

# PHASING OUT THE "TOXIC TRIO"



■ ■ ■ A Review of Popular  
■ ■ ■ Nail Polish Brands

# Phasing Out the “Toxic Trio”

## About the National Healthy Nail Salon Alliance

Founded in 2007 by the California Healthy Nail Salon Collaborative, National Asian Pacific American Women’s Forum and Women’s Voices for the Earth, the National Healthy Nail Salon Alliance (the Alliance) is a network of some 35 organizations, scientific researchers, advocates and government agencies. The goal of the Alliance is to protect and improve the health and welfare of women working in the nation’s nail salons. To achieve this goal, the Alliance promotes further research on the health risks and impacts to nail salon workers; raises the public profile of these issues through professional media communications; provides appropriate educational materials to salon owners and workers about ways to reduce exposure; builds and maintains a clearinghouse of information on chemicals unique to nail salons; and utilizes the strength of the many participant groups to coordinate advocacy projects aimed at convincing manufacturers to reduce the use of hazardous chemical ingredients.

The **California Healthy Nail Salon Collaborative** was formed in 2005 out of growing concern for the health and safety of nail salon and other cosmetology workers, owners, and consumers. The Collaborative coordinates, leverages, and builds upon the respective expertise and activities of its diverse members and partners to advance a preventative environmental health and safety agenda for the nail salon sector in California.

Founded in 1996, the **National Asian Pacific American Women’s Forum** is the only national multi-issue Asian and Pacific Islander (API) women’s advocacy organization in the country. Their mission is to address the concerns and increase the rights of API women and girls, and to build an API women’s movement among those who believe in advancing social justice and human rights.

**Women’s Voices for the Earth** (WVE) is a national organization that engages women to advocate for the right to live in a healthy environment. WVE leverages the power of women’s voices to create healthy homes, workplaces, and communities by reducing environmental hazards that adversely impact women’s health.





# PHASING OUT THE “TOXIC TRIO”

## A REVIEW OF POPULAR NAIL POLISH BRANDS

Over the last several years, scientific studies have shown a correlation between health problems in nail salon workers and daily exposure to chemicals in nail products. Three chemicals of particular concern are toluene, formaldehyde and dibutyl phthalate, nicknamed the “toxic trio.”

**Toluene** helps create a smooth finish across the nail and also keeps the pigment from separating from the liquid in the bottle. It is a common volatile solvent that is released into the air and can impact the central nervous system. It can also cause irritation of the eyes, throat and lungs and is a possible reproductive toxin.<sup>1</sup> **Formaldehyde**, which is

used as a nail hardening agent, is also a volatile chemical that can evaporate into the air of a salon. Formaldehyde is known to cause cancer.<sup>2</sup> **Dibutyl phthalate** (DBP) is a plasticizing chemical, added to nail polishes to provide flexibility and a moisturizing sheen. DBP exposure can effect thyroid function<sup>3</sup> and, in pregnant women, has been linked to reproductive problems in baby boys<sup>4</sup> as well as to decreased sperm count<sup>5</sup> in adult men.





Nail salon workers come into contact with nail care products and solvents day in and day out, resulting in a much higher exposure to these chemicals than the average person or customer. While research on nail salon workers is limited, new studies provide reason for concern for this vulnerable population. For example, an occupational health study looked at levels of phthalates in the bodies of workers commonly exposed to these chemicals. It found that manicurists had levels of DBP in their bodies two-times higher than that of the general population.<sup>6</sup> Another study looked at DBP exposure in manicurists before and after a full workday. Urinary levels of DBP increased significantly after a full work shift. The increase was even greater if the manicurist did not wear gloves, indicating that skin absorption of phthalates is a critical route of exposure.<sup>7</sup>

In order to provide nail salon owners, workers, and consumers with current information on which products do not contain the “toxic trio,” the National Healthy Nail Salon Alliance (the Alliance) surveyed popular nail product manufacturers on whether they use these toxic chemicals in their products.

Nail salon workers come in contact with nail products day in and day out, allowing for a much higher exposure to these chemicals than the average person. While research on nail salon workers is limited, new studies provide reason for concern for this vulnerable population.

#### THE GOOD NEWS:

A majority of the manufacturers the Alliance surveyed responded that their nail polishes are now “three-free,” meaning they no longer contain toluene, formaldehyde and dibutyl phthalate. This change appears to have occurred in the last several years (although some companies profess never to have used these chemicals in their products).

#### THE BAD NEWS:

A few of the surveyed manufacturers still use some of these toxic chemicals (although they claim to be developing alternative formulations); and some companies chose not to respond to the survey. Also, most companies only provided information about their nail polishes, not their full range of nail care products such as nail hardeners, top coats, base coats, etc.

The Alliance applauds the efforts of those companies that have reformulated their products to remove the “toxic trio.” The removal of toxic chemicals should lessen the harmful exposures nail salon workers experience. There is, however, **further work to be done to ensure that alternative chemicals are safe, and that companies remove hazardous ingredients from all nail salon products and solvents** and not just nail polishes. Additionally, more research is needed to better understand the chemical exposures nail salon workers experience, so that preventive measures



can be taken to protect their health. The nail product industry is responsible for making products safe for both professional and consumer use. The Alliance remains committed to ensuring that the policies and practices of the nail product industry and the U.S. government protect the health and safety of salon workers.

## Three Ways You Can Reduce Toxic Exposure in Nail Salons

**1. Purchase nail care products that do not contain the “toxic trio.”** If your favorite salon brand of polish does not appear in our “three-free” survey list, contact the company to determine whether the brand contains the “toxic trio.” While cosmetics marketed for consumer use will contain a list of ingredients on the label, U.S. law does not require ingredient disclosure for cosmetics marketed for salon or professional use.

**2. Contact the three companies\* that ignored our nail survey request.** You have a right to know if the products you’re putting on your body contain toxic chemicals. Call or email American Manicure, Sation and Yves Saint Laurent to find out if their nail care products contain the “toxic trio.”

**American Manicure:** 800-782-3555 or  
Information@americanmanicure.com

**Miss Professional Nail Products** (maker of Sation): info@misspn.com

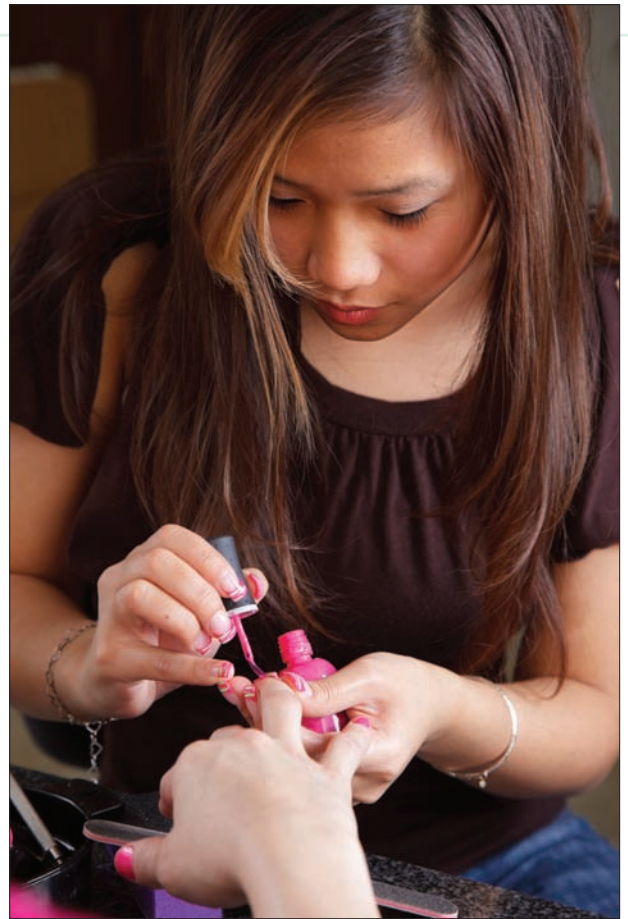
**Yves Saint Laurent:** 212-832-7100 or  
www.yslbeautyus.com/i22/contact-us/information.html

Use the following script as a guide:

*I’m concerned that [NAME OF COMPANY]’s nail care products might contain the “toxic trio” because they chose not to respond to the National Healthy Nail Salon Alliance survey. Does [NAME OF COMPANY] use toluene (pronounced tall-you-ene), formaldehyde and dibutyl phthalate (pronounced dye-byut-ill tha-late) in its products?*

**3. Learn about best practices for making salons safer work places.** The Environmental Protection Agency, in collaboration with nail salons and other partners, has created a guide with advice on topics such as safe handling and disposal of nail products, proper ventilation and other best practices to help workers lessen potential health risks. The guide is available online in English, Korean and Vietnamese: [www.epa.gov/opptintr/dfc/pubs/projects/salon/index.htm](http://www.epa.gov/opptintr/dfc/pubs/projects/salon/index.htm)

\* Although Sally Hansen did not respond to the Alliance regarding their use of the “toxic trio,” the company’s website states that their nail polish is now “three free.”





## Methodology

The National Healthy Nail Salon Alliance developed a list of popular nail product manufacturers through a variety of sources including industry websites and fashion magazine “favorite picks.” The list includes both those used professionally in salons and top retail brands. We confirmed the list with several nail salon owners and polled them for additional suggestions of commonly used salon brands.



Each manufacturer received a letter by certified mail (see letter on page 8) requesting information about the chemicals used in their nail products. The letter was signed by 35 non-profit groups, government agencies and individuals from across the U.S. interested in protecting the health of nail salon workers.

## Results

The following table shows the responses we received. Seventeen of the 23 manufacturers stated that they no longer use (or never have used) the “toxic trio” in their nail polishes. Two manufacturers, Creative Nail Design and Essie, stated that they still used some of the “toxic trio” chemicals but were in the process of reformulating. Four companies, American Manicure, Sally Hansen, Satin and Yves Saint Laurent chose not to respond to the letter.



| Confirmed nail polish is “three free” | Confirmed nail polish is not yet “three free” | Did not respond to letter |
|---------------------------------------|---|---------------------------|
| Acquarella                            | Creative Nail Design <sup>1</sup>             | American Manicure         |
| Butter London                         | Essie <sup>2</sup>                            | Sally Hansen <sup>3</sup> |
| Chanel                                |   | Sation                    |
| China Glaze                           |   | Yves Saint Laurent        |
| CHI                                   |   |                           |
| Colorpops                             |   |                           |
| Lippman Collection                    |   |                           |
| L’oreal USA                           |   |                           |
| NailTini                              |   |                           |
| OPI Products                          |   |                           |
| Orly International                    |   |                           |
| Rescue Beauty Lounge                  |   |                           |
| Revlon                                |   |                           |
| Seche                                 |   |                           |
| SpaRitual                             |   |                           |
| Suncoat                               |   |                           |
| Zoya                                  |   |                           |

*Survey results are self reported. Independent laboratory testing is necessary to confirm the presence or absence of the “toxic trio.”*

## Chart Footnotes

1 Creative Nail Design nail polish currently contains toluene. In their response letter, Creative Nail Design clarified that their nail polish no longer contains dibutyl phthalate (as of 2004), has never contained formaldehyde and that several new toluene-free formulations were “in development.”

2 Essie products may still contain toluene and formaldehyde. In their response letter, Essie clarified that their products comply with the European Union regulations (which ban dibutyl phthalate) and that they are “responding to our customer’s concerns and are reformulating our nail products portfolio.”

3 Although Sally Hansen did not respond to the Alliance regarding their use of the “toxic trio,” the company’s website states that their nail polish is now “three free.”



**National Healthy Nail Salon Alliance**  
 Women's Voices for the Earth  
 National Asian Pacific American Women's Forum  
 California Healthy Nail Salon Collaborative



July 15, 2008

Manufacturer  
 Address  
 City, State, Zip

Dear CEO or Lead Principal,


We are writing on behalf of thousands of concerned consumers, nail salon owners and workers, organizations and governmental agencies interested in confirming which nail product brands no longer contain three toxic chemicals of concern: toluene, formaldehyde and dibutyl phthalate (DBP). Your company was identified in our research as a top seller of nail polish to salons or consumers.

As you know, these particular chemicals, often called the "toxic trio," have received increased public attention in the past few years. Advocates, health professionals and scientists are deeply concerned about the potential health impacts of exposure to nail products, particularly for nail salon workers who have exceedingly higher exposures than the general population. These chemicals have been linked to reproductive harm, including miscarriages, infertility and birth defects, as well as cancer.

Over the last two years, the national profile of hazardous chemicals in nail products has been significantly expanded. For example, numerous articles have been published in major media outlets (including the *San Francisco Chronicle*, *Boston Globe*, *New York Times* and *The Nation*) highlighting the concerns and symptoms associated with exposure to chemicals in nail products reported by nail salon workers across the country. Several new major research initiatives, in California and New York, are also underway to better understand specific health outcomes for nail salon workers. In June, the *Journal of Occupational Environmental Medicine* reported that manicurists showed a statistically significant increase of dibutyl phthalate metabolites in their urine at the end of their workday compared to the start of their day. State legislative initiatives, such as the 2005 California Safe Cosmetics Act, serve to improve disclosure about harmful chemicals in these products and related health risks. Finally, we are pleased to see that many major nail product manufacturers have responded to increased public attention to these issues by reformulating their products.

The purpose of this letter is to confirm and clarify which manufacturers have, in fact, reformulated their products. We kindly request that you respond to the following questions about the nail products manufactured by your company:



- 
- 
- 1) Has your company phased out the use of toluene, formaldehyde and/or DBP in your nail polish products sold in the U.S.?
  - 2) If so, which of your products no longer contain these chemicals? Please list by color or date of manufacture.
  - 3) If not, do you plan to phase these chemicals out in the future? If so, when and for which products?
  - 4) Has your company phased out the use of toluene, formaldehyde and/or DBP in your nail polish products sold in other countries such as in the European Union?

Many of the organizations endorsing this request work directly with nail salon workers, owners and customers. In this capacity, we field a growing number of questions about which products are safe to use. We understand that your company may hold the position that nail products containing these chemicals are safe. However, a growing body of research tells us otherwise. In addition, our experience indicates that individuals everywhere are now looking for products which are toluene, formaldehyde and DBP-free. We would like to confirm that the information we have about your company's products is accurate and up to date.

Company responses to this letter will be analyzed, compiled and made available to the media, nail salon owners, workers and consumers. **To include your company's status in our report, please respond in writing by August 8, 2008.** Companies that fail to respond by this date will be described as non-responsive.

**Please send your written response to Alexandra Scranton, Women's Voices for the Earth, P.O. Box 8743, Missoula, MT 59807, or by email at [alex@womenandenvironment.org](mailto:alex@womenandenvironment.org)**

Thank you for your consideration and prompt response to this letter. If you have any questions, feel free to contact Alexandra Scranton at 406-543-3747.

Sincerely,

**Alexandra Scranton**  
Director of Science and Research  
Women's Voices for the Earth

**Priscilla Huang**  
Policy and Programs Director  
National Asian Pacific American Women's Forum

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**Barbara A. Brenner**  
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**Joan Sheehan**  
Co-President  
Capital Region Action Against Breast  
Cancer (CRAAB!)  
Albany NY

**Kathy Curtis**  
Policy Director  
Clean New York

**Patricia Huback**  
Coordinator  
Oregon Collaborative for Healthy  
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**Lisa Archer**  
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**Eveline Shen**  
Executive Director  
Asian Communities for  
Reproductive Justice

**Lynn Rose, Project Manager**  
Healthy Vietnamese Nail Salon  
Project  
Pioneer Valley Project  
Springfield, MA

**Laurie Foster, Project Coordinator**  
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Local Hazardous Waste  
Management Program in King  
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**Tiffany Skogstrom**  
Boston Public Health Commission's  
Safe Nail Salon Project

**Cora Roelofs, ScD.**  
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University of Massachusetts  
Lowell

**Miliann Kang**  
Assistant Professor of Women's  
Studies  
UMASS Amherst

**Connie Nguyen**  
Nail salon worker  
Caregiver for children whose  
parents are both manicurists

**Ngoc-Tram Duong**  
Outreach for Vietnamese Healthy  
Nail Project  
Environmental Coalition of South  
Seattle (ECOSS)

**Tina Ling**  
Policy Analyst  
Asian Law Caucus

**Secret Charles**  
Organizer, Toxic Beauty Project  
Community Coalition for  
Environmental Justice (CCEJ)  
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**Anuja Mendiratta, M.E.S.**  
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Epidemiologist  
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**Shirley Wu Chan**  
Belmont, CA

**Jessica Huynh**  
UC Berkeley student  
(Northern California Cancer  
Center)

**Romila G. Kim, MPH**  
Sacramento, CA

**Chia-Hui Wen**  
San Ramon, CA

**Emily Lui**  
Irvine, CA

**Elaine Yang**  
Chapel Hill, NC

**Tamarra Coleman-Hill**  
Senior Policy Associate  
African American Women Evolving  
Chicago, IL

**Tolle Graham**  
MassCOSH (MA Coalition for  
Occupational Safety and Health)

**Hiep Chu**  
Executive Director  
Viet-AID, Inc.  
Dorchester, MA

**Thu Pham**  
Project Coordinator  
Vietnamese Health Project, Mercy  
Medical Center  
Springfield, MA

**Donna L. Moultrup,**  
**RN, BSN, CHO**  
Director of Health  
Belmont Health Department  
Belmont, MA

**Laura Weinberg, President**  
Great Neck Breast Cancer Coalition  
Great Neck, NY

1 HESIS (2005) "Toluene Fact Sheet." Hazard Evaluation System and Information Service. California Department of Health Services. Available at: [www.dhs.ca.gov/ohb/HESIS/toluene.htm](http://www.dhs.ca.gov/ohb/HESIS/toluene.htm)

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for toluene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service. Available at: [www.atsdr.cdc.gov/toxprofiles/tp56.html](http://www.atsdr.cdc.gov/toxprofiles/tp56.html)

2 OSHA (2002) "Formaldehyde Fact Sheet". Occupational Safety and Health Administration. Available at: [www.osha.gov/OshDoc/data\\_General\\_Facts/formaldehyde-factsheet.pdf](http://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf)

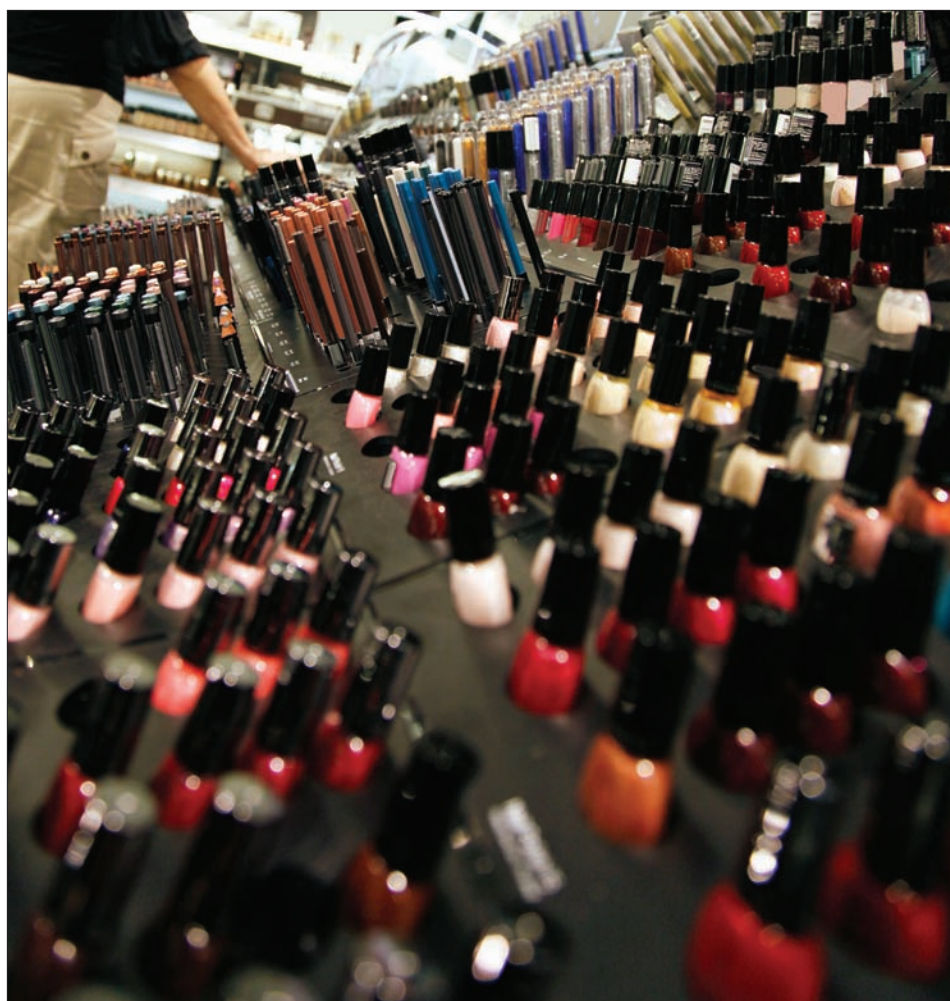
3 Huang, PC et. al. (2007) Associations between urinary phthalate monoesters and thyroid hormones in pregnant women. *Human Reproduction*, October 2007: 22 (10): 2715-22.

4 Swan, S. et. al. (2005) Decrease in Anogenital Distance Among Male Infants with Prenatal Phthalate Exposure. *Environmental Health Perspectives*, August 2005, 113 (8): 1056-1061.

5 Hauser, R. (2006) Altered semen quality in relation to urinary concentrations of phthalate monoester and oxidative metabolites. *Epidemiology*, November 2006. 17 (6): 682-691.

6 Hines, CJ et. al. (2009) Urinary phthalate metabolite concentrations among workers in selected industries: a pilot biomonitoring study. *Annals of Occupational Hygiene*, January 2009; 53 (1): 1-17.

7 Kwapniewski R. et. al. (2008) Occupational exposure to dibutyl phthalate among manicurists. *Journal of Occupational and Environmental Medicine*, June 2008: 50 (6): 705-11.





For more information about the National Healthy Nail Salon Alliance, visit [www.womenandenvironment.org](http://www.womenandenvironment.org) or call Women's Voices for the Earth at 406-543-3747.

