

Promethea Biochem Solutions (PBCS) is a CRO dedicated to delivering **innovative tailored solutions in formulation chemistry** to support industrial progress and solve their pressing needs.

Since our founding in 2017, we have specialized in tackling the unique challenges and complexities of the **agrifood industry**, with a particular on **botanical extracts**.

Our mission is to assist our customers with **chemical solutions** that are **environmentally sustainable, industrially scalable, and deliver high efficacy performance**.

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in Promethea
biochem solutions
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Our solutions



Integrated into a collaborative and synergistic group of companies and surrounded by an esteemed academic environment, as a forward-thinking **Contract Research Organization (CRO)**, we specialize in fine actives extraction techniques, green chemistry and advanced formulations science. Our facilities boast **state-of-the-art equipment** and utilize **AI-powered software** to accelerate research and development processes.

By managing projects **from conceptual experiments to large-scale manufacturing**, we partner with companies to overcome their most pressing challenges, delivering **sustainable innovative solutions** tailored to their needs. This unique integration empowers us to maintain **superior quality** at every stage and provide exceptional solutions and support to our clients, ensuring they differentiate in competitive marketplaces.

Our group

Promethea is a dynamic group of specialized scientific companies united by a shared goal: to **advance the agrifood industry promoting sustainable innovation, ensuring quality and enhancing safety**.

Driven by a commitment to excellence, teams of experienced scientists, researchers and consultants operate in state-of-the-art laboratories and facilities equipped with the latest technologies to deliver **comprehensive and innovative R&D platforms, trusted laboratory analytics and expert consultancy**.



Efficacy studies
from lab R&D to GEP field trials



DES
Deep Eutectic Solvents development platform



Multi-omics studies
genomic, proteomic, transcriptomic



CompareGenome
pipelines for biological data analysis



Formulations
micro-encapsulated solid and liquid forms



Actives extraction
with innovative techniques



Laboratory testing
environmental, food, feed and Ag testing



Biocepest is the **CRO** focused on studying the **biological activity** of active ingredients and formulations.



Promethea Biochem Solutions is the **CRO** dedicated to delivering innovative tailored solutions in **formulation chemistry**.



Biosafe laboratories is dedicated to **laboratory testing** for **safety** and **quality** in the agrifood industry.

Discover more:

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des
Deep Eutectic Solvents

“

Inspired by nature, DES are the next-gen organic chemicals designed to upgrade processes and products to the most efficient, sustainable and safest level achieved.

”

What are DES?

DES (Deep Eutectic Solvents) are a new class of solvents, mixtures of specific solid compounds often natural, non-toxic and eco-friendly, that are an **enhanced solutions in the chemical innovation pathway to sustainability**.

Due to the **natural and chemical characteristics**, DES add value in many industrial processes like active compounds extraction, solubilization and stabilization.

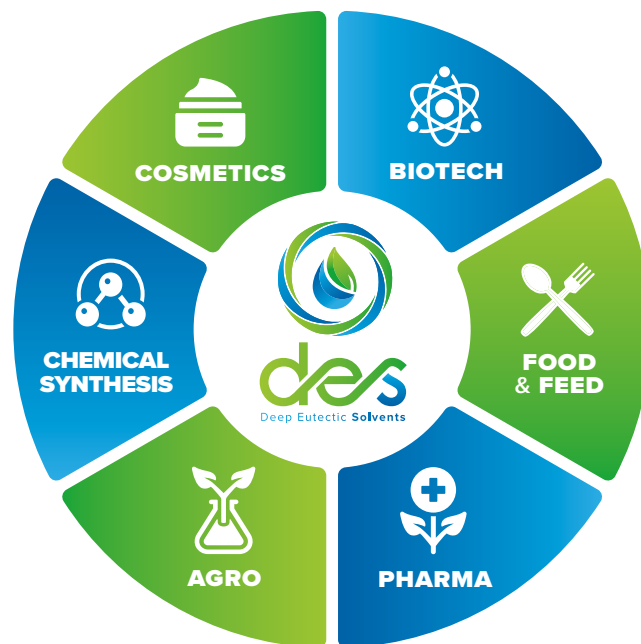


It's time to rethink industrial formulations, starting with what makes them truly green.

*Sustainability is no longer just a word, it's a concrete need in the chemical industry. In this context, **Deep Eutectic Solvents** are a true game-changer.*

Application of DES

DES can be applied to **sustainable challenges** in various sectors such as:



BENEFITS OF USING DES

- ✓ Tunable properties to desired effect
- ✓ Efficacy booster
- ✓ High biodegradability
- ✓ Low environmental impact
- ✓ Stability in water
- ✓ Low components toxicity
- ✓ Low energy production processes
- ✓ Biocompatibility
- ✓ Low inflammability risk

INNOVATING WITH
**DES MEANS
NO COMPROMISE
BETWEEN
PERFORMANCE and
SUSTAINABILITY.**



Love at first sight

Investing in the research and adoption of Deep Eutectic Solvents means building **the sustainable industry of tomorrow**: in Promethea Biochem Solutions we have studied and designed a comprehensive **technology platform** that allows us to **optimize DES production and applications**, studying, testing and producing multiple combinations of Deep Eutectic Solvents from lab concept to industrial scale-up.

We have large experience on DES and:

- ✓ **POLYPHENOLS**
- ✓ **FLAVONOIDS**
- ✓ **TERPENES**
- ✓ **CAROTENOIDS**

Our expertise has been developed through years of internal R&D, applied in our products and in tailor-made customer projects, due to the specific nature of each DES system.

Promethea Biochem Solutions masters DES for **green solutions** in products:



EXTRACTION

Efficient recovery of target compounds using customized DES systems at low temperatures.

e.g. Increase and selectivity on secondary metabolites, change in antioxidant kinetics



SOLUBILIZATION

Enhancing solubility of poorly soluble molecules and improving their efficacy.

e.g. solubilization of Q10 Coenzyme, lutein, astaxanthin and correlated molecules



STABILIZATION

Protecting active substances against degradation for improved shelf life and performance.

e.g. preserve the colour of natural dye, increase the stability of curcumin



**CONTACT
US!**

WE CAN STUDY YOUR
PROCESS and **PROPOSE**
HOW THE **DES** CAN IMPROVE
THE PERFORMANCE IN
TERMS OF **COST, SAFETY,**
AND **ECO COMPATIBILITY**