THE CHALLENGE

Cost-competitive integration of renewable raw material into industrial value chains.

ONE PROJEKT
ONE TEAM
ONE GOAL

THE AIM

Increasing competitiveness of renewable-based production processes via increasing raw material and energy efficiency.

THE AIM

Decreasing CAPEX & OPEX via developing cost-effective technologies for fermentative production and downstream processing.

MORE INFORMATION

PRODIAS webpage
http://spire2030.eu/prodias

Framework Horizon 2020
http://ec.europa.eu/programmes/horizon2020

SPIRE PROJECT

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PRODIAS

Processing Diluted Aqueous Systems

SUCCESS FACTOR: CONSORTIUM PHILOSOPHY

Dedicated to innovation
Multi-beneficiary work-packages combining talents, creativity, expertise, and application orientation.

Trust & cooperation
Transparency and open communication to overcome technical, organizational, and cultural hurdles.

One project – one goal
Mindset focused collective success valuing individual contribution.

PUSHING THE LIMITS

PRODIAS partners pushed the limit of concentrating enzymes to above 40% D.S. without measurable activity loss! Thinking "hybrid" the combination of freeze concentration and ultrafiltration led to a cost-effective, novel concentration system.

From lab to pilot
Two-stage freeze concentration plant dedicated for enzyme concentration.

GEA BASF We create chemistry

CHEMISTRY LOVES SEPARATION

The consortium succeeded in decreasing energy needs for certain disk-stack separators by 50% compared to standard.

Mother and son
Scalable test centrifuge "Explorer" and a commercial-size equivalent.

ALFA LAVAL BASF We create chemistry

PROCESS UNDERSTANDING IS KEY

PRODIAS teamwork enabled a 25% performance increase in a commercial fermentation process thus saving resources and energy in DSP.

Successful transfer
Intensified process implemented in commercial production.

Cargill

THINK OUT OF THE BOX

Re-thinking EBA-SMB: **PRODIAS developed an efficient apparatus & software combination allowing for efficient adsorption / desorption process. Result: high purification efficiency from particles containing feed stream.**

Bench-top scale-up
Novel EBA-SMB System enables for bench-top scale-up.

XENDO BASF We create chemistry

PRODIAS: A SUCCESS STORY

Starting in 2015, **PRODIAS so far developed 4 demonstrator units (TRL > 7) and 6 implemented research standards (TRL > 4).**

Academic partners working on ground-breaking methods to predict physicochemical behavior of unknown mixtures.

Numerous ideas were born based on PRODIAS findings – exciting work for 2018 and beyond.

Go cross-sectorial – go success!