# Deutero Corporate Overview Clearsynth

2025

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# Clearsynth at a Glance



### LEADING THE WAY

Leader in Deuterium Chemistry and trusted partner for Reference Standards, Stable Isotope Labelled Compounds, Building Blocks, Fine Chemicals & Intermediates.







### **EXPANDING HORIZONS**

World's Largest Inventory of Stable Isotope Labeled Compounds







### WE OPERATE 24X7

#### **Global Presence :**

Sales & Stock Points in Mumbai, Hyderabad, Toronto, Boston & Korea. Coming Soon in China.

Sale Offices in Europe & Japan.



### **INSPIRING INNOVATIONS**

Extensive Product Range Covering Production, Research and Analytical Testing

### **OUR COMMITMENT**

**Global Compliance to Quality & Delivery** 

### **ELEVATED EXPERTISE**

Highly Experienced Scientific and Management Team

## Clearsynth Journey



Customers and an Inventory of 200 Compounds.



mchem

Inauguration of Clearsynth **Innovation Centre -**Hyderabad New Facility & Started US Operations

Inauguration of new bulk facilities in Patalganga & Karad

202.



- and many more...

- D9 D2SO4
- Benzene D6

at CMO site

**Bulk Deuterated** 

### Leadership Team

\*\*\*\*\*\*



Vijay Ambati Founder and Chairman



**Biren Parekh** Executive Director, Corporate Strategy & Operations.



Dr. K. Sakthivel **Chief Scientific Officer Chemistry Services** 



Mallikharjuna K. Director **Quality Services** 



Nagasreenivasu Akula General Manager Catalog Sales



Satish Bhatia General Manager **Business Development** 



Anal Ganai Senior Manager **Deutero Sales** 



Rahul Vohra, Ph.D. Chief Scientific Officer Research & Development



**Sharad Tripathi** Associate Vice President Sales & Business Development



Sastry TVRS Director Compound Delivery & Strategic Sourcing



Shermishtha Sharma Manager-Sales & Marketing (North America)



Dr. Naga Siva Rao Assistant Director - Chemistry R&D

# Major Business Verticals

#### CATALOG



**Reference Standards** and Research Chemicals

- Stable Isotopes
- Impurities
- Glucuronides
- Metabolites
- Fine Chemicals
- Building Blocks
- Catalysts
- Organometallics
- High purity Inorganics

#### DEUTERO



**Development &** Manufacturing of **Deuterated Bulk** reagents, Intermediates & Novel Final compounds

- End Application -OLED
- Semiconductor
- Pharma and **Optical Fibers.**

#### CRDMO



Contract Development & Manufacturing of Novel compounds



profile

- Patent granted: 2

#### DEUTERATED DRUG DISCOVERY

In-house Corporate Program of Novel molecules with deuterium incorporation for enhancing its

• Total patents filed: 51

#### ULTRAPURE GASES



Supply of commercial gases for industrial application

- Deuterium Gas
- Helium Gas
- Fluorine Gas

## Clearsynth In Numbers

### 359,000+ Compounds in Catalog



### 400+ Employees

80,000+ Products in Inventory





### 4,500+ Active Global Customers

12+ Employees with Post Doc 35+ **Employees with PhD** 190+ Employees with MSc.



### Global Presence



# Our Expertise in Deuterium Chemistry

- Deuterated Reagents
- Deuterated Solvents
- Deuterated Materials
- Deuterated Building Blocks



- Deuterium Labelled Products for Deuterated Drug Development
- Deuterated Custom Synthesis



#### **Non-Deuterated**

#### Deuterated

# Deuterium In Drug Discovery

#### Deutetrabenazine (Austedo) Reduced and less-frequent dosing

Teva Huntington Disease

#### AVP-786 (Dextromethorphan) Reduced amount of co-administered booster

Otsuka Alzheimer

#### Deucravacitinib (Sotyktu) Increased selectivity

BMS Pharma Plaque Psorasis

#### PXL065 (Deuterium Stablized Pioglistazone) Reduced enantiomerization

Poxel Pharma Diabetes



#### Donafenib (Zepsun) Reduced toxicity

Suzhou Zelgen BioPharma Oncology

#### VV116 (Deuremidevir) Possibility of oral administration

Junshi Biosciences Covid

#### RTO01 (Deulineleate Ethyl Linoleic Acid) Novel mechanism of action

Retrotope Progressive Supranuclear Palsy (PSP)

Heroin Vaccine Increased pharmacodynamic activity

# Benefits Of Deuterium in Drug Discovery



**Higher Drug Absorption** 

**Reduced Amount of Co-Administered Booster** 

#### **Lower Incidence of Adverse Effects**





#### **Higher AUC**

#### **Reduced Toxicity**

# Deuterated Products (Deutero)

- Benzene-D6
- Bromobenzene-D5
- Chlorobenzene-D5
- Iodobenzene-D5
- Phenyl Boronic Acid–D5
- 1,3-Dibromobenzene-D4
- Tert-Butanol-D10 / D9
- Sodium Deuteroxide
- Anthracene-D10
- Carbazole-D8
- Naphthalene-D8
- 9-Bromo Anthracene-D9
- 1-chloro-3-iodobenzene-D4

- Sulphuric Acid-D2
- Deuterated Bromide
- Deuterated Chloride
- Bromocyclopentane-D9
- Benzoic Acid-D5
- Tert-Butyl Chloride-D9
- Methanol-D4
- Methanol-OD
- Dibromoethane-D4
- Ethanol-OD
- Lithium Aluminum Deuteride-D4
- Sodium Boro-deuteride-D4
- Dimethylsulfoxide-D6

#### Methyl D3 Amine HCI

- Methyl Iodide-D3
- Aniline-D5
- Phenol-D5
- Acetone-D6
- Piperazine-D8
- Propanol-D7
- Propionic Acid-D5
- Toluene-D8 / D5
- Acetic Acid-D4 / D3
- Chloroform-D
- Dimethylamine-D6

# Capacity – Current & Future

List Of Products	Present Status	Present
		Capacity/ month (Kgs)
Benzene D6 - 99% D-atom	Commercial Scale	2000
Benzene D6 - 99.5% D-atom	Commercial Scale	2000
Bromobenzene D5 - 99% D-atom	Commercial Scale	600
lodobenzene D5 - 98% D-atom	Commercial Scale	200
Phenyl D5 Boronic Acid - 99% D-atom	Commercial Scale	150
1,3 Dibromobenzene D4 - 98% D-atom	Commercial Scale	150
3 Chloro 1 iodobenzene D4 - 98% D-atom	Commercial Scale	25
Carbazole D8 - 98% D-atom	U/R&D (D atom improvement)	-
Anthracene D10 - 98% D-atom	U/R&D (D atom improvement)	-
9 Bromoanthracene D9 - 98% D-atom	Gram Scale	5
Tertiary Butanol D10	Commercial Scale	25
Bromocyclopentane D9 - 98% D-atom	Commercial Scale	200

Bromobenzene, Chlorobenzene, Iodobenzene, Phenylboronic acid - Capacity will depend upon Benzene D6 spare capacity and can be interchanged

D-2 is presently manufactured in-situ in Lab for Methanol D4, we plan to set-up a separate plant for D2 gas for Semi-conductor

# Capacity – Current & Future

List Of Products	Present Status	Present
Methanol D4 - 99.5% D-atom	Commercial Scale	50
lodomethane D3 - 99% D-atom	Commercial Scale	3800
Methyl D3 amine Hydrochloride - 99% D-atom	Commercial Scale	50
Tertiary Butanol D9	Commercial Scale	25
Aniline D5	Commercial Scale	200
Benzoic Acid D5	Commercial Scale	100
Sodium Deuteroxide - 99% D-atom	Commercial Scale	500
Deuterium Bromide - 99% D-atom	Commercial Scale	500
Deuterium Chloride - 99% D-atom	Commercial Scale	200
Sulfuric Acid D2 - 99.5% D-atom	Commercial Scale	3000
Dimethyl Sulfoxide D6 - 99.5% D-atom	Commercial Scale	25
Chloroform D - 99.5% D-atom	Commercial Scale	25
D2 Gas	U/discussion	Only captive

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### The Clear Choice !

### High Isotopic Purity

Custom Synthesis / New Product Development

High Volumes / Variable Packaging

Reliable and continuous Supply

Pilot and Bulk Scale Manufacturing



# Clearsynth Innovation Centre (Hyderabad)



**5** Floors

**Location : Industrial Development** Area, Mallapur, Hyderabad, India



### 50,000+ Square Foot

### **250+ Fume Hoods**

### 250+ Scientist

### **100+ Support Staff**

# Clearsynth Innovation Centre (Hyderabad)



#### **List of Equipment**

me of Instruments	Instrument Brand	Number of instruments
00 MHz Bio NMR	Bruker	1
ICP MS	Perkin Elmer	1
GC-HS/MS	Thermo	1
LCMS	AB Sciex and Shimadzu	2
TGA	Perkin Elmer	1
Prep HPLC	Shimadzu	2
HPLC	Waters	3
HPLC	Dionex	1
HPLC	Thermo	6
Flash System	SapaBean	1
Coulometer	Metrohm	1
IR	Shimadzu	1

### **Globally Accredited Quality Certifications**

### Certifications

ISO/IEC 17025:2017 ISO 17034:2016 ISO 14001:2015 ISO 9001:2015 ISO 45001:2018 **FDA Registration Certificate DSIR Recognition Certificate** 











#### ACCREDITATION COMMISSION FOR CONFORMITY ASSESSMENT BODIES

CERTIFICATION OF ACCREDITATION



CLEARSYNTH LABS LIMITED

Certificate No.: ACCAB/IN/RMP/1059 d accredited as per inter

ISO 17034:2016 nents for the competence







## Chemistry Operations





- Capacity from mg to tonnes
- Highly Trained Manpower
- All Safety Precautions in Place
- Access Controlled
- Security Cameras
- All Literature Access

## Warehouse Operations



- 2 • -
- Clean Rooms for Packing & Labelling
  Access Controlled
- Security Cameras



- 2-8° Walk-in Cold storage
- -20° Walk-in Cold storage
- Easily Accessible Racks

• Access Controlled

# Clearsynth Services



#### **Analytical Services**



#### **Small Molecule Manufacturing**



#### **Process Development**



**CDMO Services** 



#### **Bio NMR Services**



**Contract R&D** 



# Serving Industries



# Clearsynth

### **Thank You!** www.clearsynth.com | sales@clearsynth.com | +91-22-45045900



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