



FOR OVER 70 YEARS WE ADD VALUE TO NATURAL RESOURCES



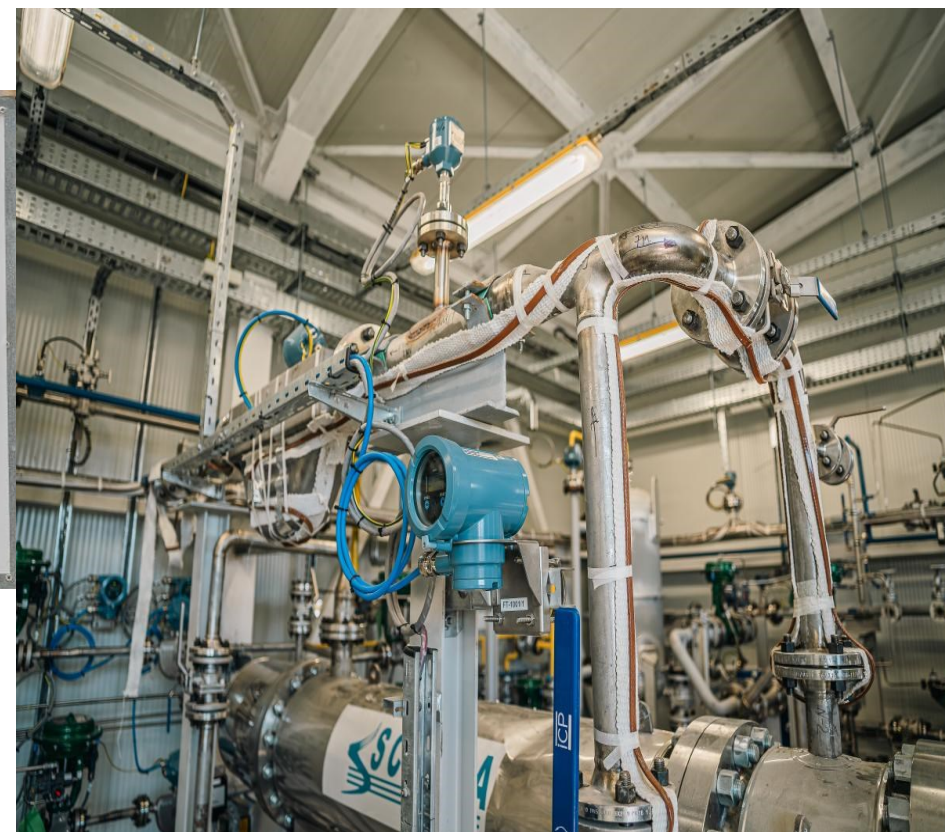
**The success of the micro-installation:
innovation, sustainability, and
strategic partnerships.**



Iceland 
Liechtenstein 
Norway grants 
Norway grants



The Green Polyols Micro-Plant, a project in collaboration with Innovation Norway, plays a crucial role in the development and optimization of bio and eco-friendly polyols, enabling the production of samples and the testing of various synthesis technologies at an intermediate scale—between the Laboratory and the Industrial Plant.



The micro-plant is fully operational and enables the production of various polyols, including:

- **Vegetable oil-based polyols** – an alternative to traditional polyols, aimed at reducing the carbon footprint and providing eco-friendly solutions.
- **DMC-catalyzed polyols**, with or without ethylene oxide, for high-performance applications.
- **KOH-catalyzed polyols**, with or without ethylene oxide, filtered through a filter press to ensure product clarity and quality.
- **Polyols for rigid foams**, including sucrose-based, sorbitol-based, amine-based, and Mannich-type polyols, essential for industrial applications.
- **High molecular weight diols (12,000 Da and 18,000 Da)**, designed for formulations requiring specific flexibility and durability.
- With a maximum capacity of **400 L of product per batch**, the micro-plant provides an optimal framework for process validation before scaling up to industrial production.



Recent Technological Validations and Development Directions

For the upcoming period, new sample requests are in progress, confirming market interest in our developments:

- **Petol 56-2B** – currently under testing
- **Petol 370-3** – currently under testing

Additionally, new types of polyethers have been synthesized in the micro-pilot plant:

- **Petol 9-2** ($M = 12,000$ Da)
- **Petol V60-3S**
- **Petol 48-3S**
- These syntheses enable rapid testing of new products, the approval of customized formulations for clients, and the acceleration of the development process.





ACHIEVEMENTS

The development of the vegetable oil-based polyol **Petol V50-3S** has not only enabled the technological success of these polyols but has also transformed the company into a strategic player in **IKEA's supply chain** through partnerships with clients in **Poland, Bulgaria, Lithuania, Serbia, and Romania**.

- By using **vegetable-based polyols**, our clients benefit from **more sustainable and environmentally friendly solutions**, meeting the growing market demand for eco-friendly products. These collaborations not only support **IKEA's sustainability goals** but also strengthen our position as a **trusted supplier of green polyols**, contributing to increased demand and production volumes.

EVOLUTIE VANZARI, to	
Years	PETOL V50-3S
2023	37.390
2024	590.360
2025	590.300
Grand Total	1293.170



ACHIEVEMENTS

The development of **polyol 45-3S** (using **DMC catalysis**, which reduced energy consumption and minimized environmental impact by eliminating the filtration phase) has led to a new **strategic contract with EMFI France**.

- EMFI is a key player in the **adhesives and sealants industry**, known for its use of **high-performance and sustainable raw materials**. This contract confirms the **versatility and quality of polyol 45-3S**.

Sale Evolution	
Years	PETOL 45-3S
2024	0
Jan 2025	108
Grand Total	108



Bio and eco-friendly polyols

- **Reduce environmental impact** – lower CO₂ emissions and decreased dependence on oil.
- **Improved energy efficiency** – optimized processes, reduced energy consumption.
- **Use of renewable resources** – vegetable oils, captured CO₂, chemical recycling.
- **Compliance with future regulations** – EU Green Deal, circular economy.
- **Attracting eco-conscious customers and partners.**



Foam machine

- The micro-installation is equipped with a foaming machine, an essential piece of equipment for testing and adapting polyurethane formulations.
- This additional feature provides a major competitive advantage, as it allows not only the production and testing of polyols but also the verification of their performance in real applications for polyol customers, facilitating the product approval process for clients.



The strategic impact of the micro-installation on business development.

Attracting New Clients – We offer dedicated technical support for each partner to optimize the integration of the polyethers developed in the micro-installation.

Reducing Product Approval Time – Clients can test by having samples provided and can approve our polyols much faster.

Customized Formulas for Clients from Various Industries, including segments such as furniture and comfort (foam for mattresses and pillows), automotive (foam and polyurethane components with a reduced footprint), construction (insulations and adhesives).

Continuous Expansion of the Portfolio with Innovative Products, responding promptly to market trends for the supply of green polyols (based on vegetable oils, CO₂-based polyols).

Increasing the Added Value of Our Services – We don't just offer raw materials; we provide complete solutions for the polyurethane industry.

- **Strengthening Market Position** – We are transforming into a testing and innovation center for polyols and polyurethane formulations.

