according to SRPS EN ISO 17025 for testing of food and feed, organized in six sections: chemical, sensory, rheological, transport quality, microbiological, and analytical testing.	Enzymatic–gravimetric determination of dietary fiber and colorimetric analysis of pectic substances; application of fiber-rich by-products in functional foods (e.g., plum pomace in plum spread); textural and rheological measurements; water retention capacity of fiber-rich materials.	Enzymatic digester for dietary fiber analysis and UV–Vis spectrophotometer for pectic substances.	Knowledge exchange and capacity building in dietary fiber analysis through participation in Action activities.
159	University of Warmia and Mazury in Olsztyn	Poland	Physics and biophysics laboratory.	Nuclear magnetic resonance (NMR) relaxometry and molecular science.	Fast field cycling (FFC) NMR (up to 1 T), time-domain (TD) NMR, electron paramagnetic resonance (EPR), and sonicator.	NMR-based research and data analysis.
160	Marche Polytechnic University, Ancona	Italy	Plant pathology laboratory with experimental fields and storage rooms.	Identification of plant pathogens; testing of the antimicrobial activity of fibers (e.g., chitosan) and other compounds; field and postharvest trials for plant disease management.	PCR, qPCR, digital droplet PCR, laminar flow hoods, experimental fields, and storage rooms.	Collaboration with partners seeking to test the antimicrobial activity of compounds and fiber-based materials.

5. Results and Summary

5.1 Distribution by Working Group

Table 4 summarizes the number of contributors to each Working Group; the distribution is also shown in Figure 1B.

Table 4. Number of contributors per Working Group (WG).

Working Group	Number of Contributors
WG1	53
WG2	85
WG3	76
WG4	84
WG5	45
WG6	79
WG7	40

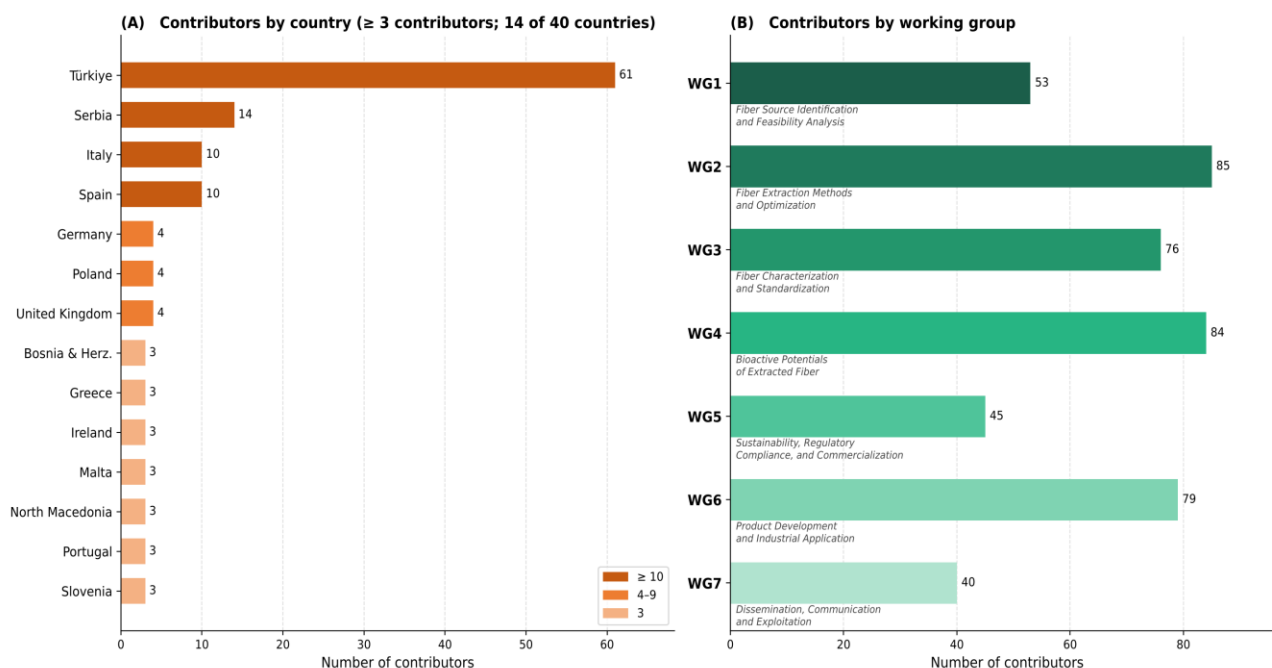


Figure 1. ENFiber Network: Geographic and Working Group Distribution. (A) Countries with three or more contributors (14 of 40). (B) Number of contributors per working group. A total of 160 contributors from 40 countries (CA24111, GP1) participated in the study.

5.2 Key Observations

- The database covers a wide range of expertise, including fiber extraction, characterization, encapsulation, electrospinning, fermentation, pilot-scale processing, emerging processing technologies (pulsed electric field, ultrasound, pulsed light), NMR relaxometry, colloid and polymer science, plant pathology, statistical modeling, and analytical chemistry.
- The equipment available across the network includes HPLC, GC-MS, FTIR, UV-Vis spectrophotometers, freeze-dryers, electrospinning apparatus, texture analyzers, rheometers, zetasizers, NMR relaxometers, pulsed electric field and pulsed light systems, automatic fiber analyzers, and various pilot-scale production units.
- A total of 40 countries were represented, ensuring broad geographic coverage across Europe and international partners. Türkiye (61), Serbia (14), Italy (10) and Spain (10) contributed the largest numbers of respondents. WG2 (85) and WG4 (84) are the largest working groups, followed by WG6 (79), WG3 (76), WG1 (53), WG5 (45) and WG7 (40). Most respondents (125 of 160; 78%) are active in more than one working group, with the strongest overlap between WG2 and WG3 (57 shared contributors; Figure 2).

Figure 2 — Cross-Working Group Collaboration Potential

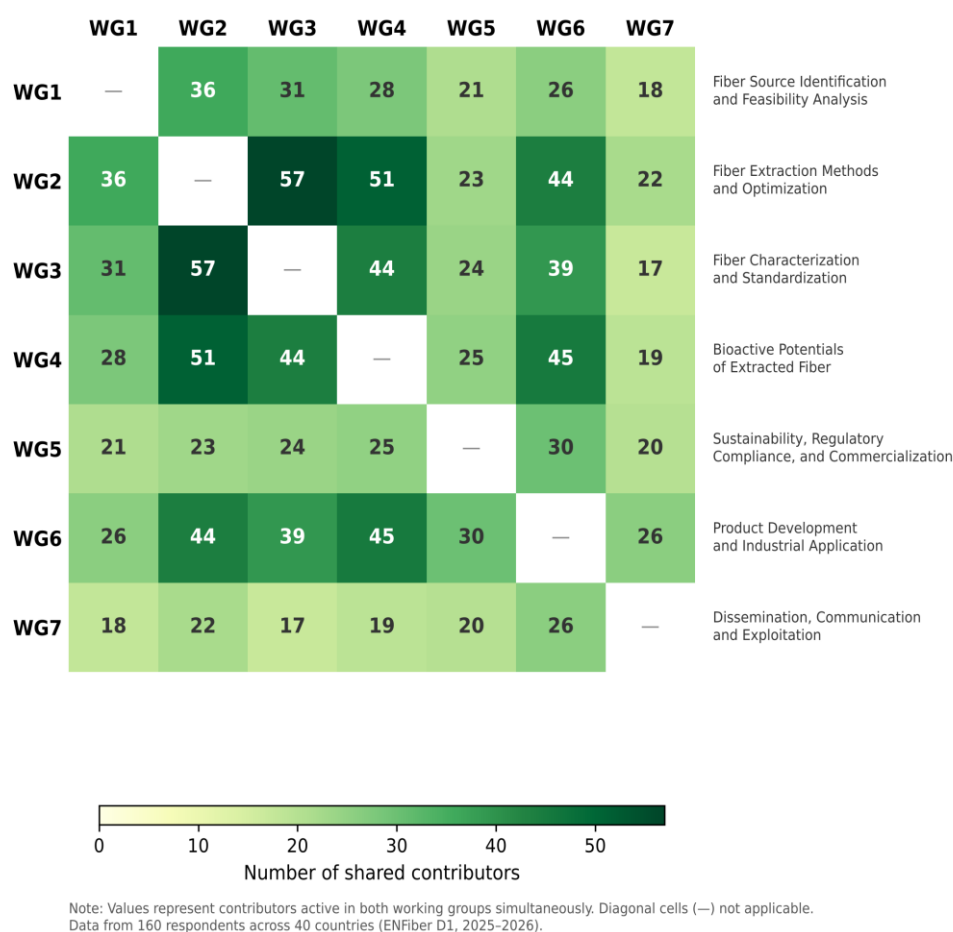


Figure 2. Cross-Working Group Collaboration Potential. The values indicate the number of contributors shared between each pair of working groups. Data from 160 respondents across 40 countries (ENFiber D2, 2025–2026) were used.

6. Link to MoU Objectives and Action Progress

This deliverable directly addresses Research Coordination Objective RCO1 (establishing a consensus-based conceptual framework for fiber valorization through participant consultations) and Capacity Building Objective CbO1 (building strong scientific competencies among participants in fiber extraction, characterization, materials processing, and sustainability assessment methodologies). By providing a comprehensive overview of the available infrastructure and expertise, D2 positions the Action to identify complementary capabilities, plan collaborative experiments and STSMs, reduce redundancy across the network, and maximize the network's overall impact.

7. Conclusions and Next Steps

The D2 Infrastructure & Expertise Database successfully documented the research capabilities of 160 ENFiber Action members from 40 countries. The database will be maintained as a living resource and updated as new members join the Action, and will be used to identify complementary partners for STSMs, joint experimental work, and publications across WG1–WG7.

8. Annexes

Annex A: Survey Instrument

The survey was administered online via Google Forms and was distributed to all registered ENFiber COST Action (CA24111) members. It comprises the following sections and fields:

- **Section 1 - Institutional Information**
 - Full name, institutional affiliation, Country, Email address.
- **Section 2 - Working Group Membership**
 - Which ENFiber Working Group(s) do you belong? (Multiple selection: WG1–WG7)
- **Section 3 - Laboratory Infrastructure and Facilities**
 - Please describe the laboratory infrastructure and facilities available at your institution relevant to the ENFiber Action. (Open text)
- **Section 4 - Key Technical Expertise**
 - What are your key areas of technical expertise relevant to sustainable fiber valorization? (Open text)
- **Section 5 - Available Equipment**
 - Please list the major equipment available at your institution that is relevant to fiber extraction, characterization and valorization. (Open text)
- **Section 6 - Preferred Contribution to the Action**
 - How would you prefer to contribute to ENFiber's activities? (e.g., experimental work, joint publications, hosting STSMs, dissemination, training) (Open text)
- **Section 7 - Additional Notes**
 - Any additional information you would like to share regarding your infrastructure, expertise, or interest in the ENFiber network. (Open text, optional)
- **Section 8 - Data Consent**
 - Participants were required to confirm the consent statement reproduced in Annex B before submitting their forms. The survey was distributed via a shared Google Forms link to all registered ENFiber Action members, and responses were collected. A total of 160 responses were received and compiled into the database presented in Section 4.

Annex B: Consent Statement

All participants confirmed the following: "I confirm that the information provided is accurate and that I consent to the processing of my personal data for ENFiber COST Action (CA24111) activities. The submitted information will be used exclusively for the development of the ENFiber COST Action (CA24111) Infrastructure & Expertise Database (D2 deliverable) and for facilitating collaboration, networking, and reporting within the Action, in compliance with applicable data protection regulations, including GDPR."