

# FUTUREbio

## Project Quality Assurance Plan

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## FutureBio Project Quality Plan V2.0

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**REVISION SHEET**

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Version	Date	Author (Partner/Person)	The revision reason
0.1	14.02.2022	Arzum IŞITAN (PAU)	First draft that forms the plan
0.2	14.02.2024	Arzum IŞITAN (PAU)	Final form

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## 1. Introduction

This Plan provides an overview of the main Quality Assurance (QA) procedures set up by the FutureBio project consortium. QA measured and assured the quality of the project's processes, outputs, results, deliverables, and impacts in order to:

- deliver value to the target beneficiaries,
- fulfill the requirements of the providing grant support,
- operate in an efficient and timely manner, and
- assist in the strategic-decision making during and after project lifetime.

The quality of the FutureBio project has been to a large extent guaranteed by the quality of the partners, as well as the quality of the project work plan. However, close monitoring of the project quality at different phases of its implementation was felt to be crucial for its success.

FutureBio was a two-year KA220-HED-Cooperation Partnerships in Higher Education project supported by Turkish National Agency, on biopolymers between nine partners from Turkey and EU. The FutureBio project which provided information about bioplastics and production methods and carried out awareness studies with new innovative training materials is the first project in the field. FutureBio was divided into phases in order to maximize efficiency by establishing quality standards, including project implementation, widespread impact, dissemination, and sustainability of the project from the project preparation phase. The project implementation phases were characterized by activities, products, and quality indicators.

FutureBio has five work packages/phases categorized into four management levels for the purpose of to benefit from innovative practices among university students, academic staff, industry workers and the society, and to increase the competencies of academics and students with on-site training:

- Management Level- Phase1: Management
- Operation Level- Phase2 and Phase3: Curriculum preparation including needs analysis, company visits and survey applications, report preparation; creation of interactive open-access education modules, lecture guidebook, and VR exercises.
- Dissemination Level- Phase 4: Dissemination and sustainable implementation of the products
- Monitoring and Control Level- Phase5: Quality Control and Monitoring

Quality Plan has included detailing procedures, criteria and resources which has been agreed by all partners:

1. Erasmus+ KA220-HED Project Proposal for “Let's use biodegradable plastic for the future”,
2. Partnership Agreement,
3. Guideline for the Use of the Grant for Grants Awarded in 2021 under Call — EAC/A09/2021.

## 2. Quality Indicators

FutureBio has “Quality assurance of the products” phase which includes:

- Quality plan
- Quality report
- Meeting evaluations

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- Interim Evaluation
- Testing Evaluation
- Final Evaluation

A Quality Plan has been prepared and shared before starting the project by the coordinator. At the first Transnational Meeting (M1), it was discussed, and necessary corrections were made. Quality Plan has included detailing procedures, criteria and resources which agreed by all partners. The Partners used indicators to measure on a regular basis the rate of success of foreseen results using quality plan: to ensure that the project outputs follow the specified standards to enrich all training and testing activities with quality standards to provide a final project validation report. At Table 2.1, it can be seen all project activities and their quality indicators:

**Table 2.1** Quality Assurance Matrix

Project Process	Period	Quality Assurance	Standard Inputs Include
Project management	1-24th m	<p>"Project Management and Implementation" is the framework of the project where all the activities, correct timing, Project quality, functioning, all materials used from project results to dissemination activities were planned and checked during the entire project.</p> <ul style="list-style-type: none"> <li>➤ Set up management and communication platforms, definition of milestones (1-3rd m)</li> <li>➤ Preparation of project's contracts (1-3rd m)</li> <li>➤ assurance of project coordination and organization of activities, ensuring the provision of project documents (1st-24th m)</li> <li>➤ organizing technical trips to local plastic companies</li> </ul> <p><b>Quality Indicators:</b></p> <ul style="list-style-type: none"> <li>➤ Partnership evaluation surveys,</li> <li>➤ Meeting evaluation surveys,</li> <li>➤ Number of activities,</li> <li>➤ Number of activities attended by project partners.</li> </ul>	<p>Management plan, Management platform, Interim report, Final report Minutes of meetings TPM participant lists Partnership Agreement Partnership Evaluation surveys Meeting evaluation surveys Number of activities, Number of activities attended by project partners</p>
Consultation Process	1-24th m	<p>In Phase 2 (PR1), national and international reports have been prepared including situations and needs analyses for academics, students, and companies. At the same time, these analyses have been revealed awareness situations for individuals and institutions. For this purpose, each university applied the survey studies at the beginning of the project to its academic staff, graduate, and</p>	

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		<p>undergraduate students. It has foreseen that these surveys will apply to at least 5 academic staff and 10 students. Since we are 6 universities as a project partnership, we aimed to apply these surveys to 30 academicians and 60 students in total.</p> <p>In Phase 2, each project partner tried to find companies producing plastics and BDP production locally and nationally and create a portfolio. By contacting at least 3 companies for each partner, it was expected to complete these needs analysis surveys. In this way, we expected to be in contact with at least 24 companies.</p> <p>After those works have been done as national and international reports, we determined the educational needs.</p> <p><i>A total of 589 students were involved in a specially designed questionnaire through face-to-face interviews and online was applied between June–July 2022 in Technical University of Cluj Napoca, Romania, Pamukkale University, Selcuk University and Kirkareli University from Turkey, University of Trento, and Cosvitec from Italy, SUPSI from Switzerland, and OTH from Regensburg, Germany.</i></p> <p><i>A total of 221 academic staff were involved in from Technical University of Cluj Napoca, Maramures County from Transylvania Region, Romania, Pamukkale University, Selcuk University and Kirklareli University from Turkey, University of Trento and Cosvitec from Italy and SUPSI from Switzerland and OTH Regensburg, Germany.</i></p> <p><i>271 industrial employers were involved in from small and medium enterprises or individual activities from Romania, Turkey, Italy, and Finland</i></p> <p>In Phase 3, it was planned to open 2 courses on BDP in the Technology Faculty of PAU and within the scope of The Graduate School of Natural and Applied Sciences. In accordance with the curriculum, in the second year of the project, educational activities would be carried out in these courses. Students who took these courses were given an awareness survey at the beginning of the semester and the level of awareness will be changed by repeating the same survey at the end of the semester. At least 50</p>	<p>Survey for academicians Survey for university students Survey for industrial workers National reports International report Training programs Activity evaluation reports Attendance lists Pilot testing survey Pilot testing of online materials and guide books Final testing survey Evaluation reports</p>
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		<p>students were expected to take these courses.</p> <p>A total of 6 courses were offered in two graduate degrees at departments at PAU (Mechanical and Manufacturing Engineering and Metallurgy and Materials Engineering) and 3 of these courses were actively conducted with 250 students.</p> <p>Pilot applications between 17-18<sup>th</sup> months of the Project performed by 250 students and 50 academics in total. Students who took the courses had an opportunity to utilize interactive learning materials, laboratory videos, and Lecture Guidebook. The feedback requested and thus, necessary revisions have applied to the modules, tools, and chapters.</p> <p><b>Quality Indicators:</b> Number of prepared questionnaires Number of academic and university students surveyed</p>	
<p>Training process</p>	<p>10-18<sup>th</sup> m</p>	<p>This project has been prepared in accordance with the European Union's strategy of developing cooperation, increasing quality, and encouraging innovation in the learning activities of individuals and groups in the field of education and training. The project aimed to make the use of innovative practices among university students, academic staff, industry employees, and the community and to increase the competencies of academics and students with in-place training.</p> <p>During the project life cycle, mutual information transfer, know-how, and brainstorming were carried out, and the partnership got more efficient. It has been developed its scientific knowledge related to the BDP through the training activity (C1) for the project staff. Therefore, we aimed for the project partnership to develop itself in innovative education technologies. Thus, the potential of using these technologies in new projects was also be increased. 18 project staff attended the C1 activity.</p> <p>C2, a short-term student training activity, has been held in IT on the 20<sup>th</sup> month of the project. 33 students and 6 accompanying people from all partner universities were planned to participate in this activity (8+1 from PAU, and 5+1</p>	<p>Signature Lists of trainees and trainers</p>

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		<p>from other partners). 39 students and 6 accompanying persons have attended.</p> <p><b>Quality Indicators:</b> Number of academicians Number of students Number of surveys Number of activities</p>	
<p>Dissemination and sustainable implementation of the products</p>	<p>1-24th m</p>	<p>Dissemination materials, activities, the number of people to reach, and their expected impact are the followings: 6 webinars will be organized through the project website. 5 newsletters have been prepared every six months. 7 National Informative Meetings and 1 Workshop (E1-E8) have been organized. Some review and research papers were published in highly-ranked international journals. Within the participation in various conferences, 1000 brochures have been prepared by PAU and all partners and were distributed. It was expected to reach 1000 people via website, social media, press/media. We reached approx. 20000 people. At least 285 people were expected to attend national informative meetings. We reached 600 people with those activities directly. FutureBio has a workshop/panel organized by KLU with 70 local participants. Earth day STEM challenge activities were organized to reach at least 350 young people with activities at the secondary and high school level, which was held locally in especially Italy, Romania, and Turkey. For university students, various activities were organized: A poster competition was organized by OTH. Social responsibility movements such as collecting plastics etc. were initiated by FBK, UNITN, and IND. The number of people we directly reached among university students was planned to be 500. With the events organized, press reports, lectures given at university level, and project outputs, we have reached more than this number of university students. eTwinning, Erasmus+ Project Results Platform, and EPAL platforms were used for the dissemination, also. <i>The Layman's Report</i> provides a general and brief overview of the project and its outcomes, such as the challenges faced</p>	<p>Dissemination plan Sustainability plan Website Social media platforms Logo Newsletters Brochure Attendance lists Webinars Number of posters the Layman's Report Informative meeting reports</p>

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		<p>by the project, the proposed solutions, the innovative aspects of such solutions, the main achievements and outputs, the main results of the implemented pilots or recommendations for future.</p> <p><b>Quality Indicators:</b>          Number of clicks          Number of leaflets distributed          Number of newsletters sent          Number of oral presentation and scientific papers          Number of activities          Number of download and number of distributed books          Informative meeting reports</p>	
<p>Development of Lecture Guidebook</p>	<p>6-23<sup>th</sup> months</p>	<p>Most of the current scientific books in English are focused on biopolymer chemistry, their physical properties, nanocomposites and their applications especially in medical or environmental areas. Moreover, there are very few books on biodegradable plastics and their applications. On the other hand there has no course book in Turkish related biopolymer technology.</p> <p>The guide book, which contains examples from the project partners' works and industry applications, is innovative in this respect. It is a book that people from different disciplines can use according to their interests. It was planned to open 2 courses on biopolymers in Technology Faculty of Pamukkale University and within the scope of the Graduate School of Natural and Applied Sciences. In accordance with the curriculum, in the second year of the project, educational activities would be carried out in these courses. At least 50 students were expected to take these courses. A total of 6 courses were offered in two graduate degrees at departments at PAU (Mechanical and Manufacturing Engineering and Metallurgy and Materials Engineering) and 3 of these courses were actively conducted with 250 students. Pilot applications between 17-18<sup>th</sup> months of the Project performed by 250 students and 50 academics in total. To close an important interdisciplinary course material gap in Turkey and Europe and to contribute to the literature, development of environmental awareness, to encourage biodegradable polymers to be included in the study and research topics of students, academicians, and industrial companies,</p>	<p>Survey for academicians          Survey for university students          Survey for industrial workers          Book chapters</p>

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		<p>raising awareness about sustainable environment and decarbonization were among the aims of this project result. This project result has a high impact on all target groups, and it has high potential of dissemination and transferability.</p> <p><b>Quality Indicators:</b>          Number of chapters          Number of downloading          Number of surveys          Providing 90% and above satisfaction from the results of the inter-partnership surveys regarding the quality of the project result (thus determining the problems and collecting the solution suggestions)</p>	
<p>Development of open access education materials and VR tools</p>		<p>There are no online modules prepared on experiments for the laboratory applications at university level. However, laboratory works are especially helpful to gain the knowledge and skills to make scientific evaluations about the synthesis, properties, and applications of biodegradable polymers. Production from different materials and characterization of biopolymers, and the characterization techniques and tests are the main video topics.</p> <p>Within this result, it is aimed to create innovative technologies based on e-learning and mobile learning tools with interactive videos and animations in game format. The materials are structured according to a competency-based learning approach (PR1). The use of e-learning technologies in the FutureBio project can provide new opportunities for learners increasing flexibility, motivation and engagement.</p> <p><b>Quality Indicators:</b>          Number of students attend the pilot application          Number of academics attend the pilot application          Number of online tools          Number of created videos          Number of VR tools          Number of tools to be changed Providing 90% and above satisfaction from the results of the inter-partnership surveys regarding the quality of the project result (thus determining the problems and collecting the solution suggestions)</p>	<p>Surveys          Laboratory videos          Interactive tools          VR tools</p>

Qualitative and quantitative indicators have been used in overall project management:

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### Quality of Project management arrangements

- no more than 20% rate of delays in delivering results throughout the project

### Effectiveness of coordination by the project coordinator

- no more than 20% rate of issues and problems detected in coordination

### Effectiveness of the monitoring and evaluation processes

- 100% of partners and coordinator compliance with quality monitoring process tasks.

### Effectiveness of quality arrangements

- 100% rate of compliance with recommendations and amendments according to the problems detected.

### Qualitative and quantitative indicators have been used in Project Results:

In order to see the effectiveness of developed online modules, the pilot study was added to Project. With this regard, the project team and the users were in constant contact and feedback was provided. To achieve expectations, the definition/monitoring of specific project indicators were used. In order to be more useful for the book, literature work and interviews have been created. In order to measure the quality and progress of the project as well as its success, quality indicators have been determined and applied for each work package of the project and summarized below:

Phase 1: Partnership evaluation surveys, Meeting evaluation surveys, number of activities, number of activities attended by project partners

Phase 2: number of students, academicians, industrial workers, firms answered surveys

Phase 3: number of students and academics attend the pilot applications, number of online tools and videos, number of tools to be changed, number of book chapters

Phase 4: number of participants who attend seminars / informative meetings / workshop / webinars, number of website visits, number of distributed newsletters / brochure, number of audience of seminar / congress

Phase 5: covers all the above-mentioned indicators to ensure the quality of the whole project. Providing 90% and above satisfaction from the results of the inter-partnership surveys regarding the quality of the project result (thus determining the problems and collecting the solution suggestions)

## 3. Management Quality Control

Quality assurance of the products was valid for the whole project term. During the project, 5 TPMs have been organized. 75 staff from all partners in total will attend those meetings. Participants were the permanent staff of the partner institutions who took an active role in the project.

It was planned to prepare 5 transnational meetings every 6 months to monitor project progress and ensure that responsibilities were distributed properly:

- M1, Kick-off meeting: It has been held in Denizli/TR on 26-27th of May 2022 organized by PAU. 17 person from all partners and 1 person from SUPSI have been attended. This meeting was very important to communicate and work together. The purpose and objectives of the project have been clearly laid out in order to ensure that tasks are shared properly both throughout the

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project and especially during the first 6 months. Draft Quality and dissemination plans prepared by PAU has been discussed at this meeting. The activities expected to be completed in the first 6 months were on the agenda. Especially “Innovative Course curricula (PR1)” has been discussed. For situation analysis, surveys, report formats prepared by PAU, COSVITEC and CNU were discussed and finalized. The draft online application contents and the platforms used for creating these tools have been discussed. SUPSI has supported us in this task. Since the online application content by considering the results obtained in PR1 and by performing the needs and shortcoming analysis, it was agreed on that it had to be done before the 2nd TPM. The online platform has been argued, also. Decisions taken at the meeting shared with all partners as the 1st minor report.

- M2, 2nd TPM: It has been held in Finland on the 27-28th of September 2022 organized by CTRL. 18 persons from all partners and 2 person from SUPSI have been attended. The activities expected to be completed in the first 6 months has been discussed. The national reports were discussed and analyzed, also. The partnership presented the curriculum's final form. These analyses and curriculum formed the basis of PR2, PR3, and PR4. The results of PR1 and the preparation of PR2, PR3, and PR4 have been discussed. For PR2, online modules are shared between all the partners. Providing preliminary information to the Project staff about the creation and use of online materials and videos have been organized by PAU. SUPSI supported us in this task. C1 training and the tasks related to the second six months have been discussed. Decisions taken at the meeting shared with all partners as the 2nd minor report.
- M3, 3rd TPM: It has been held in Naples, Italy on the 2-3rd of March 2023 organized by COSVITEC. 14 persons from all partners and 2 persons from SUPSI have attended. The activities expected to be completed in the first year and the coming tasks for the third six months have been discussed. The evaluation of C1 activity negotiated. The progress of PR2, PR3, and PR4 has been discussed. The plan of C2 talked about in detail. Pilot testing of online materials and guidebooks have been argued. The decisions taken at the meeting were shared with all partners as the 3rd minor report.
- M4, 4th TPM: It has been held in Regensburg, Germany on the 19-20th of September 2023 organized by OTH. 12 persons from all partners and 2 persons from SUPSI have attended. The activities expected to be completed in 18 months and the tasks related to the fourth six months have been discussed. The progress and revisions of PR2, PR3, and PR4 discussed, also. C1 and pilot applications have been evaluated. And the planning of the “E8-International workshop/panel” activity has been negotiated, and it was decided to be an international panel. The organization of E1-E7 has also been discussed. The decisions taken at the meeting were shared with all partners as the 4th minor report.
- M5, Final TPM has been held in Kırklareli, Turkey on the 5-6th of February 2024, organized by KLU. 14 persons from all partners and 2 persons from SUPSI have attended. All Project activities and E7 have been evaluated. The results of Quality and dissemination plans and all activities completed in project time-schedule have been discussed at this meeting. All project results were shared with all partners. Sustainability of the project products has been negotiated.

#### 4. Monitoring and Evaluation

A management team was formed by choosing one person from each of the project partners: Arzum Işitan, Evren Çağlarer, Yasemin Öztekin, Gratiela Dana Boca, Aniello Gervasio, Alessandro Pegoretti, Massimo Bersani, Laura Pasquardini, Teijo Lehtonen, Charlotte Thiel, and Nadia Catenazzi. These people were responsible for management, implementation, monitoring and quality on behalf of their

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organization. After the project contract was signed between the coordinator and the NA, bilateral agreements have been sent to all partners to be signed. With these agreements, the coordinator has also shared the draft quality plan with the partners. During the Kick-off meeting, the quality plan has been discussed and updated. The quality plan included the timing of all project activities, the start and end dates of each work package, the report formats to be prepared after the applications and activities, and the questionnaires to be applied to the participants. In the project life cycle, in each 6 months 5 Transnational Project Meetings (M1-M5) have been held. In addition, Skype meetings will be organized when needed. After each transnational meeting, a survey study has been conducted among the partners to evaluate the meeting. In this way, problems in coordination, compliance with quality monitoring process tasks, and compliance with suggestions and changes made to identified problems were monitored. At the same time, an evaluation has been made at the end of the first year, as well as evaluations have been made at the end of each project result, pilot implementations, training activities, and dissemination activities. After the completion of each project activity by the partners, the participant list and a report were sent to the coordinator. The reports have been included the following information:

1. Activity name
2. Activity date
3. The place where the activity is held
4. Number of participants
5. Surveys conducted before and after the activity and their results
6. Feedback from the activity
7. Notifications about the activity
8. Opinions and suggestions

In addition, "Evaluation of the meeting" and "INTERNAL PROGRESS REPORT" have been filled online by all partners in every six-month period to evaluate the meeting and project progress after each TPM (*Annex 1 and Annex 2*). Thus, in addition to the efficiency of the meetings, continuous evaluation has been made in the partnership.

In addition, all scales and questionnaires used in the project were developed specifically for the project and are given in the Annexes 3-8 respectively:

Item Pool for Bioplastic Scale for University Student

Item Pool for Bioplastic Scale for Academicians

Item Pool for Bioplastics Scale for Industrial Workers

Bioplastic awareness scale for high school students

Bioplastic Knowledge test for high school students

Pilot test evaluation for project results

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**Annex 9** also shows the results of the evaluation survey conducted by Kırklareli University.

The quality of the project materials/results depends on the expertise of the project partners and their ability to bring this expertise together on a specific platform. For the OERs created under the project, SUPSI provided training to the project consortium and prepared a guide for the preparation of quality and standardized online materials. **Annex 10** shows this guide.

All meetings of the consortium were evaluated using the questionnaire provided in Annex 1. The quality processes of the meetings were monitored by IND. **Annex 11** shows examples of the survey results.

An evaluation questionnaire was also developed by IND for C1 -staff training. **Annex 12** shows the questions and answers of this questionnaire.

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# ANNEXES

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## ANNEX 1: Questionnaire – Evaluation of the meeting

PLEASE COMPLETE ONE FORM PER PARTICIPANT

### Introduction

Please rate the aspects of **CK4STIM** partnership meeting as follows:

5 = all positive; 4 = mainly positive; 3 = neutral; 2 = mainly negative; 1= all negative;

Meeting in ..... , on .....

\*1. Please assess individual aspects of the meeting

5 = all positive      4 = mainly positive      3 = neutral      2 = mainly negative      1= all negative

a. Usefulness of presentations - Presentations were relevant for the project

b. Usefulness of discussions - Discussions were relevant for the project

c. Working methods - The methods of working were suitable for the topics and the group

d. Cooperation with other partners - I enjoyed the cooperation with the other partners

e. Expectations for the meeting - My expectations about this meeting were met or exceeded

f. Treatment of difficulties - Difficulties were treated constructively/readily

g. Quality of my participation - I am satisfied with the quality of my own participation

h. Outcomes of the meeting - I was satisfied with the outcome the meeting

\*2. What I liked best about the meeting was:

\*3. What I liked least about the meeting was:

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## ANNEX 2: Questionnaire – INTERNAL PROGRESS REPORT

### Internal Progress Report Form

Reporting period: .....

Partner:

### Qualitative evaluation - Overview of project activities and results:

Period	Activities

### Evaluation of the work undertaken:

Please describe any **divergence** from the initial project plan (aims and objectives, work programme, products, partnership, and budget). Give the reasons for the changes.



Concrete results/outputs:

Signature

Name and Surname of the national Manager

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### ANNEX 3: Item Pool for Bioplastic Scale for University Student

**Dear University Student;**

This research is a part of the Erasmus+ KA220 Collaboration in Higher Education project named “Let's use biodegradable plastics for the future (FutureBio)” supported by the European Commission and the Turkish National Agency under the coordination of Pamukkale University. With this study, it is aimed to evaluate your awareness regarding the use of bioplastics. After reading each sentence carefully, to determine how much you agree with the sentences, mark only one of the options to the right of the sentences that best suits you by putting an “x”. There is no right or wrong choice of the options you select. Please do not leave any of the sentences unanswered. Please do not write your name. Thank you for your valuable contributions.

FutureBio Project Team

#### Personal Information Form

1. Your gender?  
1) Female ( ) 2) Male ( ) c) Other (Please specify).....
2. What grade are you studying in?  
1) Year 1 ( ) 2) Year 2 ( ) 3) Year 3 ( ) 4) Year 4 ( ) 5) Graduate ( )
3. Which university are you studying at? (Please write.) .....
4. Which faculty do you study at? (Please write.).....
5. In which department do you study? (Please write.).....
6. I know that petroleum product plastics take a long time to biodegrade?  
1) Yes ( ) 2) No ( ) 3) No idea ( )
7. Have you attended a conference on nature conservation before?  
1) Yes ( ) 2) No ( )
8. Do you think you are an environmentalist?  
1) Yes ( ) 2) No ( ) 3) Sometimes ( )
9. Did you take part in environmental activities organized within the university?  
1) Yes ( ) 2) No ( )



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### Bioplastic Awareness Scale (BIOF) –For University Students

SUBSTANCES		Totally Appropriate	Appropriate	Some what Appropriate	Not Appropriate	Not At All Appropriate
1.	I prefer bioplastic products, even if they are expensive.					
2.	When I see plastic being burned, I warn it, thinking it will cause air pollution.					
3.	I decompose plastics to contribute to recycling.					
4.	Bioplastics are produced from raw materials that do not harm nature.					
5.	Bioplastics are produced from raw materials that do not harm human health.					
6.	I prefer to use bioplastic bags for my grocery shopping.					
7.	I prefer to use bioplastic products in the kitchenware.					
8.	I prefer not to buy products with nylon additives.					
9.	I make an effort to use a small number of bags in my daily life.					
10.	I do not throw plastic products into nature.					
11.	I throw the recycling products into the relevant boxes.					
12.	If I have to choose between two similar products, I prefer products that are less harmful to nature.					
13.	Instead of plastic products, I take care to use low-damage objects such as paper and glass.					
14.	I participate in campaigns for the use of bioplastic products.					
15.	I prefer to use mesh/cloth/paper bags instead of using disposable bags while shopping.					
16.	I carry flasks instead of plastic water bottles.					

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17.	I try to inform the people around me about the use of bioplastic products.					
18.	I would like to learn new information about the use of bioplastic products.					
19.	I recognize the bioplastic logos on the products.					
20.	I participate in environmental activities related to bioplastics (collecting plastic caps, collecting plastics in the environment, etc.).					
21.	When I see plastic in the green area, I take it from there.					
22.	I think that bioplastics should replace conventional polymers in the future.					
23.	I think that all kinds of studies on the pollution of traditional plastic products should be increased.					
24.	I prefer the products obtained from the bioplastics industry because they are renewable.					
25.	I avoid products that increase global warming.					
26.	I prefer bioplastic products because they do not harm the nature when they decompose.					
27.	I prefer bioplastic products as they do not harm human health when degraded.					
28.	I prefer bioplastic products because they degrade earlier in nature.					
29.	I make no effort to use bioplastic products.					
30.	Bioplastic products do not cause an increase in the greenhouse gas effect.					
31.	I think that bioplastics should be used in mass social events (festival, fair, etc.).					
32.	I think that bioplastics should be used in takeaway products.					

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## ANNEX 4: Item Pool for Bioplastic Scale for Academicians

**Dear Academician/Scientist;**

This research is a part of the Erasmus+ KA220 Collaboration in Higher Education project named “Let's use biodegradable plastics for the future (FutureBio)” supported by the European Commission and the Turkish National Agency under the coordination of Pamukkale University. With this study, it is aimed to evaluate your awareness regarding the use of bioplastics. After reading each sentence carefully, to determine how much you agree with the sentences, mark only one of the options to the right of the sentences that best suits you by putting an “x”. There is no right or wrong choice of the options you select. Please do not leave any of the sentences unanswered. Please do not write your name. Thank you for your valuable contributions.

FutureBio Project Team

### Personal Information Form

1. Your gender?

a) Female ( ) b) Male ( ) c) Other (Please specify).....

2. Your title?

a) Prof. Dr. ( ) b) Assoc. Dr. ( ) c) Assistant professor ( ) d) Res. See. ( ) e) Instructor ( )

3. What age range are you in?

a) ( ) Between 21-29 ( ) b) Between 30-39 ( ) c) Between 40-49 ( )  
d) Between 50-59 ( ) e) 60 and above ( )

4. Which university do you work at? (Please write.) .....

5. Which faculty do you work at? (Please write.).....

6. In which department do you work? (Please write.).....

7. What do you think about the impact of waste on the environment?

a) Important to me ( ) b) Unimportant to me ( ) c) not interested in this issue ( )

8. I know that petroleum product plastics take a long time to biodegrade?

a) Yes ( ) b) No ( ) c) Not interested ( )

9. Have you attended a conference on nature conservation before?

a) Yes ( ) b) No ( ) c) Not interested ( )

10. Do you think you are an environmentalist?

a) Yes ( ) c) No ( ) b) Sometimes ( )

11. Did you take part in the environmental event(s) organized within the university?

a) Yes ( ) c) No ( )

12. Did you take part in the environmental event(s) held in institutions other than the university?

a) Yes ( ) b) No ( )

### FutureBio Project Quality Plan V2.0

**Survey of Academics' Opinions on Bioplastics (ABIO)**

SUBSTANCES		Totally Appropriate	Appropriate	Somewhat Appropriate	Not available	Not at all Appropriate
1.	Whenever possible, I emphasize the importance of using bioplastic products in my classes.					
2.	I sort recycling products in my office.					
3.	When I talk to my students outside of class, I emphasize the importance of using bioplastics.					
4.	I support environmental activities related to the use of bioplastics.					
5.	Bioplastic products do not harm human health.					
6.	I use few bags in my shopping.					
7.	I think that I should be an example to my students about the use of bioplastics.					
8.	I prefer packaging that is not more harmful to nature.					
9.	I participate in environmental events organized at universities.					
10.	I recommend students to organize social activities related to the use of bioplastics.					
11.	I prefer to use non-nylon bags while shopping.					
12.	I somehow share the information I have learned about bioplastic products with the students.					
13.	I discuss with my colleagues about the use of bioplastic products.					
14.	Even though it is not my field, I do academic readings on the use of bioplastic products when it comes across.					
15.	I think that universities should cooperate with different institutions on bioplastics when necessary.					
16.	When I see plastic on the floor, I take it from there.					

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17.	I think that more events (seminars, conferences, etc.) should be organized in the university regarding bioplastics.					
18.	I prefer bioplastic products mainly because they are produced from natural raw materials (mushrooms, plants, animals, etc.).					
19.	I prefer bioplastic products as they do not cause carcinogenic effects.					
20.	I try not to include disposable products (plastic cups, forks, straws, etc.) in my life.					
21.	I prefer bioplastic products as they do not cause soil pollution.					
22.	Since bioplastics are produced from natural raw materials, they reduce dependence on petroleum.					
23.	I think that the use of bioplastic products is important in terms of sustainability.					
24.	I find bioplastic products expensive.					
25.	I prefer bioplastic products as they do not cause pollution of water resources.					
26.	I use it more comfortably because bioplastic products do not contain petrochemical products.					
27.	I prefer bioplastic products as they do not cause air pollution.					
28.	When buying children's toys, I prefer bioplastic products.					
29.	I think that bioplastic products should be used in agricultural studies.					
30.	I think that countries should develop effective policies on waste management.					
31.	I think that universities should carry out studies to raise public awareness about bioplastics.					
32.	I think that awareness campaigns on bioplastic products should be organized.					
33.	I think that more academic studies should be done on bioplastics.					
34.	I think that bioplastic materials should be used in all areas (tables, chairs, cabinets, etc.) within the university.					

## FutureBio Project Quality Plan V2.0

## ANNEX 5: Item Pool for Bioplastics Scale for Industrial Workers

### Dear Industrialist;

This research is a part of the Erasmus+ KA220 Collaboration in Higher Education project named “Let's use biodegradable plastics for the future (FutureBio)” supported by the European Commission and the Turkish National Agency under the coordination of Pamukkale University. With this study, it is aimed to evaluate your awareness regarding the use of bioplastics. After reading each sentence carefully, to determine how much you agree with the sentences, mark only one of the options to the right of the sentences that best suits you by putting an “x”. There is no right or wrong choice of the options you select. Please do not leave any of the sentences unanswered. Please do not write your name. Thank you for your valuable contributions.

FutureBio Project Team

### Personal Information Form

#### 1. Gender?

- a) Female ( )      b) Male ( )      c) Other (Please specify).....

#### 2. What do you produce in your workplace? (Please write.).....

#### 3. Do you know that petroleum product plastics take a long time to decompose in nature?

- a) Yes ( )      b) No ( )      c) Not interested ( )

#### 4. Do you use bioplastic products in your productions?

- a) Yes ( )      b) No ( )

#### 5. Do you inform your customers about the use of bioplastic products?

- a) Yes ( )      b) No ( )      c) Not interested ( )

#### 6. Do you have sufficient knowledge of the industrial applications of bioplastics?

- a) I have sufficient knowledge ( )      b) I have some knowledge ( )      c) I have no knowledge ( )

#### 7. What is your use of bioplastic products in the production process?

- a) We use only bioplastic raw materials in our production. ( )  
b) We use bioplastic raw materials in some parts of the production. ( )  
c) We do not use bioplastic raw materials in our production. ( )

#### 8. Do you cooperate with recycling facilities regarding waste materials generated during the production process?

- a) Yes ( )      b) No ( )

## FutureBio Project Quality Plan V2.0



## Survey of Industrialists' Opinions on Bioplastics (SBY)

1. Studies/researches/actions are carried out in our company to reduce the amount of waste.
  - a) Yes ( )      b) No ( )
2. We prefer to use bioplastic raw materials, even if they are expensive.
  - a) Yes ( )      b) No ( )      c) Sometimes ( )
3. We are sensitive to the recycling (batteries, paper, etc.) wastes generated during the production process.
  - a) Yes ( )      b) No ( )
4. We are sensitive to the recycling of waste materials in our industry and other existing facilities.
  - a) Yes ( )      b) No ( )
5. We use recycled waste raw materials in the production of suitable products.
  - a) Yes ( )      b) No ( )
6. The products in our company are produced in accordance with special recycling guidelines according to quality standards.
  - a) Yes ( )      b) No ( )
7. Bioplastics being biodegradable provides many conveniences to industrialists.
  - a.( ) I totally disagree    b.( ) I disagree    c.( ) I somewhat agree
  - d.( ) I agree    e.( ) I agree very much
8. We make enough efforts to use bioplastic products in production.
  - a.( ) I totally disagree    b.( ) I disagree    c.( ) I somewhat agree
  - d.( ) I agree    e.( ) I agree very much
9. There is no issue    in the production process of bioplastic products.
  - a.( ) I totally disagree    b.( ) I disagree    c.( ) I somewhat agree
  - d.( ) I agree    e.( ) I agree very much
10. We are ready to cooperate with local governments to promote the use of bioplastic products.
  - a.( ) I totally disagree    b.( ) I disagree    c.( ) I somewhat agree
  - d.( ) I agree    e.( ) I agree very much
11. Equipped/well-trained personnel are required for the production of products from bioplastic raw materials.

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- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**12.** Customers' expectations about the product (impact strength, chemical stability, high dimensional stability, etc.) make it difficult for us to use bioplastic raw materials.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**13.** The use of bioplastic materials in products is not among the first requests of customers.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**14.** Some of the equipment in production is not suitable for the use of bioplastic raw materials.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**15.** There is not enough research on determining the lifespan of products obtained from bioplastic raw materials.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**16.** Government incentives are needed for the use of bioplastic raw materials in the production.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**17.** Government policies should be developed to inform the public about bioplastic products.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**18.** The cost of bioplastic raw materials is high.

- a.  I totally disagree    b.  I disagree    c.  I somewhat agree  
d.  I agree    e.  I agree very much

**19.** Which of the following options would you recommend to promote the use of bioplastic products? Mark the appropriate option with an X. You can tick more than one option.

- a.  Billboards should have awareness raising articles.

## FutureBio Project Quality Plan V2.0

- b. ( ) There should be lessons in schools regarding bioplastic products.
- c. ( ) Television programs should be made.
- d. ( ) Local governments should carry out information activities.
- e. ( ) Courses should be opened in the relevant departments of universities on bioplastic products.
- f. ( ) Social responsibility projects should be developed with students.
- g. ( ) Conferences with broad participation should be organized.
- h. ( ) Manufacturers should be informed about bioplastic products.
- i. ( ) Public service announcements about bioplastic products should be prepared.
- j. ( ) The benefits of bioplastic products should be emphasized in advertisements.
- k. ( ) Industry-University joint projects should be carried out.
- l. ( ) Other (Please write.).....

# FUTUREbio

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## ANNEX 6: Bioplastic awareness scale for high school students

Dear Student;

This research is a part of the Erasmus+ KA220 Cooperation Partnerships in Higher Education project named “Let's use biodegradable plastics for the future (FutureBIO)” supported by the European Union and the Turkish National Agency under the direction of Pamukkale University. With this study, it is aimed to evaluate your awareness regarding the use of bioplastics. After reading each sentence carefully, to determine to what extent you agree with the sentences, mark only one of the options to the right of the sentences that best suits you by putting an “x”. There is no right or wrong choice of the options you select. Do not leave any of the sentences unanswered. Do not write your name. Thank you for your valuable contributions.

FutureBIO PROJECT RESEARCH TEAM

**Personal Information Form**

1. Your gender?

1) Girl ( ) 2) Boy ( )

2. What grade are you studying in?

1) Grade 1 ( ) 2) Grade 2 ( ) 3) Grade 3 ( ) 4) Grade 4 ( )

5. I know that petroleum product plastics take a long time to biodegrade?

1) Yes ( ) 2) No ( )

6. Have you attended a conference on nature conservation before?

1) Yes ( ) 2) No ( )

7. Do you think you are an environmentalist?

1) Yes ( ) 2) Sometimes ( ) 3) No ( )

8. Have you taken part in environmental activities organized in your place of residence?

1) Yes ( ) 2) No ( )

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**Bioplastic Awareness Scale (BFO) – For High School Students-**

Score the following statements as if you were giving points, whichever of the numbers in the boxes on the side is appropriate. Mark with an X above the number you find appropriate.		Totally Appropriate	Appropriate Somewhat	Appropriate	Not Appropriate	Not At All Appropriate
1.	I make an effort for my family/friends to use recyclable products.					
2.	I do not use plastic products unless it is necessary.					
3.	Bioplastic products can be reused without disturbing the balance of nature.					
4.	I always throw plastic products in recycling bins.					
5.	I do not prefer to use plastic products as they disrupt the functioning of nature.					
6.	I would like recycling bins to be located in more accessible points of the city.					
7.	I do not want to use plastic products because they impair human health.					
8.	I know that there are products (packaging, forks, spoons, etc.) made of bioplastic in our daily life.					
9.	I have never used bioplastics until today.					
10.	I prefer bioplastic products because they are environmentally friendly products.					
11.	Since plastics do not deteriorate in nature for many years, I do not prefer to use them.					
12.	I carry a glass bottle or metal flask with me every day to avoid using a plastic water bottle.					
13.	Plastic products take away people's right to live in a clean environment.					
14.	I believe that the use of plastics made from fossil fuels should be reduced.					
15.	I prefer bioplastic products because they are recyclable.					
16.	It doesn't matter to me whether or not to use bioplastic products.					
17.	I know that plastics are products made from petroleum.					

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## ANNEX 7: Bioplastic Knowledge test for high school students

Dear Student;

Below you will find some questions for a research done as part of the bioplastics project. These questions aim to measure your knowledge of bioplastics. In this context, answer the multiple choice test below. After reading the question, tick the option that suits you best. The information obtained will be used for a scientific research within the scope of the project. Thank you for your contribution to this research.

FutureBIO PROJECT RESEARCH TEAM

**Personal Information Form**

1. Your gender?  
1) Girl ( ) 2) Boy ( ) 3) Prefer not to say ( )
2. What grade are you studying in?  
1) Grade 1 ( ) 2) Grade 2 ( ) 3) Grade 3 ( ) 4) Grade 4 ( ) 5) Grade 5 ( )
5. I know that generally petroleum product plastics take a long time to biodegrade?  
1) Yes ( ) 2) No ( )
6. Have you dealt with nature conservation outside of class?  
1) Yes ( ) 2) No ( )
7. Do you think you are an environmentalist?  
1) Yes ( ) 2) Sometimes ( ) 3) No ( )
8. Have you taken part in environmental activities organized in your place of residence?  
1) Yes ( ) 2) No ( )

**Bioplastic Knowledge Test (For High School Students)**

1. Which of the following is not appropriate to explain why plastic products are dangerous in the ecosystem? (E)
  - a) Petroleum-derived products.
  - b) They increase carbon emissions into the atmosphere.
  - c) They remain in nature for a long time without decomposition.
  - d) Generally not suitable for recycling and reuse.
  - e) They are useful for plant species.
2. Which of the following information about plastics is incorrect? (C)
  - a) Plastic is a family of materials generally based on artificially produced polymers.
  - b) The incorrect use of plastic products causes greenhouse gas effect.
  - c) Sea creatures cannot eat plastic products.
  - d) Some plastic products may contain toxic substances in their structure.
  - e) The incorrect use of plastic products causes an increase in global warming.
3. Which of the following information about bioplastics is false? (B)
  - a) After use, biodegradable bioplastics can be converted into products that do not harm the environment by microorganisms.

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- b) The energy consumed while producing bioplastics is generally higher than the energy consumed when producing petroleum-based plastics.
- c) They are biodegradable products as they can be degraded by microorganisms in a specific environment.
- d) Bioplastics can be produced from different biomass sources (e.g., corn or potato starch, cellulose) obtained from plants.
- e) Bioderived bioplastics reduce dependence on petroleum.

**4. Which of the following information regarding bioplastics is/are incorrect? (A)**

- I. During the production of bioplastics, less carbon dioxide is released than petroleum-derived plastics.
  - II. The raw materials of bioplastics are more robust than the raw materials of plastics.
  - III. Bioplastics degrade in nature in a shorter time than plastics, if disposed in the right environment.
  - IV. Plastics are produced from cork.
- a) II and IV b) I, II, IV c) II, III d) I, II, III e) II, III, IV

**5. Which of the following is not one of the reasons why bioplastics are preferred for some specific applications? (D)**

- a) Bioplastics are environmentally friendly, if used correctly.
- b) There is serious plastic pollution in the seas.
- c) Bioplastics maintain the eco-balance.
- d) Bioplastics threaten the life of living things.
- e) Since the greenhouse gas effect of bioplastics is low, they do not cause air pollution.

**6. Which of the following information regarding bioplastics is/are correct? (E)**

- I. Primary resource savings are achieved in the production of bioplastics.
  - II. It contributes to environmental sustainability.
  - III. Bioplastics reduce fossil fuel demand.
- a) Only I b) I, II c) I, III d) II, III e) All are correct.

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## ANNEX 8: Pilot test evaluation for project results

Dear Student,

Below you will find some questions for a research done as part of the bioplastics project. These questions aim to measure your knowledge of bioplastics. In this context, answer the multiple choice test below. After reading the question, tick the option that suits you best. The information obtained will be used for a scientific research within the scope of the project. Thank you for your contribution to this research.

**FutureBIO project research team**

### Personal Information Form

1. Your gender?
  - 1) Girl
  - 2) Boy
  - 3) Prefer not to say ( )
2. What grade are you studying in?
  - 1) Grade 1 ( )
  - 2) Grade 2 ( )
  - 3) Grade 3 ( )
  - 4) Grade 4 ( )
  - 5) Grade 5 ( )
3. You are student to University of .....
4. Faculty of .....

From a scale from 1 to 5 where 1-Totally disagree 3 neither agree nor disagree and 5-totally agree

1. This book generally:

	1	2	3	4	5
Increased my knowledge about bio plastics					
Let me change my vision about bio plastic products					
Increased my sensitivity about bio plastic products					
Increased awareness about the waste plastic problem					
Make myself more responsible using bio-plastic materials					

2. The presentation of the book has positive impact on my perception upon the book chapters:

	1	2	3	4	5
Polymers					
Indispensable Polymers of Life: Plastics					
Bioplastics					
Properties of Biodegradable Plastics					
Characterization of Biodegradable Plastics					

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Current Applications of Biodegradable Plastics					
Impact of Biodegradable Plastics: Market Trends for Biodegradable Plastics					
Past, Current and Future of Biodegradable Plastics: Innovative Applications					

3. The presentation of this book improves my understanding about plastic:

	1	2	3	4	5
Polymers					
Indispensable Polymers of Life: Plastics					
Bioplastics					
Properties of Biodegradable Plastics					
Characterization of Biodegradable Plastics					
Current Applications of Biodegradable Plastics					
Impact of Biodegradable Plastics: Market Trends for Biodegradable Plastics					
Past, Current and Future of Biodegradable Plastics: Innovative Applications					

4. The short videos about bio plastics have positive impact on my perception upon the book chapters:

	1	2	3	4	5
Polymers					
Indispensable Polymers of Life: Plastics					
Bioplastics					
Properties of Biodegradable Plastics					
Characterization of Biodegradable Plastics					
Current Applications of Biodegradable Plastics					
Impact of Biodegradable Plastics: Market Trends for Biodegradable Plastics					
Past, Current and Future of Biodegradable Plastics: Innovative Applications					

5. The LUMI presentation of the chapters book make me understand the impact of plastic problem:

	1	2	3	4	5

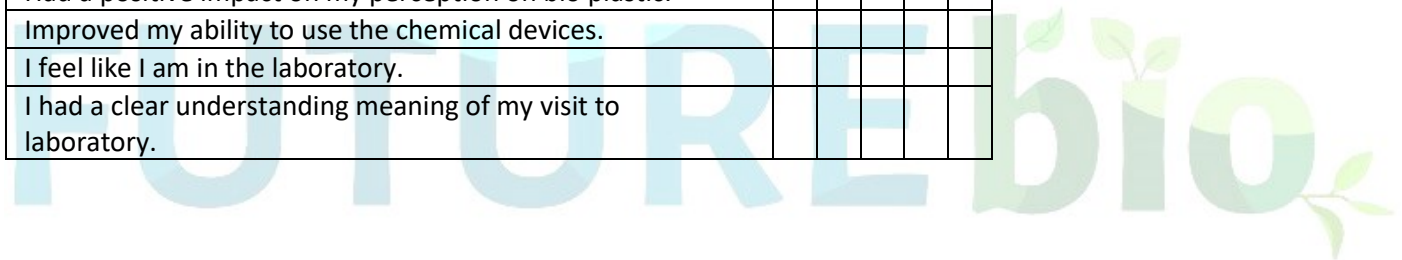
## FutureBio Project Quality Plan V2.0

Polymers					
Indispensable Polymers of Life: Plastics					
Bioplastics					
Properties of Biodegradable Plastics					
Characterization of Biodegradable Plastics					
Current Applications of Biodegradable Plastics					
Impact of Biodegradable Plastics: Market Trends for Biodegradable Plastics					
Past, Current and Future of Biodegradable Plastics: Innovative Applications					

6. Did you ever use VR glasses before? Yes No

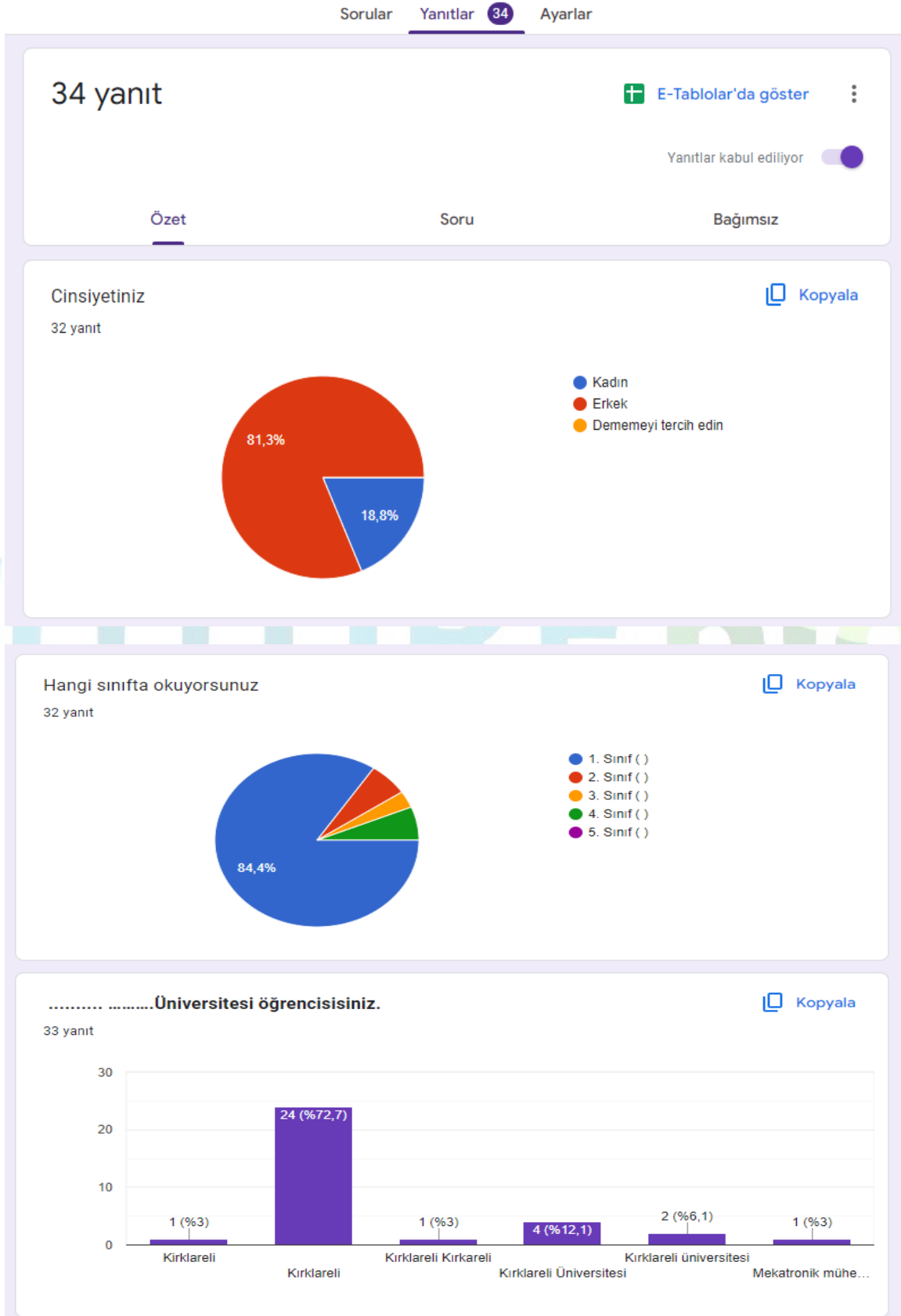
7. Using VR (virtual reality) related with the chapters of this book

	1	2	3	4	5
Improved my understanding about recycling.					
Had a positive impact on my perception on bio plastic.					
Improved my ability to use the chemical devices.					
I feel like I am in the laboratory.					
I had a clear understanding meaning of my visit to laboratory.					



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## Annex 9 The results of the evaluation survey conducted by KLU

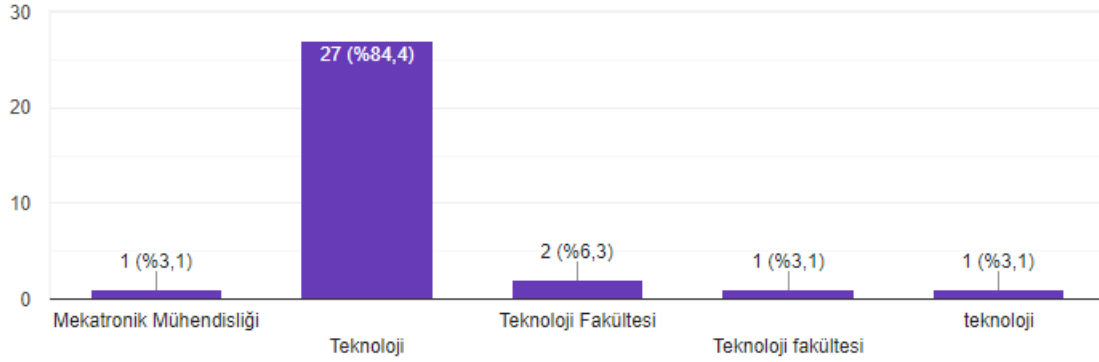


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..... Fakültesi

[Kopyala](#)

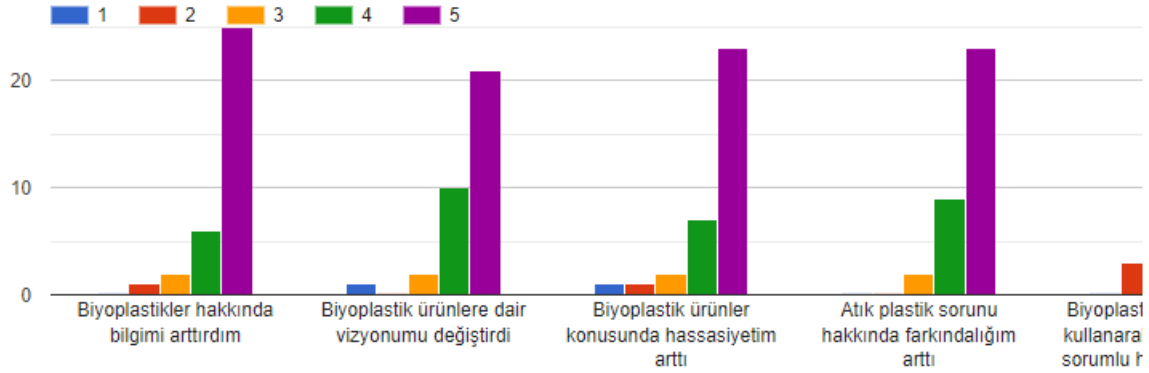
32 yanıt



Aşağıdaki sorulara; 1-Hiç katılmıyorum 3 Ne katılıyorum ne katılmıyorum ve 5-Tamamen katılıyorum şeklinde 1'den 5'e kadar bir ölçekte cevap veriniz.

Bu kitap genel olarak:

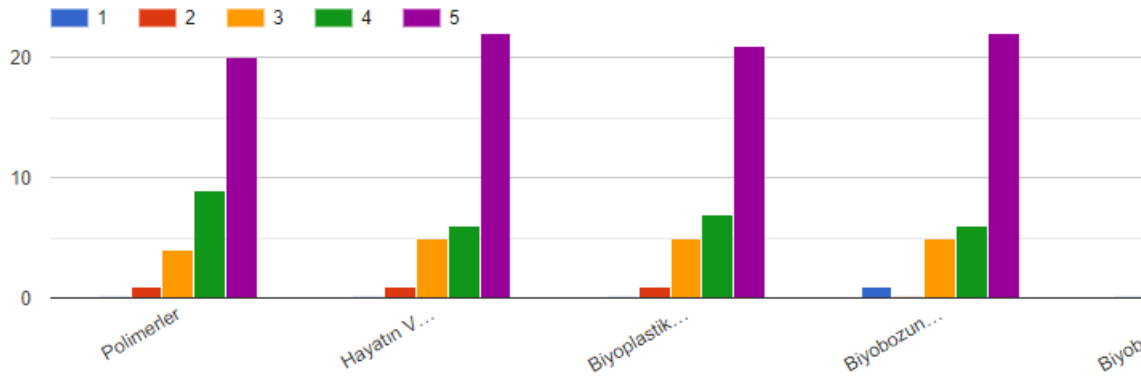
[Kopyala](#)



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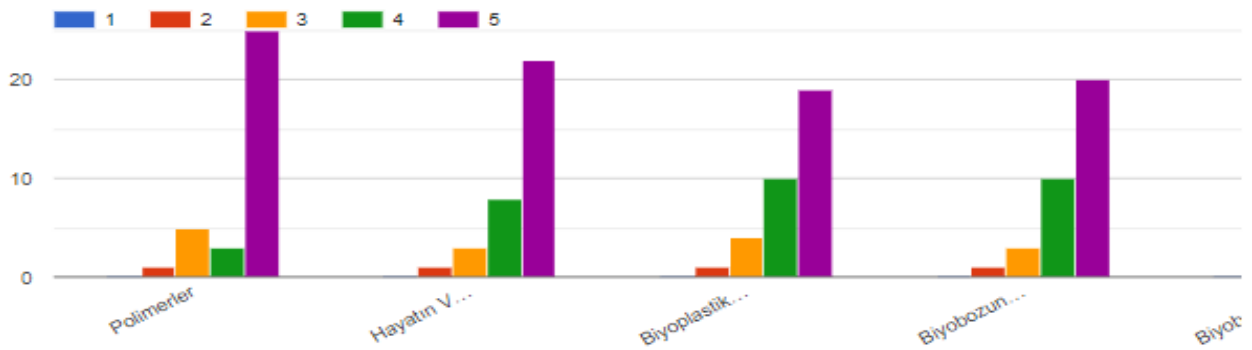
Kitabın sunumu kitap bölümlerine ilişkin algımı olumlu yönde etkiliyor:

[Kopyala](#)



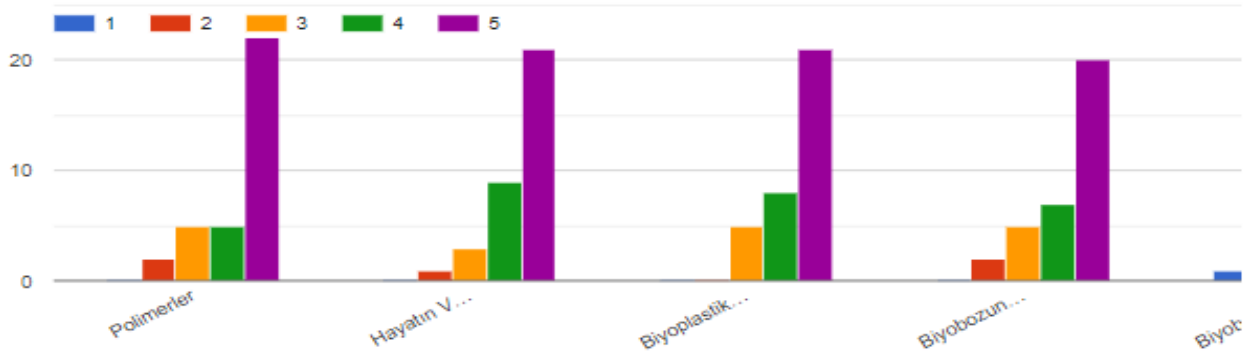
Bu kitabın sunumu plastik hakkındaki anlayışımı geliştiriyor:

[Kopyala](#)



Biyoplastiklerle ilgili kısa videolar kitap bölümlerine ilişkin algımı olumlu yönde etkiliyor:

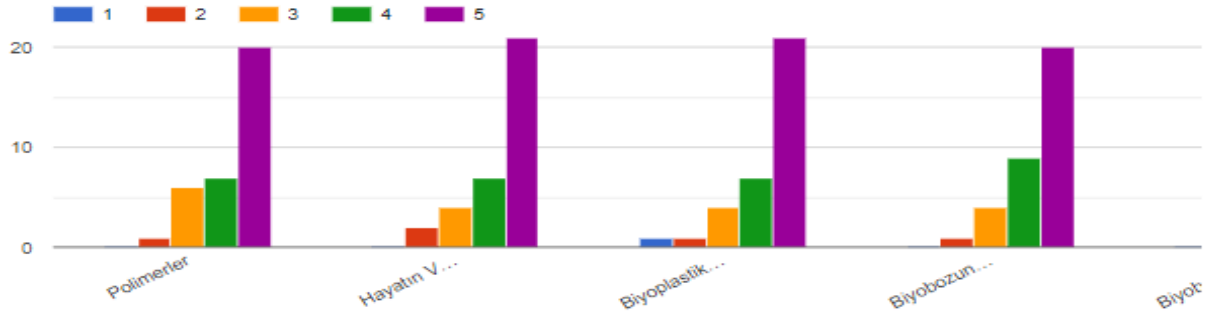
[Kopyala](#)



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**Bölümler kitabının LUMI sunumu plastik probleminin etkisini anlamamı sağlıyor:**

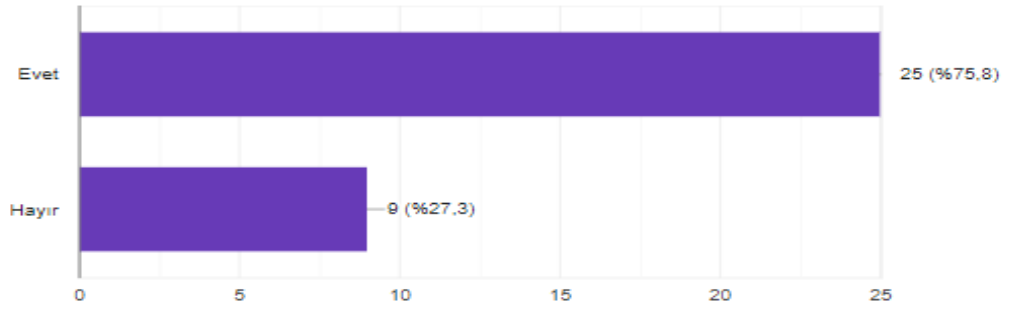
[Kopyala](#)



**Daha önce hiç VR gözlük kullandınız mı?**

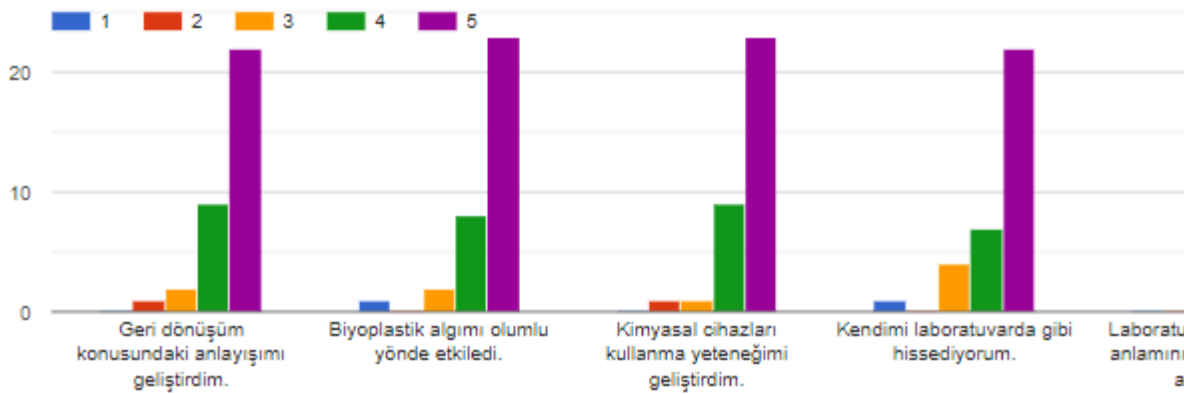
[Kopyala](#)

33 yanıt



**Bu kitabın bölümleriyle ilgili VR (sanal gerçeklik) kullanımı**

[Kopyala](#)



**FutureBio Project Quality Plan V2.0**

## Annex 10 Instructions to create open educational resources (OERs) in the form of course presentation in H5P by SUPSI

Let's use biodegradable plastic for the future (FutureBIO)

# Instructions to create *open educational resources (OERs)* in the form of course presentation in H5P

SUPSI, February 2023

## 1. Introduction

This document is a practical guide to help authors to create educational resources in H5P in the form of course presentation. The resources will be initially produced in English and then translated in other languages. The last part contains some instructions for translation.

## 2. Creation of a course presentation in H5P using the FUTUREbio template

### 2.1 Preliminary phase

- To get familiar with the H5P tool, have a look at existing course presentation examples at <https://h5p.org/presentation> and tutorial at <https://h5p.org/tutorial-course-presentation>

### 2.2. Planning phase

- The presentation you are creating should be related to a specific book chapter; select the appropriate learning outcomes.
- Prepare and organize all your content for an interactive presentation in digital form: write texts (for titles, descriptions, etc.), create/collect images (files, links, copyrights info), create/find videos + interaction points, prepare quizzes (questions, answers, etc.). Create a storyboard, where you design the different slides with their own content.
- These materials will be used to create the H5P course presentation.

1

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### 2.3. Development phase

- Install the Lumi app for your computer, selecting your Operating System (<https://app.lumi.education/#download>)
- Download from ~~SDWA~~ Gdrive the predefined course presentation template: "FUTUREbio-template.h5p" in folder "<https://drive.google.com/drive/folders/1dTj-rqFucKw6p2lWfCSTpHt0iICTx5zY>"
- Open the Lumi app, select the "H5P editor" and select "open existing H5P" to load the template previously downloaded
- Insert a "title" of your new presentation and save it locally on your computer

**NAMING CONVENTION:**

the file name for your new OER presentation should BE:

[Chapter Number] [title]\_EN, e.g., 1.Polimers\_EN

- Save the presentation with this name
- You are now presented with a new editing environment where you can start modifying the template presentation according to your needs for producing your specific OER:
- Extend/modify the uploaded course presentation to a maximum of 20 slides:
  - Slide 1: modify the title slide by inserting the title of the presentation and the date;
  - Slide 2: complete the list of Learning Outcomes of your interactive material following the competence map classification;
  - Slide 3 – Slide n: create different slides containing text, images, videos or interactive videos, links to connected materials, and various types of questions, by "cloning" the template slides. Please use the preformatted slides for each type of content; there is also an empty slide for any other content you may want to insert;
  - keep the last disclaimer slide as it is
- name each slide by changing it in the slide keywords list on the bottom left:

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- video
  - *source*: two options
    - upload a video from your computer or
    - enter a link to [youtube/vimeo](#) video
  - *resolution*: use videos with high resolution quality: 240p is very low, suggested resolution is at least 720p
  - *length*: short (recommended length: 2-5 minutes, max 6)
  - *copyright*: remember that you should upload only free copyright videos
  - *audio track*: a video with an audio track could be an issue for translations: do we have it in all languages? Is the video understandable if we cut the audio? The best solution is to have a video without audio narrations (music is OK, no translation issues), alternatively, you can find a video available in all the partner languages, or you can keep the original video and add subtitles in your language;
- interactive video
  - Its creation consists of 3 steps: Upload video, Add interactions and Summary (ref. <https://h5p.org/tutorial-interactive-video>):
  - 1) Upload video  
(see general suggestions for videos above)
  - 2) Add interactions
    - *interactive points*: insert different interactive points: bookmarks, quizzes, text, images, links, etc.
    - *bookmarks*: they are useful to split the video into sections/chapters identified by subject; insert at least 1 bookmark for each subject change, e.g., 3/5 bookmarks in a 4-minute video;
    - accurately position the timing of the interaction points
  - 3) Summary
    - at the end of an Interactive video, you can add a Summary, intended to make the learner reflect on the learning content presented in the video (ref. <https://h5p.org/tutorial-summary>).

F



#### 2.4. Additional recommendations

- **SAVE** frequently and check how it looks, enter edit again
- Sometimes it is necessary to activate the "Bring to Front/Send to Back" button after re-editing content
- When editing text boxes, use plain unformatted text for copy-paste, or remove the format style with the button.

4

## FutureBio Project Quality Plan V2.0

## 2.2 Final steps

- Export your presentation as “HTML all in one” and open the resulted file in a browser to check that the export process has run successfully.
- Upload (only) the H5P presentation in Gdrive in the folder: OERs >EN

## 3. How to Translate the educational content in other languages

- Download from Gdrive EN each presentation in English
- open it in Lumi
- change the title, by replacing the “EN” string in the title with the code of your language:
  - For example, the “1.Polimers\_EN” would become in
    - 1.Polimers\_TK in Turkish
    - 1.Polimers\_IT in Italian
- translate/adapt the content to your language
- upload the translated presentation in the Gdrive folder related to your language

## Annex 11 The results of the Evaluation of the meetings by IND

Sorular Yanıtlar **12** Ayarlar



### Survey – Evaluation of the 1st Transnational Meeting in Denizli (26-27/05/2022)

PLEASE COMPLETE ONE FORM PER PARTICIPANT

Please rate the aspects of **FutureBio** partnership meeting as follows:

5 = all positive; 4 = mainly positive; 3 = neutral; 2 = mainly negative; 1 = all negative;

What I liked best about the meeting was:

3 yanıt

It was nice meeting all project partners in person, and take decisions together for the sake of the project

The Turkish hospitality and the constructive collaborative climate

Option 1

What I liked least about the meeting was

6 yanıt

The outside weather, otherwise nothing to mention

Nothing

I can not mention any bad points about the meeting

There is nothing bad about the meeting.

Since all the details are considered by the PAU team, I cannot write the slightest negativity about the meeting.

A little more time can be given for presentations.

## FutureBio Project Quality Plan V2.0



## Survey – Evaluation of the 5th Transnational Meeting in Kırklareli (4-6/02/2024)

B I U

PLEASE COMPLETE ONE FORM PER PARTICIPANT

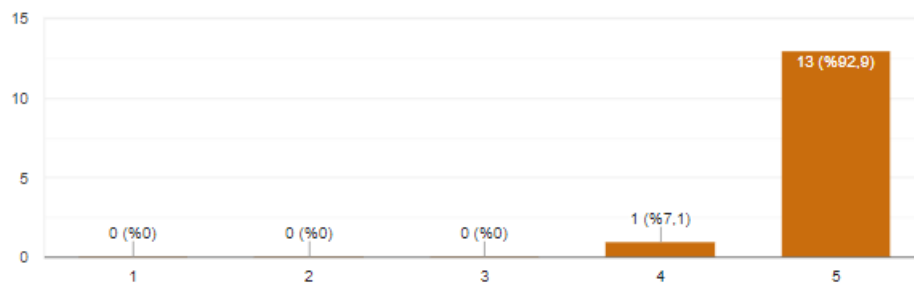
Please rate the aspects of **FutureBio** partnership meeting as follows:

5 = all positive; 4 = mainly positive; 3 = neutral; 2 = mainly negative; 1 = all negative;

e. Expectations for the meeting - My expectations about this meeting were met or exceeded

Kopyala

14 yanıt



f. Management of the difficulties - Difficulties were treated constructively/readily

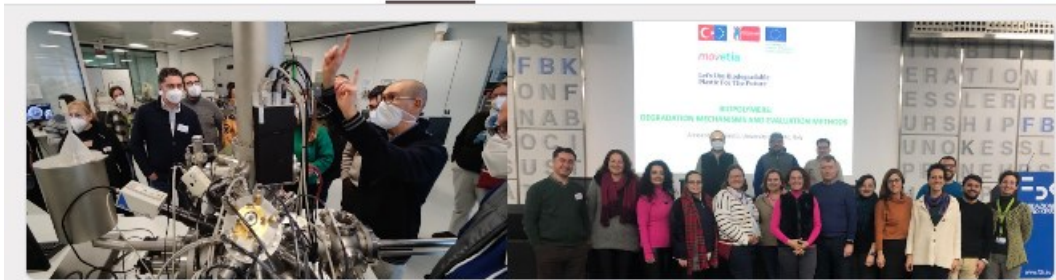
Kopyala

14 yanıt



## FutureBio Project Quality Plan V2.0

### Annex 12 The results of the Evaluation of the C1 by IND



## Survey – Evaluation of the C1 activity in Trento (18-20/01/2023)

B I U ↻ ✕

PLEASE COMPLETE ONE FORM PER PARTICIPANT

Please rate the aspects of FutureBio partnership meeting as follows:

5 = all positive; 4 = mainly positive; 3 = neutral; 2 = mainly negative; 1= all negative;

What I liked best about the course was:

13 yanıt

Cooperation between partneri. Lab's

The labs and new information

educational materials and presentations

The experience of the host institution is the point that I liked. All is presented as theoretical and application.

Guillias Presentations

Competence and teaching skills of the presenters

Presentations were informative and well presented

It was quite a tough training. educators were very knowledgeable, expert in their field and good instructors.

They were instructors with dynamic live and effective presentations

What I liked least about the course was:

13 yanıt

Not necessary

Everything was perfect

the program time is enough

There was not any point that I liked least about the courses.

## FutureBio Project Quality Plan V2.0