



Toxics Link
for a toxics-free world



Presence of
Mercury in skin
whitening creams

About Toxics Link

Toxics Link is an Indian environmental research and advocacy organization set up in 1996, engaged in disseminating information to help strengthen the campaign against toxics pollution, provide cleaner alternatives and bring together groups and people affected by this problem. Toxics Link's Mission Statement is *"Working together for environmental justice and freedom from toxics"*. We have taken upon ourselves to collect and share both information about the sources and danger of poisons in our environment and bodies, and information about clean and sustainable alternatives for India and the rest of the world.

About EEB

The European Environmental Bureau (EEB) is the largest network of environmental citizens' organisations in Europe. It currently consists of around 170-member organisations in more than 36 countries (all EU Member States plus some accession and neighbouring countries), including a growing number of European networks, and representing some 30 million individual members and supporters.

ZMWG:

The Zero Mercury Working Group (ZMWG) is an international coalition of over 110 public interest environmental and health non-governmental organizations, from more than 55 countries from around the world, formed in 2005 by the European Environmental Bureau and the Mercury Policy Project. ZMWG strives for zero supply, demand, and emissions of mercury from all anthropogenic sources, with the goal of reducing mercury in the global environment to a minimum. The Mission is to now advocate and support the implementation and enforcement of the Minamata Convention on Mercury.

www.zeromercury.org

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Disclaimer:

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List of Abbreviations:

ASEAN	Association of Southeast Asian Nations
BIS	Bureau of Indian Standards
CAGR	Compound Annual Growth Rate
CDCP	Centre for Diseases Control and Preventions (CDCP)
CDSCO	Central Drugs Standard Control Organization
EU	European Union
FDA	Food and Drug Administration
ICP-MS	Inductively Coupled Plasma-Mass-Spectrometry
MoHFW	Ministry of Health and Family Welfare
NEP	National Environmental Policy
ppm	Parts per million
RAPEX	e-safety Gate Rapid Alert System
SC	Stockholm Convention
UNEP	United Nations Environment Programme
USD	United States Dollar
WHO	World Health Organisation
ZMWG	Zero Mercury Working Group

UNITS OF CONCENTRATION

mg/kg	Milligram(s) per kilogram. Corresponds to parts per million (ppm) by mass
µg	Microgram(s) per kilogram. Corresponds to parts per billion (ppb) by mass
ng/kg	Nanogram(s) per kilogram. Corresponds to parts per trillion (ppt) by mass

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Introduction

a. Background of the Study

In India, skin whitening creams are being used since ages as white complexion has been associated with prosperity and beauty for thousands of years. However, after the post globalisation, India has evolved as a key market of the cosmetic products. Further with the growth of the online marketing portals, now the products across the globe are being flooded into Indian markets. A market research survey reveals that the market for skin whitening creams is constantly growing. Skin Lightening Market was valued at USD 4.74 Billion in 2020 and is projected to reach USD 7.68 Billion by 2028, growing at a CAGR of 6.23% from 2021 to 2028¹. In India, skin lightning (or whitening) products have been estimated to be of worth of about USD 0.45–0.53 billion.²

India was among the few countries across the globe that restricted the use of mercury in cosmetics including skin whitening cream and completely prohibited it under the Drug and Cosmetics Rules, 1945 of the Drugs and Cosmetics Act, 1940³. However, an amendment was brought in 2017 and the mercury limit of use in cosmetics was brought to 1 ppm. As per the Cosmetic Rules, 2020 of the Drugs and Cosmetics Act, 1940, the prescribed mercury limit is 1 ppm as an unintentional impurity which is applicable to the producers as well as cosmetics to be imported to India.⁴

As the mercury is very commonly used in the skin whitening creams and there are enough evidences that mercury-containing skin whitening creams can lead to adverse health impacts, the Minamata convention on mercury also restricted the mercury use in cosmetics from 1st January, 2021 the manufacture, import and export of cosmetics with over 1 ppm mercury is prohibited.⁵

In this context, Toxics Link has been associated with a global NGO campaign on Mercury-Added Skin-Lightening Creams conducted by the EEB in collaboration with the ZMWG to support national government efforts to ban the manufacture, import, export and use of mercury-added cosmetics (with mercury content over 1 ppm). In this framework, skin-lightening products have been sampled and tested in 2018 and 2019. In its latest study in 2019, samples were collected in India from the market as well as from the online marketing portal including Flipkart and Amazon India. The study reported very high levels of mercury in all the samples ranging from 48

1



As per the Cosmetic Rules 2020 of the Drugs and Cosmetics Act 1940, the permissible mercury limit is 1ppm as unintentional impurity.

ppm to as high as 113000 ppm despite the allowed limit of 1 ppm under the Drugs and Cosmetics Act, 1940. Incidentally, it has been found that most of these skin lightening products are imported from neighbouring countries like Pakistan, Philippines, Singapore, Bangladesh, China, Thailand etc.⁶

Another study conducted in 2020 lead by the research team from IIT Hyderabad have also reported very high concentration of mercury in the imported skin whitening creams bought from online marketing portals. The maximum mercury level detected was 9240 ppm. Notably, no mercury was detected in any of the Indian brands they have tested.⁷

After these findings of high content of mercury in skin whitening creams, Toxics Link alerted the concerned government agencies as well as wrote to Amazon India and Flipkart to look in this issue as these products are not legally allowed and have potential harmful impacts on human health. Though only Amazon India has responded to our letter, it has reiterated that they are not responsible for the third-party products being sold through their portals. The response from Amazon India is enclosed in Annexure-II.

Considering the grave importance of the issue, Toxics Link is regularly monitoring the availability of the mercury-laden skin whitening creams on e-portals and found that many of these products are still available in these online marketing portals. Since, India has guidelines of 1ppm all the cosmetics containing more than 1ppm mercury are considered as illegal in the country.

In 2021, Toxics Link conducted an additional physical survey of these products with its partner NGO and through Toxics Link members in some of the major cities in the country i.e., Mumbai, Delhi, Trivandrum, Ahmedabad, Vijayawada, Lucknow and Bhopal. Moreover, considering the earlier studies and online monitoring data, we prepared a list of 35 skin whitening cream brands to be looked for in the market, as being possible high mercury creams; however only 8 high mercury laded imported brands and 7 Indian brands were found for the study from Mumbai, Vijayawada, Trivandrum and Delhi only. Incidentally, during the survey, the shopkeepers revealed that they are selling these illegal skin whitening brands very often. Many of the likely to have high mercury brands; however, of the illegal brands were not available during the period of survey due to global COVID pandemic restrictions and lockdown in the country.

This clearly reflects that the mercury-containing skin whitening creams are available in the country and there are serious monitoring gaps at the various levels starting from the entry point onto the retailer level in the country.

b. Case studies: Mercury skin lighting creams and health impact

According to WHO¹⁶, mercury is hazardous to health and has the potential to cause damage to the central nervous system, gastrointestinal system and the kidneys.¹⁷ UNEP has also shown concern over the fact that mercury bio-accumulates in the body tissue, and its long term exposure can have impact on brain, kidneys, lungs and immune system, particularly in unborn children and babies¹⁸. It can also lead to hyper-pigmentation.



Mercury in Skin whitening Creams

Mercury in cosmetics are used in two forms: inorganic and organic. Inorganic mercury is used in skin whitening creams and soaps. It is added to skin whitening products to inhibit the formation of melanin. Melanin is responsible for skin colour. Dark-skinned people have more melanin than light-skinned people. Mercury inhibits melanogenesis in melanocytes by inactivating tyrosinase, the important catalyst in melanin production, thus reducing pigmentation of skin⁸. In vitro studies showed that inorganic mercury species such as mercurous chloride (calomel), mercurous oxide, mercuric chloride or ammoniated mercury, which are predominantly used in skin-whitening creams, could penetrate the skin.⁹

Organic mercury compounds, such as thiomersal, which contains ethyl mercury, and phenyl mercuric salts, are used as cosmetic preservatives in eye makeup including mascara, in hand & body creams and lotions, and makeup cleansing products. However, recent reports have shown that methylmercury is also sometimes added to skin lightening products.¹⁰

As these products are applied regularly to various body parts from where they may be absorbed into the skin through the sweat glands and hair follicles and can be assimilated into the body.^{11, 12, 13, 14} These products may potentially affect not only the user, but also other house members, who might be at risk of exposure through the direct contact with contaminated items or inhalation of mercury vapours released from the products.¹⁵

Besides direct exposure, through these products mercury indirectly enters our body too. Mercury in soaps, creams and other cosmetic products is eventually discharged into waste water. The mercury then enters the environment, where it becomes methylated and can enter the food chain as highly toxic methylmercury in fish. Pregnant women who consume fish containing methylmercury can transfer the mercury to their fetuses, which can result in neurodevelopmental disorders in the children.¹⁸



Table 1 Signs and Symptoms of mercury intoxication. ^{19,20,21,22,23}

General Signs and Symptoms	Children with prolonged exposure
Difficulty concentrating, memory problems	Pink hands and feet
Nervousness, irritability, anxiety	Weight loss, fatigue
Depression, insomnia	Excessive salivation or thirst, gingivitis
Headaches	Irritability, anorexia
Weight loss, fatigue	Poor muscle tone, leg cramps
	Hypertension, rashes
Neuromuscular Effects	Renal Effects
Tremors, paresthesias	Kidney damage
Numbness or tingling in hands, feet, or around the lips	
Weakness in the extremities	

Despite known severe health impacts of mercury, its association with skin-whitening cream gets unnoticed both by the consumers and physicians, as mercury poisoning symptoms do not follow a precise standard pattern and its symptoms overlap with other common health issues.

Rakete et al (2021) had reported a case study of a 4-yr old boy from Germany who got admitted with loss of weight, weakness, fatigue, strong sweating, arterial hypertonia (114/104 mmHg) and tachycardia (>150 bpm). The boy also had abdominal pain in the stomach, joint pain without any swelling, redness and high blood pressure. After 6 months of first admission, the patient's blood was tested for mercury which established the mercury poisoning. Further investigation reveals that the boy got mercury intoxication due to the transmission of a mercury-containing cream by skin-to-skin contact with his mother. This established that case reports associated with skin-lightening creams often articulate considerable diagnostic difficulties connecting the symptoms to mercury poisoning.²⁴

Home Contamination The mercury from skin-whitening creams can easily spread from the skin of the affected user to clothing and bedding, and on to surfaces and furniture throughout the home where the creams are used. From these surfaces, through mechanisms that are poorly understood, some of the mercury gets into the air in the home. As a result, until the home is assessed and decontaminated, every person in the home where these products are used is at risk for mercury poisoning. Small kids on skin-to-skin contact with the user are more prone to mercury poisoning.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4586653/>

Centres for Diseases Control and Preventions (CDCP) in 2019 had released a case study of a 47-year-old woman from California who was using skin-lightening creams twice daily for seven years and sought medical care for dysesthesias and weakness of her upper extremities. Later she went into coma. Analysis reported the presence of organic mercury in her cream up to 12000 ppm while the blood mercury level was 2,630 µg/L (normal values are less than 5 µg/L).^{25,26}

Similarly, Ori et al (2018) had reported the case study in Arizona of a 17-month-old child with hypertension, fussiness, constipation, and arthralgia due to mercury toxicity from a skin-lightening cosmetic used by her mother and grandmother.²⁷

Unfortunately, due to lack of awareness of such cases, consumers are still using skin whitening creams. In-fact usage of cosmetics is increasing in the society, not just among women and teenage girls, but among men too. Therefore, it has become a necessity to analyse the safety of cosmetic products available in the market.

2 Regulations on Mercury in cosmetics

a. The Minamata Convention

The Minamata Convention on Mercury is an international treaty that came into force on 16 Aug 2017, and that is designed to protect human health and the environment from anthropogenic (caused by humans) emissions and releases of mercury & mercury compounds.²⁸

India has ratified the treaty on 18 June 2018. As by the end of 2020, the Minamata Convention on Mercury requires each Party to ban the manufacture, import or export of cosmetics containing over 1 ppm mercury, by taking appropriate measures, India is also bound to follow the compliance, although India has sought for a five years extension till 2025 to comply with the Convention.²⁹ India is among the few countries in the world which has a very stringent regulation of 1 ppm in place for mercury use in cosmetics via the Drugs and Cosmetics Act 1940, and is already complying with the provisions of the Minamata Convention.

As of November 2021, 128 countries have signed the treaty and 135 countries have ratified the Minamata Convention.

b. Global Benchmarks on Cosmetics

The European Union³⁰ and many other countries such as Canada³¹, Philippines³² and the United States, as well as a number of African nations, including Ghana, Nigeria and Uganda³³ have regulations banning mercury-containing cosmetics.³⁴

Furthermore, the EU has e-Safety Gate Rapid Alert System (RAPEX) in place under Directive 2001/95/EC. RAPEX data helps to prevent and restrict the supply of dangerous products. Since 2005, 46 cosmetic products were reported under RAPEX to contain high levels of mercury.³⁵ A similar system is also in place in South East Asia under ASEAN.^{36, 37} Other examples of controls and regulations can be found in the ZMWG 2019 Enforcement report.

c. Regulation in India

In India, the manufacture, import and export of cosmetics and drugs are regulated under the Drug and Cosmetics Act 1940 and the Drugs and Cosmetics Rules 1945. The Act has the mandatory provisions to mention the ingredients on the cosmetics container besides all the other details like manufacturing date, site, manufacturer name, etc. The Act also has the provisions for the safe disposal of corrosive or dangerous products by neutralisation or deactivation and of the need for complete disposal of mercury and its salts.³⁸ The Drugs and Cosmetic Rules 1945 had a total prohibition of mercury use in cosmetics.

However, there was an amendment made to the rules in 2017 and mercury use was limited to 1 ppm and subsequently new Cosmetics Rules 2020 came into force.

The specific provisions in the rules on mercury use are:

Rule 39 (5) (b): Cosmetics imported or manufactured in the country shall contain mercury in the following proportions, namely, (a) in cosmetics intended for use only in the area of eye, the level of mercury not exceeding seventy parts per million (0.007 per cent.) of mercury, calculated as the metal, as a preservative; (b) in other finished cosmetic products, unintentional mercury shall not exceed one part per million (1 ppm).³⁹

Moreover, the BIS standard of IS 4707 for cosmetic raw materials and adjuncts: Part 2 lists the raw materials generally not recognized as safe for use in cosmetics. This standard prohibits the use of mercury and its compound as an ingredient.⁴⁰

d. Enforcement Agencies in India

The Drugs and Cosmetics Act 1940 and the Rules 1945 have bestowed power with the central government and state government departments to enforce the Drugs and Cosmetic Act. The following agencies, Central Drugs Standard Control Organisation (CDSCO), the Ministry of Health and Family Welfare, Govt of India, State FDA and the Bureau of Indian Standards have been entrusted power to comply and monitor the various provisions of the Drugs and Cosmetic Act and Rules. Further, there is a role of the custom department which is to check the entry of these illegal cosmetics to India.

3 Objectives of the study

Although the mercury use in cosmetics is well regulated in India, the availability of the mercury-laden creams in India remains a great concern. On top of it's, the study aim to contribute to the ZMWG NGO global campaign which is focusing mostly on skin-lightening creams available online, Toxics Link has been conducting a complementary study by collecting samples physically from the Indian market, in view of finding the root of the overall problem of availability of these skin lighting creams across the country.

In this context the overall objective of the study is to bring new data on mercury laden skin whitening creams' availability in the Indian local market. In parallel, by highlighting the gaps in the monitoring of the cosmetics regulations in place, the study would aim to assist in identifying the capacity needs to better enforce existing regulations. The study also aims to create larger public awareness to refrain the consumers from buying dangerous illegal products. This study also aims to further contribute to and complement the ZMWG NGO global campaign which is focusing mostly on skin-lightening creams available on-line.

to bring the new data on mercury laded skin whitening creams available in Indian market

- **Survey of the cities to understand the availability of skin whitening products in the local market.**
- **To detect the presence of mercury in skin whitening creams available in the local Indian market**
- **To highlight the gaps in view of assisting in identifying capacity needs for better enforcement.**



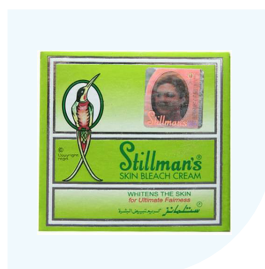
4 Collection of the Samples and Methodology

4.1 Collection of the samples

The sampling was planned after a thorough monitoring of products on e-portal sites and the survey on the availability of skin whitening creams in the local market in collaboration with our partner NGOs and Toxics Link team across the major cities in the country. The market survey was conducted in Mumbai, Vijayawada, Ahmedabad, Delhi, Trivandrum, Lucknow and Bhopal.

During the survey it came to the light that most of the shopkeepers were aware about these products and informed that these skin whitening creams are imported from neighbouring countries. Further, they reiterated that due to global COVID pandemic as well as extended lockdown in the country, supply got impacted. Moreover, the local shopkeepers revealed that these products are immensely popular among Muslim women. Further it was found that, being the imported one, most of these products are selling at

Sampling locations



much higher price than the maximum retail price mentioned on the products. Further all the imported brands have mentioned their country of origin and the Indian brands have mentioned made in India. It was also found in the study that shopkeepers were not aware about the fact that these creams may contain mercury and that the mercury may pose risk to human health and the environment.

On the basis of earlier studies, online monitoring and demand, we enlisted 35 skin whitening cream brands to be collected from eight cities for this study, out of which 27 brands were imported brands from other countries and 8 brands were from Indian Manufactures. All the enlisted 35 manufacturers are put in Annexure-I. However, we were able to get only 15 brands, which included 8 imported brand and 7 Indian brand. These samples were from collected from 4 cities, namely, Navi Mumbai, Vijayawada, Delhi and Trivandrum. The details of the samples are mentioned in the results and discussions.

4.2 Testing methodology

The samples were sent to Shriram Institute for Industrial Research, Delhi for mercury analysis. The samples were tested using **ISO/TR: 17276-2014** for analysis using Inductively Coupled Plasma-Mass-Spectrometry (ICP-MS) and the instrumental limit of detection was 1 ppb.



5 Results and Discussions

Important findings of the study;

- Mercury was reported in six out of fifteen skin whitening cream brands.
- Among the six brands containing mercury, only one sample, i.e., TL-WC-8 (Stillman's Skin Bleach Cream) had mercury concentration of 0.3 ppm that is below the allowed permissible limit of 1 ppm. Remaining five brands were found to contain very high mercury concentrations (4000 to 14000 ppm)
- As per the label of packaging all the six brands in which mercury was reported were imported creams.
- Maximum mercury concentration (i.e., 14000 ppm) was reported in TL-WC-5 (Goree Day and Night Whitening cream) followed by TL-WC-1 (Chandni whitening cream) and TL-WC-6 (Goree beauty cream) where mercury concentration reported was 11000 ppm.
- All the seven creams manufactured in India were found to be free from mercury
- Two imported brands (one from Philippines and other from Pakistan) also reported no mercury

Table 2 Concentration of mercury in skin whitening creams

Samples	Product name	Location (sample purchased from)	Country of Origin (based on the labelling on the product)	Result (ppm)
TL-WC-1	Chandni Whitening Cream	Delhi, Mumbai, Vijayawada	Pakistan	11000
TL-WC-2	Face Fresh	Delhi, Mumbai, Vijayawada	Pakistan	8000
TL-WC-3	Faiza Beauty Cream	Delhi, Mumbai, Vijayawada	Pakistan	0
TL-WC-4	Golden Pearl Whitening Beauty Cream	Delhi, Mumbai, Vijayawada	Pakistan	4000
TL-WC-5	Goree Day and Night Whitening Cream	Delhi, Mumbai, Vijayawada	Pakistan	14000
TL-WC-6	Goree Beauty Cream	Delhi, Mumbai, Vijayawada	Pakistan	11000
TL-WC-7	Kojie San	Delhi, Mumbai, Vijayawada	Philippines	0
TL-WC-8	Stillman's Skin Bleach Cream	Delhi, Mumbai, Vijayawada	Pakistan	0.3
TL-WC-9	Lotus Herbals WhiteGlow Skin Whitening and Brightening Gel, Face Cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0

Samples	Product name	Location (sample purchased from)	Country of Origin (based on the labelling on the product)	Result (ppm)
TL-WC-10	L'Oreal Paris Skin perfect antiaging+ Whitening cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0
TL-WC-11	VLCC Snigdha skin whitening cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0
TL-WC-12	Jovees Pearl Whitening Face cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0
TL-WC-13	Himalaya Herbals Clear Complexion Whitening Day Cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0
TL-WC-14	Vcare skin whitening cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0
TL-WC-15	VLCC Snigdha skin whitening cream	Delhi, Mumbai, Vijayawada, Trivandrum	India	0

Figure 2 Pie chart shows the share of cream samples above and below 1ppm mercury.

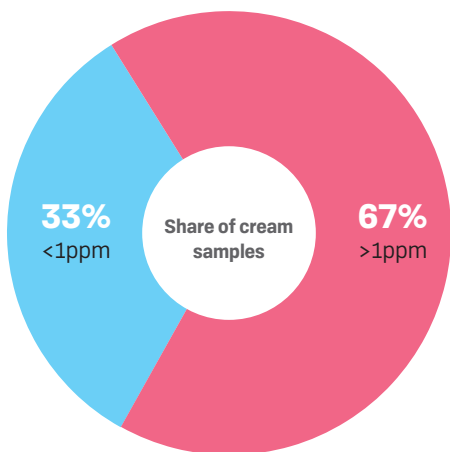
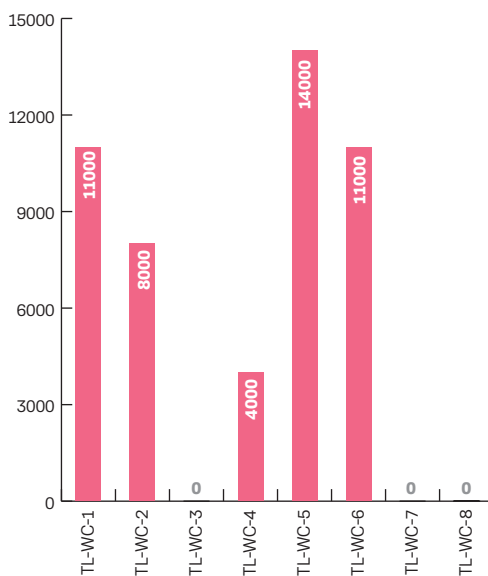


Figure 3 Mercury concentration in imported skin whitening cream samples



Discussions

The results of the samples are astonishing considering the levels of mercury that is being detected in these products. It is important to mention that these are brands that were also tested in 2019 by Toxics Link in collaboration with ZMWG. Even then, these products reported high mercury concentrations. Thus, it is established that mercury laden creams are prevalent in the country despite the strict regulations in place to limit mercury levels to 1 ppm in cosmetics.

As one example, in the 2019 ZMWG study, mercury was detected in concentrations as high as 1,00,000 ppm in the samples of brand Chandni Whitening Creams while in the present study, the mercury concentration reported in the same brand was 11000 ppm that is still way higher than 1 ppm. This clearly suggests that it is not a question of unknowing or hazard contamination, but rather that mercury is still systematically used as an active ingredient in the formulation of these creams.⁴¹

Similarly, there are other studies conducted in India which have reported concentrations of mercury from 0.001 ppm to 10000 ppm^{42,43,44,45}. All these studies clearly suggest that mercury is still used as an active ingredient in the formulation of whitening creams, raising serious concerns about associated health risks for the consumers and their families. Further these creams are also putting other associated environmental risks such as disposal of these unused creams.

Most notably all the Indian manufactured samples which were part of this study had mercury level below detectable limits.

Limitations of the study

Although, the present study gives an indication of the presence of mercury in very high concentrations in imported products, the study has certain limitations which needs to be highlighted.

- Sample size is very limited considering the number of products available in the market.
- Many of the imported brands were not available due to Covid -19 pandemic and global supply chain issues.
- COVID-19 pandemic was barrier to collect samples from different parts of the country.

In present study, although in TL-WC-3 (Faiza) no mercury has been reported but in earlier studies conducted in 2018 and 2019 as high as 21000 ppm have been reported. This could be due to a number of factors:

1. The formulation of the products is not very precise, resulting in inconsistent formulations;
2. The mercury compound may not be evenly mixed into a batch of cream so, for example, if a jar is filled from the top of a batch, the mercury concentration could be different from that at the bottom of the batch;
3. The transport and storage conditions of the final product may result in varying rates of evaporation of mercury (being higher at higher temperatures, etc. This also shows the need of regular analysis and monitoring of such mercury laden whitening cream products (Source: Dangerous, mercury laden and often illegal skin lightening products. ZMWG, 2019.)

6 Way Forward & Recommendation

Mercury is toxic and has known impacts on health as well on the environment. Skin whitening creams are an important source of mercury exposure mainly to women; therefore, the Minamata Convention has prohibited mercury in cosmetics. However, they are still advertised and available to consumers via the internet and other means especially in India where the demand is very high largely due to obsession for white skin.

Despite legislation prohibiting mercury containing products, their availability in India remains a problem^{46,47}. The availability of high mercury-laden creams in different parts of the country through offline and online sale shows the need for more intense monitoring and enforcement mechanism that needs to be put in place to check the infiltration of these products into India. Further, the easy availability of these products in the Indian markets indicates that the concerned agencies identified in the Drugs and Cosmetics Act and most notably custom departments may need more support (e.g. resources, technical, financial) to ensure that these products are not coming into the Indian market.

Therefore, to address this growing challenge, coordinated compliance mechanisms are needed at the local, national, regional and global levels. The ultimate goal of this study is to improve consumer protection by targeting unsafe products and accelerating their removal from commerce before they are sold to consumers.

Recommendation

In this context, few recommendations have been drawn out, which could restrict mercury in skin whitening creams in India.

Third party liability of online shopping portals: Our present study together with former studies done in collaboration with the ZMWG found inherent gaps in selling these illegal toxics products through online portals. Many of these products which contain high mercury are easily available in the online shopping portals. This shows the need to take measures to address the liability of the online platforms which is currently lacking. Furthermore, a strategy would need to be developed, to check the selling of these products through these online portals. Responsibility and penalties should be incurred for selling illegal products.

Enhanced monitoring: The study found that the Indian brands had mercury below the indicated limit of 1ppm; however, as the imported brands have high mercury content, the study reflected the gaps in monitoring of these products. Therefore, there is a need of the monitoring mechanism needs to be reinforced, to allow

The FDA has recommended to read the label of skin lightening creams before use for the terms/ words “mercury,” “mercurous chloride”, “mercuric,” “mercurio,” or “calomel” on their ingredient list.

for better checking of these products being imported to India. The concerned agencies need to be reinforced and supported, to undertake periodic testing of these samples and confiscate the products which are illegally being sold into the market. The Government should come up with provisions such as ingredient lists, detention lists to check the availability of such illegal products. The government may develop an alert system in line with ASEAN and RAPEX of EU to check the infiltration of these illegal toxic products into India.

Coordination of stakeholders: The implementation of the rules lies with various central and state government agencies and therefore, there is a need of coordinated approach by these agencies ranging from custom to CDCSO, Central government and finally the state FDA.

Capacity building of the stakeholders: Periodic capacity building of the stakeholders especially the customs and state government FDA officials are very important to check these products being entered in to the market.

Labelling of the products: The drugs and cosmetic rules have the provisions for mandatory labelling of the cosmetic rules. So, the mechanism should be in place to check and monitor the labelling of the products. This will not only help to check mercury but also other toxics chemicals which can also be present in these products.

Public Awareness: Given the worldwide increase in the use of cosmetic products and presence of high concentration of mercury, there is a great need for public awareness to highlight the adverse effects of mercury.⁴⁸ Further the traders and the shopkeepers should be made aware of these issues so that they will desist from trading and selling these products

International collaboration: These mercury-laden skin whitening creams are largely being imported to India from the neighbor countries, so it is essential to collaborate with these countries for market surveillance and enforcement, information-sharing, product inspection and analysis, and training. System should be in place for monitoring and tracing dangerous and non-compliant products sold online to inform the customs service, as well as consumers, regarding such products and take relevant measures.

Annex-I

Brands enlisted for the study.

Sr. No.	Name of product	Origin of the product
1.	Aneeza Gold Beauty Cream	Pakistan
2.	Chandni Whitening Cream	Pakistan
3.	Clara Luna	
4.	Collagen Plus Vit E	UAE
5.	Dr. Japan, Nano	Japan
6.	Due Beauty Cream	Bangladesh
7.	Egg White and Cherry 7 Days Specific Eliminating Freckle Whitening Cream	Taiwan
8.	Face Fresh	Pakistan
9.	Faiza Beauty Cream	Pakistan
10.	Formula AA Arche Pearl Cream	Thailand
11.	Gluta Speed White Sakura	USA
12.	Golden Pearl Whitening Beauty Cream	Pakistan
13.	Goree Beauty Cream	Pakistan
14.	Goree Day and Night Whitening Cream	Pakistan
15.	JiaoBi Whitening set	
16.	Jalea Real Grisi	Mexico
18.	Kim Whitening Ginseng and Pearl Cream	
19.	Kojie San	Philippines
20.	New Face Whitening Cream	Pakistan
21.	Palmers Skin Success Fade Milk	USA
22.	Parley Beauty Cream	Pakistan
23.	Pop Popular Facial Cream Whitening Acne Pimple	Thailand
24.	Pond's Clarant B3	USA
25.	Sandal Whitening Beauty Cream	Pakistan
26.	Stillman's Skin Bleach Cream	Pakistan
27.	Lotus Herbals WhiteGlow Skin Whitening and Brightening Gel, Face Cream	India
28.	L'Oreal Paris Skin perfect antiaging+ Whitening cream	India
29.	Jezara Skin whitening cream [whitening cream 1% mentioned in ingredient]	India

Sr. No.	Name of product	Origin of the product
30.	VLCC Snigdha skin whitening cream	India
31.	Alna Whitening cream [manufactured by Alna Biotech India]	India
32.	Jovees Pearl Whitening Face cream	India
33.	Himalaya Herbals Clear Complexion Whitening Day Cream	India
34.	Saroj Organics skin glow and whitening cream	India
35.	Vcare skin whitening cream	India
36.	Inveda whitening cream	India

Annex II

Reply from Amazon India on the availability of mercury laden skin whitening cream.



To,
Mr. Piyush Mohapatra
Sr. Programme Coordinator
Toxics Link
H2 (Ground Floor), Jungpura Extension,
New Delhi – 110 014

January 21, 2020

Re: Reply to letter dated January 10, 2020 ("Letter").

Respected Sir,

1. This is in reference to the captioned Letter, which pertains to the listing for sale of skin lighting creams ("Subject Products") by certain sellers on the www.amazon.in marketplace ("Marketplace").
2. We understand from the Letter that the Subject Products contain mercury which is higher than the permissible limits as prescribed under the Drugs and Cosmetics Act, 1940, according to the findings enclosed in the said Letter.
3. At the outset, we would like to humbly state as under:
 - (i) Amazon Seller Services Private Limited ("Amazon") runs, manages and operates the Marketplace wherein it provides an online marketplace and software/tools enabling third-party sellers on the Marketplace to display, list and offer their products for sale to end-customers in India.
 - (ii) The products offered for sale on the Marketplace are always owned and/ or sold by the seller at any point of time (and not by Amazon). Each and every seller owns the products and independently offers them for sale on the Marketplace in their own right.
 - (iii) The sellers are themselves responsible for ensuring all compliances under applicable laws.
4. Amazon as a good corporate citizen is committed to extend all necessary support to your good office in this matter and confirm that we are in the process of taking necessary action against the Subject Products mentioned in the Letter by suppressing and removing the listings from the Marketplace.

Do let us know if you may require any further support or assistance from our end.

Yours sincerely,

For and on behalf of **Amazon Seller Services Private Limited**

Authorized Signatory



**REGISTERED OFFICE : # 26/1, World Trade Center Bangalore, Brigade Gateway, 8th Floor,
Dr. Rajkumar Road, Malleshwaram(W), Bangalore - 560055.**

Endnotes

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