

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>

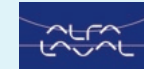


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Project Coordinator
Michael Helmut Kopf
BASF SE
Carl-Bosch-Str. 38
67056 Ludwigshafen
Germany

Dissemination & Exploitation Manager
Hans Hasse
Technische Universität Kaiserslautern
Erwin-Schrödinger-Str. 44
67663 Kaiserslautern
Germany



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

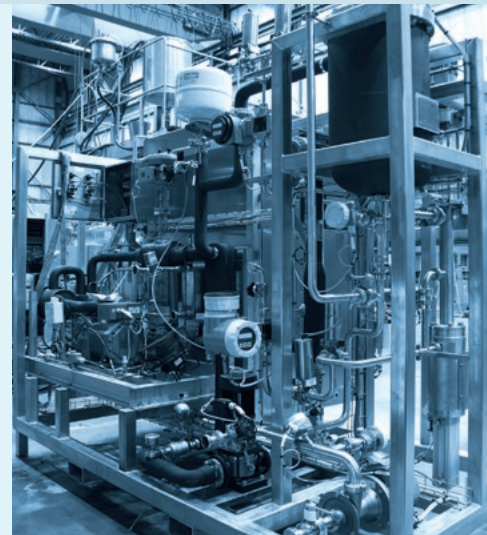
Mindset focused collective success valuing individual contribution.

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.



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.



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.



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.



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!