

Balsam of Peru



The tree from which Balsam of Peru is derived.

Balsam of Peru, also known and marketed by many other names, is a balsam derived from a tree known as *Myroxylon*, which is grown in Central America (primarily in El Salvador) and South America.^[1]

Balsam of Peru is used in food and drink for flavoring, in perfumes and toiletries for fragrance, and in medicine and pharmaceutical items for healing properties. It has a sweet scent. In some instances, Balsam of Peru is listed on the ingredient label of a product by one of its various names, but it may not be required to be listed by its name by mandatory labeling conventions.

It can cause allergic reactions, with numerous large surveys have identifying it as being in the “top five” allergens most commonly causing patch test reactions.^{[2][3]} It may cause inflammation, redness, swelling, soreness, itching, and blisters, including allergic contact dermatitis, stomatitis (inflammation and soreness of the mouth or tongue), cheilitis (inflammation, rash, or painful erosion of the lips, oropharyngeal mucosa, or angles of their mouth), pruritus, hand eczema, generalized or resistant plantar dermatitis, rhinitis, and conjunctivitis.

1 Collection

Balsam of Peru is an aromatic viscous resin obtained by scorching or inflicting V-shaped wounds on the bark of the trunk of the tree *Myroxylon balsamum* var. *pereirae*.^{[1][4][5]} In response, the Balsam of Peru – oily, resin-like, aromatic fluid – exudes to heal the tree’s lesions, and the liquid is collected.^{[1][6][7]} An essential oil is distilled from the balsam.

2 Composition

Balsam of Peru contains 25 or so different substances,^[8] including cinnamein, cinnamic acid, cinnamyl cinnamate, benzyl benzoate, benzoic acid, and vanillin.^{[1][9]} It also contains cinnamic acid alcohol and aldehyde, farnesol, and nerolidol.^[10] A minority of it, approximately 30–40%, contains resins or esters of unknown composition.^[9]

3 Uses

Balsam of Peru is used in food and drink for flavoring, in perfumes and toiletries for fragrance, and in medicine and pharmaceutical items for healing properties.^[9]

In some cases, it is listed on the ingredient label of a product by one of its various names.^[11] Naturally occurring ingredients may contain substances identical to or very closely related to Balsam of Peru.^[11]

It has four primary uses:

- flavoring in foods and drinks such as coffee, flavored tea, wine, beer, gin, liqueurs, apéritifs (e.g., vermouth, bitters), soft drinks including cola, juice, citrus, citrus fruit peel, marmalade, tomatoes and tomato-containing products, Mexican and Italian foods with red sauces, ketchup, spices (e.g., cloves, Jamaica pepper (allspice), cinnamon, nutmeg, paprika, curry, anise, and ginger), chili sauce, barbecue sauce, chutney, pickles, pickled vegetables, chocolate, vanilla, baked goods and pastries, pudding, ice cream, chewing gum, and candy
- fragrance in perfumes and toiletries, such as perfumes, colognes, deodorants, soaps, shampoos, conditioners, after-shave lotions, cosmetics, lipsticks,

creams, lotions, ointments, baby powders, sunscreens, and suntan lotions

- in medicinal products such as hemorrhoid suppositories and ointment, cough medicine/suppressant and lozenges, diaper rash ointments, oral and lip ointments, tincture of benzoin, wound spray (it has been reported to inhibit *Mycobacterium tuberculosis* as well as the common ulcer-causing bacteria *H. pylori* in test-tube studies), calamine lotion, surgical dressings, dental cement, eugenol used by dentists, some periodontal impression materials, and in the treatment of dry socket in dentistry.^{[1][9][12][13][14][15][16][17][18]}
- optical properties as a glue, typically as a mounting medium for microscope specimens^{[19][20]} due to purified Balsam of Peru's transparency and refractive index of 1.597 being very close to that of many glasses used in optics^[21]

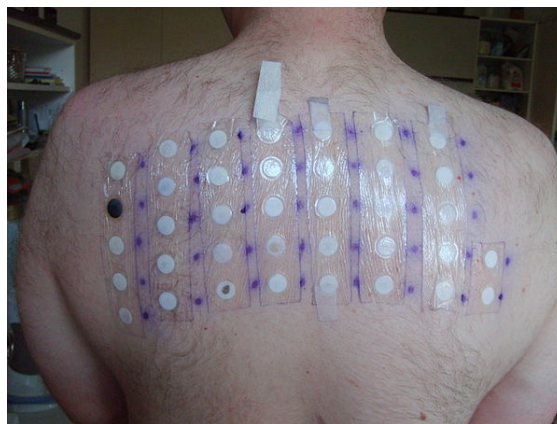
It also can be found in toothpaste, mouthwash, scented tobacco, cleaning products, pesticides, insect repellants, air fresheners and deodorizers, scented candles, and oil paint.^{[12][22][23]}

4 Allergy

A number of national and international surveys have identified Balsam of Peru as being in the “top five” allergens most commonly causing patch test reactions in people referred to dermatology clinics.^{[15][24][25]} A study in 2001 found that 3.8% of the general population patch tested was allergic to it.^[26] Many flavorings and perfumes contain components identical to Balsam of Peru.^[27] It may cause redness, swelling, itching, and blisters.^{[28][29]}

People allergic to Balsam of Peru, or other chemically related substances, may experience a contact dermatitis reaction.^[9] If they have oral exposure, they may experience stomatitis (inflammation and soreness of the mouth or tongue), and cheilitis (inflammation, rash, or painful erosion of the lips, oropharyngeal mucosa, or angles of their mouth).^{[9][15][24]} If they ingest it, they may experience pruritis and contact dermatitis in the perianal region, possibly due to unabsorbed substances in the feces.^{[15][30]} It can cause a flare-up of hand eczema.^[9] Among the other allergic reactions to Balsam of Peru are generalized or resistant plantar dermatitis, rhinitis, and conjunctivitis.^{[15][31]} In a case study in Switzerland, a woman who was allergic to Balsam of Peru was allergic to her boyfriend's semen following intercourse, after he drank large amounts of Coca Cola.^[32]

A positive patch test is used to diagnose an allergy to Balsam of Peru.^{[9][14][30]} Positive patch test results indicate that the person may have problems with certain flavorings, medications, and perfumed products.^[9] Among



Patch test

foods, the most commonly implicated are spices, citrus, and tomatoes.^[33]

People allergic to Balsam of Peru may benefit from a diet in which they avoid ingesting foods that contain it.^[15] Naturally occurring ingredients may contain substances identical to or very closely related to Balsam of Peru, and may cause the same allergic reactions.^[11] In some instances, Balsam of Peru is listed on the ingredient label of a product by one of its various names, but it may not be required to be listed by its name by mandatory labeling conventions (in fragrances, for example, it may simply be covered by an ingredient listing of “fragrance”).^{[11][34][35][36][37]} To determine if Balsam of Peru is in a product, often doctors have to contact the manufacturer of the products used by the patient.^[38]

Before 1977, the main recommended marker for perfume allergy was Balsam of Peru, which is still advised. The presence of Balsam of Peru in a cosmetic will be denoted by the INCI term *Myroxylon pereirae*.^[10]

Because of allergic reactions, since 1982 crude Balsam of Peru has been banned by the International Fragrance Association from use as a fragrance compound, but extracts and distillates are used up to a maximum level of 0.4% in products, and are not covered by mandatory labeling.^[27]

In March 2006, the European Commission, Health and Consumer Protection Directorate-General, Scientific Committee on Consumer Products, issued an Opinion on Peru Balsam.^[39] It confirmed that crude Peru Balsam should not be used as a fragrance ingredient, because of a wide variety of test results on its sensitizing potential, but that extracts and distillates can be used up to a maximum level of 0.4% in products.^[39]

5 History

“Balsam of Peru” is a misnomer.^[40] In the early period of Spanish dominion in Central and South America, the balsam was collected in Central America and shipped

to Callao and Lima in Peru, then shipped onward to Europe.^{[40][41][42]} It acquired the name of “Peru” because it was shipped from there.^{[40][41]} Its export to Europe was first documented in the seventeenth century in the German Pharmacopodia. Today it is extracted under a handicraft process, and is mainly exported from El Salvador.^[43]

6 Alternate names

Among the alternate names used for Balsam of Peru are: *Balsamum peruvianum*, Black balsam, China oil, Honduras balsam, Indian balsam, Peruvian balsam, Peru balsam, Surinam balsam, Balsams Peru, Balsam Peru oil, Oil balsam Peru, Peru balsam oil, *Balsamum Peruvianum*, *Bálsamo del Perú*, *Baume du Pérou*, *Baume Péruvien*, *Baume de San Salvador*, *Myroxylon pereirae klotzsch* resin, *Myroxylon balsamum* var. *pereirae*, *Myroxylon pereirae klotzsch* oil, *Myrospermum pereirae*, *Myrospermum pereira* balsam, balsam fir oleoresin, balsam fir oil, hyperabsolute balsam, Quina, Balsamo, Tolu, Quina quina, Santos Mahogany, *Toluidifera pereirae*, and *Toluidifera pereira* balsam.^{[9][28][44]}

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