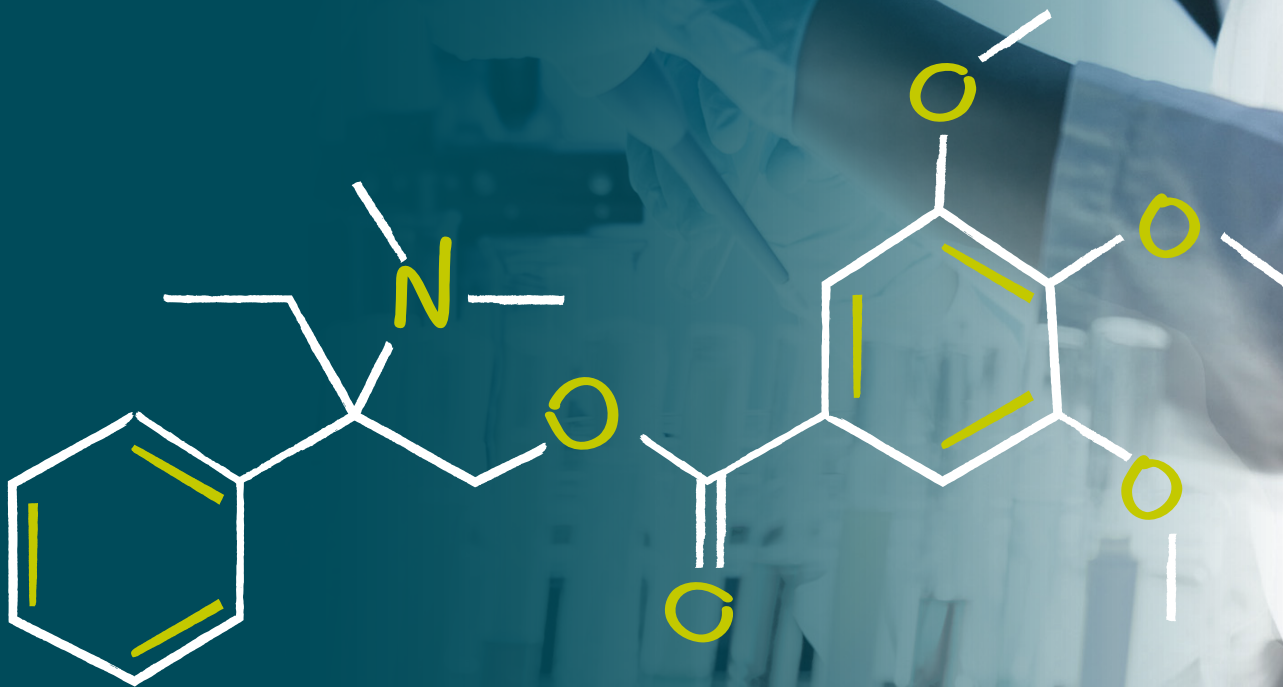


WHERE YOUR MOLECULES TAKE FORM



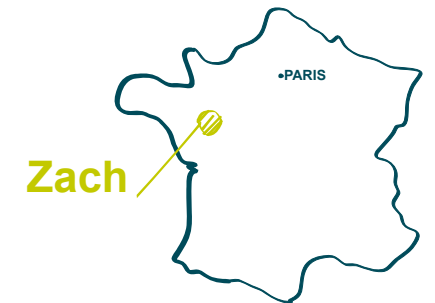
VISION

We put our **passion** and **talents** into products and services to deliver **innovative** and **sustainable solutions** for human health.

We are committed to offering **Active Pharmaceutical Ingredients** (API) and **advanced intermediates** for the pharmaceutical industry

100^{m³}
REACTOR CAPACITY

EXPERIENCED
PROJECT
MANAGEMENT
TEAM



ZACH IN FEW WORDS

✓ A STRONG
TRACK RECORD

✓ A GMP KILOLAB PLANT

✓ A GMP PILOT PLANT

✓ A BROAD RANGE
OF TECHNOLOGIES
IN A FLEXIBLE
MANUFACTURING
FACILITY

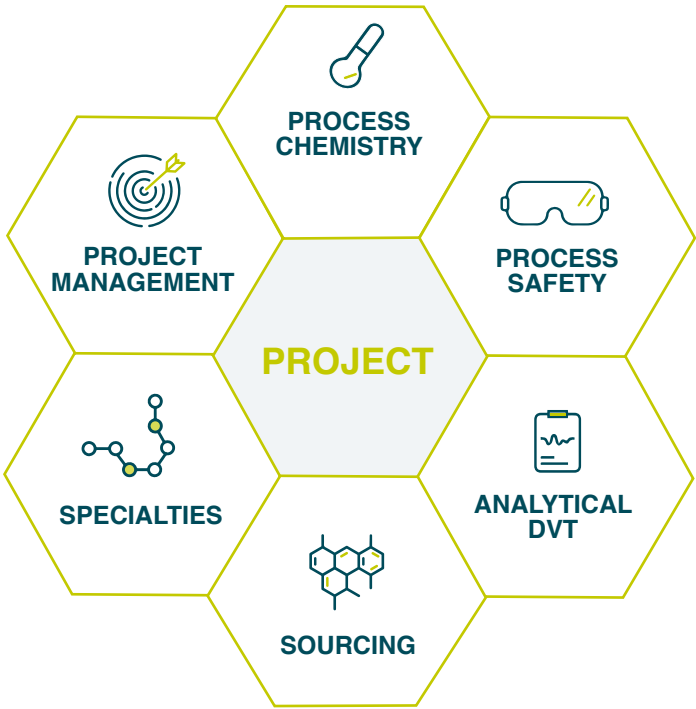
✓ SPRAY-DRYING OF APIs
& LOW ENDOTOXIN
EXCIPIENTS

✓ ISO 14001
CERTIFICATION
SINCE 2002

REGULATORY & GLOBAL COMPLIANCE



R&D MISSION & FACTS



We provide to our customers the **highest level of science** through an **innovative R&D approach**

- ✓ **30-35**
process steps/year
- ✓ **300-350**
analytical methods/year
- ✓ **50**
safety risk assessments/year

R&D FACILITIES

PROCESS CHEMISTRY LABS (0.1 – 10 lt glass reactors, including O ₃ , H ₂ and flow chemistry; 24 standard and walk-in fume-hoods)	KILO-LAB (15 lt and 30 lt glass reactor skids, 0.07 m ² agitated filter; -80°- 150°C)	HPAPI LAB (OEB5, OEL > 0.1 µg/m ³ ; 4 standard and walk-in fume-hoods, including spray-drying)	PROCESS SAFETY LAB (DSC, TGA, RC1, ARC; 5 fume-hoods)	ANALYTICAL LABS (HPLC, UPLC, GC, HPLC-MS, HRMS-TOF, GC-MS, HS-GC-MS, 400MHz NMR; 5 fume-hoods)
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SPRAY DRYER

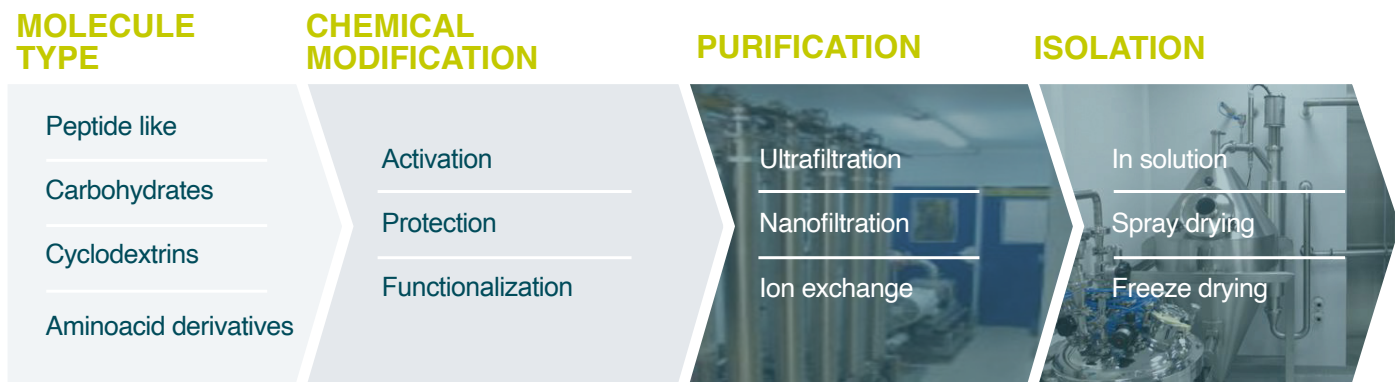
A sustainable technology for an **efficient drying**

PSD1 for SOLVENT SOLUTIONS <ul style="list-style-type: none">- Drying gas (N₂) rate: 100 kg/h- Inlet temperature ≤ 250 °C- Spray: bi-fluid nozzle- ATEX design	PSD2 for AQUEOUS SOLUTIONS <ul style="list-style-type: none">- Drying gas (air) rate: 360 kg/h- Inlet temperature ≤ 250 °C- Spray: High Pressure nozzle / bi fluid nozzle- Sanitary design (+ steam decontamination)
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DOUBLING OF OUR CAPACITY
READY IN 2026



PURIFICATION OF MACROMOLECULES



From pilot to tens of tons/year

Bacterial control

✓ Equipment sanitization

✓ Purified water

✓ Low endotoxin content

OUR PILOT PLANT

11

REACTORS WITH A TOTAL CAPACITY OF 5100 L

5

GLASS LINED REACTORS (100 TO 600 L)

6

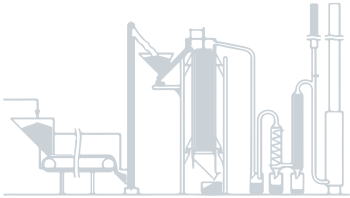
STAINLESS STEEL REACTORS (50 TO 1000 L)

3

FILTER DRYERS (0.2 TO 0.7 m²), 2 IN CLEAN ROOMS

2

HYDROGENATION REACTORS (400 L & 1000 L, 5 bar)



✓

CRYOGENIC UNIT STAINLESS STEEL (70 L)

✓

TEMPERATURE RANGE (FROM -80°C TO +150°C)

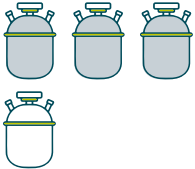
✓

WIPED FILM EVAPORATOR

OUR REACTORS

4

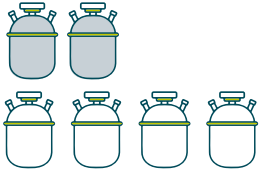
1000 to 2000 L



*1 cryogenic (-90°C)


6

2000 to 3000 L



7


3000 to 4000 L



*3 autoclaves (up to 10 bar)


1

4000 to 6000 L




4


6000 to 8000 L




2

8000 to 10000 L



 STAINLESS STEEL

 GLASS LINED

CORE CHEMISTRY

			BATCH SIZE
REDUCTION	Catalytic H ₂	Pd/C, Pt/C, PtO ₂ , Ir/C	100s kg
	Asymmetric H ₂	RhL*, RuL*	10s kg
	C=C, C=O	LAH (powdr, sln), DIBAL (sln), LiAlH(OtBu) ₃ , BH ₃ , CBS rdxn	10s – 100s kg
	C–O cleavage	TES, TIBAL (pure, sln)	100s kg – MTs
OXIDATION	H ₂ O ₂	H ₂ O ₂ / H ₂ WO ₄ Alk ₂ S oxdn	100s kg
	Periodate, permanganate	NaIO ₄ , 75°C; KMnO ₄ , 25°C	10s kg
	Asymmetric	Sharpless	100s kg
	Ozonolysis	SS 50 / 1500 l, cryo	100s kg
METALATION, ALKYLATION, C–C FORMATION	Lithiations	AlkLi, LDA, LiHMDS, Li / NH _{3(l)}	10s – 100s kg
	DMS, DES alkylation	room / high T	MTs
	Eschweiler-Clarke	HCHO / HCOOH	MTs
	Cyanation	KCN, NaCN	100s kg
	Grignard	Mg or AlkMgX/ether; VinylMgCl, -80°C	100s kg
	Pd-cat coupling	Heck, Suzuki	10s – 100s kg
	High T/P aminolysis	Aq. NH ₃ , 160°C / 8 bar	100s kg
MISCELLANEOUS	Mitsunobu	Ph ₃ P, DIAD	10s kg



WE **CREATE VALUE** TRANSFORMING **RESOURCES** INTO **FINAL PRODUCT**



Find out more

FOR INFORMATION

NICOLAS GIRARD

Commercial Director
Mobile +33 6 76 06 52 10
nicolas.girard@zambongroup.com

PASCAL THOMAS

Business Development Manager
Mobile +33 6 62 07 67 61
pascal.thomas@zambongroup.com

Zach System SA

Z.I. la Croix-Cadeau
C.S. 10079 - 49242 Avrillé - France
Tel: +33 (0) 2 41 96 61 61
www.zachsystem.com