

## Bay Leaf Phytodermatitis

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Leaves of the bay laurel, also known as laurel, noble laurel, sweet bay, or sweet laurel (*Laurus nobilis* L., fam. Lauraceae) have long been used for food flavouring mainly in Mediterranean cuisine and also in cosmetology.. In medicine, the plant has been used in physical and aromatherapy, and is renowned for its analgesic and anti-inflammatory effects in rheumatic arthralgia <sup>1</sup>. Contact allergy has been mainly described to the essential bay leaf oil in masseurs, aromatherapists and in patients who applied the plant extract for arthralgia <sup>1-3</sup>.

A 44-year-old Caucasian woman presented with a 5-day history of itchy eczematous eruption on the skin around her right elbow (**figure 1a, b**). She had taken a home-prepared infusion of bay leaves for 2 days, and she then applied bay leaves under plastic film occlusion to the elbow for her chronic joint pain. She had no other relevant present or past medical history. The patient admitted using bay leaf in her home culinary practice before with good skin tolerance.

Clinical examination revealed two demarcated oval-shaped erythematous plaques with fine coalescing papules forming a leaf-like shape. Treatment with topical mometasone furoate 0.1% cream once daily for 14 days resulted in significant improvement of the inflammatory skin changes without leaving residual changes.

Six week later, patch testing was performed with Finn Chambers®, according to the ICDRG criteria, with the European baseline series (Chemotechnique®, Vellinge, Sweden) and 2% pet. ethereal extract of bay leaf obtained by distillation (Eterika Ltd. Plovdiv, Bulgaria). A positive

reaction (++) at day 2 and day 3 to 2% pet. ethereal bay leaf extract was observed. The same preparation was negative on patch testing in 15 consecutive control subjects.

The patient was advised to avoid any skin or systemic exposure to bay leaf.

Sesquiterpene lactones (SL), pinene, citral, terpineol and cineol are the common allergenic compounds of laurel <sup>4</sup>. SL are the most common allergen in bay leaf, while on the molecular level the exocyclic  $\alpha$ -methylene group of SL is the target for the allergic reaction, and is also responsible for the cross reactions to Compositae plants <sup>4-6</sup>. Our patient was negative to SL mix Allergy to SL could not be ruled out, as in *Laurus nobilis* chemovars exist, each containing SL different from the ones in the obtained commercial hapten <sup>7</sup>.

A certain limitation of our study is our inability to define the exact hapten on the molecular level and the lack of testing with plan series for cross-reactivity. The present case is of interest because the allergic contact dermatitis developed to the leafs of the plant but not to laurel oil or extract.

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**Figure legends:**

**Figure 1:** Skin findings present on the patient's elbow skin **(a)**, and closer view of the erythema and coalescing papules **(b)**.



1066x1422mm (72 x 72 DPI)



1008x947mm (72 x 72 DPI)