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Sidvim Lifesciences Position Paper

Analysis of Import Price
(Time Period : 2018 to 2023)





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Agenda

- Price Analysis
 - Background and context
 - Objective And Methodology
- Pharma Intermediate Reagent Pricing
- Advance Intermediates Pricing
- Fermentation and Semi-synthetic reagent Pricing
- Commodity Pricing
- Average Solvent Pricing
- Overall Pricing



Background and context

- Bulk drug imports from China increased from 62 per cent to 75 per cent in the past nine years as per the report of Care Ratings.
- According to the report, imports of bulk drug from China have soared in terms of both value as well as value.
- During FY14 to FY23, the country's total bulk drug imports from China increased at a CAGR of about 7%, indicating that the country continues to rely heavily on China for some of the critical key starting materials (KSMs).

Year (FY)	Total Pharma Imports	China Import
2014	\$ 5.2 Bn	\$ 2.1 Bn
2019	\$ 6.4 Bn	\$ 2.6 Bn
2021	\$ 7.0 Bn	\$ 2.9 Bn
2022	\$ 8.5 Bn	\$3.2 Bn
2023	\$ 7.9 Bn	\$ 3.4 Bn

News about Care Rating Report is [here](#)

- In this context, we decided to analyse price movement of various chemicals which are being imported in India and mainly from China. Our first report was published where import prices up to CY-H1 2023 were considered for the analysis. This month we are analysing price fluctuations during remaining two quarters of CY-2023.



Price Analysis : Objective And Methodology

Objective:

- To analyze price changes in the various categories of chemicals in last 5 years.
- Categories included for our analysis are :
 - Early-stage intermediates
 - Advance stage intermediates
 - Fermentation and semi-synthetic products
 - Commodities
 - Solvents

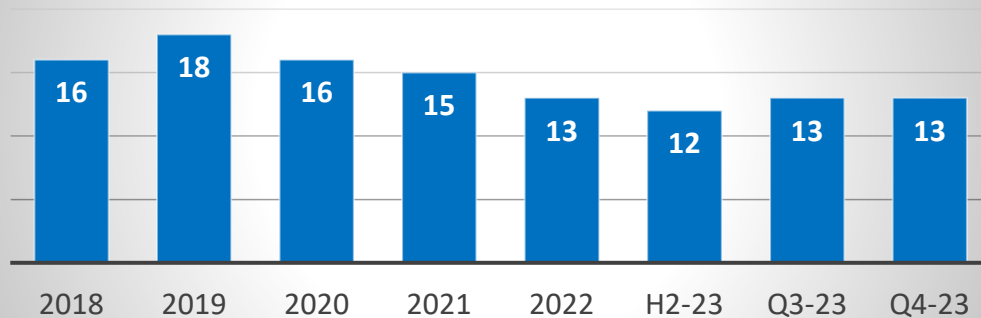
Methodology:

- Import-export database has been used to collate pricing information
- For major part of this assessment, import prices have been used while export prices were considered in rare scenarios.
- Price analysis has been done for 32 imported chemicals used in pharma industry across different categories. One would appreciate we would not get relevant and meaningful import prices for all 32 items every month and the indices to be adjusted based on available import data.
- In case of any outliers, median prices are considered for the calendar year.
- This document analyses prices for the CY 2023
- **Prices in INR are considered based on the approximate exchange rate prevailing during the time of shipment.**



Though intermediate prices showed significant dip since 2019, and same trend is broadly continuing, prices are more or less steady in 2023

Intermediate prices in USD/KG



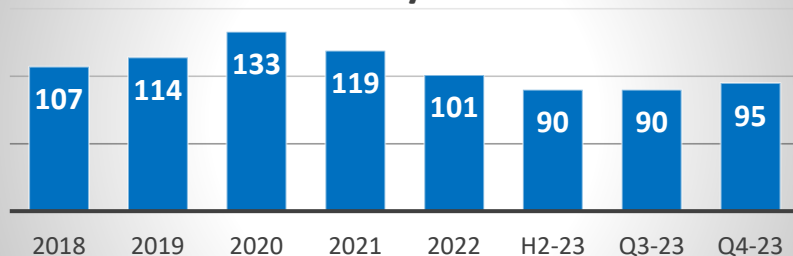
- Intermediates prices are below 2018-2019 levels. Prices were steady in CY 23
- For the purpose of this document intermediates are defined as chemicals used in early stages of API manufacturing.
- Generally, these intermediates are used in very high volume.
- As per Sidvim's business intelligence and database information; there are many Indian sources available for these intermediates, but still lot of these are imported from China. HEEP is an exception, and it is exported to China! However, since there's no export in last quarter price of HEEP is assumed unchanged.
- Source changes for these intermediates would not be challenging for regulatory markets. Of course, this should be evaluated on case-by-case basis.

Product Name	2018		2019		2020		2021		2022		H2-2023		Q3-2023		Q4-2023	
	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG
Intermediates	16	1029	18	1268	16	1190	15	1107	13	1063	12	982	13	1079	13	1062
THIOPHENE-2-ETHANOL (Clopidogrel)	17	1100	18	1256	21	1602	25	1885	16	1294	11	913	10	832	10	832
DCC (Reagent)	16	1025	17	1179	7	533	7	521	9	701	8	616	7	565	6	527
L-LYSINE-ACETATE	15	1068	13	902	12	917	13	986	12	914	11	945	23	2028	13	1104
HEEP (Quetipine)	24	1582	22	1525	22	1618	22	1668	22	1750	23	1845	22	1741	22	1741
OTBN (Sartan)	17	731	31	2229	24	1866	14	1031	14	1047	9	766	7	566	6	518
SETRALINE TETRALONE (Sertraline)	12	758	12	879	12	912	13	973	12	963	12	955	12	955	11	885
3,3-DIMETHYL ACRYLIC ACID	14	942	13	904	12	883	9	687	10	770	10	837	12	869	11	766



Advance intermediates' prices were reasonably stable in CY 2023

Advance intermediate prices in USD/KG



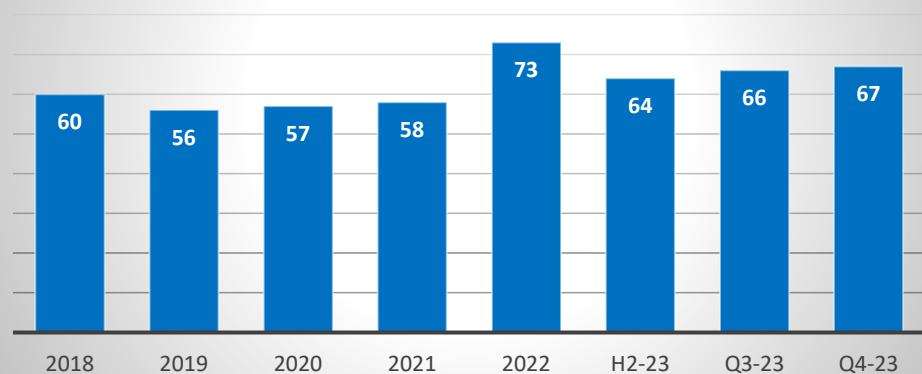
- Ten intermediates have been identified for this analysis. Advance intermediates' prices are below 2018-2020 peak prices.
- Downtrend in advance intermediate is continued in CY-23, but in this year, prices did not move much in either directions.
- For the purpose of this document advance intermediates are those which are used at later stages of API manufacturing. They are not necessarily defined as KSMs by the manufacturers.
- These intermediates form a part of the API molecule and would generally demand good documentation from the suppliers.
- For supply in stringent regulatory markets, these supplier's facilities (in principle) should be auditable.
- Indian suppliers are present for all these advance intermediates.
- Source change for these intermediates could be challenging as it could be difficult and resource consuming.

Product Name	2018		2019		2020		2021		2022		H2-2023		Q3-2023		Q4-2023	
	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG
Adv Pharma intermediates	107	7195	114	8138	133	9829	119	9665	101	7966	90	15236	90	7525	95	7603
META BROMO ANISOLE (tramadol)	13	929	16	1150	10	759	10	758	14	1115	14	1145	11	956	11	888
MAEM/MICA Cefixime trihydrate	30	1960	30	2156	30	2228	23	1692	29	2196	23	1941	23	1961	22	1860
SMIA (Cefuroxime)	35	2416	44	3115	45	3576	42	3117	32	2396	48	3986	47	3885	40	3353
3-RAB (Dolutegravir)	220	15085	170	12026	111	8476	110	8107	89	7114	75	6442	62	5214	108	7810
MCA (Montelukast Intermediate)	146	9518	163	11512	164	12272	170	12659	205	15781	160	13472	162	13456	165	12636
Z-7 (Rosuva Adv Int)	70	4281	91	6477	86	6496	83	6320	81	6392	73	83391	71	5913	97	8103
CIPRO Q ACID	22	1481	21	1425	26	1859	23	1711	25	1893	20	1680	19	1595	27	2287
(1R,2R)-1,2-CYCLOHEXANEDIMETHANOL (Gaba adv int)	417	28627	440	31457	700	50505	600	52430	400	32039	365	30551	394	32877	343	28606
ATS-8 (Atorva adv int)	83	5343	125	8892	110	8488	92	6961	95	7498	85	7094	85	7076	95	7245
3,4-DIFLUORO NITROBENZENE (Linezolid)	34	2307	44	3168	48	3634	39	2894	41	3234	32	2661	28	2315	44	3240



Prices of fermentation/semi synthetic/animal origin products continued to show strength

Fermentation & Semi synthetic Intermediates Prices in USD/KG



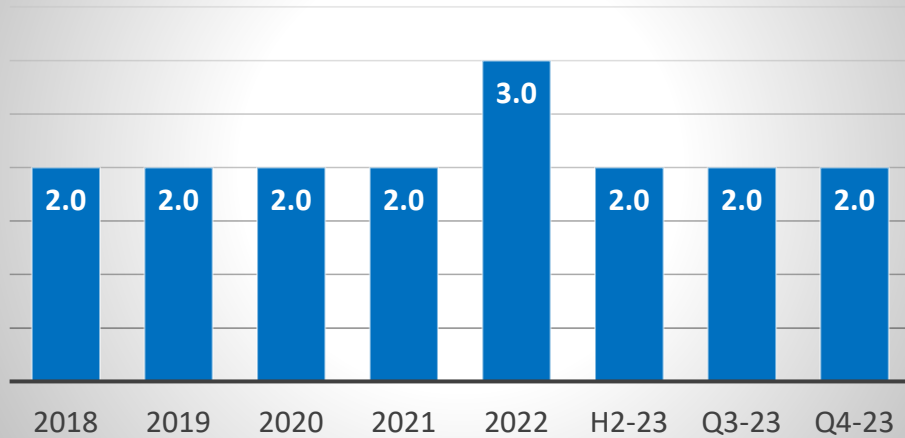
- Six fermentation and semisynthetic products were identified for the analysis.
- These products are based on fermentation, where energy cost would be very high.
- Prices of fermentation products are reasonably steady in CY 2023.
- Most of these products are part of PLI scheme but prices are still not reflecting effect of PLI, maybe this is too early. One could perhaps be able to notice real price impact once Indian companies start producing these intermediates commercially under PLI scheme.
- Prices for products like 6-APA, Pen G and THIOC have moved substantially up in last couple of years
- This eventually should reflect in antibiotic prices, which is yet to be investigated.

Product Name	2018		2019		2020		2021		2022		H2-2023		Q3-2023		Q4-2023	
	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG
Fermentation-Semi Synthetic Intermediates	60	3989	56	4126	57	4239	58	4319	73	5718	64	5391	66	5574	67	5583
6-APA	30	2013	19	1348	18	1374	28	2093	45	3497	45	3704	45	3727	44	3625
7-ACA	60	4041	55	3902	54	4091	60	4401	65	5099	56	4614	57	4749	58	4886
Erythromycin Thiocyanate (THIOC)	59	3802	63	4414	54	4109	61	4569	71	5776	70	5793	72	5987	74	6197
Rifa S	112	7378	100	7639	113	8350	90	6795	120	9311	93	7912	95	7947	96	8032
Cholesterol	85	5595	87	6652	87	6408	89	6729	102	7920	91	7746	95	8212	97	8042
Penicillin G Potassium	17	1103	10	802	15	1101	18	1328	35	2707	30	2577	34	2824	32	2715



Commodity prices are lower than the top in CY-22 and were well within the range in CY 2023

Commodity Prices in USD/KG



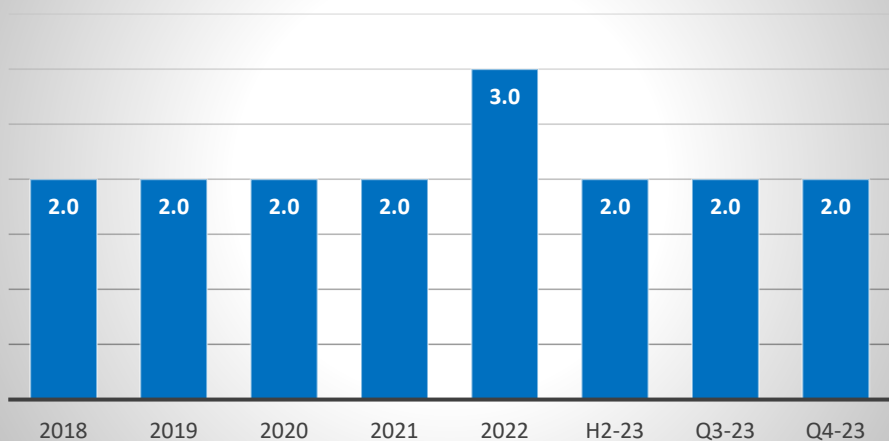
- Commodity prices were rangebound during CY 2023.
- Significant drop in PNCB import price could impact local PNCB manufacturers and could reflect in paracetamol API price in India. The drop in DCDA import price would reflect in metformin API price.
- For the purpose this document, commodity items are defined as chemicals which would be very basic chemicals and would be synthesized from crude oil or manufactured by employing specific technology.
- Generally, these chemicals would have multiple applications in other areas of chemical business.
- As per business intelligence most of these chemicals are in excess supply, this is buyers' market.
- All of these or at least most of these commodity chemicals would not have an economical Indian substitute and hence are imported from China.

Product Name	2018		2019		2020		2021		2022		H2-2023		Q3-2023		Q4-2023	
	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG
Commodity	2	155	2	186	2	141	2	190	3	262	2	185	2	147	2	162
MALONIC ACID	6	428	9	614	6	473	6	477	9	745	6	482	4	300	4	326
PHTHALIC ANHYDRIDE	1	73	1	63	1	59	1	73	1	100	1	98	1	92	1	93
1,2,3- TRICHLORO BENZENE	1	100	3	181	1	94	2	158	3	216	3	239	3	239	3	273
PNCB	1	83	1	74	1	87	2	152	2	190	1	95	1	83	1	104
DCDA	2	197	2	197	2	120	3	205	4	296	2	197	2	137	2	132
MALEIC ANHYDRIDE	1	90	1	66	1	69	2	119	2	128	1	80	1	73	1	87
L- LYSINE HCl	2	112	1	108	1	88	2	144	2	161	1	105	1	103	1	119



Solvents prices are on declining path from their top in 2022. Despite the weakening of rupee, prices of solvents were stable in CY-23 in rupee term

Solvent prices USD/KG

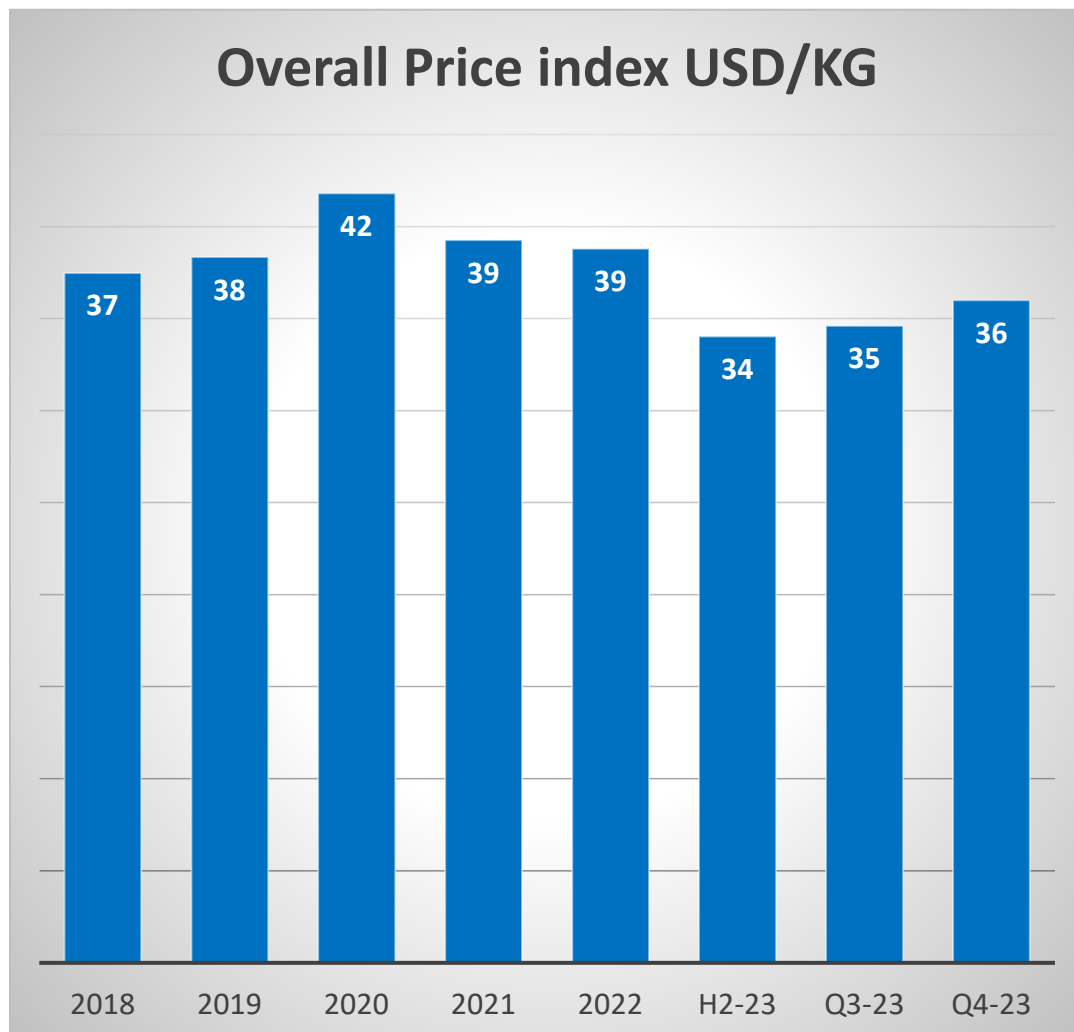


- Average prices of solvents have gone up in 2022 but since then started showing drop, and slight increase in price noticed in Nov-2023.
- The reasons for prices changes are mainly changes in THF and acetonitrile prices.
- Solvents considered for this assessment are common solvents which are routinely used in pharmaceutical industry under API manufacturing.
- As tanker load and drum prices are varying across imports of some solvents, these price variations have been accounted for while deriving median prices for the year.
- Even though there is presence of some Indian suppliers for these solvents, their imports are consistently growing. The reason for growth needs to be investigated.

Product Name	2018		2019		2020		2021		2022		H2-2023		Q3-2023		Q4-2023	
	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG	USD/KG	INR/KG
Solvent	2	111	2	113	2	119	2	184	3	258	2	170	2	160	2	172
DMF	1	69	1	56	1	62	2	145	2	166	1	81	1	70	1	69
ACETIC ACID	1	47	0	32	0	26	1	74	1	< 0.5	0.4	37	1	57	1	46
N-HEXANE	2	130	2	129	1	108	2	114	2	153	2	127	2	158	3	254
DMSO	1	102	1	97	2	123	2	183	6	494	5	439	5	399	4	365
ACETONITRILE	2	152	3	223	3	256	3	244	2	190	2	155	1	120	2	135
THF	2	164	2	141	2	136	5	343	6	490	2	183	2	154	2	163



Conclusion of price analysis highlights the overall price drop by 15-16% from the peak in CY 20. In CY 23 overall prices were within the range.



- Overall chemical prices are below 2018-2020 levels.
- Prices of solvents, intermediates and advance intermediates are reasonably rangebound in CY-2023.
- However, in general, the prices are lower than pre-Covid levels and one can safely assume that Covid has no residual impact on the pricing.
- One of the postulates for low prices is stock piling by Chinese suppliers during Covid and now they are offloading the stocks.
- Probable reasons for overall lower prices in CY 22 and CY 23
 - Slowdown of Chinese and global economy;
 - Wider portfolios;
 - Fresh capacity created that remains idle/underutilised;
 - Relaxation in EHS norms prescribed under BlueSky policy 2018.



Reference Document

<https://chemgentia.com/>

Thank You!

We welcome questions! For more information please contact:
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