## \*TOXIC TRIO"

A REVIEW OF POPULAR NAIL POLISH BRANDS



ver the last several years, scientific studies have shown a correlation between health problems in nail salon workers and daily exposure to chemicals in nail care 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. 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. Dibutyl phthalate (DBP) is a plasticizing chemical, added to nail polishes to provide flexibility and a moisturizing sheen. DBP exposure can effect thyroid function and, in pregnant women, has been linked to reproductive problems in baby boys as well as to decreased sperm count 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.

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 leading nail product manufacturers on whether they use these toxic chemicals in their products.

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—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.

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## SURVEY RESULTS

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."

## 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."