

PREPARATION OF SOLID, LIQUID AND LYOPHYLIZED MATERIALS

Innovations and Benefits - Preparation and/or processing of materials deriving from agro-industrial production is carried out by using several facilities, at bench- and pilot-scales, for crushing, grinding, mixing, vacuum evaporation, drying, freeze-drying, sample division, size separation, bottling, packaging, labeling, etc. The temperature is lower than 40 °C at all stages of the process, to avoid the thermolabile compounds degradation. Highly homogeneous and stable materials can be prepared under controlled conditions of temperature, pressure or covering atmosphere.

Use -

Treatment of solid and liquid matrices deriving from agricultural, agri-food and agro-industrial sectors, including waste, by-products and wastewater (food and vegetable matrices, waste from citrus fruit, olive-growing, wine-making and dairy industries, etc.), in order to stabilize the obtained products and to recover fractions and/or molecules with biological activity.

Applications and ongoing Activities -

RS&T activities in collaboration with SMEs and Research Institutions by Contract and/or Joint Projects drafted in response to regional/national calls and EU measures. Some of the activities are addressed in: preparation of lyophilized materials from bergamot juice or tomato derivatives for the enrichment in substances with pharmacological activity, and the stabilization/preparation of mixtures for food and/or pharmaceutical uses. It is also possible to prepare the materials in the form of tablets. Moreover, technical and economic feasibility assessments of the process are carried out.



1- STRIKE 5000 vacuum evaporation plant



2- VIRTIS Genesis 35 ES freeze dryer at pilot scale, at the CR Trisaia (MT)

Characteristics: CUSTOM

The service can be flexibly adapted to different needs and contexts