



WHO WE ARE

ARD is a R&D company in the field of crop fractionation, biotechnology and bio-based chemistry.

WHAT WE DO

We develop innovative processes to produce, food prototypes and chemicals derived from biomass and food industry by-products.

WHAT WE STAND FOR

We design and scale up processes to produce chemicals and food ingredients from renewable resources and agroindustrial by products.

TECHNOLOGY READINESS LEVELS (TRL)

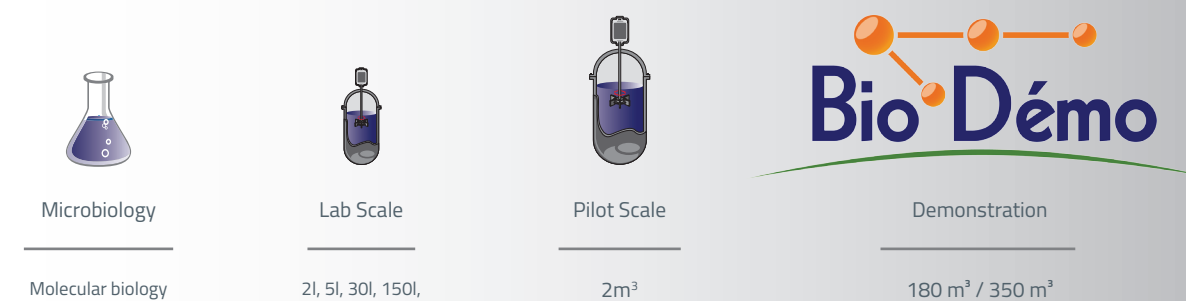
Technology readiness levels (TRLs) are measures used to assess the maturity of evolving technologies (devices, materials, components, software, work processes, etc.) during their development and in some cases during early operations.

TRL 9	Actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)
TRL 8	System complete and qualified
TRL 7	System prototype demonstration in operational environment
TRL 6	Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
TRL 5	Technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
TRL 4	Technology validated in lab
TRL 3	Experimental proof of concept
TRL 2	Technology concept formulated
TRL 1	Basic principles observed

FROM CONCEPT TO REALITY

We rely on our 25 years experience in process design and scaling up and on networking with academic centers including the CEBB located close to the site.

BIODÉMO, AN OPEN PLATFORM FOR PROCESS SCALE UP



BioDémo is ARD's scale up platform designed to :

- Operate under industrial conditions on a 24/7 continuous basis
- Validate processes reliability and consistency
- Determine industrial mass, energy, water balances and Cost Of Goods models
- Conduct market tests with the end product
- Fine tune standard operation procedures (SOP)

BioDémo has been set up to handle genetically modified microorganisms (GMM) or natural strains under industrial conditions.

OUR SERVICES, YOUR BENEFITS

The clients benefit from the know how developed by the team, together with the comprehensive set of equipment at laboratory, pilot and demonstration scale, thus avoiding CAPEX and enabling a reduced time to market and a decrease in industrial risks.

AREAS OF EXPERTISE

- Plant fractionation
- Down Stream Processing
- Industrial Biotechnology
- Green Chemistry
- Environment
- Analytics

EXAMPLE OF PRODUCTS

- Extraction of pentoses out from wheat bran
- Food prototypes
- Rare sugars
- Lignocellulosic ethanol
- Alfalfa proteins
- Biopolymers
- 1st generation ethanol
- Succinic acid
- Chemical intermediates
- Food grade strain production
- Fermented food products
- Polyesters and agromaterials
- Green surfactants
- Specialty chemicals for cosmetics, detergent, civil construction, agroindustry, aeronautic, platurgy

FROM LAB TO DEMO SCALE

- Fermentors from 2L to 180 m³
- Cross flow filtration
- Frontal filtration
- Ion exchange
- Chromatography
- Evaporation
- Crystallization
- Electrodialysis
- Decantation
- Centrifuge separation
- Glass lined reactors from 1m³ to 9m³

SOME OF OUR REFERENCES

