



This project is financed by the LIFE Programme 2014-2020 of the European Union for the Environment and Climate Action under the project number LIFE19 ENV/ES/000121.



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**EGG
SHELL
ENCE**

NEWSLETTER N° 2

LIFE EGGSHELLENCE

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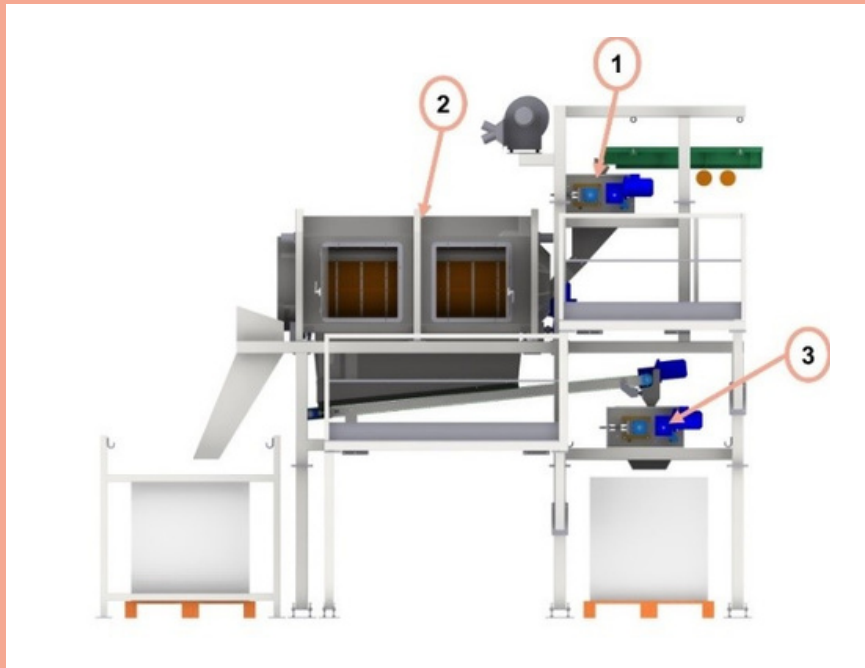
FUNDING AND CONTACT

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DEVELOPMENT OF PROTOTYPE

THANK TO LIFE EGGSHELLENCE PROJECT WE DEVELOPED A MACHINE THAT PERFORMS THE SEPARATION PROCESS BETWEEN THE MEMBRANE AND THE EGG SHELL.



Prototype schematic built for separation of the membrane.

Once the process of separation the eggshell from the membrane was optimized at pilot scale, a prototype for separation the membrane from the shell was built. The prototype consists of the following system:

- 1.Primary grinding with a roller mill (1).
- 2.Screening on a rotatory sieve (2).
- 3.Secondary grinding with a roller mill (3).



Project members with the working prototype.

This prototype is the key to the success of the project since it allows to achieve the separation of the membrane in such a way that the bio-carbonate obtained has a null or practically null organic matter content.

This prototype was built by the machinery manufacturer Maincer and is installed and operating at the ovo-producing company Agotzaina.

DEVELOPMENT OF CERAMIC TILE COMPOSITIONS WITH BIO-CARBONATE FROM EGGSHELL, INDUSTRIAL TEST

THANKS TO LIFE EGGSHELLENCE PROJECT, WE HAVE MANAGED TO DEVELOP COMPOSITIONS ON INDUSTRIAL SCALE, PARTIALLY REPLACING CALCIUM CARBONATE MINERAL BY BIO-CARBONATE.



Tiles of 15x15 cm obtained with the standard composition (left) and with the composition with 5% of bio-carbonate (right).

The development of compositions has been carried out initially at laboratory scale, then at pilot scale and finally at industrial scale. Laboratory and pilot tests have shown that the composition incorporating bio-carbonate have the same properties after firing as those containing only mineral carbonate, the only changes associated with the introduction of bio-carbonate being the need to slightly increase the consumption of deflocculant and the pressing pressure of the tiles.



Industrial Test



One of the tiles obtained with the atomized powder containing 5% bio-carbonate.

Finally, an industrial test was carried out in which approximately 15 tons of atomized powder with 5% tons of the standard composition were manufactured.

With these atomized powders, approximately 1000 m² of 30x90 cm tiles have been manufactured, with no changes in the size of the tiles or defects in the glazed surface.

WE HAVE BEEN IN...



TOP INSIDERS 2022
25/10/2022 MADRID

Francisca Quereda, together the researcher Nuria González, members of the research team of LIFE EGGSHELLENCE project, collected the award as finalists of the Top Insiders 2022 Awards in one of the 10 categories contemplated in these awards, specifically in the Smart Business Intelligence category by Life Eggshellence project funded by

the LIFE 2014-2020 Environment and Climate Action Programme of the European Union (Ref.: LIFE19 ENV/ES/000121).

WE HAVE BEEN IN...



SUSTAINABLE TECHNOLOGY FORUM VALENCIA (STECH23) 06-10/03/2022 VALENCIA

The Sustainable Technology Forum Valencia (STECH23), was celebrated last March 6-10 for the sixth consecutive year, focusing on topics such as clean energy transition, sustainable chemistry and circularity, photovoltaic expansion and sustainable transport among others... Dr. Paqui Quereda attended this congress to give a presentation entitled "Recycling and circularity in the ceramic sector: case studies", making first

a brief introduction on circular economy and industrial symbiosis in the ceramic sector and the second part of the presentation focused on the most relevant advances of the Life Eggshellence project.

WE HAVE BEEN IN...



CEVISAMA 2023 27-03/03/2023 VALENCIA

Two of the partner companies of the Life Eggshellence project, Adelino Duarte da Mota S.A. and Maincer S.L., attended the Cevisama Fair celebrated in Valencia between February 27th and March 3rd with a stand, carrying a poster and project's leaflets. In addition, ITC-AICE and the company EuroAtomizado S.A. attended on Thursday, March 2 to meet with the other partners and discuss the progress of the project.



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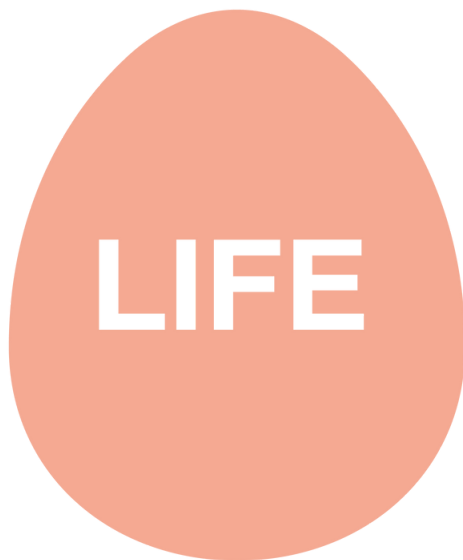
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THANKS TO THE
SUPPORT OF THE FUNDING FROM
THE LIFE PROGRAM

REF: LIFE19 ENV/ES/000121



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