



**LET'S GROW  
TOGETHER**





## ABOUT US

Valsynthese is a private Contract Development and Manufacturing Organization (CDMO) based in Brig, Switzerland, with an international reach.

Valsynthese is part of the SSE Group (Société Suisse des Explosifs), which was founded more than 125 years ago to meet the challenges of building the Simplon railway tunnel connecting Switzerland and Italy. We are one of the leading experts in hazardous and high-energy chemicals, thanks to more than a century of knowledge in the field.

Since 1983, when Valsynthese was founded, it has built on this bases to develop fine chemicals projects and, over the years, has consolidated its capabilities in the production of chemical intermediates and APIs under cGMP and ISO certification.

Today, Valsynthese is considered one of the most experienced chemical manufacturers in the field of hazardous chemistry for the pharmaceutical and fine chemicals industry.



Valsynthese SA

Fabrikstrasse 48 / PO Box 636 / CH-3900 Brig



## OUR PHILOSOPHY AND VALUES

From lab procedure to ton scale manufacturing, the project management approach is always success beyond technology.

Valsynthese's mission is to bring Swiss high-quality services to our worldwide network.

Our modus operandi involves our customers throughout the process, from development to scale-up, in constant cooperation. Beginning with tailor made and accurate propositions for specific projects, Valsynthese applies a custom-fit project management approach.

Valsynthese continues to focus its strategy to be the partner of choice for high complex intermediates which require a special knowledge in the field of hazardous chemistry.

We are convinced that innovation and strategic decisions have to go toward an environmentally and economically sustainable future to be really effective.

To reach this goal at Valsynthese we are committed to Environment, Health, and Safety (EHS) to protect people, our communities, the environment and the company.

## ALWAYS PUTTING PEOPLE IN THE CENTER

Our unique culture and values are based on:



Entrepreneurial culture



Value-added services



Quick decision process



Passion



Innovation



Teamwork



Safety





## OUR CORE EXPERTISE

Valsynthese has extensive expertise and capabilities in the field of high-risk chemical reactions & energetic processes and where safe handling of hazardous reagents and substances is required.

- Acylation
- Amination
- Azidation
- Bromination
- Carboxylation
- Chlorosulfonation
- Chlorination
- Dehalogenation
- Diazotisation
- Diels-Alder
- Etherification
- Friedel-Crafts
- Grignard
- Heterocyclic Synthesis
- Hydrogenation
- Nitration
- Oxidation
- Phosgenation
- Reduction
- Sulfonation

## OUR CATALOGUE



Nitrite Derivatives



Nitro Derivatives



Carboxylic Acid Derivatives



Anhydride Derivatives



Aminoacid Derivatives



Others

SCAN ME!



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on our website.

# OUR FACILITIES

## PRODUCTION

### Multipurpose Plants

- 40 m<sup>3</sup> total reactor-capacity. 11 stainless steel units (450 - 4500 L), 6 glass lined units (2000 – 4900 L), 1 glass lined pressure reactor up to 25 bars suitable also for hydrogenations.
- Several scrubbers to retain corrosive gases.
- 2 Distillation columns (up to 5 m<sup>3</sup>/h), 1 wiped film distillation (up to 700 L/h), 2 extraction columns.
- 4 centrifuges (200 - 400 kg), 1 suction filter dryer (1 m<sup>2</sup>), 1 vacuum paddle dryer (6000 L), 1 vacuum tray dryer (20 m<sup>2</sup>, corrosion resistant). 2 clean rooms (ISO 8) for API and API intermediates isolation and packaging.
- Fully qualified to run under cGMP

### Kilo-Lab

- Special ability to perform hydrogenation-reactions up to 25 bars in a chemical-resistance Hastelloy equipment of 30 L
- Scale-up to production level in progress
- Fully qualified to run under cGMP

### Pilot

- 120 L glass reactor with distillation column, 120 L and 450 L stainless steel, 270 L glass lined pressure reactor up to 6 bars also suitable for hydrogenations
- Scrubber to retain corrosive gases.
- Suction filter 60 L, pressure filter 100 L. Corrosion resistant vacuum tray dryer.
- Clean room (ISO 8) for API and API intermediates isolation and packaging.
- Fully qualified to run under cGMP

### Phosgenation

- Modern phosgene generator, 4500 L glass lined reactor in special isolated and dedicated containment featuring state of the art safety standards.
- 10–40 kg phosgene/h
- Fully qualified to run under cGMP

### Continuous Grignard Reagents Module

- Mg<sup>Flow</sup>® is a novel continuous flow process designed by Chemium ([www.chemium.com](http://www.chemium.com)) especially for the safe manufacturing of Grignard reagents.
- Thanks to exceptional temperature control and innovative mixing the reaction time is substantially reduced to minutes generating a constant flow of product also possible at your production facility. The limited reactive volume - not exceeding litres - eliminates process safety concerns inherent to Grignard batch production. The skid-based process is providing an ideal solution to complex logistics and a complete control over the supply-chain.
- Valsynthese SA operates the Mg<sup>Flow</sup>® for Chemium on its manufacturing site.
- For Grignard reagents please contact [www.chemium.com](http://www.chemium.com).
- Grignard reactions and downstream processing can be carried out in Valsynthese's facilities.



## DEVELOPMENT

### Development – State of the art equipment

Valsynthese's laboratories offer a diverse and complete set of state-of-the-art equipment. We believe that process development can only be successful if it is done as close as possible to the eventual large-scale production. Double jacket glass reactors, hot/ cold regulated thermostats and overhead mechanical stirring are thus standard.

### Safety – 40 Years of experience

Safety is a major concern when dealing with hazardous chemistry. Valsynthese's development team, consisting of experienced PhD Chemists and highly trained laboratory technicians, looks back to 40 years of experience handling thermal, toxic and corrosive hazards. It is important to note that Valsynthese measures most safety relevant data in-house: impact & friction sensitivity, DSC, RC1, AKTS modeling.

### Phosgene Laboratory – Large Scale Concept

In order to perform phosgenation, special precautions need to be implemented. Valsynthese offers therefore a dedicated phosgene laboratory having following features: completely insulated, dedicated containment featuring under-pressure, two independent scrubbers, four independent phosgene sensors and a state-of-the-art double jacket glass reactor with overhead stirring.

## QUALITY CONTROL

A reliable and competent quality control is as important as a robust manufacturing process. Valsynthese offers a one-stop CDMO experience to customers with highest standards. This includes analytical proficiency from the start to the end: method development, process development support, method validation, IPC measurement, release measurement with certificate. Methods like HPLC-UV/MS, GC-FID/MS, ion chromatography, IR, UV-Vis and all common wet-chemical techniques are commonly performed. In case that other analyses are requested, Valsynthese partners with certified analytical laboratories. For API manufacturing under cGMP, Valsynthese offers a fully qualified quality control facility with highly trained analytical experts and technicians. To complete the service, stability studies and stress tests are implemented in-house (according to ICH).

## OUR CERTIFICATIONS



We are registered  
by Agroscope.



Société Suisse des Explosifs Group

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