

5-PROTEG: pre-cooked foods based on meat protein for senior citizens

Summary

The main objective of the 5-PROTEG project was to develop pre-cooked food dishes that provide the nutritional requirements necessary for the segment of the elderly population in good health (seniors). The project is presented by TALLER DE CUINA BON GUST, S.L. (BONGUST, a company with experience in the precooked dishes sector) and MATADERO FRIGORIFICO DEL CARDONER, S.A. (MAFRICA, a company in the meat sector specialising in the slaughter, cutting and processing of meat products). The two companies designed a working plan involving 5 activities to study and design the best strategy in the preparation of pre-cooked dishes to meet the nutritional needs of senior citizens, in partnership with the Eurecat technology centre and coordinated by INNOVACC.

At the same time, 5-PROTEG investigated the possibility of valorising ingredients (meat off-cuts) to make application of a health declaration on pre-cooked food dishes possible

Objectives

The following technical objectives were established to achieve this general objective:

- Identify and select local ingredients appropriate to the specific requirements of senior citizens that are part of the recipe for the pre-cooked food dish.
- Select and analyse the valorisation of meat off-cuts arising from processing in the handling primarily of pork, but also of beef and lamb, as a source of protein.
- Optimise and adapt the process involved in producing pre-cooked food dishes in order to meet the nutritional requirements of senior citizens.
- Address the needs of people who live alone or with their partner, as well as residential homes with their own kitchen or those with the capacity to include pre-cooked food products in the diet that they provide for their users.

Description of the actions carried out in the project

1. Definition of the nutritional requirements of senior citizens
2. Description of the off-cuts to be valorised
3. Design of pre-cooked food dishes
4. Development of pre-cooked food dishes
5. Analysis of results, reports and dissemination

Final results and practical recommendations

The results of the project led to the development of a range of ready meals (10-12). Of these, three prototypes were studied on a pilot scale, based on the valorisation of meat off-cuts with limited commercial value and in line with senior citizens' nutritional requirements. The three pilot recipes are described below, with photographs (Figures 1,2,3):

- Cabbage cannelloni with lamb and pumpkin sauce (Plate 1) (Figure 1)
- Meatball stuffed with Gorgonzola and walnuts with mashed potatoes and smoked bacon (Plate 2) (Figure 2)
- Stuffed pig's trotters with pepper sauce (Plate 3) (Figure 3)



Figure 1. Cabbage cannelloni with lamb and pumpkin sauce



Figure 2. Meatball stuffed with Gorgonzola and walnuts with mashed potatoes and smoked bacon



Figure 3. Stuffed pig's trotters with pepper sauce

Conclusions

The following conclusions can be drawn from the results of the project:

- The **different meat off-cuts with limited financial impact were valorised** to develop pre-cooked food dishes with added nutritional value for the senior population segment.
- **The nutritional requirements of the senior population segment** to be covered with the different ingredients of pre-cooked food dishes were identified.
- Ranges were developed that enabled the pre-cooked food dishes to be designed in a manner targeted to meet the nutritional requirements of the senior population.
- **Pre-cooked food dishes** combining off-cuts with other local ingredients were designed theoretically and evaluated.
- Three pilot prototypes of pre-cooked food dishes were developed, which were evaluated in terms their nutritional, sensory and food safety properties over their 90-day shelf life.
- The three **prototypes of pre-cooked food dishes were found to retain their properties throughout their 90-day shelf life.**
- The three pre-cooked food dishes enable the inclusion of the **HIGH PROTEIN CONTENT** nutritional declaration, which was the main objective of the project.
- The dish *cabbage cannelloni with lamb and pumpkin sauce* enables the inclusion of the **SOURCE OF FIBRE** declaration, giving the dish nutritional value, and complementing the provision to the segment of the population which it is aimed at.

Leader of the Operational Group

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ORGANISATION: MATADERO FRIGORÍFICO DEL CARDONER

Other members of the Operational Group (not recipients of the grant)

ORGANISATION: EURECAT FOUNDATION

Subject area(s) of application

- ☒ Waste and by-product management
- ☒ Food quality/processing and nutrition
- ☒ Supply chain, marketing and consumption

Geographical area(s) of application**PROVINCE(S):** GIRONA, BARCELONA, TARRAGONA AND LLEIDA**REGION(S):** LA GARROTXA, EL BAGES, EL TARRAGONÈS, EL BAIX CAMP, EL SEGRIÀ**Dissemination of the project: publications, seminars, multimedia, etc. (State links)**

INNOVACC annual magazine 2021, where there is an article on the project. Action planned in the Project Dissemination Plan. See page 18 of the following link:

https://www.innovacc.cat/wp-content/uploads/2021/06/disseny-revista-innovacc-2021_ok.pdf

Project website

<https://www.innovacc.cat/2021/08/10/aliments-de-5a-gamma-amb-base-de-proteina-carnia-per-a-la-gent-gran-5-proteg-3/>

More information on the project

PROJECT DATES	TOTAL BUDGET
Starting date: July 2019	Total budget: €198,233.77
End date: September 2021	DARP funding: €81,014.02
Current status: Executed	EU funding: €61,115.85
	Own funding: €56,103.90

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