Monthly Bulletin

BDWVI



From the Desk of President

Dear Friends,

It gives me immense pleasure to connect with you on the occasion of the release of the digital version of BDMAI's Newsletter. This marks a significant milestone in our efforts to enhance communication and engagement with our esteemed members.

I am humbled to have been reelected as National President of the Association, along with mv dedicated team, in September 2024. Together, we are committed to taking the Association to new heights. I am also delighted to welcome our new Executive Director Mrs. M Roja Rani, who joined us in December 2024. With fresh perspectives and ideas, we are poised to achieve our shared vision for the future.

I am proud to report the continued success of BDMAI Technology & Training Center. The support from companies that have stepped forward to absorb freshly trained students is commendable. My special and sincere thanks to all those members, who generously contributed through CSR funds, which have played a pivotal role in the development of the Center, equipping students with skills that meet industry demands.

Looking ahead, we have ambitious plans to transform the Association into a truly national body. To achieve this, we are actively seeking suggestions from our members. Your ideas are invaluable in making the Association more vibrant and extending our services to the industry. Together, we can create a stronger, more inclusive platform that benefits all stakeholders.

As always, I sincerely request your continued support and active participation. Let us work hand-in-hand to build a brighter future for the Association and the industries we serve.

Warm regards

R K Agrawal National President, BDMAI

In this Bulletin you can expect:

Global Pharma News in short

BDMAI Activities

Members' Achievements

Technical & Commercial Articles

APIs Import/Export Data

Pharma Market Report -Indonesia



Representation to Principal DG, GST, New Delhi:

Dear Sir

Sub: Request for certain amendments in GST rules – Notification No. 20/2024 dated 8th October 2024

Greetings from BDMAI!

We, Bulk Drug Manufacturers Association India, is an association exclusively serving the Active Pharmaceutical Ingredients (APIs) and Intermediates industry in India. Our Head office is located at Hyderabad, Telangana.

Some of our members have brought their issues / concerns to our notice subsequent to the issue of Notification No. 20/2024, which we would like to appraise to you as follow, for your consideration and necessary action.

At the outset, our members are very thankful positively considering the genuine for problems faced by the companies in case of refunds claimed under Rule 89(4) of GST rules and omitting the rule vide above cited Notification, However, the industry feel that the hardship still persists since the effect of the omission has not been given with retrospective effect. Ambiguity with respect to claims pertaining to the period from 23.10.2017 i.e. data of insertion of Rule 96(10), till the date of its omission, is likely to continue, in the absence of clarity. We understand that some of the members are getting show-cause Notices / Summons for personal appearances from the Department.

Another issue faced by the industry is with regard to Rule 89(4) (c). The cap of '1.5 times

the value of same or similar goods supplied domestically' in the definition of zero rated supplies, is curtailing the right of exporter to claim the accumulated GST, since the value of domestic sales may be much lower than the export value of the product. Also, it would be very difficult to demonstrate 'same/similar' where the exporter will goods, be manufacturing exclusively suitable to the requirements of their customers. It may kindly be noted that similar view has been endorsed by the Hon'ble High Court of Karnataka in its Judgement in the case of Tonbo Imaging India Pvt Ltd vs Union of India, a copy of the same is enclosed for your kind reference.

In view of the above explained genuine concerns, we request you to kindly consider:

Giving retrospective effect to the omission of 89(4) by suitably amending the Notification No 20/2024 dt. 8.10.2024

Removing the cap of 1.5 times the value of same or similar goods supplied goods in the definition of zero rated supplies mentioned in Rule 89 (4) (c)

Thanking you and looking forward to your kind consideration in this regard.

Yours sincerely For BULK DRUG MANUFACTURERS ASSOCIATION INDIA

L V SUNIL GENERAL SECRETARY



Executive Committee Members of BDMAI met Hon'ble Chief Minister of Telangana on 6th Jan 2024





FDA India officials had a meeting with Executive Committee Members of BDMAI on 26th Feb 2024

CSIR -IICT organized "One Week One Theme – CLP-Chemicals (including leather) and Petrochemicals" program on 15th July 2024 - Mr. RK Agrawal National President, BDMAI was the Chief Guest of the event.



BDMAI Technology & Training Center

Passing out ceremony of 1^{st} Batch of Students of BDMAI Technology and Training Center – 12^{th} Sep 2024





Dr. A Ramakishan, Dy. Drugs Controller (India), CDSCO addressing the students on the eve of Passing Out ceremony of 1st batch

Dr. B Pardhasaradhy Reddy, Chairman, Hetero Drugs distributing Certificates to the Passing out students of 1st Batch. He generously announced to absorb entire batch into his company.



Seminar by Alfa Laval in Association with BDMA-Advanced and Compact Hygienic Condensers for the API Industry





Demo classes conducted by Dwaraka Scientifics Ltd on lab equipment operations.

Training classes as per LSSSDC syllabuses





Members' Achievements



A landmark agreement between MSN Laboratories, and Al Hobail Medical Company, Saudi Arabia.. The ceremony was attended by His Excellency Mr. Meraee Al-Qahtani, Deputy Minister of Health for Supply Chain and Contracts at the Ministry of Health, Saudi Arabia, and His Excellency Dr. Suhel Ajaz Khan, Ambassador of India to the Kingdom of Saudi Arabia, along with Counsellor Ms. Manusmriti. High-ranking officials from both companies

It was a great pleasure for Dr. MSN Reddy, Chairman of MSN Group to meet Most Honourable Andrew Holness, ON, PC, MP, Prime Minister of Jamaica, and to have an insightful meeting with the Honourable Prime Minister of the Republic of Bharat, Shri Narendra Modi. The discussions delved into innovative and futuristic solutions to promote sustainable healthcare and advancements in science and technology, aiming to create a healthier world. Dr. MSN Reddy expressed his gratitude for the opportunity to connect with global leaders and contribute to shaping a brighter, more resilient future for all.





VRRV Family M/s Vasudha Foundation' charity function held in December 2024, where financial assistance was extended to the needy. Shri Grandhi Mallikarjun Rao, Founder Chairman, GMR Group was the Chief Guest.

Nakoda Chemicals: Healthcare Leadership Summit & Awards 2024- Certificate of Excellence- Healthcare super brand awards 2024- India's Most valuable pharma API Company of the Year 2024 awarded to Nakoda Chemicals Ltd.





Global Pharma News in Short

The New Off-Patent Drugs to aid Indian Pharmaceuticals - US will see drugs worth Rs.12,000 crore expired between 2025-28

The top patented drugs getting expired in the coming years in the US include:

- Pembrolizumab, sold under the brand name Keytruda by Merck and Co.,
- Eliquis (Apixaban) sold by Bristol Mayers Squibb and Pfizer.
- Eylea sold by Regeneron and Bayer
- Bristol Myers Squibb's Opdivo (nivolumab) Palbociclib sold under the brand name Ibrance by Pfizer.
- Xarelto (Rivaroxaban) by Bayer and J&J. Trulicity by Eli-Lilly.
- Pfizer's Prevner 13 Ocrelizumab Sold under the brand name Ocrevus by Roche and Prolia/Xgevalt (Denosumab) sold by Amgen.

Source: Asian Age, 2nd Jan 2025

Antag Therapeutics secures €80 million in weight loss therapy financing

Antag Therapeutics has announced the closing of an €80 million Series A financing round to develop AT-7687, a novel therapy targeting obesity. Versant Ventures leads investment round to advance drug Source: Pharma Times

MindMed begins phase 3 study of MM120 for anxiety disorder

MindMed has announced the dosing of the first patient in its phase 3 Voyage study of MM120 ODT, a pharmaceutically optimised form of lysergide D-tartrate (LSD) for treating Generalised Anxiety Disorder (GAD)

Source: Pharma Times Refeyn introduces new mass photometry products to streamline biomolecular analysis workflows

Refeyn, the company behind pioneering mass photometry technologies, has taken another step to assure mass photometry is a simpler, more efficient bioanalytics tool with the release of a powerful expansion of its consumables portfolio.

Source World Pharma Today

Roche's Vabysmo prefilled syringe approved in EU for three retinal conditions that can cause blindness

The European Medicines Agency has approved Roche's Vabysmo (faricimab) 6.0 mg single-dose prefilled syringe (PFS) for use in the treatment of neovascular or 'wet' age-related macular degeneration (nAMD), diabetic macular edema (DME) and macular edema

Source: Pharma Business International



Imfinzi approved in US for patients with limited-stage small cell lung cancer

AstraZeneca's *Imfinzi* (durvalumab) has been approved in the US for the treatment of adult patients with limited-stage small cell lung cancer (LS-SCLC) whose disease has not progressed following concurrent platinum-based chemotherapy and radiation therapy.

Source: Pharma Business International

Roche to acquire Poseida Therapeutics

Roche has entered into a definitive merger agreement to acquire Poseida Therapeutics, a public clinical-stage biopharmaceutical company pioneering donor-derived CAR-T cell therapies

Source: Pharma Business International

CBC Group completes acquisition of UCB's mature neurology and allergy business in China

CBC Group, the healthcare-dedicated asset management firm headquartered in Singapore, has completed the strategic acquisition of global biopharmaceutical company UCB's mature neurology and allergy business in China, in partnership with Mubadala Investment Company.

Source: Pharma Business International

Northeastern India's first API/Bulk Drug Plant inaugurated in Guwahati

Chemex Global's pharmaceutical API manufacturing facility in Guwahati, first of its kind in the region, positions Assam as the next big pharma hub in India. It aims to expand trade routes with Gujarat, Hyderabad, Sikkim, and Southeast Asia.

Source: ET Pharma.com China's drug regulator clears mpox vaccine; to undergo clinical trial

The process can take years, even decades. However, the National Medical Products Administration, China's top drug regulator, has launched a number of accelerated or streamlined channels to facilitate applications of novel drugs and vaccines or those in urgent need, state-run China Daily reported on Tuesday.

Source: ET Pharma.com

US CDC warns of overdose risks of fake prescription medicines online

The counterfeit pills sold through illegal internet based pharmacies frequently contain fentanyl a synthetic opioid that is the leading cause of drug overdoses in US, the health agency said

Source: ET Pharma.com

EXPORT DATA BULK DRUGS & INTERMEDIATES OCTOBER, 2024

Values Rupees in lakhs Source: DGCI&S

	Source: DGCl&S							
S.No.	HSCode	Commodity	Oct 2023 (R)	Oct 2024 (F)	%Growth	Apr-Oct 2023 (R)	Apr-Oct 2024 (F)	%Growth
1	17023010	GLUCOSE LIQUID	4496	4058	-10	31415	25967	-17
2	17023020	GLUCOSE SOLID	692	873	26	5641	5578	-1
3	17023031	DEXTROSE,SOLID	1716	1284	-25	10417	8225	-21
4	17023039	DEXTROSE OTHER THAN SOLID	2	9	385	385	187	-52
5	17024039	DEXTROSE OTHER THAN SOLID	6	0	-95	37	66	79
6	29051410	ETHAMBUTOL, ETHAMBUTOL HCL	633	333	-47	4354	3982	-9
7	29051420	SALBUTAMOL SULPHATE	492	1165	137	4652	5981	29
8	29054300	MANNITOL	291	896	208	2136	2988	40
9	29054400	D-GLUCITOL (SORBITOL)	3971	5201	31	29920	30353	1
10	29071930	THYMOL	348	890	156	2552	4491	76
11	29072200	HYDROQUINONE (QUINOL) AND ITS SALTS	1160	559	-52	5163	4352	-16
12	29095010	GUAIACOL	153	155	1	1781	897	-50
13	29124920	HELIOTROPINE (PIPERONYL ALDEHYDE)					0	
14	29124940	3,4,5-TRIMETHOXY-BENZALDEHYEDE	348	381	9	1176	1293	10
15	29154010	MONOCHLOROACETIC ACID, THR SALTS AND ESTERS	1025	1328	30	5794	6742	16
16	29163120	BENZYL BENZOATE	249	683	174	1258	2923	132
17	29163150	BENZOCAINE (ETHYLPARA-AMINO BENZOATE)	122	50	-59	518	952	84
18	29163400	PHENYLACETIC ACID AND ITS SALTS	258	117	-55	3837	611	-84
19	29171940	FERROUS FUMERATE	787	687	-13	4055	4009	-1
20	29171970	ETHOXY METHYLENE MALONATE,DIETHYL MALONATE	0	2	22660	3	3	18
21	29181120	CALCIUM LACTATE	11	6	-43	56	96	72
22	29181320	METROPROLOL TARTRATE	743	751	1	4857	4948	2
23	29181510	POTASSIUM CITRATE	325	171	-48	1441	1499	4
24	29181520	SODIUM CITRATE	1547	790	-49	8593	4882	-43
25	29181550	FERRIC AMMONIUM CITRATE	55	32	-41	274	302	10
26	29181610	CALCIUM GLUCONATE	312	943	202	3174	3519	11
27	29181620	FERROUS GLUCONATE	24	91	276	497	642	29
28	29182110	SALICYLIC ACID	140	265	90	910	1413	55
29	29182120	SODIUM SALICYLATE	189	164	-13	1173	1418	21
30	29182200	0-ACETYLSALICYLIC ACID ITS SALTS AND ESTRS	47	61	30	997	750	-25
31	29182310	METHYL SALICYLATE	304	450	48	3613	3695	2
32	29182320	AMINO SALICYLATE	111	53	-52	414	302	-27
33	29183030	NALIDIXIC ACID	50	454	814	1069	1003	-6
34	29199010	GLYCEROPHOSPHATE ACID				15	15	0
35	29199030	IRON GLYCEROPHOSPHATE	1	3	235	1	34	3375
36	29214236	METHYL DOPA(L-ALPHA METHYL-3, 4- DIHYDROXYPHENYLALANINE)	39	11	-72	223	71	-68

37	29214600	AMFETAMINE BENZFETAMINE ETC THR SALTS	330	4637	1306	4454	13628	206
38	29215110	O- PHENYLENEDIAMINE		31		190	429	127
39	29215120	M-PHENYLENEDIAMINE (M- DIAMINOBENZENE)	461	1104	140	3234	4098	27
40	29215130	P-PHENYLENEDIAMINE	576	260	-55	6869	5686	-17
41	29215170	PARA-AMINO ACETANILIDE	28			197	113	-42
42	29222933	PARA ACETYL AMINOPHENOL(PARACETAMOL)	10486			103518		
43	29223100	AMFEPRA NONE(INN), METHDONE AND MORMETHADONESALTS	73	132	82	201	265	32
44	29224100	LYSINE AND ITS ESTERS SALTS THEREOF	84	296	253	674	1002	49
45	29224210	GLUTAMIC ACID	2	2	-4	83	99	19
46	29224220	MONOSODIUM GLUTAMATE (AZINAMOTO)	23	48	105	229	340	49
47	29224400	TILIDINE (INN) AND ITS SALTS	66	166	152	182	190	5
48	29224910	AMINO ACETIC ACID (GLYCINE)	1335	2209	66	5703	11312	98
49	29224920	N-METHYL TAURINE		2		4	16	296
50	29225011	PARA-AMINO-SALICYLIC ACID	135			197	1	-99
51	29225013	PROCAINE HYDROCHLORIDE		5		92	34	-63
52	29225015	L-TYROSINE(P- HYDROXYPHENYLAMINE)	0	0	1356	2	7	271
53	29225021	FRUSEMIDE	1104	1706	54	8738	9945	14
54	29225024	DOMPERIDONE	643	489	-24	4348	4079	-6
55	29231000	CHOLINE AND ITS SALTS	522	834	60	6335	5311	-16
56	29241100	MEPROBAMATE (INN)				117	2034	1644
57	29242910	ACETANILIDE	4	9	123	47	112	136
58	29242960	PYRAZINAMIDE(PYRAZINE CARBOXAMIDE)	289	441	52	2489	2892	16
59	29242970	Pretilachlor (ISO)	7	0	-97	24	28	16
60	29262000	1- CYANOGUANIDINE(DICYANDIAMIDE)	0			3	1	-57
61	29263000	FENPROPOREX (INN) AND ITS SALTS					31	
62	29280010	ISONIAZID	49	96	97	461	554	20
63	29304000	METHIONINE	37	48	29	215	168	-22
64	29309040	L-CYSTINE (ALPHA-AMINO BETA- THIO PROPIONICACID)-SULPHUR CONTAINING AMINO ACID	134	319	138	2067	1377	-33
65	29322010	COUMARIN, METHYLCOUMARINS AND ETHYLCOUMARINS	544	719	32	4205	4976	18
66	29329100	ISOSAFROLE			1	0		
67	29329300	PIPERANOL			1	131	68	-48
68	29329600	CARBOFURAN (ISO)		1	1		1	
69	29331100	PHENAZONE (ANTIPYRIN) AND ITS DERIVATIVES	344	706	105	3632	5150	42
70	29331910	3-CARBOXY (PARA SLPHPHNYL)-5 PYRAZOLONE	271	19	-93	744	913	23
71	29331920	1(2:5 DCHLR-4-SLPHPHNYL)-3-MTHYL 5-PYRAZLN	126	6	-95	516	412	-20
72	29331930	3-MTHYL-1(4-SLPHO-0-TOLUYL-5- PYRAZOLDNE)	159	114	-28	169	561	233
73	29331940	PHENYL-METHYL PYRAZOLONE		9		2	19	667
74	29331950	1-PHNYL-5-PYRAZLN-3-CRBOXYLC ACD ETHYLESTR	0			64	16	-75

		India's Total Export of BULK DRUGS, DRUG INTERMEDIATES	316068	367564	16	2228330	2245276	1
100	29349100	AMINOREX, BROTIZOLAM AND OTHER LIKE CMPNDS, SALTS THEREOF	152	15	-90	3095	3185	3
99	29339920	Carbendazim (ISO)	6	1	-85	179	14	-92
98	29339200	AZINPHOS-METHYL (ISO)	10	75	683	100	88	-11
97	29339100	ALPRA ZOLAM, CAMAZEPAM AND OTHER CMPNDS OF ZEPAM, SALTS THEREOF	1032	1518	47	7912	10092	28
96	29335950	Bispyribac-sodium (ISO)		8			132	
95	29335940	1 - AMINO-4METHYL PIPERAZINE	364	134	-63	2619	1622	-38
94	29335930	DIETHYL CARBANAZINE CITRATE		211		47	336	609
93	29335920	TRIMETHOPRIM	871	933	7	6606	6285	-5
92	29335910	AMINOPHYLLINE(CORDOPHYLIN)	112	35	-69	372	372	0
91	29335500	LOPRAZOLAM, MECLOQUALONE, METHAQUALONE , ZIPEROL, SALTS THEREOF						
90	29335400	OTHER DERIVATIVES OF MALONYLUREA (BARBITURIC ACID), SALTS THEREOF	460	81	-82	6109	844	-86
89	29335300	ALLOBARBITAL AND OTHR BARBITAL COMPNDS ANDITS SALTS	144	288	100	2464	2215	-10
88	29335200	MALONYLUREA (BARBITURIC ACID) AND ITS SALS	2	1	-38	172	107	-38
87	29334100	LEVORPHANOL (INN) AND ITS SALTS	3	408	15080	246	1090	343
86	29333929	Other	8734	18302	110	73773	77026	4
85	29333922	Imazethapyr (ISO)	578			2912	1742	-40
84	29333921	Acetamiprid (ISO)	3	0	-97	3	69	2086
83	29333917	Chlorantraniliprole (ISO)				138	43	-69
82	29333914	CHLORPHENIRAMINE MALEATE	314	560	78	3614	2802	-22
81	29332960	Imidacloprid (ISO)					0	
80	29332950	ALBENDAZOLE	640	829	29	5255	6230	19
79	29332940	DIMETRIDAZOLE	56	365	555	2062	3927	90
78	29332930	MEBENDAZOLE	278	456	64	2066	2628	27
77	29332920	METRONIDAZOLE METRONIDIAZOLE BENZOATE	1226	683	-44	9402	7126	-24
76	29332910	TINIDAZOLE	221	179	-19	1345	1559	16
75	29331960	1-(M-SULPHOPHENYL)-3- PYRAZOLONE	4			137		

* As per Principal Commodity Basket of HS Code of commodities provided by DGCI&S.

IMPORT DATA BULK DRUGS & INTERMEDIATES OCTOBER, 2024

Values Rupees in lakhs Source: DGCI&S

							Source:	DGCI&S
S.No.	HSCode	Commodity	Oct 2023 (R)	Oct 2024 (F)	%Growth	Apr-Oct 2023 (R)	Apr-Oct 2024 (F)	%Growth
1	17023010	GLUCOSE LIQUID		6		608	35	-94
2	17023020	GLUCOSE SOLID	83	29	-65	299	398	33
3	17023031	DEXTROSE,SOLID	22	209	868	324	423	31
4	17023039	DEXTROSE OTHER THAN SOLID	51	36	-29	563	442	-22
5	17024039	DEXTROSE OTHER THAN SOLID		70		0	70	29158
6	29051410	ETHAMBUTOL, ETHAMBUTOL HCL		353		0	1912	429039
7	29051420	SALBUTAMOL SULPHATE				49	129	165
8	29054300	MANNITOL	6151	5126	-17	28214	25829	-8
9	29054400	D-GLUCITOL (SORBITOL)	753	641	-15	4868	5398	11
10	29071930	THYMOL	7	0	-97	40	45	12
11	29072200	HYDROQUINONE (QUINOL) AND ITS SALTS	2366	2595	10	17197	15768	-8
12	29095010	GUAIACOL	293	218	-26	1838	678	-63
13	29124940	3,4,5-TRIMETHOXY-BENZALDEHYEDE	45	0	-100	746	226	-70
14	29154010	MONOCHLOROACETIC ACID,THR SALTS AND ESTERS	47	73	57	2459	1223	-50
15	29163120	BENZYL BENZOATE	99	26	-74	632	246	-61
16	29163150	BENZOCAINE (ETHYLPARA-AMINO BENZOATE)		7		7	7	1
17	29163400	PHENYLACETIC ACID AND ITS SALTS	505	711	41	507	2859	464
18	29171940	FERROUS FUMERATE	4			109	22	-80
19	29171970	ETHOXY METHYLENE MALONATE,DIETHYL MALONATE	1571	1482	-6	10054	10075	0
20	29181120	CALCIUM LACTATE	15	27	74	356	234	-34
21	29181320	METROPROLOL TARTRATE		98		636	278	-56
22	29181510	POTASSIUM CITRATE	102	23	-77	831	872	5
23	29181520	SODIUM CITRATE	390	222	-43	1776	1071	-40
24	29181550	FERRIC AMMONIUM CITRATE				3		
25	29181610	CALCIUM GLUCONATE	465	563	21	3495	4463	28
26	29182110	SALICYLIC ACID	1635	2786	70	12042	14675	22
27	29182120	SODIUM SALICYLATE	3	5	37	23	32	39
28	29182200	0-ACETYLSALICYLIC ACID ITS SALTS AND ESTRS		111		97	285	195
29	29182310	METHYL SALICYLATE	35	117	232	1642	623	-62
30	29182320	AMINO SALICYLATE				13		
31	29183030	NALIDIXIC ACID	40			40	467	1058
32	29199010	GLYCEROPHOSPHATE ACID					1	
33	29214236	METHYL DOPA(L-ALPHA METHYL-3, 4- DIHYDROXYPHENYLALANINE)	1581	468	-70	6887	6780	-2
34	29214600	AMFETAMINE BENZFETAMINE ETC THR SALTS	89			145	199	37
35	29215110	O- PHENYLENEDIAMINE	730	913	25	5569	8687	56
36	29215120	M-PHENYLENEDIAMINE (M-DIAMINOBENZENE)	497	283	-43	2813	1955	-31
37	29215130	P-PHENYLENEDIAMINE	176	213	21	2067	2548	23

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38	29222933	PARA ACETYL AMINOPHENOL(PARACETAMOL)	433			3295		
39	29224100	LYSINE AND ITS ESTERS SALTS THEREOF	4981	6230	25	51162	60735	19
40	29224210	GLUTAMIC ACID	7	30	330	201	388	94
41	29224220	MONOSODIUM GLUTAMATE (AZINAMOTO)	4859	2911	-40	25263	31024	23
42	29224910	AMINO ACETIC ACID (GLYCINE)	652	2815	331	5886	13200	124
43	29224920	N-METHYL TAURINE	134	34	-74	192	595	210
44	29225011	PARA-AMINO-SALICYLIC ACID	134	0	-74	17	99	473
45	29225015	L-TYROSINE(P-HYDROXYPHENYLAMINE)	224	99	-56	1509	1010	-33
46	29225021	FRUSEMIDE	224	55	-50	3	40	1295
47	29225024	DOMPERIDONE				5 67	40	1255
48	29231000	CHOLINE AND ITS SALTS	84	356	325	807	1337	66
49	29241100	MEPROBAMATE (INN)	04	184	525	212	1337	527
50	29242910	ACETANILIDE	100	1030	442	7162		1
51	29242960	PYRAZINAMIDE(PYRAZINE CARBOXAMIDE)	190	75			7208	2
52	29242970	Pretilachlor (ISO)	175		-57	665	677	
53	29251200	GLUTETHIMIDE (INN)	0	74	330633	199	1322	565
54	29262000	1-CYANOGUANIDINE(DICYANDIAMIDE)				1		
_		, , ,	4759	3137	-34	44894	38183	-15
55	29263000	FENPROPOREX (INN) AND ITS SALTS				1		
56	29264000		7	4	-37	54	34	-38
57	29280010	ISONIAZID	22	1027	4550	1470	1358	-8
58	29304000	METHIONINE	8298	12479	50	60976	84195	38
59	29309040	L-CYSTINE (ALPHA-AMINO BETA-THIO PROPIONICACID)-SULPHUR CONTAINING AMINO						
		ACID	829	1403	69	12220	9098	-26
60	29322010	COUMARIN, METHYLCOUMARINS AND	c	20	400			
61	29329300	ETHYLCOUMARINS PIPERANOL	6	29	420	208	388	87
62	29329300	PHENAZONE (ANTIPYRIN) AND ITS DERIVATIVES	589	302	-49	1688	1457	-14
02	29331100	Phenazone (ANTIPTRIN) AND ITS DERIVATIVES	133	76	-43	592	662	12
63	29331910	3-CARBOXY (PARA SLPHPHNYL)-5 PYRAZOLONE	_			2	140	2556
64	29331920	1(2:5 DCHLR-4-SLPHPHNYL)-3-MTHYL-5-	0			3	118	3556
04	29551920	PYRAZLN	1143			1558	61	-96
65	29331930	3-MTHYL-1(4-SLPHO-0-TOLUYL-5-PYRAZOLDNE)					_	
66	29331940	PHENYL-METHYL PYRAZOLONE					2	
66				123		305	451	48
67	29331960	1-(M-SULPHOPHENYL)-3-PYRAZOLONE		85			174	
68	29331970	ANALGIN	118	369	212	1214	1885	55
69	29331980					0	11	15767
70	29332910	TINIDAZOLE				58	38	-34
71	29332920	METRONIDAZOLE METRONIDIAZOLE BENZOATE	241	1319	447	3381	6388	89
72	29332930	MEBENDAZOLE		0		7	99	1331
73	29332940	DIMETRIDAZOLE		0			98	
74	29332950	ALBENDAZOLE	218			1270	814	-36
75	29333914	CHLORPHENIRAMINE MALEATE	66	105	59	69	105	52
76	29333917	Chlorantraniliprole (ISO)	97			134		
77	29333921	Acetamiprid (ISO)		<u> </u>		38		ļ
78	29333922	Imazethapyr (ISO)		<u> </u>			0	
79	29333929	Other	2293	575	-75	9064	10704	18
80	29335200	MALONYLUREA (BARBITURIC ACID) AND ITS	2233	.,.	,,,	5004	10704	10
		SALS	410	142	-65	2879	2425	-16
81	29335300	ALLOBARBITAL AND OTHR BARBITAL COMPNDS	1	152	19373	6	156	2341
	1	ANDITS SALTS	I	1-2-	100/0	ľ		

		India's Total Import of BULK DRUGS, DRUG INTERMEDIATES	322061	344881	7	2162234	2249649	4
100	29359011	SULPHAMETHOXAZOLE	17			17	21	18
99	29355090	Other	0	29	20244	27	53	94
98	29353000	N-ETHYL-N-(2-HYDROXYETHYL) PERFLUOROOCTANE SULPHONAMIDE					2	
97	29351000	N-METHYLPERFLUOROOCTANE SULPHONAMIDE				101	19	-81
96	29349990	OTHER	50521	35671	-29	321206	329906	3
95	29349920	MORPHOLINE	673	239	-64	4679	2974	-36
94	29349910	CHIARO THIOPHENE-2-CARBOXYL IC ACID	1047	186	-82	4321	279	-94
93	29349200	OTHER FENTANYLS AND THEIT DERIVATIVES	41	71	74	229	442	94
92	29349100	AMINOREX, BROTIZOLAM AND OTHER LIKE CMPNDS, SALTS THEREOF	1231			1248	19	-98
91	29339920	Carbendazim (ISO)				1	2	112
90	29339200	AZINPHOS-METHYL (ISO)					0	
89	29339100	ALPRA ZOLAM, CAMAZEPAM AND OTHER CMPNDS OF ZEPAM, SALTS THEREOF	66	119	80	1608	1081	-33
88	29335950	Bispyribac-sodium (ISO)				17	55	220
87	29335940	1 - AMINO-4METHYL PIPERAZINE					10	
86	29335930	DIETHYL CARBANAZINE CITRATE				1		
85	29335920	TRIMETHOPRIM		113		1315	191	-85
84	29335910	AMINOPHYLLINE(CORDOPHYLIN)				129	307	137
83	29335500	LOPRAZOLAM, MECLOQUALONE, METHAQUALONE , ZIPEROL, SALTS THEREOF				7	0	-96
82	29335400	OTHER DERIVATIVES OF MALONYLUREA (BARBITURIC ACID), SALTS THEREOF		1		184	3	-98

* As per Principal Commodity Basket of HS Code of commodities provided by DGCI&S.



Fortifying API Supply Chains 2025 and Beyond: Aligning Current Strengths with Future Opportunities for Better Patient Outcomes

By: Dr. Ajay Babu Pazhayattil

The US FDA has highlighted vulnerabilities in the supply of active pharmaceuticals (APIs) and key ingredients. According to the agency, 72% [1] of API manufacturers [Figure 1] serving the US market are located overseas. Consequently, when disruptions occur at these limited siteswhether due to geopolitical events, natural disasters, economic tariffs, or pandemic-related shutdowns, the patients bear the impact. Thousands of pharmaceutical formulation plants worldwide rely heavily on imports. For small molecule drug products, API costs represent the most significant expense. Policymakers world's in the largest pharmaceutical market, the US, and the largest generics producer, India, are increasingly dependency concerned about and its implications on patient care.

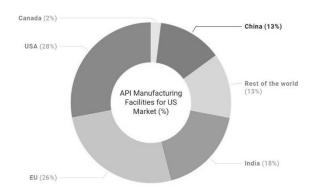


Figure 1: US Marketed Products API Supply

Reference: US FDA Testimony Before the House Committee on Energy and Commerce, Subcommittee on Health An older World Bank exploratory study on APIs revealed that Western API manufacturers face an average wage index of 100, whereas, in Asia, it is as low as 8 to 10. Additionally, India and China benefit from lower electricity, coal, and water costs. These countries also have the advantage of being part of extensive networks of raw material and intermediary suppliers, reducing shipping and transaction costs. Furthermore, firms in India and China often rely on less expensive equipment, resulting in lower depreciation costs. [2]. Meanwhile, capacity utilization for API manufacturing sites in the US remains low. Over the past decade, Taiwan saw the highest percentage growth in new API manufacturing facilities globally, with a 326% increase and 189 new sites. India followed with a 254% growth and 3,676 new facilities, while Israel recorded a 131% increase with 142 new sites. China ranked fourth, achieving a 55% growth with 531 additional API manufacturing sites [3].

The FDA believes that advanced manufacturing technologies hold the potential to restore US competitiveness and reduce national security risks, even amid current challenges. New regulatory guidelines aim to support emerging technologies, such as flow chemistry and continuous manufacturing, acknowledging that traditional methods cannot match the cost efficiencies and productivity of established facilities. Historically, the US FDA's long-term strategies have proven effective in addressing industry challenges. While flow chemistry is widely appreciated in theory, its practical implementation and commercialization have faced significant obstacles despite efforts from innovators and regulatory encouragement. It is well understood within the industry that flow chemistry may not provide a universal solution. However, continuous manufacturing based on mean residence time is often more practical and feasible for finished drug product formulators compared to similar applications in drug substance development. This discrepancy stems from various factors, including endpoint testing-based reaction pathways for drug substances, high costs of process characterization and stabilization, regulatory review complexities, challenges in managing the solid flow and reactor components at scale, applicability in slow reaction processes, and issues with low solubility compounds (emerging molecules) etc. [4]. Nevertheless, progress is being made, and organizations committed to innovation should take note of these advancements. A landmark achievement came in 2019 with the introduction of the first fully integrated end-to-end flowchemistry/continuous manufacturing system for commercial production [5]. To further support domestic adoption, the US government has provided a \$69-million grant [6].

From an Indian perspective, the country has enjoyed economic, political, and geopolitical stability for over a decade. Coupled with its democratic framework, expanding infrastructure, and policies such as productionlinked incentive (PLI) schemes, India's bulk drug industry remains highly competitive. These factors place Indian bulk drug manufacturers, with their well-established processes, in a favourable position despite potential US tariff threats, which are largely viewed as short-term trade negotiation strategies. With plans for process innovation and technology adoption, Indian facilities are well-positioned to capitalize on emerging opportunities over the next five years. However, investing in strategies to mitigate regulatory compliance risks will be crucial to realizing this potential.

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Methods for solving APIs Solubility & Stability Issues

APIs are often available in the forms of cocrystals, salts or polymorphs, hydrates, solvates, as well as amorphous forms in nature. The formation of salts, cocrystal, solvates are hydrates as well as the existence of polymorphs is rarely predictable. API manufacturing companies modify them to enhance the properties of a parent drug for finding or getting the best form of a drug with various innovative characterization methods.

APIs exist in several forms that vary significantly in their properties, leading to physical, chemical, mechanical and biopharmaceutical properties, they are organic chemicals used as ingredients in drug products. Organic chemicals are chemical compounds that contain carbon as part of their molecular structure and they can be either natural or synthetic.

Pharmaceutical ingredients solubilize, suspend thicken, dilute, emulsify, stabilize, preserve, colour, flavour and fashion medicinal agents into efficacious and appealing dosage forms. Each type of dosage form is a unique in its physical and pharmaceutical characteristics.

Solubility of an API

Solubility of an active pharmaceutical ingredient is critical for its bioavailability (BA), dosing precision, stability, and overall, its efficacy, forming eutectic mixtures between an active pharmaceutical ingredients and an excipient has been widely used to improve solubility of active pharmaceutical ingredient.

Active pharmaceutical ingredients solubility is necessary for the final drug to succeed in terms of therapeutic efficacy. In the case of solid and liquid oral formulations, good active pharmaceutical ingredients solubility is a prerequisite for sufficient absorption of the active pharmaceutical ingredient by the body. If an active pharmaceutical ingredient is insoluble, it cannot pass the gastrointestinal membrane and enter systemic circulation. Thus, their intended physiological effect will not be realized. Liquid formulations typically require the actions typically require the active pharmaceutical ingredient to be present in a dissolved form. Solubility is especially important for parenteral solutions which also need to be particle-free.

Eutectic systems

Eutectic systems are mixtures of components miscible in the liquid phase and either immiscible or partially miscible in the solid phase. The melting temperature of the eutectic system within a specific composition range can be lower than that of its pure constituents.

To increase the solubility, stability, and bioavailability of APIs, they have been combined with a second component (excipient) to form eutectic mixtures, such as the combination of lidocaine and camphor. These types of systems could exhibit a significant depression of the melting temperature and are regarded as a subgroup of deep eutectic solvents called therapeutic deep eutectic solvents.

Eutectic systems offer an alternate way to enhance the solubility of APIs. Eutectic systems are generated by physical mixing of two (solid) components in a ration that causes a melting point depression.

It is reported that presently over 40 percent of new drug candidates entering the drug development pipeline fail due to the non optimal biopharmaceutical properties like solubility, permeability. These non-optimal biopharmaceutical properties of the molecules present many delivery issues to the formulators and need diverse approaches to overcome this issue.

Solubility and permeability of the molecule can be improved using various approaches which include pH modification, salt formatioin, cosolvency and surfactant assisted solubilization, nanocrystal line solid dispersion, cocrystals, polymeric micelle, canonization, liposomes, micromulsions and self-emulsifying drug delivery systems.

Many research papers have reported that mesoporus silica-based dosage forms offer the potential to improve the absorption of poorly soluble drugs after oral administration.

High throughput screening and target-oriented drug discovery offer results challenging issues in active pharmaceutical ingredients that are soluble and poorly water unable to product. Solubility commercialize and permeability are two important factors that correlate with in vitro and in vivo performance. Poor solubility is a growing issue in drug development in pharmaceutical sector. Which after leads to optimized medicinal products or increased development timelines.

Physical properties of API solid forms can have a significant influence on many physical properties, including melting point, solubility, stability, hygroscopicity, bulk density and mechanical properties. In fact, most screening and selection processes focus on improving physical properties to enhance the drughandling characteristics, absorption, and delivery options.

An appropriate active pharmaceutical ingredient form has the properties to facilitate its production such as purification, isolation, handling, stability, storage, and shipping. It also supports and enhances the ability to develop a formulation and manufacture the required dosage form.

Key active pharmaceutical ingredients properties that influence medicinal product attributes and performance are: crystallinity; polymorphism; density; solubility; stability(chemical and physical stabilities); particle size distributing and crystal morphology and habit.

Globally active pharmaceutical ingredients manufacturing technologies are rapidly changing due to the advent of globalization, the significance growing of generic drug manufacturers, the rising awareness of environmental impact and the encouragement by the domestic regulatory to enhance process understanding and improve quality and efficiency while minimizing risk have led the pharmaceutical sector to reconsider the way pharmaceuticals are manufactured and the process development is approached.

This self-reflection has resulted in the promotion of continuous pharmaceutical analytical technology in order to significantly increase the efficiency and sustainability of manufacturing processes.

The stringency of current good manufacturing practice in active pharmaceutical ingredients manufacturing should enhance as the process proceeds from early active pharmaceutical ingredients steps to final steps of purification and packaging. Physical processing of active pharmaceutical ingredients, such as granulation, coating, or physical manipulation of particle size like milling and micronizing should be conducted in accordance with the specifications of pharmaceutical guidelines. As quality of the product becomes more stringent to exist in international regulated markets, which automatically increases cost of production, but low -cost products with quality. When raw material cost increases it is very tough to pass on directly to these costs to customers.

In such a situation the active pharmaceutical ingredients manufacturers can mitigate this

challenge up to a limit by constantly inspecting their manufacturing system to see how they can increase the productivity and decrease effluents discharge, which will increase some level of profitability.

Across the globe most countries are regulating APIs manufacturing because the quality of active pharmaceutical ingredients in a drug always will have a direct effect on the safety, efficacy and stability of that drug. The drugs produced by bad quality and contaminated active pharmaceutical ingredients with negative health effects such as illness or deaths.

An active pharmaceutical ingredient with a appropriately defined form adequately serves the development and manufacturing of the selected dosage form. It will provide a bulk drug material with properties tailored to the needs of the dosage form such as enhanced density, flow, compressibility and other mechanical properties, solubility, dissolution rate, and content uniformity.

Conclusion:

Active pharmaceutical ingredients play vital role in drug formulations. APIs form the most important part of new drug formulation even if generics or branded drugs. Solubility of APIs is

Source: Chronicle Pharmabiz 28th November 2024 (the author is a retired chemical Engineer)

critical for its bioavailability dosing precision, and stability. Forming eutectic mixtures between an API and excipient has been widely used to improve solubility of API.

Production of API is challenging as per the cGMP. As active pharmaceutical ingredients form the main ingredients of the new drug formulation and it contamination takes place at the time of production, it will affect the safety and efficacy of the new drug product and will lead to an adverse drug reaction.

Global active pharmaceutical ingredients markets of regulated and unregulated offer tremendous opportunities for Indian API players. Due to highly increasing healthcare expenses, all government regulatory bodies are sincerely trying to reduce healthcare costs by producing drugs from efficient production units in the country.

The cost reducing measures in healthcare sector by the highly regulated markets have pushed up the urgent demand for low cost generic drugs. The manufacturing of active pharmaceutical ingredients moves on to rise with more international pharmaceutical manufacturing companies are favourable looking towards India for quality wise low cost APIs to meet their demands.

Introduction:

Indonesia is the largest Pharma market among ASEAN countries. Indonesia hosts many multination drug companies. The authorities are also investing in regulatory improvement initiatives, which will complement their efforts to achieve universal healthcare coverage. They are PICS member. Country's economic growth is forecasted at 5.3% in 2025. Pharma market in 2023 is estimated at \$6.8 billion.

Indonesia is a lower-middle income country, where a significant proportion of the population does not have access to affordable healthcare. Despite it having an above-regional average total pharmaceutical market size, per capita expenditure on pharmaceuticals (USD 23.5) is below the average for South East Asia. By 2028 market size is expected to rise to \$ 9.6 bn from the present \$ 6.8 bn which works out to a cagr of 11%

Pharmaceuticals currently account for 16.6%, of healthcare spending, and is expected to constitute over 17.7% by 2028. Market attracts mostly generic manufacturers. Domestic drugmakers will continue to boost their capacities and capabilities in response to competition from Indian companies operating regionally.

With 29 pharmaceutical multinationals operating in the country, controlling a total market share of only around 25%. Only four of these namely Sanofi, Pfizer, Novartis & Bayer have manufacturing facilities and the rest have only offices.

Indonesia's economy is growing, driven by the country's large domestic consumption base and natural resources such as palm oil, in which the country holds a dominant position. This will have a strong effect on pharmaceutical spending as private expenditure is expected to remain a sizeable contributor to total healthcare expenditure, despite the roll-out of universal healthcare, Jaminan Kesehatan Nasional (JKN) ,which was rolled out in 2014 Jan. This was projected to become a country wide insurance scheme by the beginning of 2019. Some of the reports state only 70% of the population would have been covered, as the funding fell short. Generics sector was mainly encouraged to be used wherever possible.

Multinational pharmaceutical companies dominate the patented medicines sector in Indonesia, with companies such as Sanofi, Merck & Co and Novartis playing an active role through their subsidiaries. The recent rule changes to foreign ownership in Indonesia – increasing from 75% to 100% – have meant that international pharma companies are looking for both regional partners and acquisition targets for a local manufacturing base. This has increased the capital access for manufacturers across the region as investors look to 'get in early' among the best facilities before a potential round of consolidation and an increased interest from multinational pharma companies. Lack of an effective intellectual property regime and a persistently blurry regulatory framework will continue to deter drugmakers, preventing an immediate and significant uptick in pharmaceutical growth and multinational interests.

Updates

- In early July 2024, Indonesia's outgoing a) president Joko Widodo directed his cabinet to address the issue of high drug prices and medical equipment costs in Indonesia. The directive came in response to growing public concerns over the affordability of essential medicines and healthcare services in the country. Medicine prices in Indonesia have been significantly higher compared to neighbouring countries, particularly Malaysia.
- b) On July 9 2024, Novo Nordisk signed an agreement with Indonesia's state-owned pharmaceutical company Bio Farma to package insulin in the country. Under the memorandum of understanding. Novo Nordisk will bring in its know-how in diabetes care and insulin manufacturing while Bio Farma will contribute its local facilities. The success of this partnership will position Indonesia as an attractive destination for other global pharmaceutical companies looking to expand their operations in South East Asia.

c) In September 2024, South Korean drug maker Daewoong Pharmaceutical has announced the launch of a new stem cell plant in Indonesia, marking the 20th anniversary of its entry into the Indonesian market. The facility is set to drive largescale research and development projects in collaboration with local pharmaceutical and biotech industries, according to the firm

Generic Drug Market & Forecast:

Growth of Indonesia's generic medicines sector will mainly be supported by increased volume consumption, pushed by demand and the support with measures aiming to achieve universal healthcare coverage. Across the region, generic drugmakers are increasing production to meet the rising demand, which a re regulated by cost containment measures.

Low purchasing power of the population, the expansion of the universal healthcare programme and the mandate that generics necessarily to comprise 92% of the Essential Drugs List are likely to stimulate the growth of the generic medicines market in Indonesia. Generic drug sales in Indonesia are projected to rise from USD \$4.57 bn in 2023 to USD \$4.87 bn in 2024 with a growth of 6.73%. Over a short term of Five years, i.e. by 2028 market is likely to touch \$6.57 billion with a growth of 8 % cagr. Volumes are expected to grow much faster due to price containment.

The expiry of patents on a number of major drugs and compulsory licensing are expected to further facilitate low-cost manufacturing, boosting the consumption of generic drugs. Generic prescribing will be promoted as health insurance coverage increases and there are further cost containment measures enacted by the government, encouraging generic substitution. The organisation charged with administering the universal health coverage, Badan Penyelenggara Jaminan Sosial (BPJS), has mandated that 92.0% of drugs on the Essential Drugs List will be generics.

The government is also encouraging greater use of generic medicines to control costs and healthcare professionals working in public hospitals are mandated to prescribe generic medicines, whenever possible. While this represents an exceedingly attractive opportunity for generics manufacturers, it poses challenges for revenue streams of innovative drug makers

Regulatory:

The main regulatory authority in Indonesia is the government-controlled National Agency of Drug and Food Control/Badan Pengawas Obat dan Makanan (NADFC/BPOM), created in 2001 as a part of a major restructuring. It has broader authority than its predecessor, and reports directly to the President. Its main objectives are to protect the population from unsafe therapeutic products and traditional medicines. The BPOM claims to prioritise accelerating the drug approval process and improving transparency.

Registering drugs remains a lengthy and complicated process in Indonesia, with delays estimated to range from one to three years. Presently, there are around 17,000 registered drugs on the Indonesian market. Local clinical trials are not required in Indonesia. Drug approvals in Indonesia do not expire, although reregistration may be necessary if serious adverse effects are reported once the drug is on the market.

Medicines are classified into the following categories: narcotics (category O), prescription medicines (category G), OTC medicine with warning labels (category W), and general OTC medicines (category F). Traditional medicines are classed as standardised herbal medicines, Jamu (traditional Indonesian drug) and phytopharmaceuticals, all of which(Traditional) can be sold as OTCs.

Discriminatory Regulations: The Indonesian Ministry of Health Decree 1010/MENKES/PER/XI/2008, stipulates that only products from companies registered as 'licensing pharmaceutical industry' can be granted marketing approval. In order to be registered as such, foreign pharmaceutical firms must either establish a local manufacturing facility or transfer intellectual property to another pharmaceutical firm with local manufacturing facilities in Indonesia.

Local Content Regulation

The Indonesian Ministry of Industry plans to issue a new regulation for the calculation of local content for pharmaceutical products. This planned new regulation is a response to Presidential Directive No 6 of 2016 on the Acceleration of the Development of the Pharmaceutical and Medical Equipment Industry. That directive mandated the Ministry of Industry to implement policies to support the development of Indonesia's pharmaceutical and medical equipment industry, as well as to monitor and evaluate the implementation of local content policy in the pharmaceutical sector.

This mandate to the Ministry of Industry is also supported by Minister of Health Regulation No 17 of 2017 regarding Action Plan for the Development of the Pharmaceutical and Medical Equipment Industry (MOH Reg. 17/2017), which requires the pharmaceutical and medical equipment industry in Indonesia to prioritise the use of raw materials produced domestically.

The Ministry of Industry said the local content requirement for the pharmaceutical sector will differ for each stage of the manufacturing and development process. When evaluating local content levels of local pharmaceutical manufacturing operations, elements to consider include employees' nationalities, ownership of the manufacturing plants and use of locally-sources materials. The local content of the pharmaceutical product is calculated using four factors (and weight values):

- Raw materials content (50%)
- Research and development (30%)
- Production process (15%)
- Packaging process (5%)

With these local content requirements, the hope is that investors will set up manufacturing plants in Indonesia to produce the materials and process the products in Indonesia. Existing pharmaceutical product manufacturers should also expect that they will be required to comply with the new local content requirements.

India Pharma exports to Indonesia by Category \$ Million							
			2021-		2023-		
Category	2019-20	2020-21	22	2022-23	24	Change%	
Bulk Drugs & Drug Intermediates	66.88	77.37	124.13	119.04	110.19	-7.44	
Drug Formulations & Biologicals	13.64	62.24	72.95	27.78	39.34	41.63	
Ayush	0.62	0.21	0.34	0.27	0.20	-28.27	
Herbal Products	1.17	2.29	2.93	3.84	3.67	-4.48	
surgicals	4.32	5.44	6.74	5.18	6.88	32.75	
Vaccines	20.54	10.96	46.24	51.09	39.84	-22.02	
Total	107.16	158.51	253.32	207.20	200.12	-3.42	

India's exports:

India's Imports from Indonesia

India's Pharma Imports from Indonesia by Category \$ Million							
Category	2019-20	2020-21	2021-22	2022-23	2023-24	Change%	
Bulk Drugs & Drug Intermediates	27.51	20.16	31.56	28.45	14.18	-50.17	
Drug Formulations & Biologicals	9.37	7.69	25.51	10.65	10.05	-5.61	
Ayush	0.02	0.00	0.00	0.00	0.00		
Herbal Products	5.88	5.24	9.05	7.80	5.63	-27.85	
surgicals	0.03	1.53	0.56	0.26	0.41	57.57	
Vaccines	85.12	54.57	54.28	75.20	100.15	33.17	
Total	127.94	89.20	120.97	122.36	130.42	6.58	

Importers List (as provided by Indian Embassy in Indonesia)

	d by Indian Embassy in Indo		
Agung Mulia Chemindo,	San Prima Sejati, PT	Agru Farma Teknologi, PT,	Tasena Citra Masindo,
PT, Mr. Steven Sunjaya,	[Semarang Branch],	Mr. Sarwono, Director,	PT, Mr. Yitna Tirtabrata,
President Director,	Mr. Anshar Harlie, Sales	sales@agru.co.id	Director, sales@tasena-
info@agungmulia-	Manager,		cm.com;
<u>chem.com</u>	Sanprima_smg@yahoo.c		
	<u>o.id</u>		tasenacm@indosat.net.i
			d
Kinas Global Indonusa,	Ganesha Sakti Abadi,	IMCD Indonesia, PT	Insan Indofarma, PT
PT, Mr. Andy Setiawan,	PT,	Mrs. Adelia Sia	[Surabaya Branch]
Owner,	Mr. Gandhi Kurniawan,	Director	Mr. Irfan Nur Ridho
busdev@kinasglobal.co	Director,		Branch Manager
	ganesha gsa@yahoo.co	tranggono.bayu@imcd.co.i	insanjaya@yahoo.com
<u>m</u>		<u>d</u>	insanjaya@yanoo.com
Brataco Chemika, PT	<u>m</u> Mega Medika	Signa Husada, PT	Plasmindo Prima
	-	-	
[Bogor Branch],	Multianugerah, PT, Dr.	Mr. Eddy K. Umbas	Sejahtera, PT
Ms. Susantini, Branch	Budi Setya, Owner,	President Director	Mr. Budi Hermawan
Manager,	presdir@mmm.co.id	marketing@signahusada.c	Director
		om	plasmin jakarta@yahoo.
sas.bogor@bratachem.c			<u>com</u>
<u>om</u>			
Anindojaya Swakarsa,	Tigaka Distrindo	United Chemicals Inter	Surya Kejayan Jaya
PT, Mr. Djohan Arifin,	Perkasa, PT	Aneka, PT	Farma, PT
President Director,	Mr. Thomas Riki	Ir. Herman Moeliana	Mr. Halim Willyam
infp.ajjs@anindojaya.co	Hartanto	President Director	Director
<u>m</u>	President Director	ucia.jkt@omya.com	skjfpt@indosat.net.id
	ice@pttdp.com		
Tritunggal		Mensa Binasukses, PT	Harrymann, CV
Arthamakmur, PT	Romindo Primavetcom,	Mr. Jimmy Sidharta	Mr. Gunawan
	PT	•	Director
Mr. Temi Hendri		President Director	harrymann@hotmail.co.i
Director	Mr. FX. Gani Haryanto	contact@mbs.co.i d;	
tam@triarth.com	Ducaidant Divatar	mbshq@mbs.co.id	<u>d</u>
	President Director		
	romindo@romindo.ne		
	<u>t</u>		
Galic Bina Mada, PT	Menjangan Sakti, PT	PT Enseval Putera	Dwi Pardi, PT
Mrs. Silvi Tambuwun	[Operational Office]	Megatrading Tbk.,	Mr. Aswin Aditiawan
President Director	Mr. Jimmy Sudharta	Mr. Djonny Hartono	Director
sales@galicbinamada.	President Director	Tjahyadi	(021) 5309004
com	suliana@mensa.co.id	President Director	
	<u>sanana@mensa.co.iu</u>		
		amelia bharata@enseval.	
Mr. John Lucius Tionster	Mrs. Comu Terresso	<u>com</u>	Mr. Elio Abdal Karina
Mr. John Lucky Tjandra	Mrs. Gary Tanoesoe	Mr. Emmanuel Zebua	Mr. Elie Abdel Karim
President Director	Director	President Director	President Director
	Dos Ni Roha, PT	Asveliagracia Pratama, PT	Abbott Indonesia, PT
Corona Prajitna, PT		Asvenagracia i ratarita, i r	
(021) 6690704	corcomm@dnr.id	asveliainfo@gmail.com;	custservice.id@abbott.co
-		-	

Thank you

pls share views at ed@bdmai.org for further improvement