

Proprietary Products – Fine Chemicals

Range of Fluoro Pyridines being launched

S.no	Product	Pharma End Use	Agro End Use
1	2,3-Dichloro-5-(trifluoromethyl)pyridine		Chlorfluazuron, Fluopicolide, Haloxyfop-etotyl, Haloxyfop-methyl, Fluazuron
2	2-Chloro-5-(trifluoromethyl)pyridine	Tipranavir	Fluazifop / Fluazifop P, Pyridalyl
3	2-Amino-3-chloro-5-(trifluoromethyl)pyridine		Fluazinam
4	3,5-Dichloro-2,4,6-trifluoropyridine		Fluroxypyr-meptyl
5	2,6-Dichloro-5-fluoro-3-methylpyridine	Trovafloxacin, Alatrofloxacin, Tosufloxacin	
6	2-Fluoro-6-methylpyridine		
7	4-Chloro-3-fluoropyridine		
8	2-Amino-5-(trifluoromethyl)pyridine		
9	2-Chloro-3-Cyano-6-(trifluoromethyl)pyridine		Flupyr-sulfuron
10	2-Chloro-3-(trifluoromethyl)pyridine		Flazasulfuron
11	2-Chloro-4-(trifluoromethyl)pyridine		Pyroxulam
12	2-Hydroxy-6-(trifluoromethyl)pyridine		Picoxystrobin
13	2,6-Dichloro-4-(trifluoromethyl)pyridine		Fonicamid
14	2-Fluoro-4-methylpyridine		
15	3,5-Difluoro-2-cyanopyridine		
16	2-Chloro-3-fluoropyridine		

Jubilant's Fine Chemicals business offers about 165 products developed through in-house R&D. These are mainly Pyridine and Piperidine based intermediates which find application in about 250 APIs and 50 Agrochemicals.

Jubilant holds globally No.1 position in Amino Pyridines, Lutidines and Collidines and for most of the other products it enjoys a leading position in the global market.

Over the last 10 years, the Fine Chemicals business has been granted 28 process patents in various countries including India, Japan and PCT Union.

Over sixty products have already been commercialised and are being supplied

to about 145 customers globally. These customers include Innovator, Generic Pharma, Agro companies, Personal care and other Fine and Speciality Chemical companies.

Fine Chemical Products are produced in India at seven multipurpose manufacturing plants at Gajraula, UP and two multipurpose plants at Ambernath, Maharashtra.

Niche Positioning of Fine Chemicals Business

- Business has a leading position in almost all of its products, due to the backward integration of raw materials through its Pyridine business

Niche Technological Capabilities

- High temperature Vapour phase catalytic reaction (up to 450°C)
- High temperature Vapour phase catalytic hydrogenation reaction (up to 58 bar)
- Low temperature Butyl Lithium reaction (at -80°C)
- Photo Chlorination reaction
- Large volume Grignard and Sandmeyer reaction and many more
- Expertise in handling large volumes of hazardous chemicals like Sodamide, POCl_3 etc.

- 7 large scale commercial multipurpose plants at Gajraula (near Delhi) and 2 commercial multipurpose plants at Ambernath (near Mumbai). Reactors ranging from 1 KL to 12 KL, Total reactor Volume ~ 400 KL (including Cryogenic reactors & Hydrogenators, MSGL reactors and SS reactors)
- All plants are ISO 9001:2008, 14001:2004 and OHSAS 18001:2007 certified
- NABL accredited QC laboratories with Standard ISO/IEC 17025:2005 certification
- Our facilities are being audited and approved by several global Pharma and Agro customers on a regular basis
- These facilities are zero discharge with all effluent treatment backups like Solid & Liquid Waste Incinerators, Spray Dryers, Aerated Ponds, Reverse Osmosis Plant and Landfill Site etc.



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Our Commercialised Fine Chemicals

S.no	Product	Pharma End Use	Agro End Use
1	2,3-Lutidine	Lansoprazole, Rebeprazole	-
2	2,4-Lutidine	Argatroban	-
3	2,5-Lutidine	-	Dipropyl pyridine-2,5-dicarboxylate
4	2,6-Lutidine	Amoxicillin	Phorate
5	3,4-Lutidine	Pentazocine, Phenazocine	-
6	3,5-Lutidine	Omeprazole	-
7	2,3,5-Collidine	Omeprazole, Esomeprazole	-
8	2,4,6-Collidine	Lamivudine, Vitamin D Analogues	-
9	2-Aminopyridine	Piroxicam, Risperidone, Sulfasalazine	Imazosulfuron, Sulfosulfuron, Clodinafop
10	2-Amino-3-methyl pyridine	Permirolast, Ozenoxacin	-
11	2-Amino-4-methyl pyridine	Nevirapine	-
12	2-Amino-5-methyl pyridine	Zolpidem	-
13	2-Amino-5-chloropyridine	Zopiclone, Eszopiclone	-
14	2-Amino-6-methyl pyridine	Nalidixic acid	-
15	4-DMAP	Abacavir, Lamivudine & many other uses as catalyst	Captan, Chlorpyrifos, Clethodim & many other uses as catalyst
16	2-(Aminomethyl)pyridine	Flecainide acetate	-
17	3-(Aminomethyl)pyridine	Picotamide	Acetamidrid
18	2-(Hydroxymethyl)pyridine	Bevonium metilsulfate, Ibuprofen piconol	-
19	3-(Hydroxymethyl)pyridine	Nicofibrate	-
20	2-(Chloromethyl)pyridine	Mefloquine, Picoperine	-
21	3-(Chloromethyl)pyridine	Indinavir	-
22	Pyridine Hydrobromide	Cephalexin, Clarithromycin, Cephadrine	-
23	Pyridine Hydrochloride	Raloxifen	-
24	PPTS	Montelukast, Tecrolimus, Orlistat,	-
25	5-Methylnicotinic acid	Rupatadine	-
26	Pyridine-3-acetic acid	Risedronic acid	-
27	Picolinic acid	Bepotastine, Bromazepam, Pirmenol	-
28	Azacyclonol	Fexofenadine	-
29	Ethyl Isonipecotate	Maropitant	-
30	Ethyl Nipecotate	Tiagabine	-
31	Isonicotinic acid	Aconiazide, Nialamide	Forchlorfenuron, Inabenfide
32	Isonipecotic acid	Declenperone, Risperidone	-

S.no	Product	Pharma End Use	Agro End Use
33	Chromium picolinate	Maropitant	-
34	Pyridine-2-aldehyde	Bisacodyl, Sodium picosulfate	Pyriprole
35	Pyridine-4-aldehyde	Donepezil	-
36	2-Chloropyridine	Chlorphenamine, Dexmethylphenidate, Rosiglitazone	Forchlorfenuron, Pyriproxifen, Pyrithiones
37	2-Bromopyridine	Carbinoxamine, Chlorpyramine, Triprolidine	-
38	3-Chloropyridine	Benzimidazole	-
39	3-Bromopyridine	Abiraterone	-
40	2,5-Dibromopyridine	NNC-26-9100	-
41	2,6-Dichloropyridine	Enoxacin, Flupirtine	Picolinafen
42	2,6-Dibromopyridine	Acrivastine	-
43	2,3,5,6-Tetrachloropyridine (Symtet)	-	Chlorpyrifos, Triclopyr
44	2,3,4,5,6-Pentachloropyridine (PCP)	-	Fluroxypyr-meptyl
45	2-Bromo-6-methoxypyridine	Cyclopenta(b)pyridine-2,5-dione	-
46	2-Chloro-6-methoxypyridine	-	Piributicarb
47	2,6-Dimethoxypyridine	Pyrido {1,2-a} pyrazines	-
48	2-Methoxy pyridine	Pyronaridine	-
49	2-Methoxy-5-bromopyridine	Perampanel	-
50	2-Methoxy-5-nitropyridine	Pyronaridine	-
51	2-Bromo-5-methylpyridine	Avosentan, Clozasentan	-
52	2-(Aminomethyl) piperidine	Flecainide acetate	-
53	3,5-Dimethyl piperidine	Tilmicocine	-
54	N-Formylpiperidine	Sorafenib	-
55	2-Methylpiperidine	-	Piperalin, Piperophos
56	3-Methylpiperidine	5-Acylamino-1,1'-biphenyl-4-carboxamide	-
57	3-Acetyl pyridine	Imatinib mesylate, Telithromycin	-
58	Cetylpyridinium chloride	Mouthwashes (disinfectant)	-
59	3-Hydroxy-2-methylpyridine	Febrifugine, Halofuginone	-
60	4-Hydroxy-3-pyridinesulfonic acid	Torse mide	-
61	Piperidine.HCl	Eperisone.HCl, Tolperisone.HCl	-
62	2-(N-2-hydroxyethyl-N-methyl) aminopyridine	Rosiglitazone	-