

was conducted on 43 subjects to determine the efficacy of formulations containing 0.5% 5,5'-dipropylbiphenyl-2,2'-diol for the treatment of ultraviolet (UV)-induced pigmentation, and showed a significant difference in pigmentation score from placebo, with no adverse skin reactions (4). The skin-lightening effects of 6 months of application of 0.5% 5,5'-dipropylbiphenyl-2,2'-diol for facial hyperpigmentation were studied in 51 Japanese females, and no adverse effects were recorded (5). Another study investigating its effect on UV-induced facial skin hyperpigmentation in 300 Japanese females did not report adverse effects after application for 1 month (6).

The first case of allergic contact dermatitis caused by 5,5'-dipropylbiphenyl-2,2'-diol was described in

2009 (7). This first case reacted positively to 5,5'-dipropylbiphenyl-2,2'-diol 1% pet. In the present case, patch testing was performed with 5,5'-dipropylbiphenyl-2,2'-diol 0.5% pet., as the amount of 5,5'-dipropylbiphenyl-2,2'-diol permitted for use in cosmetics is less than 0.5%.

This case highlights the possibility of allergic contact dermatitis caused by skin-lightening agents in cosmetics. Determination of the optimum patch test concentration of 5,5'-dipropylbiphenyl-2,2'-diol may be required in further cases of allergic contact sensitivity caused by this agent.

## References

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