



EXPOSED

Ingredients in Salon Products and Salon Worker Health and Safety

An analysis of chemicals of concern in
professional hair and nail salon products, and
manufacturer compliance with California
cosmetic ingredient disclosure laws.

PUBLISHED
March 2023

EXPOSED: Ingredients in Salon Products and Salon Worker Health and Safety

An analysis of chemicals of concern in professional hair and nail salon products, and manufacturer compliance with California cosmetic ingredient disclosure laws.

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This report is dedicated to salon workers.

For more information about WVE,
visit: womensvoices.org

For more information about Black Women for Wellness,
visit: bwwla.org

For more information about the California Healthy Nail Salon Collaborative,
visit: cahealthynailsalons.org

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*I was very healthy before starting work in the nail industry. Three or four years after working in the nail salon industry, my hands started shaking. My **entire left arm went numb**, so I couldn't feel it a lot. At work, while massaging customers, I would pretend to use my left hand to push, but really I was just doing the motion. My right hand was doing most of the massage. I also had bad body aches... After the situation with the hand, in 2012, **I got cervical cancer**. I don't know if any of my body aches or left hand numbing or the cancer is related to the nail salon industry. I just know that after the cancer treatment I had to quit the nail salon work because it is **too dangerous for me now**.*

-Trish Pham

”

EXECUTIVE SUMMARY

Professional hair and nail salon workers are exposed to chemical ingredients in the products they use every day. The ingredients are breathed in the air and absorbed through the skin, entering the body where they can affect salon worker health. For far too long, manufacturers have been legally allowed to keep these chemical ingredients a secret from their customers, denying salon workers a full understanding of their exposures. Recently, however, the laws have changed – first in California, and now nationally – requiring product manufacturers to list professional salon product ingredients on the package label, as has been required for retail cosmetics since 1938. In addition to these disclosure requirements, another new law enacted in California requires all cosmetic products (both professional and retail) to report toxic fragrance and flavor ingredients to the California Safe Cosmetic Program, where they are then disclosed via a public database. Salon workers, advocates and researchers can now better understand chemical exposures in the salon and act on that knowledge. The increase in ingredient transparency is also a first step to the development of safer and healthier products.

This report reviewed a snapshot of certain professional salon products currently available in California beauty supply stores to investigate how well manufacturers are complying with these new laws, to help identify important ingredient and disclosure trends, and to further emphasize what we now know about chemicals found in these professional products.

Salon workers are especially vulnerable to toxic exposures in the salon. They work day in and day out with salon products, accumulating significantly more exposure than the average user of cosmetic products. Salon workers are predominately a workforce of women, people of color and are often low-income – meaning the exposure to toxic chemicals in the salon workplace compounds the myriad of other threats to their health they already face related directly to gender, race, economic status, access to quality healthcare, and more. As a result, studies show that salon workers suffer from significantly higher rates of disease and chronic health conditions such as asthma, skin conditions, pregnancy complications and some types of cancer compared to other occupations. Urgent action is needed to prevent these negative health outcomes, many of which are avoidable – starting with ensuring that professional salon products are safe and healthy for salon workers to use.

Our investigation discovered that professional salon products still largely contain ingredients that have been documented as hazardous to salon workers for decades. We identified very little innovation in the salon product industry to replace hazardous chemicals with inherently safer alternatives. Instead, we noted that in many cases, where hazardous chemicals were included in products, the manufacturers included unrealistic safety instructions for users. The safety instructions suggest avoiding exposure to the products (like inhalation or contact with skin) where this would be nearly impossible to accomplish. This unfairly puts the onus for safety on the salon worker, rather than on the manufacturer who is responsible for making products that are safe to use. In addition, we identified products and product categories where ingredient disclosure remains inadequate or absent altogether.

Key Findings:

- Hazardous chemicals are found in professional salon products that harm lungs, cause allergic skin reactions and are linked to reproductive harm and cancer.
- Despite decades of warnings about these chemicals from public health officials, and known harm to salon workers, very little innovation toward safer chemistry is evident in the professional salon product industry.
- The few harmful ingredients that have been removed from products have been replaced with regrettable substitutes.
- Manufacturers frequently provide product safety instructions that make it near impossible to use products in a way that avoids harm.
- Despite new laws requiring ingredient disclosure, some salon products are still sold without ingredient listings on the label.

Securing the right-to-know what ingredients are used in products is an important first step to transforming the salon product industry toward a healthier and more sustainable future. As a result of new laws ([see below](#)) we are learning more about the prevalence of harmful ingredients that are used in salon products than ever before. We hope this information will give salon workers greater ability to avoid certain ingredients or products that may harm their health and to advocate for safer and healthier workplaces. It is time to demand greater accountability from the salon product industry to manufacture products that are less toxic. Innovation of inherently safer chemical ingredients is well overdue. The salon product industry must ensure that the products they make will no longer harm the health of salon workers. Safer and healthier products will clearly benefit both salon workers and their clients alike.

COSMETICS LEGISLATION

Summary of Recent Right-to Know Cosmetics Legislation

The Food, Drug, and Cosmetic Act and the Fair Package and Labeling Act are two federal laws overseeing cosmetic labeling and safety in the United States. Ingredients used in salon and retail cosmetic products are not required to meet any kind of federal health protective standard of safety, meaning ingredients linked to cancer, infertility, birth defects, neurological disorders and more can legally be found in these products. Under these laws, cosmetic and personal care products that are sold in retail settings are required to disclose ingredients on the product label (however, ingredients used in fragrance are exempt from labeling requirements and considered confidential business information). Due to a loophole in these laws (that was closed recently with signing of the Modernization of Cosmetics Regulation Act of 2022), salon products used by salon professionals (often labeled for Professional Use Only and only available to licensed salon workers) were not federally required to list any ingredient information on the label, making it nearly impossible for salon workers to know what chemicals they are being exposed to and preventing workers from selecting products that may pose less of a health risk.



CALIFORNIA PROFESSIONAL COSMETICS LABELING ACT

In 2018 the California Professional Cosmetics Labeling Act (AB 2775) was signed into law. The California law, which requires professional use only salon products manufactured after July 1, 2020 to meet the same labeling requirements as retail cosmetics, was precedent-setting and helped pave the way for the federal Modernization of Cosmetics Regulation Act of 2022.

COSMETIC FRAGRANCE AND FLAVORS RIGHT TO KNOW ACT

In 2020 the Cosmetic Fragrance and Flavors Right to Know Act of 2020 (SB 312) was signed into law in California. The law was the first in the nation to require disclosure of ingredients in fragrance or flavor. Under the law, which became effective in January of 2022, manufacturers are required to report toxic fragrance and flavor ingredients listed on the California Safe Cosmetic Program (CSCP) Reportable Ingredient list (including fragrance allergens) to the CSCP. This information is also publicly available on the California Safe Cosmetics Program Product Database.

The California Safe Cosmetics Program Product Database was developed under the California Safe Cosmetics Act of 2005 (SB 484) and went into effect in January 2007. The law requires companies to report cosmetic and personal care products sold in California that contain chemicals known to cause cancer and birth defects (identified by California Proposition 65) to the California Safe Cosmetics Program for inclusion in its public database. When the law passed in 2005 it did not include requirements for reporting harmful chemicals in fragrance. The Cosmetic Fragrance and Flavors Right to Know Act of 2020 closed that loophole and requires the reporting of more ingredients beyond Prop 65 (like allergens).

MODERNIZATION OF COSMETICS REGULATION ACT (MOCRA)

In 2022, the Modernization of Cosmetics Regulation Act of 2022 (MOCRA) was signed by President Biden. Under this new law, professional salon products are required to meet the same requirements as the labeling of retail cosmetics by the end of 2024. MOCRA represents the first significant updates to the Food, Drug, and Cosmetic Act in over 80 years. In addition to requiring the labeling of salon products, the law:

- Requires manufacturers to report serious adverse events to the FDA within 15 days. Previously, if a salon worker called a manufacturer of a salon product to report an adverse event (like a serious rash, hair loss, birth defect, burns, hospitalization, etc.) the manufacturer was not required to report the adverse event to the FDA making it difficult for the agency to assess whether a product poses a threat to worker health.
- Gives the FDA the authority to issue a mandatory recall of products that are adulterated and/or misbranded if the manufacturer doesn't voluntarily recall the product. Previously, the FDA did not have the authority to require manufacturers to pull dangerous products off the shelves. For example, when it came out that the popular hair straightening treatment Brazilian Blowout contained high levels of formaldehyde in products labeled "formaldehyde-free," the FDA could not require the manufacturer to issue a recall.
- Requires labeling of fragrance allergens, as directed by the FDA via new regulations.

These new laws mark a significant change in the public's right to know (and particularly salon worker's right to know) about ingredients in cosmetic products.



METHODOLOGY

In June 2022, we conducted an online survey in English and Vietnamese for salon workers to collect information on types and brands of professional salon products that were of concern for impacts to salon worker health. Fifteen salon workers, mostly residing in California, provided input to the survey.

Based on the products reported by salon workers, we visited beauty supply stores in six California cities to document commonly used professional hair and nail salon products between August – October 2022. The cities were Oakland, Alameda, San Mateo, San Leandro, Los Angeles and Corona, CA. Photos of 145 professional salon products were taken to obtain the ingredient listings. This study focused on a few specific types of salon products which were previously noted by salon workers as potentially being of concern to their health. The hair salon product types included: hair dyes, keratin straighteners, permanents, relaxers, hair/wig adhesives and adhesive removers. The nail salon product types included: gel nails, acrylic and dip powders, acrylic nail liquid, nail glue, nail polish thinner, and nail polish remover. The product photos were reviewed for the presence (or absence) of ingredients lists. Ingredient lists were reviewed for chemicals of concern. In many cases, these lists represented the very first disclosures of ingredients in these products to the salon workers that use them every day.

We acknowledge that there are thousands of salon products on the market, and that this study represents just a snapshot of what is currently available in beauty supply stores in California for specific categories of products. This study is not intended to be exhaustive of all chemicals or products of concern found in salons but provides insight into both ingredient trends and ingredient disclosure compliance seen in the salon product industry today.

BACKGROUND

History of hazardous chemicals in professional salon products

Dangerous chemicals in hair and nail salon products are not a new problem. For at least the last thirty years, health and safety advocates and government agencies have known about toxic exposure at the workplace. In 1993, the California Board of Barbering and Cosmetology (BBC) and the Labor and Occupational Health Program (LOHP) at UC Berkeley developed an extensive curriculum focused on nail and hair salon worker safety and the potentially hazardous chemical products they use in their jobs. It provided information on the chemical products' potential harms, and how to prevent or minimize that harm. A list of health problems that might be caused by using chemical products at work included asthma, skin rash, dizziness, miscarriage, cancer, and more.¹

Similarly, in 2004, the US Environmental Protection Agency (EPA) published a guide for the nail salon community on how to protect themselves from potentially hazardous chemical exposures, focusing predominantly on wearing personal protective equipment and improving ventilation, as well as implementing best practices.² The guide also highlighted a short list of some of the potentially dangerous chemicals in nail products and their hazards, such as methyl methacrylate (MMA). This chemical is often used in artificial nail products, even though it is prohibited from use in nail salons in California and other states. It can cause "irritation to eyes, skin, nose, mouth, and throat, sore throat, cough, shortness of breath, and skin rash." The Guide also listed toluene and dibutyl phthalate as problematic chemicals. Phthalate levels in the body have been found to be higher in nail salon workers relative to the general population.³ Studies have shown a positive association between phthalate exposure levels and adverse reproductive outcomes such as preterm birth.⁴ Toluene is a reproductive toxicant and may have an effect on the nervous system.⁵ Although many salon product manufacturers have phased out toluene and dibutyl phthalate, it's unclear if the replacements are any safer.

Formaldehyde is a dangerous pollutant and carcinogen that can be severely irritating to the eyes, nose and throat.⁶ Repeated exposure can possibly lead to cancer. In 2011, the federal Occupational Safety and Health Administration (OSHA) issued a hazard alert warning against the use of hair straighteners containing high levels of formaldehyde due to complaints of "difficulty breathing, nose bleeds, and eye irritation" from hair stylists using Brazilian Blowout and similar brands.⁷ While many other countries around the world immediately removed these products from shelves, formaldehyde in these and other hair products continue to be sold in the United States.

The lack of transparency by some manufacturers of hair and nail products is also not a new problem. In 2012, the California Department of Toxic Substances Control (DTSC) reported on its analysis of 25 nail products. It found that 10 out of 12 products advertised as free of toluene and dibutyl phthalate (DBP) actually contained toluene, DBP, or both when tested.⁸

In 2013, California's Attorney General's office announced the settlement of a lawsuit brought against the manufacturer of the hair-straightening product Brazilian Blowout for mislabeling the product as formaldehyde-free. Among other things, the manufacturer GIB, LLC, was ordered to "Cease deceptive advertising of the products as formaldehyde-free and safe."⁹

Given the decades-old concerns about hazardous chemicals in professional salon products, and the history of inadequate ingredient transparency, we designed our study to get a snapshot of ingredients in products used by salon workers **today**. We aimed to assess both the presence of hazardous ingredients as well as how transparent manufacturers are now about the ingredients in their products, given the new laws requiring disclosure.

FABIENNE'S STORY

I was like, "Wow, that's on the market?" You know what I mean? Wow! Could it be legal to put something on the market that's not entirely safe and actually can cause harm? Or you might not even know if it's safe?
– FABIENNE GRISEL-TODOROV

I kept getting sick. A lot. I kept getting sinus infections and asthma attacks. And obviously, like I said I'm asthmatic, so clearly I already have that against me, but being exposed to the fumes, the moment that I was in a same room where someone was doing a hair straightening treatment, I would literally feel it in my chest, and I have to leave the room. I mean it was that powerful for me. **My lungs would basically shut down**, so the moment I was away from that space, I felt a lot better because I didn't have to breathe all that stuff, so therefore I didn't have asthma attack, after asthma attack, after asthma attack every time I was at work. I mean when you're dealing with chemicals you always are exposed to some type of something, but the Brazilian Blowout specifically for me was the kiss of death and it was obvious that I was having a reaction to it. And not just me. I mean, I'm asthmatic, so yes my reactions will be bigger, but I had plenty of my colleagues that also had issues with it like headaches or coughing or other breathing problems, or that they in general just didn't feel very good being around this treatment. I just happened to have a bigger reaction, but regardless it was not good for any of us to breathe all that stuff. And to find out, you know, formaldehyde is the main component in it, so a bunch of us got issues with it. At some point where I worked was a big salon; big enough that they separated the Brazilian Blowout people into one room specifically, and that helped to some degree... you know, as long as you didn't pass by it or you know didn't spend too much time in that room. But even that had problems because the air would circulate throughout the salon... you still start breathing it and feeling it in your lungs. **Eventually I just decided to leave because I cannot function properly in a salon when I feel like that.**

Originally I'm from Switzerland. To be put on the market there, products go through a lot of rules and regulations, and a lot of hoops and hoops. So you know that when it's on the market, it should be pretty good! So coming from that culture, when I first came to work in the United States I thought it was the same here. I was like, "Wow, that's on the market?" You know what I mean? Wow! Could it be legal to put something on the market that's not entirely safe and actually can cause harm? Or you might not even know if it's safe? Because it does not have to go through all the different, you know, rules, and **they didn't really study the products for safety.** To me, that was interesting because I thought it would be similar--you know, I thought if it's on the market it must be okay!

CHEMICAL CONCERNS WITH PROFESSIONAL SALON **HAIR** PRODUCTS TODAY

Harmful ingredients in professional hair dye:

Unfortunately, our label reading analysis found that professional hair dyes continue to contain many of the same toxic ingredients salon workers have been warned about for decades. Despite awareness and information available about the toxic properties of certain hair dye chemicals, our review of current professional salon hair dyes found very few examples of innovation towards safer or healthier products. The professional salon products industry does not appear to have made any progress, in decades, towards innovating safer chemicals in hair dye. Instead, the industry continues to use the very same harmful chemicals they have always used, requiring salon workers to make extraordinary (and often unrealistic) efforts to protect themselves from exposure.

Specifically – the most common toxic hair dye chemicals we identified are:

Hair Dye Ingredient of Concern	Health Effects/Toxicity
Toluene 2,5 diamine	Extreme skin sensitizer/allergen Genotoxicity Increased cancer in animal testing
Toluene 2,5 diamine sulfate	Skin sensitizer/allergen
p-aminophenol	Skin sensitizer/allergen
m-aminophenol	Skin sensitizer/allergen
P-phenylenediamene (PPD)	Extreme skin sensitizer/allergen Severe dermatitis Asthma, rhinitis Genotoxicity
P-phenylenediamene sulfate	Skin sensitizer/allergen
Resorcinol	Skin sensitizer/allergen Endocrine disruption
4-amino-2-hydroxytoluene	Skin sensitizer/allergen Genotoxicity
Ethoxydiglycol	Reproductive harm

Almost every hair dye ingredient list we looked at contained **three or more** of these toxic chemicals.

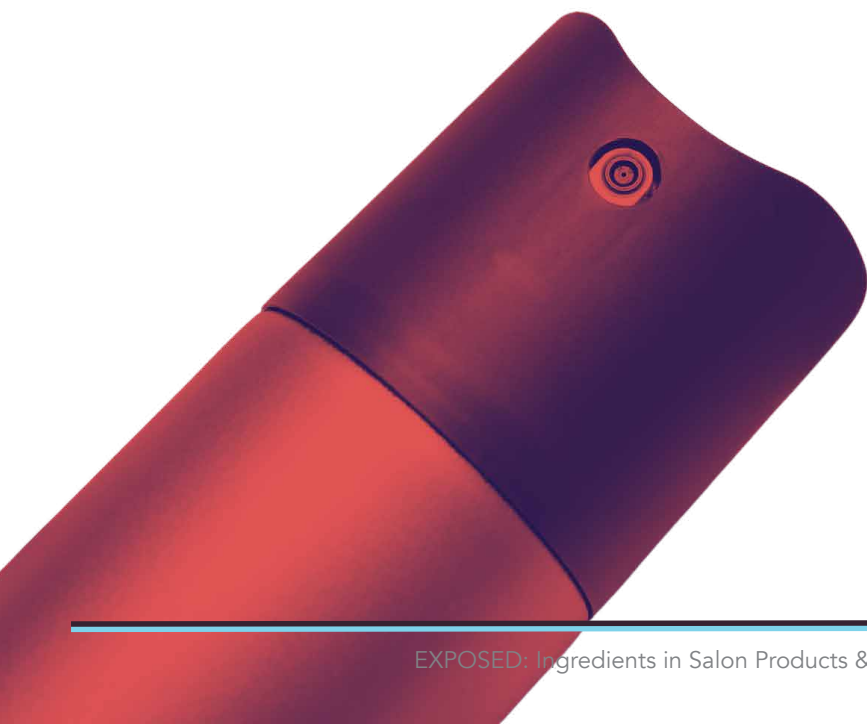
A case of regrettable substitutions:

Over the years and in several instances, ingredients known to be harmful were slightly modified by the salon industry in an attempt to reduce their toxicity. 2,4 toluenediamine is a chemical that was previously used in hair dyes until it was phased out in 1971 due to research indicating the chemical caused cancer.¹¹ 2,4 toluenediamine was replaced with the chemically similar toluene 2,5 diamine, which was intended to be safer. Unfortunately, we now understand that toluene 2,5 diamine is an extreme skin sensitizer that led to high rates of skin allergy among salon workers.¹² Animal research on toluene 2,5 diamine also indicates that exposure leads to higher rates of cancers, but the chemical has not yet been officially declared a carcinogen in humans. Some companies now prefer the use of toluene 2,5 diamine sulfate, a chemical, again slightly modified from toluene 2,5 diamine, as a safer alternative. Unfortunately, studies are showing that toluene 2,5 diamine sulfate is also a potent skin sensitizer, with only slightly lower rates of allergy than toluene 2,5 diamine - the ingredient it was meant to improve upon.¹³

Similarly, p-phenylenediamine (PPD) is well known to be problematic as a potent skin allergen which can cause severe dermatitis in both salon workers and their clients.¹⁴ P-phenylenediamine exposure is also linked to asthma and rhinitis, particularly in salon workers.¹⁵ In an attempt to reduce these outcomes, p-phenyldiamene was replaced by some companies with the chemically similar p-phenylenediamene sulfate. Yet, p-phenylenediamene sulfate is also now found to be a skin sensitizer, frequently leading to dermatitis upon exposure.¹⁶ The replacement appears to be mildly better than the original, but still problematic. The industry simply did not do the due diligence necessary to develop a truly safer alternative before putting it on the market. In all of these cases, the choice of a regrettable alternative chemical has merely perpetuated the occupational exposure to harmful chemicals among salon workers. It is apparent hair dye is a segment of professional salon products in dire need of inherently safer innovation.

What is a “skin sensitizer/ allergen” and why is that a problem?

Skin sensitizers are substances that can cause an allergic reaction when they contact skin. Most of the time, it takes repeated exposure to a skin sensitizer for a person to become “sensitized” to the substance. Once sensitized, even very small exposures can cause a rash or other allergic reaction. In salon workers, skin sensitization frequently leads to rashes, often debilitating, particularly on their hands. As a result, hand rashes are a major factor that cause salon workers to leave salon work altogether.¹⁰



Harmful ingredients in professional hair bleaches:

Hair Bleach Ingredient of Concern	Health Effects/Toxicity
Ammonium persulfate	Strong skin irritant/sensitizer Strong lung irritant Linked to breathing problems in salon workers Chemical burns (scalp)
Potassium persulfate	Strong skin irritant/sensitizer Strong lung irritant Linked to breathing problems in salon workers Chemical burns (scalp)
Silica (nano)	Linked to lung disease

Lack of safety innovation despite clear evidence of harm

Going back at least 25 years, there are numerous robust studies of hairdressers showing significantly higher rates of breathing problems and lung disease linked to the regular use of bleaching products in their work.¹⁷ There are case reports and anecdotal stories of clients experiencing chemical burns on their scalp from the use of hair bleaches. Given the serious adverse health effects, it is astonishing that there has been almost no innovation in the industry to achieve hair bleaching with safer chemistry over the last few decades. Our review of products did not identify any alternatives to toxic persulfates in hair bleaches. We did find some products that were pre-mixed as bleach creams (as opposed to bleach powders which must be mixed in the salon) which may reduce inhalation exposure to persulfates and silica.





Harmful ingredients in hair relaxers:

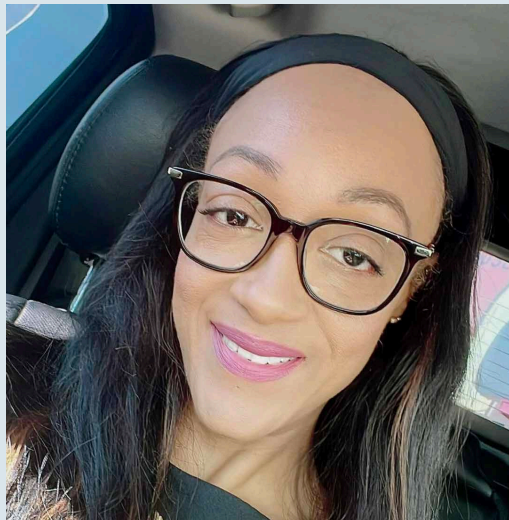
Hair Relaxer Chemical of Concern	Health Effects/Toxicity
Ammonium hydroxide	Corrosive to skin Severe eye damage Releases ammonia (gas) – strong lung irritant
Calcium hydroxide	Corrosive to skin Severe eye damage
Sodium hydroxide (Lye)	Corrosive to skin Severe eye damage
Thioglycolic acid	Skin Sensitizer Potential reproductive harm
Ammonium thioglycolate	Skin Sensitizer Potential reproductive harm

Similarly, hair relaxers today still contain the same harsh chemicals that have raised concern for decades. Hair relaxers were initially largely lye-based (containing sodium hydroxide). When concerns were raised with these products, new relaxers marketed as “no-lye relaxers” were developed. Instead of sodium hydroxide, these products usually contained chemically similar calcium hydroxide or ammonium hydroxide, which can cause many of the same health effects as sodium hydroxide, making them no safer to use.¹⁸ Use of hair relaxers has both been linked to scalp damage,¹⁹ hair loss,²⁰ uterine fibroid development²¹ and increased risk of breast cancer²² and uterine cancer.²³

FREDA'S STORY

I think that it's our right as stylists to know what chemicals we're exposed to so that we can make informed decisions on whether or not we want to use certain products for our own protection as well as for the safety of our clients.

– FREDA CULLINS



My name is Freda Cullins and I've been a licensed hairstylist for 24 years, I've taught cosmetology in beauty school, and I've owned my salon, Hair by Texture, for about 5 years now. I got my start doing hair when I was a little girl in the kitchen with my Grandmother. She was a licensed cosmetologist and I was obsessed with this kit she had with rollers and hair tools. I used to do hair for anyone that would let me, and when my mother let me relax and hot comb her hair around 13, I loved it. By 17, I already had clients, and then I decided to go to beauty school to learn more. It intrigued me that hair could be transformed using tools and products, so it's a harsh truth now knowing that many of the creams, treatments, and products that

I grew up thinking were potions in a bottle are actually bad for my health and the health of my clients.

Personally, I don't believe I've experienced too many health concerns related to my work though I do deal with numbness in my hands at night so I have to wear a brace. I also sometimes feel discomfort in my throat when I do thermal treatments that produce smoke. It really makes me sad that my work went from this pure love of doing relaxers and bonding with my mom to toxic chemicals and lies - **I feel like the purity of hair care has gone away and so has the quality of many products.** I have trouble understanding and reading many product labels because the language is too technical, the writing is small, and some products don't even have labels in the first place. We also shouldn't have to spend so much time trying to understand every ingredient on a bottle and **it's unfortunate that some ingredients**, like those used in fragrance, **are almost never listed.** Because of these difficulties, myself and many other stylists I work with tend to use products that are more established in the industry. My clients sometimes ask for products that are "natural," "organic," "green," or "clean" so I also use products with these labels even though I sometimes wonder if they're accurate. I think that it's our right as stylists to know what chemicals we're exposed to so that we can make informed decisions on whether or not we want to use certain products for our own protection as well as for the safety of our clients. I hope for honest, effective, clean products with ingredients that I can identify and trace back to a source that has a place in maintaining the health of hair.

Industry “solution” puts unfair responsibility on salon workers

Instead of widespread innovation to make these products safer, it appears the industry has relied on warning labels and complex user instructions to reduce exposure to the toxic chemicals they contain. This tactic unfairly puts the responsibility for safety on the shoulders of salon workers, rather than on the manufacturers. Although safety warnings are important, they do not eliminate a manufacturer’s responsibility to make a product safe in the first place. Legally, a cosmetic product is considered adulterated (and therefore unlawful) if

“it bears or contains any poisonous or deleterious substance which may render it injurious to users under the conditions of use prescribed in the labeling thereof, or under conditions of use as are customary and usual”²⁴

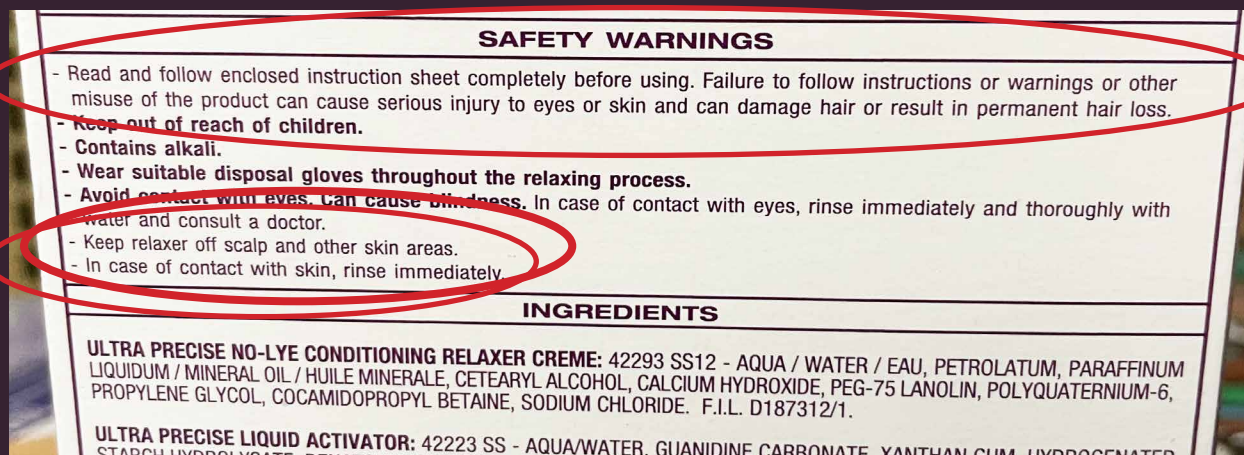
In our review, we found numerous examples of safety instructions on the packaging (i.e “conditions of use prescribed in the labeling”) that were both **onerous and**, in many cases, **entirely unrealistic**. Instead of making products safer, manufacturers have shifted the blame to the user for “misuse” of the product if directions are not followed precisely.

Unrealistic safety guidance examples include:

HAIR DYES contain instructions recommending that each user does a preliminary test on a patch of skin to determine if they will have an allergic reaction. The instructions generally recommend waiting 48 hours after applying the preliminary test before using the product. This is obviously difficult and inconvenient for a salon worker to perform – and then require their client to return two days later to finish their appointment.

HAIR RELAXERS include warnings to “*Keep relaxer off scalp and other skin areas.*” While caution can certainly be taken to minimize skin exposure, this is clearly an unrealistic instruction for a product that is intended to be applied to hair that is growing out of one’s scalp.

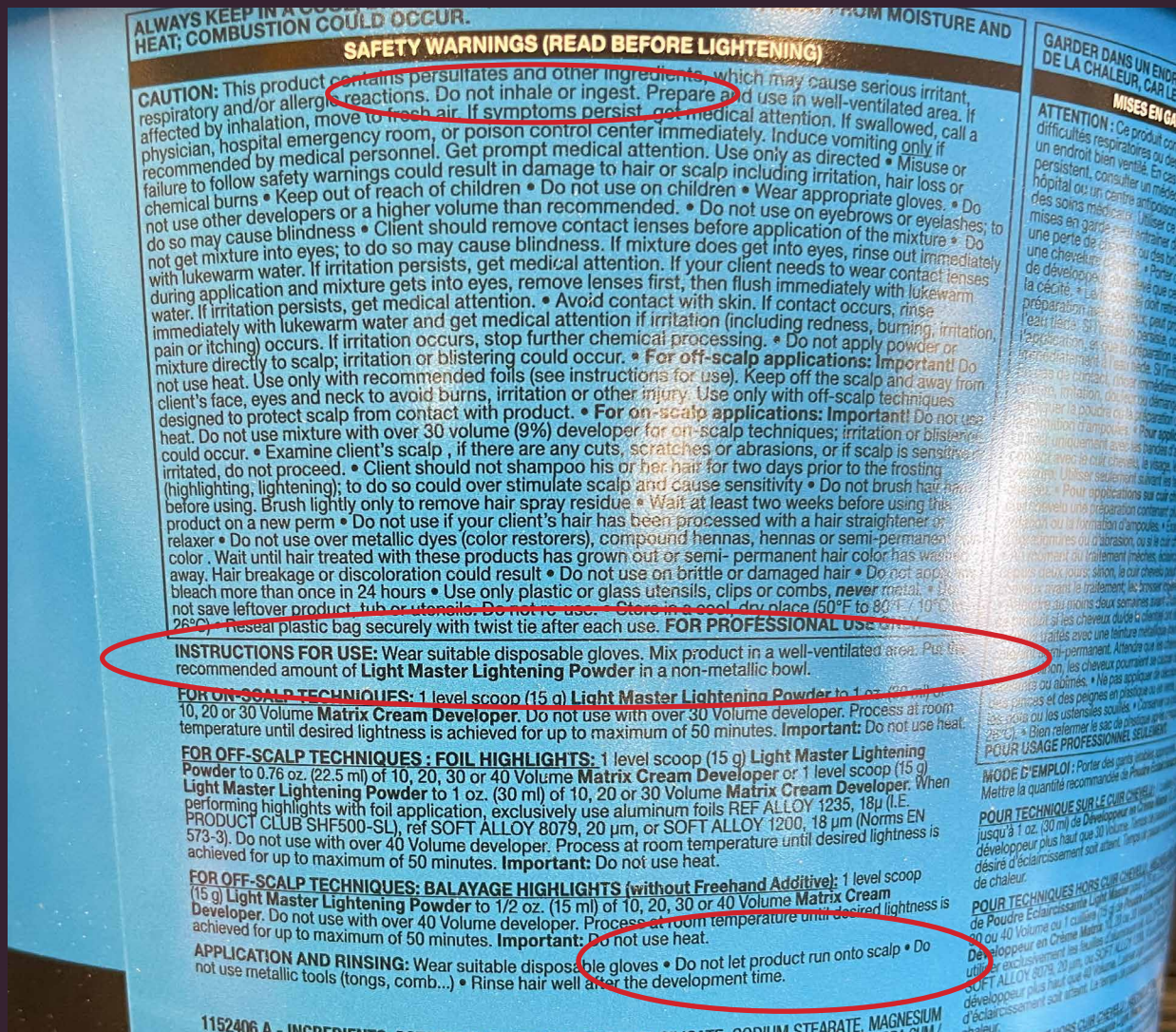
Example of IMPOSSIBLE INSTRUCTIONS found on a hair relaxer: Apply to hair...and keep off scalp...or suffer serious injury or hair loss.



POWDER HAIR BLEACHES, which must be mixed in the salon, include instructions such as *"Do not inhale."* Again, while intentional inhalation can be minimized, mixing powders in a bowl inevitably releases particles into the breathing zone of the salon worker, and sometimes even the client.

Often **PROFESSIONAL HAIR PRODUCTS** that can cause eye damage will state *"Point bottle away from face when opening."* This instruction can be unrealistic when you look at the top of the bottle in order to figure out how to open it in the first place.

IMPOSSIBLE INSTRUCTIONS: These instructions imply workers can prevent powder from going airborne, or that workers won't breathe while mixing. Instead of impossible instructions, companies should make a bleach product that is safe.



Powder bleach: Do not inhale. Mix and use in well-ventilated area. Do not let product run onto scalp.

NAIL POLISH THINNERS and some **ACRYLIC NAIL LIQUIDS** include guidance to “Use only outdoors or in a well-ventilated area.” It is not practical for a product to be used outdoors (or with even good enough ventilation which could mimic outdoor use) for a product intended to be used inside a salon.

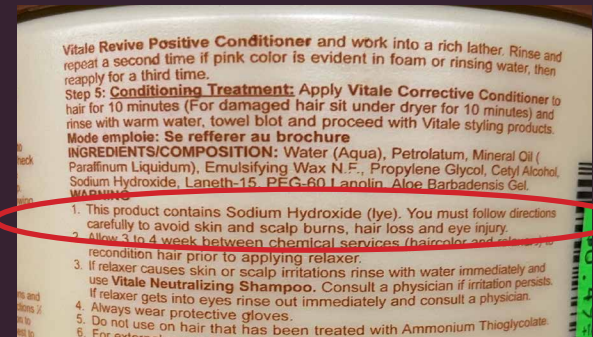
Use only outdoors? Manufacturers need to realistically make a salon product that is safe to use inside a salon.



Nail polish thinner: Use only outdoors.

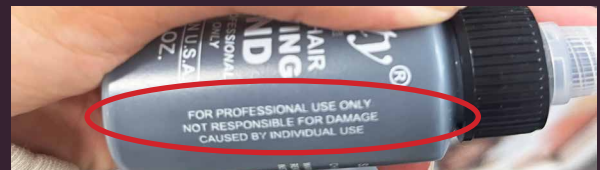
GEL NAIL POLISHES recommend “Avoid all skin contact”. This is highly impractical for a product that will be applied to the nail – immediately adjacent to skin.

Manufacturer is blaming the user instead of taking initiative to create a hair relaxer without chemicals that cause scalp burns, hair loss and blindness.



Relaxer: YOU must follow directions to avoid injury.

Companies are responsible for making a product that won't harm peoples' health.



Hair glue: Not responsible for damage.

Overall, manufacturers of professional salon products are avoiding their responsibility to produce products that are inherently safe for users. One product made this very clear with the warning:

“You must follow directions carefully to avoid skin and scalp burns, hair loss and eye injury.” Another product, a wig glue, simply stated *“Not responsible for damage caused by individual use.”*

In all of these examples, **inadvertent exposure to the product should not be considered “misuse” of the product**, where exposure is expected or practically unavoidable. Powders by their nature will enter the air when mixed and be inhalable. Liquid or cream products, when applied to the hair, will also contact the scalp, or skin on the face or neck, no matter how careful you are. Manufacturers should instead be innovating to provide products to salon workers that do not have the potential to cause harm in the first place.

MICHELE'S STORY

I was not getting any answers with the regular medical care providers help with this complex issue. Nobody could really diagnose me. That led to me leaving and severing my ties with chemical colors. It definitely felt like the right thing to do, but it was scary, because that was my livelihood. – MICHELE ORTIZ

When I was working with a regular hair color, it definitely felt like I was having inhalation issues. Like a lot of warm sensations in the mouth and lung area, and then my face would flush really easily--like red, a lot of redness, a lot of excess heat in my body. I developed rosacea on my face. I had never had rosacea and I didn't have any history of any of that before working in salons. Then my feet would get really hot in the middle of the night for no apparent reason. Then **fatigue** followed and a lot of **confusion**. It got so bad at one point my whole legs were starting to hurt. **My muscles all over my body were starting to hurt after a while.** This was about six years into the business.

I never really got a true diagnosis because I think doctors were trying to figure out what was going on with me. It was just so uncomfortable. They thought it was hot flashes, but I was only 24 at the time. They gave me medication for hot flashes, and that was the best that they could do to help stabilize the hot flashes; all that did was make me feel loopy. It was a tough one. I had to basically talk to nutritionists -- I had a lot of friends working at health food stores and we came to the conclusion that it must be the **fumes from the color treatments I was breathing and touching all day at work.** The body sensations I was physically having were just so unusual.

So I decided to give my color clientele book -- with my book full of color formulas -- to a younger apprentice at the salon, and I told the owner that "I'm leaving the salon, and I never want to come back to working regular chemical colors. I'm tired of being exposed to it." She tried putting me next to a window in the shop to see if that would make a difference. That didn't really do the job and that was sad. I was not getting any answers with the regular medical care providers help with this complex issue. Nobody could really diagnose me. That led to me leaving and severing my ties with chemical colors. It definitely felt like the right thing to do, but it was scary, because that was my livelihood.

CHEMICAL CONCERNS WITH PROFESSIONAL SALON **NAIL** PRODUCTS TODAY

Specific harmful ingredients in Professional Nail Salon products

Acrylic Nail/Gel Nail Ingredient of Concern	Health Effects/Toxicity
N,N-Dimethyl-p-toluidine (Dimethyltolylamine)	Cancer
Methyl methacrylate	Skin Sensitizer Lung irritant Asthma
Polyethylmethacrylate	Skin Sensitizer
Polymethylmethacrylate	Skin Sensitizer
2-hydroxyethyl methacrylate	Skin Sensitizer
2-hydroxypropyl methacrylate	Skin Sensitizer
Methyl ethyl ketone	Potential reproductive harm

Nail Polish Thinner Ingredient of Concern	Health Effects/Toxicity
N,N-Dimethyl-p-toluidine (Dimethyltolylamine)	Cancer
Methyl ethyl ketone	Potential reproductive harm

Nail Glue/Adhesive Ingredient of Concern	Health Effects/Toxicity
Ethyl cyanoacrylate	Skin Sensitizer
Methyl ethyl ketone	Potential reproductive harm

Professional nail product labels listed one chemical in particular, N,N-Dimethyl-p-toluidine, that is known to cause cancer. In California, products containing this chemical are also required to include a Proposition 65 warning on the label, indicating that the product contains an ingredient known to cause cancer. We identified several nail products listing this chemical as an ingredient, but not all included the required Proposition 65 language. As we only identified a few professional nail products containing this chemical, and the hazards are well recognized by government authorities, it is a prime example of a chemical that should be eliminated from nail products.

The most common chemicals of concern we found in nail products were methacrylates. We only found one product that listed methyl methacrylate as an ingredient, which is a substance that is banned from nail products. Unfortunately, the removal of methyl methacrylate from nail products led to the proliferation of use of several other types of chemically similar acrylates and methacrylates. These chemicals have also been found to be potent skin sensitizers, to cause high rates of skin allergy among nail salon workers,²⁵ and are believed to exacerbate and potentially cause occupational asthma among salon workers.²⁶ Methacrylates used in acrylic nail powders pose considerable inhalation hazards due to their powdered form. Once again, regrettable substitutes that are chemically similar have been used instead of truly safer innovation.



Additional exposure concerns: Disinfectants in the salon

Disinfectants Ingredient of Concern	Health Effects/Toxicity
O-phenylphenol	Cancer
Naphtha (petroleum)	Eye irritant Skin irritant Kidney damage
Quaternary Ammonium Compounds or “quats”	Asthma Skin Sensitizer Potential reproductive harm

Although disinfectants and cleaning products are not regulated as “professional salon cosmetic products” they are considered additional sources of chemical exposure for salon workers. Our review identified several disinfectants/cleaning products which contained highly potent pesticides linked to cancer, respiratory harm, kidney damage and potential reproductive harm. As a result of the COVID-19 pandemic, disinfectant use in the salon increased dramatically, further increasing exposure to these products.

HANH'S STORY

I'm Hanh Nguyen and I've been a nail technician in the Bay Area for 8 years. In November 2014 I suffered a miscarriage of my second child. I found out I was pregnant just a few weeks after graduating from manicurist school and starting working at a nail salon. In my fifth month, I started getting **abnormal symptoms and awful stretching pains.** I was bleeding and it was getting steadily heavier. In the middle of the shift, the **pain was so intense** that I had to call my husband to take me to the hospital, where I found out that I already lost my baby. Back then, I did not think my miscarriage may be linked with all the chemicals that I have to expose more than 10 hours a day and 7 days a week. I remember my husband reading an article about how prolonged exposure to some nail salon products could lead to birth defects. It was absolutely terrifying. Beside that, I have also experienced skin problems, headaches and respiratory irritation for years.

I remember my husband reading an article about how prolonged exposure to some nail salon products could lead to birth defects. It was absolutely terrifying. Beside that, I have also experienced skin problems, headaches and respiratory irritation for years.

- HANH NGUYEN

Bulk products are used widely in all nail salons because of their price. **I have seen many bulk products that don't even have labels,** not to mention the ingredient list. I think it falls to the owners' choice to pick what products are safe to use in the salon. As a worker, I feel like I don't have a voice in selecting what product I use in the nail salons. Even though I know it's harmful, I still have to use it. Not fully understanding the label because of the **language barrier** is also a challenge for me and all nail salon workers who don't speak English as a first language. And, I feel like it won't be easy to understand even if it is translated to Vietnamese because it is all in scientific words.

I wish the cosmetic/manicurist school could teach us how to read the ingredient list, how to distinguish what chemicals are toxic and **how to minimize the exposure.** Since joining the CA Healthy Nail Salon Collaborative and attending their training, I have learned a lot about the trio of toxic chemicals in nail salon products and workplace safety but it is not enough because I still cannot address it to the owner and help change the system.

COMPLIANCE WITH CALIFORNIA DISCLOSURE LAWS

In our review we assessed compliance with two new California laws which require ingredient disclosure. The first is the California Professional Cosmetics Labeling Act (AB 2775) which simply required for the first time ever listings of all intentionally added ingredients (except for fragrance ingredients, which were not included in the requirement) on the labels of professional salon products, on par with disclosure already required by federal law for retail cosmetic products. Overall, the majority of professional salon products we reviewed did include a listing of ingredients on the package. Yet, compliance was still imperfect in many cases.

There were three types of problems we encountered with ingredient disclosure:

- Nine products (6%) simply had no listing of ingredients at all.
- Twelve products (8%) had ingredient disclosure that was either inaccessible or possibly absent due to peel-back labels or missing outer packaging.
- Nine (6%) had product labels that listed ingredients in a manner that was vague or non-specific.

Table 1: Products with Ingredient Disclosure Problems

Product Brand Name	Type of Product	Ingredient Disclosure Problem	Category
<u>Products with No Ingredients Listed</u>			
Ghostbond Classic Professional Hair	Hair/wig adhesive	No ingredients	Hair
Keratin Complex K-C primer Pre-Treatment	Keratin straightener/ smoother	No ingredients	Hair
Keratin Complex Smoothing Treatment NKST	Keratin straightener/ smoother	No ingredients	Hair
The Hair Diagram Bold Hold Active Formula	Hair/wig adhesive	No ingredients	Hair

Table 1 continued

Nail Architecture	Acrylic powder	No ingredients	Nails
Nail Powder Young Nails	Acrylic powder	No ingredients	Nails
NailTek Renew anti-fungal oil	Anti-fungal cuticle oil	No ingredients	Nails
Unlabelled (No brand)	Glitter	No ingredients	Nails
Gabel's drops of lime aftershave lotion	aftershave	No ingredients	Other
<u>Products with Missing Packaging or Inaccessible Ingredients Listings</u>			
PulpRiot Developer	Hair Developer	Missing outer packaging	Hair
PulpRiot Liquid Demi 9-1	Hair dye	Missing outer packaging	Hair
Redken 10 min color gel Hair Lacquers	Hair dye	Missing outer packaging	Hair
Redken Blonde Idol Base breaker	Hair dye	Missing outer packaging	Hair
DND Daisy	Gel nails	Missing or inaccessible ingredients	Nails
DND DC Gel	Gel nails	Missing or inaccessible ingredients	Nails
ESSIE	Gel nails	Missing or inaccessible ingredients	Nails
GELISH sealer	Gel nails	Missing or inaccessible ingredients	Nails
Gelish Soak Off Gel polish	Gel nails	Missing or inaccessible ingredients	Nails
Morgan Taylor	Nail Polish	Missing or inaccessible ingredients	Nails
Opi Matte Top Coat	Nail Top Coat	Missing or inaccessible ingredients	Nails

Table 1 continued

Opi Nail Lacquer	Nail Polish	No ingredients	Nails
<u>Products with Vague or Non-specific ingredients</u>			
Salon pro Lace Wig Bond Extreme Hold	Hair/wig adhesive	Vague/non-specific ingredients	Hair
Natty Super Hair Weaving Bond	Hair/wig adhesive	Vague/non-specific ingredients	Hair
Natty Super Hair Weaving Bond	Hair/wig adhesive	Vague/non-specific ingredients	Hair
Ultra Safe Natural Adhesive remover	Hair/wig adhesive remover	Vague/non-specific ingredients	Hair
Walker Tape C-22 Solvent Fast acting	Hair/wig adhesive remover	Vague/non-specific ingredients	Hair
SNS	Acrylic powder	Vague/non-specific ingredients	Nails
ATN DIP POWDER	Dip powder	Vague/non-specific ingredients	Nails
CHISEL ACRYLIC POWDER	Gel nail remover	Vague/non-specific ingredients	Nails
Porce U Glaze	Liquid Catalyst	Vague/non-specific ingredients	Nails



These problems were not common across the board but occurred largely in a few specific categories of products.

- **Acrylic nail products** were often poorly labeled. We found acrylic powders in some beauty supply stores that had been repackaged from bulk supplies, without formal labels – thus providing no ingredient information. We identified acrylic nail liquid products which included no ingredients on the label. Many gel nail polishes had peel back labels on the bottom of the bottles, making the ingredients (if they were listed there) largely inaccessible before purchase.
- **Hair and wig adhesives** as well as adhesive remover products were frequently either lacking ingredient listings on the package, or included vague ingredients such as “polymers” or “hydrocarbons” which are not specific enough to determine exposure.
- **Hair dyes** were commonly sold in beauty supply stores without their outer packaging (which may or may not have included ingredient listings). Frequently the individual bottles of hair dye included language on their labels such as “*See back of packaging for detailed safety information*”.
- **One brand of keratin straighteners** also included no ingredients. Our survey only collected photos from this brand, so it is unclear if this is a problem within this category, or just the one brand. The lack of ingredient disclosure is of particular concern as some keratin straighteners have been known to include **formaldehyde**, a cancer-causing ingredient.

All of these examples result in salon workers using products without clear nor easily accessible information about the ingredients they are being exposed to.

*I kept getting sick. A lot. I kept getting **sinus infections** and **asthma attacks**...being exposed to the fumes, the moment that I was in a same room where someone was doing a hair straightening treatment, I would literally **feel it in my chest**, and I have to leave the room. I mean it was that powerful for me. My lungs would basically shut down, so the moment I was away from that space, I felt a lot better because I didn't have to breathe all that stuff, so therefore I didn't have asthma attack, after asthma attack, after asthma attack every time I was at work.*

- Fabienne Grisel-Todorov

Review of CSCP Cosmetics products database/ Compliance with CFFIRKA

In July 2022, we reviewed the California Safe Cosmetics Program Product Database to assess the impact of the new reporting requirements of the Cosmetic Fragrance and Flavors Right to Know Act of 2020 (CFFIRKA). Under federal law, cosmetic products can list “fragrance” as an ingredient on the product label, without specifying the many chemical ingredients which comprise the fragrance. Under the California Cosmetic Fragrance and Flavors Right to Know Act of 2020, however, cosmetics manufacturers selling products in California are now required to report the presence of a host of toxic fragrance ingredients to the California Safe Cosmetics Program. This law has resulted in a considerable increase in reporting of products and toxic ingredients to the California Safe Cosmetics Product Database. Information on toxic and/or allergenic ingredients included in the fragrances of thousands of cosmetic products is now available for the very first time. This toxic exposure was previously kept secret from cosmetics users, (and continues to be kept secret for most cosmetic products not sold in California) as industry trade secrets allowable by business owners and manufacturers.

Of the over 300,000 entries in the full database, we focused our review on the 50,000 entries for cosmetics specifically designed for hair or nails. Prior to the new law, cosmetic manufacturers were required to report chemicals known or suspected to cause cancer, birth defects and other reproductive harm, but that requirement did not apply to fragrance ingredients. Following the passage of the Fragrance and Flavors Right to Know Act (SB 312), fragrance allergens were most commonly reported, followed by titanium dioxide, glycol ethers, phthalates and a number of other chemicals. We identified 27 different highly toxic chemicals (including carcinogens, reproductive toxins, respiratory toxins and persistent bioaccumulative toxins (PBTs)) that are newly disclosed as ingredients in the fragrances in hair and nail products. In most cases, these ingredients were previously kept secret from the people using these products, and likely still, few would be found listed on labels.

Table 2: Hazardous chemicals present in the fragrance of hair and nails products

(As reported to the California Safe Cosmetics Program (CSCP) Product Database as of 6/30/2022)

Chemical Name	CAS Number	Hazard Traits
1,3-Dioxane, 2-(2,4-dimethyl-3-cyclohexen-1-yl)-5-methyl-5-(1-methylpropyl)-	117933-89-8; 186309-28-4	Bioaccumulation; Environmental Persistence
1-Naphthalenepropanol, a-ethenyldecahydro- 2-hydroxy-a,2,5,5,8a-pentamethyl-, [1R-[1a(R),2β,4aβ,8aa]]-	515-03-7	Bioaccumulation; Environmental Persistence
2-Phenoxyethanol	122-99-6	Respiratory Toxicity
2-Phenoxyethyl isobutyrate	103-60-6	Respiratory Toxicity
Acetaldehyde	75-07-0	Carcinogenicity; Dermatotoxicity; Neurotoxicity; Ocular Toxicity; Respiratory Toxicity

Table 2 continued

Acetophenone	98-86-2	Dermatotoxicity; Hematotoxicity; Ocular Toxicity; Respiratory Toxicity
Behentrimonium chloride	17301-53-0	Toxicity Undefined
Benzophenone	119-61-9	Carcinogenicity
beta-Myrcene	123-35-3	Carcinogenicity
Bis(2-methoxyethyl) ether	111-96-6	Reproductive Toxicity
Butylated hydroxyanisole (BHA)	25013-16-5	Carcinogenicity
Cetrimonium chloride	112-02-7	Toxicity Undefined
Coumatetralyl (ISO)	5836-29-3	Reproductive Toxicity
Diethyl hexyl adipate	103-23-1	Developmental Toxicity; Reproductive Toxicity
Diethyl phthalate (DEP)	84-66-2	Developmental Toxicity; Endocrine Toxicity; Immunotoxicity; Other Toxicological Hazard Traits; Reproductive Toxicity; Respiratory Toxicity
Diethylene glycol monoethyl ether	111-90-0	Respiratory Toxicity
Difenacoum (ISO)	56073-07-5	Reproductive Toxicity
Di-isodecyl phthalate (DiDP)	26761-40-0; 68515-49-1	Developmental Toxicity; Endocrine Toxicity; Immunotoxicity; Reproductive Toxicity; Respiratory Toxicity
Estragole	140-67-0	Carcinogenicity
Glycol ethers		Respiratory Toxicity
p-Cresol	106-44-5	Musculoskeletal Toxicity; Respiratory Toxicity
Propylene glycol mono-t-butyl ether	57018-52-7	Carcinogenicity
Pulegone	89-82-7	Carcinogenicity

Table 2 continued

quinolin-8-ol	148-24-3	Reproductive Toxicity
Safrole	94-59-7	Carcinogenicity
Styrene	100-42-5	Carcinogenicity; Developmental Toxicity; Hepatotoxicity and Digestive System Toxicity; Neurotoxicity; Ocular Toxicity; Reproductive Toxicity; Respiratory Toxicity
Tertiary butyl alcohol (TBA)	75-65-0	Carcinogenicity
Source: California Safe Cosmetics Program (CSCP) Product Database. Available at: https://cscsearch.cdph.ca.gov/search/publicsearch		

While the information now available from the California Safe Cosmetics Product Database is useful and informative, we are aware that it is still incomplete. Of the 145 professional salon product labels we photographed, we found twenty products listing ingredients on the label that are reportable to the database. Only four of those twenty products, however, had actually been reported to the database. It is unknown how many other products may have reportable ingredients in their fragrances, which simply were not included on the label. Enforcement of the reporting law is still needed to improve the availability of information on toxic ingredients in cosmetic products.

Table 3: Photographed Products Containing Ingredients Reportable to the California Safe Cosmetics Program Product Database

Product Brand Name	Type of Product	Product Category	Listed in the CDPH Database?	Reportable Ingredients
<u>Products Not Found in the Database</u>				
Get Glued Eco Style	Hair/wig adhesive	Hair	No	Methylparaben, propylparaben, limonene, eugenol, hexyl cinnamal
Pravana Chromasilk Vivids Neon	Hair dye	Hair	No	Methylparaben, ethoxydiglycol
Purple Riot 8-0	Hair dye	Hair	No	Citronellol
Olaplex Intro kit	Deep conditioner	Hair	No	Lilial

Table 3 continued

L'oreal Inoa Post	Shampoo	Hair	No	limonene, alpha isomethyl ionone
Zotos Quantum extra body	Permanent or relaxer	Hair	No	Linalool, citronellol
Celeb Luxury Viral Color-wash Pastel Baby Blue	Hair dye	Hair	No	Limonene
Dr. Miracles New Growth No-Lye Relaxer / Regular	Permanent or relaxer	Hair	No	Hexyl cinnamal, limonene
The Demi Paul Mitchell 3VR	Hair dye	Hair	No	Ethoxydiglycol, limonene, linalool,
Joico Intensity Semi-Permanent hair color Peacock Green	Hair dye	Hair	No	Methylparaben, alpha isomethyl ionone
Queen Helena Super Cholesterol Hair Conditioning Cream	Deep conditioner	Hair	No	Methylparaben
Prolific Nail Lacquer Thinner	Nail polish thinner	Nails	No	N,n-dimethyl-p-toluidine
Opi Rapidry	Nail polish dryer	Nails	No	Lilial, HICC, geraniol
Young nails Nail liquid	Acrylic nail liquid	Nails	No	N,n-dimethyl-p-toluidine
NailTek Renew anti-fungal oil	Anti-fungal cuticle oil	Nails	No	Methylparaben, BHT
OBS	Clear non-yellow liquid	Nails	No	N,n-dimethyl-p-toluidine
SNS	Acrylic powder	Nails	No	Titanium dioxide
Products Found in the Database				
L'oreal Color 10 in 1 /Spray multipurpose	Hair dye	Hair	Yes	Fragrance allergens
Salon Pro Hair Bond remover Thirty sec.	Hair/wig adhesive remover	Hair	Yes	Naptha (petroleum) Limonene
Jamaican Mango & Lime Braid Twist Remover	Hair Detangler	Hair	Yes	Limonene
Seche Vite Instant gel top coat	Nail Top Coat	Nails	Yes	Toluene
Note: This information represents the data available in the database as of 1/10/23. The database is dynamic and designed to be updated over time.				

ZIPPORAH'S STORY

Many operators and clients are allergic to latex products. I am allergic to latex so I use vinyl gloves. Chemicals are also a concern. In many cases **clients aren't aware that they may have an allergic reaction to products**, but in the event of a side effect occurring it is very important to know the ingredients of the product you are using. For instance, there has been a very popular hair coloring product on the market, that in the past had lead as one of the ingredients listed in their product. It has been and still is very effective in depositing color into the hair cuticle, but as we know lead can be harmful. Skin is the largest organ of the body and we need to be aware of all products we are using. The smoke from doing thermal services has and can cause respiratory issues. Also, you can get rashes from synthetic braiding hair, many nut oils can be used in products and can cause allergic reactions for many people. Thus, **ingredients need to be listed on products**.

Ingredient disclosing can keep those exposed to products from the harmful effects. Sometimes people make homemade "organic" products which may have special ingredients in them and because it is "organic" (which is what we want and is associated with all goodness) still could cause harm. It's against the law to not disclose the ingredients used in a product. Even that special ingredient. You need full disclosure of ingredients to know what's contained in products.

A **common concern for stylists** is they run into problems with **bulk labeling of professional salon products**. It's up to the stylist to make note of what's in the product.

There have been times I've seen advertisements for items I wanted to purchase that sound as if they would be beneficial and it's in a different language (e.g. Chinese, Vietnamese, etc.) and I don't know what's in the products. This has definitely hindered me from buying certain products.

I have found throughout the years many more people now are choosing to use more natural styles because they don't want the straighteners which have harmful chemicals or using synthetic hair (e.g. braids). **I personally don't do any styles with hair straighteners or thermal styling anymore and there are some color products I don't use due to the potential risks of chemical exposures.**



Zipporah Perine-Jones

When I have tried **to educate my colleagues or clients about chemical exposure** in salon products those interactions varied—each time during a consultation I do explain/educate clients and potential clients. It's received 50/50. Some people are receptive and say okay. Other people say they don't care and want to look the way they want to look, so will take their chances.

Limitations of this report:

This report is based on a snapshot of professional salon products on the market in California today. We did not collect ingredient information on all product types or in all locations in California. Nor did we collect information on all the products marketed in any single category. Further, this report is focused on professional salon products, used by salon workers, so comparisons cannot be made to retail cosmetic products intended for consumer use.

Still, our limited review effectively demonstrated several concerns with ingredients and ingredient disclosure among salon products. We believe the information illustrates the state of the professional cosmetic industry when it comes to safety and right-to-know: 1) dangerous chemicals continue to show up in professional salon products; 2) some manufacturers and suppliers still fail to comply with the letter or spirit of labeling and reporting laws; 3) and fixes to these same old problems are still needed, 4) innovative, green chemistry solutions are needed to replace toxic product ingredients, reduce harm and avoid regrettable substitutes.

CONCLUSION

The professional salon product industry must be held accountable for the adverse impacts it causes both to its customers - the salon workforce, as well as to our planet. Innovation in inherently safer products is well overdue. There is a long history of negative health impacts experienced by salon workers. These health effects are often instigated by the hazardous ingredients in salon products but also compounded by the social and economic conditions of salon workers. The salon workforce includes those who are women, low-income, immigrants, refugees and people of color facing numerous health disparities and burdens. Salon product manufacturers are responsible for knowing and accommodating the needs of their customers for healthier products. Warnings and unrealistic safety instructions are inadequate substitutes for safe products. It is unacceptable for manufacturers to include highly toxic, corrosive, irritant chemicals in products with expected skin contact, or ingredients known to harm the lungs in products that will easily be inhaled when used. In the meantime, manufacturers must also improve their transparency, ensuring that every product contains a listing of all ingredients, so that salon workers can make informed choices about the products they use. Hiding toxic ingredients in “fragrance” or making ingredient listings difficult to read or find is a disservice to salon workers who deserve to be fully aware of their exposures.

Salon product manufacturers, as members of the chemical industry, are also responsible for their impacts on the environment. The chemical industry is a significant contributor to climate change yet has largely escaped scrutiny from policy makers and the public. If the chemical industry stopped using fossil fuels as the basis for chemical production, and instead invested in green chemistry, safer chemicals would result and significant progress towards abating climate change could be achieved. Lacking incentives, there has been little innovation in the building blocks of the chemical industry since the advent of chemical manufacturing.

Ingredient transparency is a starting place toward the transformation that we need to see in industry. Awareness of ingredients is crucial to identifying harmful products, facilitating effective alternative assessments, and demanding safer products all of which drive the market towards innovation for safety. For the sake of salon workers and their clients, we need to start today.



TRISH'S STORY

My name is Trish Pham. I came to the US in 2004 when I was 45 years old.

I immediately started going to manicurist school, and then upon graduation two months later started working in nail salons.

My body has always been more sensitive than other people. In the nail salon, we use acetone and alcohol a lot, so the smell is really heavy with chemicals. As a result, my nose would get extremely irritated. Everytime I work on a customer, my nose would start running from the chemicals by the end of the manicure or pedicure. **I would then need to step outside immediately.** With the breath of fresh air, after a while my body would stabilize and I would not have a runny nose anymore. However, if customers are back to back and I don't have time to go outside or if the store is not well aired, I would have to work with a runny nose. This means that **I would put a towel inside the mask then wear the mask.** This way, when my nose starts running, the towel would catch it. This is hard for me because with the towel inside the mask I cannot breathe well. Also, with a runny nose, my throat would itch and I would start coughing very often. This makes my customer very uncomfortable but what can I do? I already earn much less than everyone else (\$200-300 per week for a full 5-6 days of work) because **I cannot work faster due to not being able to breathe.**

I was very healthy before starting work in the nail industry. Three or four years after working in the nail salon industry, **my hands started shaking.** My entire left arm went numb, so I couldn't feel it a lot. At work, while massaging customers, I would pretend to use my left hand to push, but really I was just doing the motion. My right hand was doing most of the massage. I also had bad body aches. Luckily, my brother told me to try glucosamine. I drank it for 1 week and my numb left arm stopped.

After the situation with the hand, in 2012, I got cervical cancer. I don't know if any of my body aches or left hand numbing or the cancer is related to the nail salon industry. I just know that after the cancer treatment I had to quit the nail salon work because it is too dangerous for me now. I am now 63 years old.

I did not know anything about the ingredients of acetone and alcohol and other nail salon products. If the ingredients were in English I would not have understood. Maybe if the ingredients are listed in Vietnamese I might. But ingredient names are scientific and I would still have a hard time understanding it in Vietnamese.

The owner would be the one to buy ingredients for the employees, so I don't have a choice in what products I use. The owner would buy bulk products and pour them into smaller bottles for employees, so I also **did not know the brand or ingredients.**

There was no education for me around toxic chemicals. Everyone is working fast and they only care for money. No one cares about your health. Stateboard only assess the safety for customers but not about chemicals for employees.

SOLUTIONS AND RECOMMENDATIONS:

(Note that this is not intended to be an exhaustive list of solutions, but rather a starting point of actions that could be taken initially.)

What salon workers/salon owners can do:

- Read ingredient lists and avoid, where possible, chemicals linked to adverse health impacts
- Switch to products that are better for you and for your clients
- Stop offering certain salon services which concern you, or cause symptoms
- Wear Personal Protective Equipment (PPE) like masks and gloves. (Keep in mind that your employer should provide these to you.)
- Open windows and doors in the salon (when possible) to improve ventilation
- Consult Safety Data Sheets (SDS) for the products you use regarding ingredients and safety warnings. (In California, SDS's are required to be translated into Vietnamese, Spanish, Korean and other languages. But be aware that the quality of SDS's varies, and some may not include all the information required.)
- Learn about Healthy Nail Salon Recognition Programs that may be available in your area.
- Contact beauty suppliers and manufacturers to ask for products that do not contain chemicals of concern.
- Raise your voice for safe and healthy salons. Contact Women's Voices for the Earth, the California Healthy Nail Salon Collaborative, and Black Women for Wellness to get more involved in advocating for the health and safety of salon workers.
- Share this report and fact sheets with your colleagues.

A note on ventilation:

As the chemical industry continues to engineer new chemicals, the ingredients in cosmetic products will continue to change with no information provided as to whether the manufacturer searched for and is using safer replacements in its products. What can help as far as decreasing exposure, although not eliminate the endless cycle of regrettable substitutes, is significantly improved ventilation – possibly ventilation systems for entire salon spaces, as opposed to only free-standing ventilating machines. But improved ventilation should be considered only as a second line of prevention when countering hazardous chemical exposures to salon workers as it is unclear what standard for air replacement or filter would be sufficient and installing a ventilation system in a salon could require a significant monetary outlay by a building owner.

What policymakers can do:

- Ban harmful chemicals in professional salon products. (The federal Modernization of Cosmetic Regulation Act does not prevent states from restricting or banning the use of harmful chemicals in professional salon products.)
- Create incentives to spur innovation in green chemistry and to help shift the chemical industry away from fossil fuel-based feedstocks.
- Ensure salon workers provide significant input in developing new policies that affect their health, safety and livelihood.
- Require improved ventilation systems in salons. Building owners should be responsible for any needed alterations to the space or building.

What companies can do:

- Review all your products for chemicals of concern. (Resources such as GreenScreen for Safer Chemicals, the Pharos Project, and the SINList can help.)
- Work to find truly safer alternatives by incorporating safer alternative assessments when changing product formulations to avoid regrettable substitutions. (The BizNGO Chemical Alternatives Protocol can be useful.)
- Ensure ingredient lists are affixed to all product containers that will ultimately be bought by salon professionals/owners.
- Ensure ingredient lists are available for products sold in bulk.
- Disclose all fragrance ingredients on your product labels (in addition to the fragrance allergens that will be required to be disclosed under the Modernization of Cosmetic Regulation Act).
- Provide accurate and realistic product use instructions to ensure products can be used safely.
- Ensure availability of SDS sheets for all products. (In California, SDS's must be translated into Vietnamese, Spanish, Korean and other languages, and must be posted on the company's website.)
- Participate in the Chemical Footprint Project to assess and measure use of hazardous chemicals.
- Invest in research and development for safer ingredient alternatives and non-fossil-fuel based feedstocks.

What clients can do:

- Talk to your stylist or nail salon technician about the products they use and the ingredients they contain.
- Share this report and accompanying fact sheets with your stylist or nail salon technician, and let them know you are concerned about their exposure.
- Refrain from judgment or blame of stylists because as this report shows, this is a manufacturer and government regulatory problem, not a salon worker problem.
- Support policies that better protect salon workers, address the issue of inadequate ingredient disclosure, and push for further research into safer substitutes.
- Visit salons that are able to use safer products. Keep in mind that some salons may not have the resources to make the change and many salon product ingredients don't currently have a safer alternative, so beware of greenwashing.
- Opt for less toxic salon services that may affect you or your stylist/manicurist's health.
- Tip your stylist or manicurist as generously as you are able.

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MONG THU'S STORY

“Language barriers are a significant problem for me, my coworkers, and my business to select safe products for the environment, my business, and my customers. Sometimes when I go to buy products, I don't know which are safe and which may not be. – MONG THU PHAM”

I have been working in nail salons for 12 years and after a few years, began noticing reactions to nail salon products that I was working with.

For example red eyes, fatigue, numbness in my hands, runny nose & sneezing, unable to sleep, etc.

If possible toxic elements are not disclosed, it puts me and my clients, and my business at risk for health problems. My business could lose clients and workers if the nail chemicals were causing health problems. Also, the environment is negatively affected. It is very important that information about nail products is clearly communicated to customers, nail salon owners, and the public.

Knowing the ingredients helps me as a nail worker to not worry about my health by avoiding possibly toxic elements for me and my customers. I would like to see warning labels and company warnings in Vietnamese about possible toxic ingredients in nail products. In Vietnamese because most nail workers and owners in California speak Vietnamese. Other languages would also be helpful. It would also be helpful if wholesalers/distributors of nail products would provide a list in Vietnamese of harmful chemicals and products that may contain them.

Some products that I get in bulk are not labeled regarding toxic ingredients etc.

Language barriers are a significant problem for me, my coworkers, and my business to select safe products for the environment, my business, and my customers. Sometimes when I go to buy products, I don't know which are safe and which may not be. If labels and information were clearly marked in Vietnamese, the language barrier problem would be much less.

Chemical exposure awareness training by California Healthy Nail Salon Collaborative has helped me select safe products to use in my salon. I can also recommend safer products to use in the salon and for my customers. I can educate my staff about safe product use, too. I talk to my staff often about how to handle nail products in a safe way and to wear protection such as masks and gloves for their safety. As a member of the Collaborative, I get training and information about nail product chemicals. I think this information should be available to everyone including workers, owners, and customers.

