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Driven to DiscoverSM

- Isothiazolinone preservatives (IPs) are notorious contact allergens:
 - **methylisothiazolinone (MI)**
 - **methylchloroisothiazolinone/methylisothiazolinone (MCI/MI)**
 - **benzisothiazolinone (BIT)**
 - **octylisothiazolinone (OIT)**
- MI was ACDS “2013 Allergen of the Year”
- Pediatric dermatologists are familiar with IPs in personal care products, homemade slime recipes, and wet wipes
- We present a novel source of MI in children’s nail polish

- Schlicte et al. found ~**20% prevalence** of MI in 152 children's products¹
- NIH Household Products and EWG's Skin Deep Databases (products marketed for children containing MI) – **shampoos/conditioners/body washes** manufactured by companies such as Suave, Avon, Aussie, Johnson's, and Dial
- EWG's Skin Deep Database archived products: **9 nail polishes** by Fing'rs and Piggy Paints contained MI
- Google and Amazon search for children's nail polishes: **JoJo Siwa 7-pack nail polish set and Pure Anada Princess Polish** currently contain MI

Scan the QR code
for hypoallergenic
children's nail
polish alternatives!



Case Presentation

- A mother with **hand dermatitis** was patch tested with positive reaction to **MI**
- Upon examination of her and her family's products, we found several sources of **MI** including a **Townley Girl Disney Frozen Non-Toxic Nail Polish**, which she applied to her 7-year-old daughter's nails (Figs. 1A-B)



Why Children's Nail Polish?

Adult nail polishes often contain: tosylamide formaldehyde resin, acrylates, formaldehyde, dibutyl phthalate, and triphenyl phosphate²

- Nail polishes marketed for children are often “**water-based**” and tout the claim of “**non-toxic**”
- Preservatives such as MI, are needed in **water-based products** to prevent bacterial/fungal growth

Conclusion

- We report this case to raise awareness of a new source of IPs in children and family members
- Baby wipes have been reformulated without MI due to awareness and education³
- We hope that continued efforts to spotlight sources of MI will minimize exposure and predisposition for pediatric allergic contact dermatitis

References

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2. Mendelsohn E, Hagopian A, Hoffman K, et al. Nail polish as a source of exposure to triphenyl phosphate. *Environ Int.* 2016;86:45-51. doi:10.1016/j.envint.2015.10.005
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