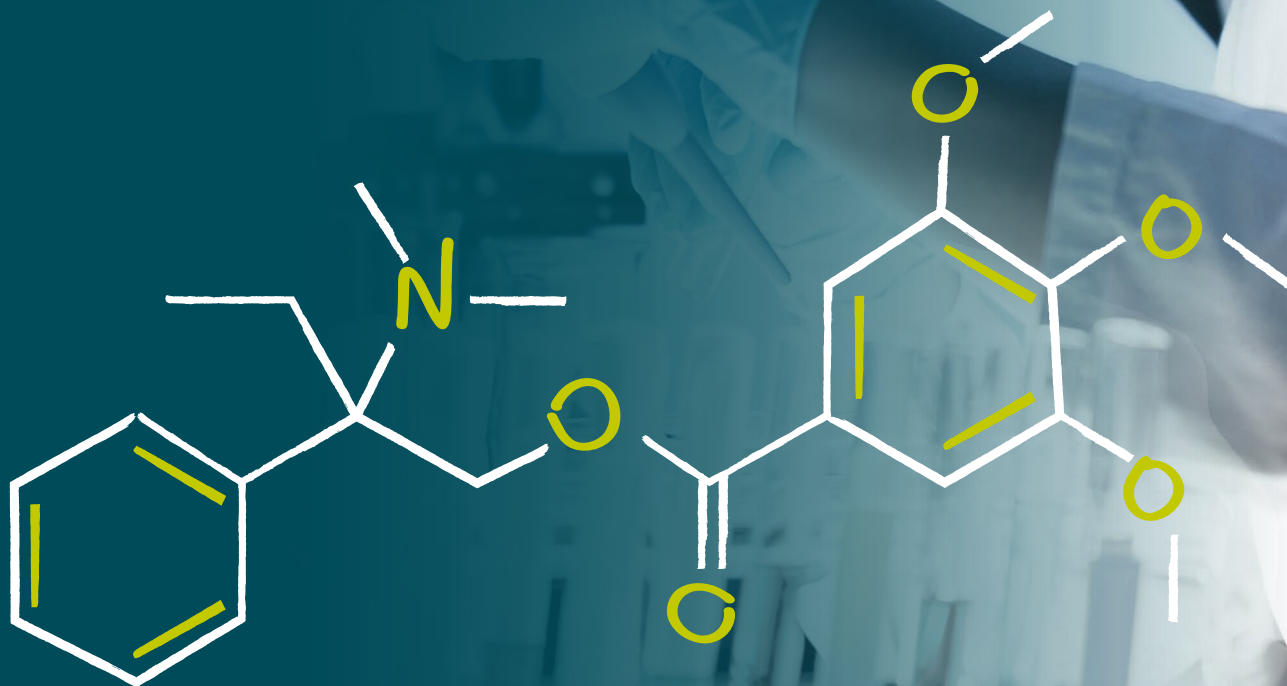


WHERE
YOUR MOLECULES
TAKE FORM



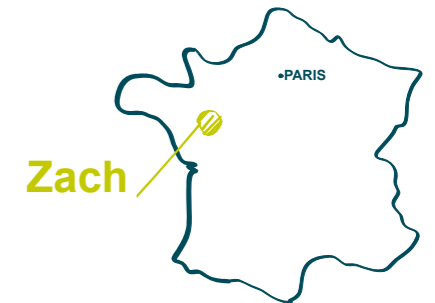
VISION

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

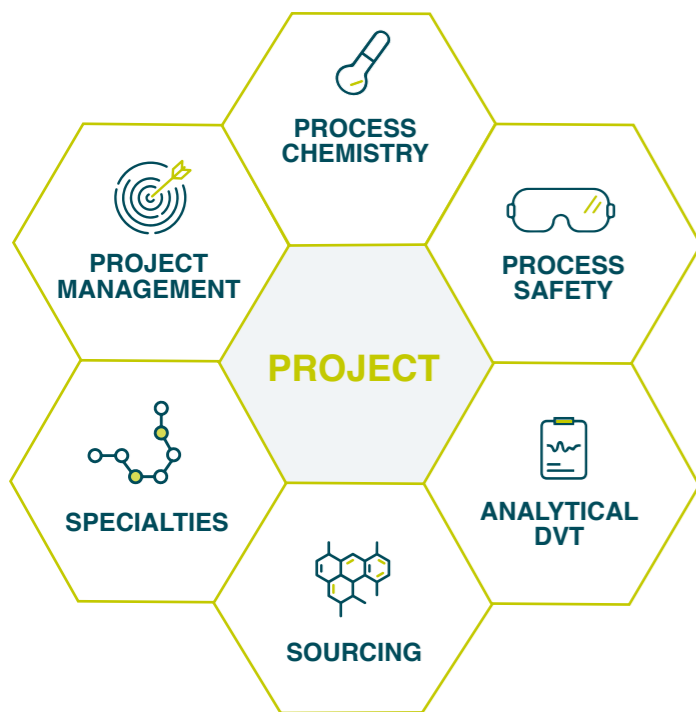
REGULATORY & GLOBAL COMPLIANCE



ansm



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 O₃, H₂ and flow chemistry; 24 standard and walk-in fume-hoods)

KILO-LAB

(15 lt and 30 lt glass reactor skids, 0.07 m² agitated filter; -80°- 150°C)

HPAPI LAB

(OEB5, OEL > 0.1 µg/m³; 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)

SPRAY DRYER

A sustainable technology for an **efficient drying**

PSD1

for **SOLVENT SOLUTIONS**

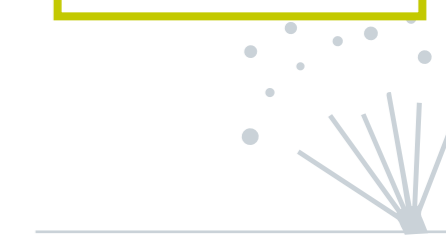
- Drying gas (N₂) rate: 100 kg/h
- Inlet temperature ≤ 250 °C
- Spray: bi-fluid nozzle
- ATEX design

PSD2

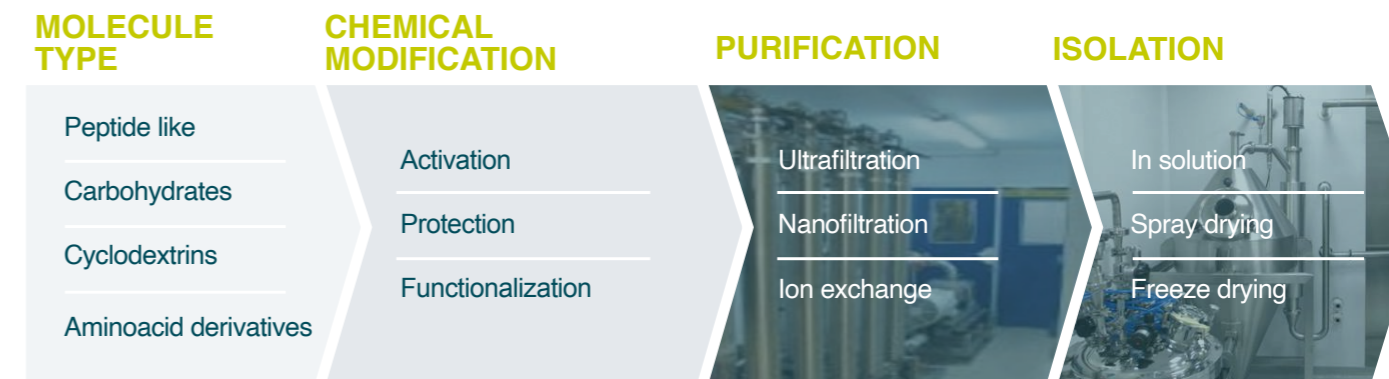
for **AQUEOUS SOLUTIONS**

- Drying gas (air) rate: 360 kg/h
- Inlet temperature ≤ 250 °C
- Spray: High Pressure nozzle / bi fluid nozzle
- Sanitary design (+ steam decontamination)

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

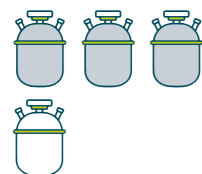


STAINLESS STEEL



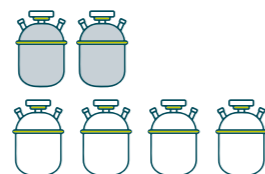
GLASS LINED

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



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₍₀₎	10s – 100s kg
	DMS, DES alkylation	room / high T	MTs
	Escheiler-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
MISCELLANEOUS	High T/P aminolysis	Aq. NH ₃ , 160°C / 8 bar	100s kg
	Mitsunobu	Ph ₃ P, DIAD	10s kg



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

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Find out more