

Short Communication

Allergic contact dermatitis from a perinone-type dye C.I. Solvent Red 179 in spectacle frames

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We report the 1st case of allergic contact dermatitis from C.I. Solvent Red 179 used in the earpieces of spectacle frames, with cross-reaction to C.I. Solvent Orange 60.

Case Report

A 61-year-old Japanese woman developed itchy scaly erythema over the ears where the earpieces of her spectacle frames touched. She had worn the spectacles for 2 years and the eruption appeared 1 year after she started to use the spectacles. She showed a positive patch test reaction to scrapings of red-violet earpieces at D3. Her skin lesions subsided after she changed the red-violet earpieces to colorless ones. She had no history of contact allergy to hair dyes, plastics or other spectacles.

The producer of spectacles informed us that components of the coloring agent were Solvent Red 179 and 151, and offered the coloring agent and 3 dyes. Further patch tests were performed with the coloring agent and

dyes. Positive reactions were obtained to scrapings of the earpieces, coloring agent 1% pet., Solvent Red 179 1% pet. and Solvent Orange 60 1% pet. at D3. She was negative to Solvent Red 151. Control patch tests with scrapings, coloring agents and 3 dyes were negative in 5 normal controls.

Chemical analysis of the coloring agent and earpieces of our case by TCL and HPLC revealed Solvent Red 179 and 151, but Solvent Orange 60 and disperse dyes were not detected.

Comment

There have been 6 reported cases of spectacle-earpiece dermatitis due to Solvent Orange 60 thus far in Japan (Table 1). Solvent Red 179 was not detected by chemical analysis in the coloring agent of causative earpieces in these reported cases. The patient of Shono et al. (1) reacted strongly to Solvent Orange 60, but did not cross-

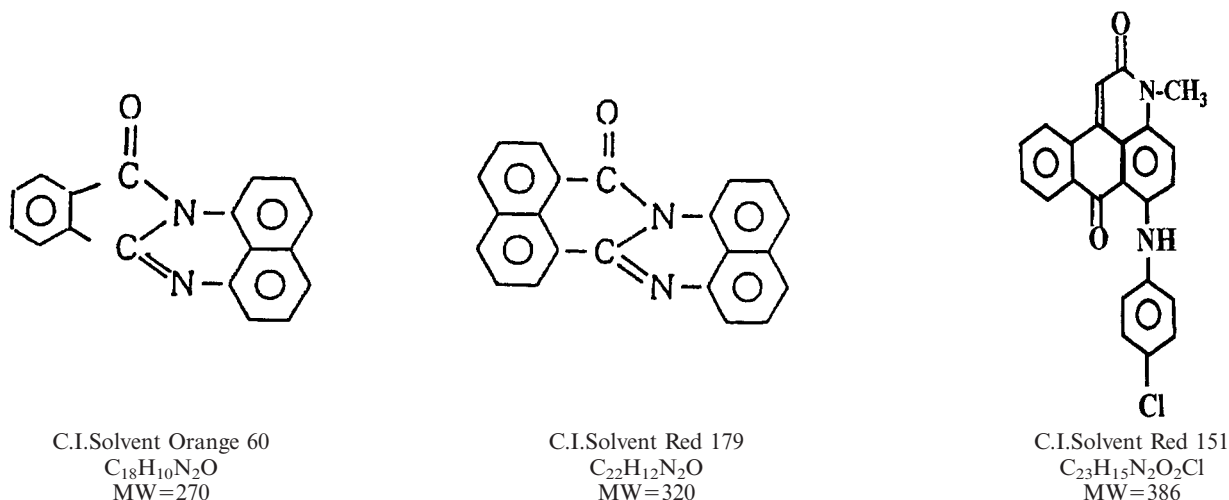


Fig. 1. Structural formula of perinone-type dyes.

Table 1. Reports of allergic contact dermatitis from Solvent Orange 60 and Solvent Red 179 in spectacle frames

Authors	Year	Age (years)	Sex	Causative chemicals
Yamazaki	1992	49	M	Solvent Orange 60
Hino	1996	31	M	Solvent Orange 60
Shono	1996	66	M	Solvent Orange 60
Fukunaga	1998	26	M	Solvent Orange 60
Aoyama	1998	48	M	Solvent Orange 60
Suzuki	2000	66	M	Solvent Orange 60
Tsunoda	2000	61	M	Solvent Red 179

react to Solvent Red 179. Our patient reacted to Solvent Red 179 and Solvent Orange 60, although the causative earpieces did not contain Solvent Orange 60. Thus, the reaction to Solvent Orange 60 in our case is concluded as being a cross-reaction with Solvent Red 179.

References

1. Shono M, Kaniwa M. Allergic contact dermatitis from a perinone-type dye C.I. Solvent Orange 60 in spectacle frames. *Contact Dermatitis* 1999; 41: 181–184.