



SANKYO KASEI

Innovation & Solutions

About Us

Established : In 1961

Employees : Over 230

Headquarter : At Osaka, in Japan

**Production
bases : At Hiroshima
and Kyoto,
in Japan**

About us As CDMO

40+ Years of corporate activity
as a CDMO

20+ R&D employees

15+ Lines for manufacturing

10+ Works with domestic
pharmaceutical companies

3 Main Business Fields

31%

80% CDMO
20% Originals

Pharmaceuticals

- APIs and Intermediates
- Catalysts
- Raw materials

34%

90% CDMO
10% Originals

Electronic Materials

- Monomers for photoresists
- Photoacid generators
- Polyimide raw materials

35%

20% CDMO
80% Originals

Automotive Chemicals

- PPS Resin Raw Materials
- PPS Resin Applications
- Specialized Chemicals

Our Advantages

Pharma × Sulfur

- **Manufacturing in a cGMP-applied plant**
- **Utilization of sulfur sources**

Speed × Quality

- **More Speedy manufacturing intermediates at 3-shift operation ISO Plant, and using them for APIs**

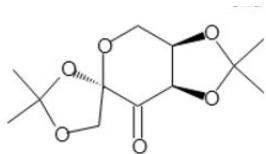
Originals × CDMO

- **Efficient production of specific reactions and APIs by utilizing original products**

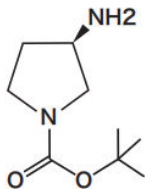
Originals

for Pharmaceuticals

**D-Epoxone : Shi Asymmetric
epoxidation catalyst**



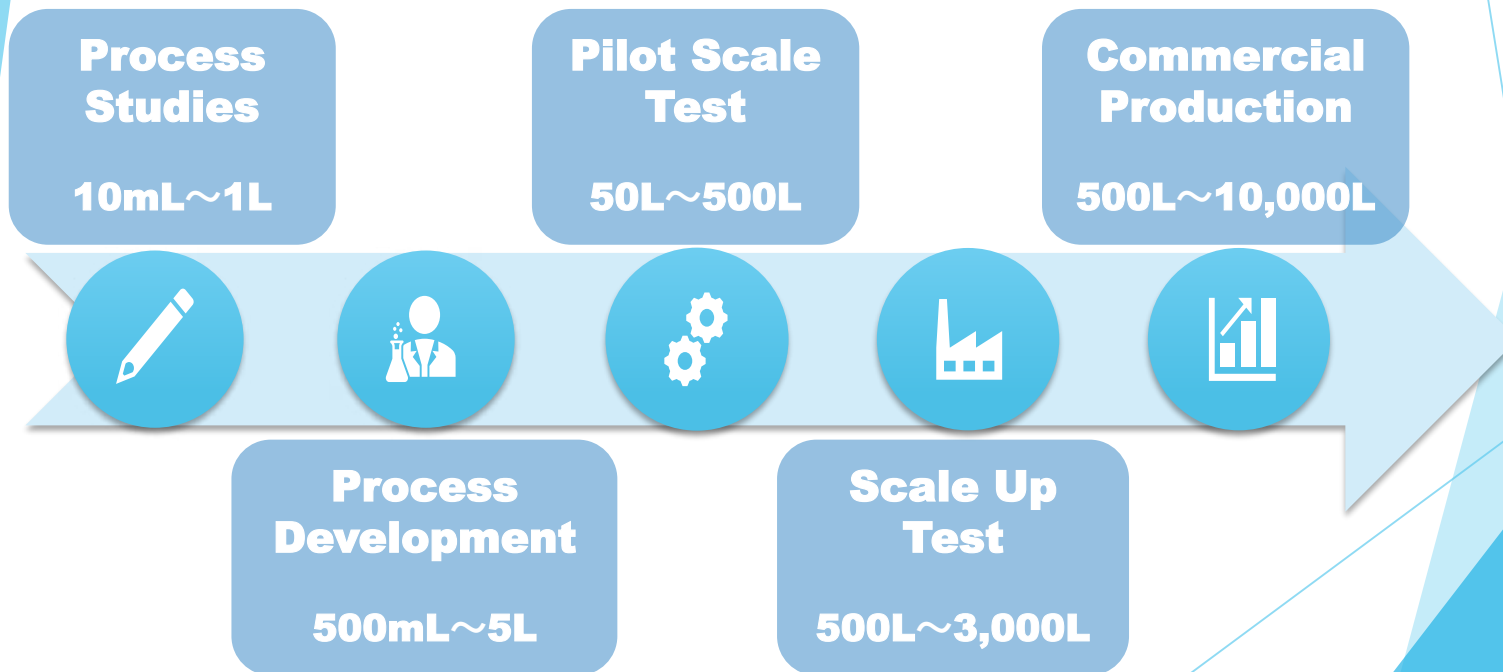
**R-BAMP : Chiral amino pyrrolidine
intermediate for APIs**



**And more compounds
listed in catalog**

R&D System

Flexible support for total or partial process development from lab to commercial production.



Studies & improvements for Pharmaceuticals

Column optical resolution

→ **Efficiency improved
by using enzymatic reactions**

Phosgene reaction

→ **Esterification with EDC hydrochloride**

Low-yield product

→ **Yield increase by selecting new catalyst**

Small scale high cost product

→ **Cost reduction by scale up**

etc.

Reaction Achievements

Reactions	Reagents	Scales
Thiolation	Na ₂ S	6,000L
	MeSNa	6,000L
	EtSNa	6,000L
Sulfidation	PhSH	3,000L
	t-BuSH	3,000L
	i-PrSH	1,000L
	NaSH	700L
	H ₂ S	500L
Sulfonylation	H ₂ SO ₄	3,000L
	HSO ₃ Cl	3,000L
	SO ₂ Cl ₂	3,000L
	TsCl	1,500L
	SO ₃	1,500L
	MsCl	500L
Halogenation	PhN(SO ₂ CF ₃) ₂	500L
	SOCl ₂	8,000L
	HBr	8,000L
	PBr ₃	6,000L
	Br ₂	500L
	I ₂	500L
	Cl ₂	500L
	NBS	500L
	NIS	100L
Oxidation	H ₂ O ₂	6,000L
	NaClO	6,000L
	Ti(OiPr) ₄ , CHP	5,000L
	NaIO ₄	500L
	Al(OiPr) ₃ , IPA	500L
Coupling	Pd/C	6,000L
	PdCl ₂ (Amphos) ₂	6,000L
	Pd ₂ (dba) ₃	1,500L
	Pd(PPh ₃) ₄	200L
	[Ir(OMe)(COD)] ₂	200L

Reactions	Reagents	Scales
Reduction	Pd/C	6,000L
	NaBH ₄	6,000L
	N ₂ H ₄ ·H ₂ O	6,000L
	Zn, HCl	6,000L
	Pt/C	500L
	Raney Ni	500L
	DIBAL	50L
Lithiation	n-BuLi	6,000L
Enzyme reaction	Lipase	1,000L
Fluorinated	KF	Labo
Friedel Crafts Reaction	AlCl ₃	3,000L
Trifluoromethylation	CF ₃ TMS, KF	500L
DMSO Oxidation	DMSO, P ₂ O ₅	1,500L
	DMSO, Ac ₂ O	Labo
	DMSO, SO ₃ ·Py	Labo
Methylation	Me ₂ SO ₄	3,000L
	Me ₂ Zn	20L
Azidation	NaN ₃	Labo
	DPPA	Labo
Carboxylic acid introduction into aromatic rings	CO ₂	Labo
Cyanation	NaCN	Labo
Nitration	HNO ₃ , H ₂ SO ₄	Labo
Imidazolidinone ring synthesis	Diphosgene	Labo
Diazotization	NaNO ₂	50L

Manufacturing plants



Fukuchiyama Works

- **At Kyoto**
- **GMP Plant**
- **over 40 employees**
- **4 lines for pharmaceuticals**



Akitsu Works

- **At Hiroshima**
- **ISO Plant**
- **over 150 employees**
- **9 lines + pilot for fine chemicals**

Fukuchiyama Works

Features for Pharmaceuticals

- **GMP manufacturing from gram to ton scale**
- **Columns for Mass Scale (~700L)**
- **High-temperature, pressure reaction (160°C, 1MPa)**
- **Low temperature reaction (-80 °C)**

Equipment	Material	Size	number
Reactor	GL	50~10,000L	19
	SUS	300~3,000L	6
	Hasteloy	500L	1
Column	SUS	700L (600 mmφ × 2500 mm)	2
	SUS	200L (300 mmφ × 2500 mm)	1
Centrifuge	SUS	24~48inch	9
Filter	GL	600~900mmφ	3
	SUS	500mmφ	1
Filter dryer	GL	1.5 m ²	1
dryer	SUS	Air blower type 100~400L	4
	SUS	Mixing type 150L	2
	SUS	Nauta dryer 3,000L	1
	SUS	Shelf type	1
Crusher	SUS	Comil	1

Akitsu Works

Features for Pharmaceuticals

- Speedy production through 24-hour, 3-shift operation
- Manufacturing with sulfur compounds
- Low metal control and Metal Analysis

Equipment	Material	Size	number
Reactor	GL	50~8,000L	61
	SUS	500~10,000L	14
	PVDF	2,000~4,000L	4
	PFA	500~4,000L	2
Centrifuge	SUS	42inch	7
	Hasteloy	42inch	2
	PFA	42inch	1
Filter	GL	0.5 ~ 1.5 m ²	6
	PFA	1.0 m ²	2
	ETFE	1.0 m ²	1
	TEF	0.5 m ²	1
Filter dryer	TEF/Ti	2.5 m ²	1
	TEF/Ti	2.5 m ²	2
dryer	SUS	Shelf type	7
	SUS	Mixing type 3 m ²	1
	GL	Conical type 3 m ²	2
	SUS	Vibration type 2.1 m ²	1

Analysis Equipment

Analysis Equipment	number
HPLC	39
GC	30
GPC	3
NMR	1
KF Moisture Meter	11
Melting Point Measurement	2
Viscometer	2
Ion Chromatography	4
ICP-MS	2
ICP-AES (Emission)	2
FT-IR	2
UV-vis	2
Thermal Analyzer	1
Atomic Absorption Spectrophotometer	1
Optical Rotation Spectrometer	2
Colorimeter	1
Powder X-ray Diffractometer	1
Endotoxin Analyzer	1
TOC Meter	1

Thank you
for your attention

Contact Us :



(+81)6-6345-4138



<https://sankyo-kasei.com/en/>