IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

A REVIEW ON PHARMACOLOGICAL USES AND INTERACTION OF BALSAMUM PERUVIANIM

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❖ ABSTRACT :

Balsamum peruvianimor Peru balsam belonging to papilionaceae is a tree and widely distributed throughout EL SALVADOR, and AMERICA it is up to 34 m. many parts of plant like bark ,leaves, and other part are used by various communities and forest dweller for treatment of diseases . This tree is found to be beneficial as stimulant ,expectorant ,treatment of scabies.The important pharmacological activity is that asthma ,chronic bronchitis ,leucorrhoea.

❖ KEW WORDS :

Balsamum peruvianim, pharmacology ,uses, interaction , pharmacodynamics .

❖ INTRODUCTION :

Balsam of Peru or Peru balsam or Balsamum peruvianim also known and marketed by many other names, is a balsam derived from a tree known as Myroxylon balsamum var family Fabaceae it is found in El Salvador, where it is an endemic specie Because Myroxylon pereirae (MP), or balsam of Peru, is nowadays almost not used “as such,” and fragrance mix 1 (FM1) apparently is more sensitive in detecting fragrance allergy, the usefulness of testing MP in baseline series was recently questioned Myroxylon pereirae (MP), also known as balsam of Peru (CAS no. 8007-00-9), is an aromatic, fixative and mild antiseptic, antifungal, and antiphrastic resin, obtained from the bark of Myroxylon balsamum var. pereirae.1, 2 MP has been a frequent contact sensitizer in the past, and for this reason its use “as such” has been almost abandoned; however, 4%–8% of patients tested with baseline it shows the positive reactions with the Myroxylon pereirae. With certain differences variability in thare chemical composition, Myroxylon pereirae contains different fragrance chemicals and is considered as fragrance allergy. Positive patch tests with to the Myroxylon pereirae and with fragrance mix 1 (FM1) are frequently related with because of shared components. This certainty, and the higher sensitivity of Fragrances mix 1 in identifying fragrance allergy, led some authors to propose elimination of Myroxylon pereirae from baseline series.

fig no.1:balsamum peruvianim

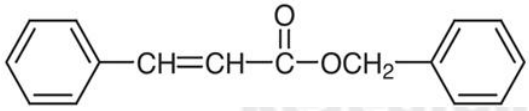
❖ HISTORY :

The name balsam of Peru is a misnomer. In the untimely time of Spanish expropriate in south and Central America, the balsam of Peru was assembling in Central America and transferred to Callao (the port of Lima) then shipped onward to Europe. It acquired name of "Peru" because it was shipped via there. Its delve into Europe was first certified in the seventeenth century in the German pharmacopoeia. This day it is take out of withdraw under a handicraft process, and is mainly transported from El Salvador. In now a day Balsam of Peru is useful in nutriment and liquid refreshments product for spices or additive, in perfumes and toiletries for fragrance, in medicines and pharmaceutical it use as items for healing properties; it has sweet scent in some instances .

fig no.2 historical record of balsamum peruvianim

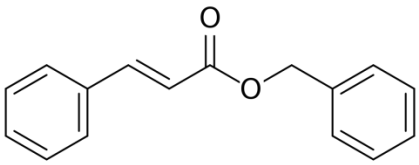
❖ CHEMICAL CONSTITUENTS:

Peruvian balsam contains free benzoic and cinnamic acids (12-15%)benzyl (40%); esters of this acids (5.2-13.4%cinnamein); and volatile oil (1.5-3%) the fragrant volatile oil contains toluene,styrol, benzoic and cinnamic acids.



Cinnamein (benzyl cinnamate)

Balsam of Peru has 25 contain so different substances, including cinnamein, cinnamic acid, cinnamyl cinnamete, benzyl benzoate, benzoic acid, and vanillin. It also contains cinnamyl alcohol, cinnmaldehyde, farnesol, nerolidol. The few of it, about 30-40% quell esters or resins of their unknown compositions.The drug contains balsamic esters (45-70%) like benzyl cinnamate (cinnamein), (50-60%), benzyl benzoate, and cinnamyl cinnamate (styracin), resin (28%) consisting of peruresinotannol combined with cinnamic and benzoic acids, alcohol [nerolidol (peruviol), faenesol, and benzyl alcohol], and small amount of vanillin and free cinnamic acid.



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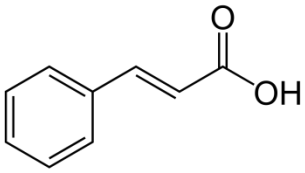
Benzyl cinnamate



Cinnamic acid

The balsam of peru's solution in alcohol (90%) becomes it shows the turbid nature on the addition of different solvent. The relative thickness of balsam of peru is 1.14-1.17, is shows the good quality indication of purity, and with fixed oil and it shows adulteration also with alcohol and kerosene it also shows abnormal adulteration.

❖ CHEMICAL TEST :

1. Balsam of peru of its alcoholic solution gives green colour with ferric cloride.
2. Thin layer chromatography of balsam of peru with ethyl acetate shows two main spot of benzylic ester under UV light.
3. Thin layer chromatography layout with phosphomolybdic acid indicates the existence of nerolidol.
4. Balsam of peru react with potassium permagnet to yield benzaldehyde.

❖ HARVESTING,PROCESSING AND COLLECTION:

Balsam of Peru is acquired by utilizing rags to absorbs the resin after strips of bark are detaches from the trunk of Myroxylon balsamum var. pereirae, evaporating the rags and letting the balsam sink in water. The balsam of Peru exhibit is an pungent dark-brown oily fluid.

A balsam of Peru is a vast tree, at 25 meters in height. Balsam of Peru is a chronic resin and is establish when the plant is wounded. The 10-years old tree is worn on four sides in a month of November or December. The crevice bark is burn with torch to separate it from the body. Inside a week the bark is drizzled from body and the balsam begins to flow from the exposed wood. The wounded part is covered with attire or rags in which the resin is take-up. When the attire are saturated with diffusion, they are detaches from time to time and bubble with water. On cooling the water extracted balsam is extracted out which is removed detach, pinched, fill up in tin container, and transported to get balsamo de trapo. The balsam of peru construct in the bark is deriving by boiling the bark in water and is known as sedition (prepared without fire) or balsamo de cascara (balsam of the bark). By the extracted of narrow strips of woof and the renewar of burning with the help of using a hot iron the tree take back in six months.

fig no.3 harvesting of myrospermum pereirae

❖CHARACTERISTIC FEATUREWS:

1) Balsamum peruvianimis transparent in a thin films.
2) The Balsamum peruvianimis a viscid liquid having a pleasant aromatic smell.
3) It has dark brown colour in nature.
4) It has the bitter taste and persistent aftertaste which shows similar like vanilla.
5) It is brittle in nature when placed in cold
6) It is insoluble in water , petroleum ether but it is soluble in chloroform,glacial acetic acid and ethanol

Fig no.4 characteristics of Balsamum peruvianim

❖ PHARMACODYNAMICS :

1. As a symbiotic, balsam of Peru is believed to demolish the creeping acarus and its eggs. As an cough medicine, it is arrived that its administration produces a reduction in mucous secretions.
2. As a heart antidepressant, it has been describe to locally rise the blood flow to even 45% at about 3 hours post administration.
3. The disinfectant effect was reveal in vitro opposite to gram- positive and gram-negative bacteria as well as in case of fungi. In skin ulceration, the balsamum Peruvianims was shows to rush repair and distinction of the burned tissue.

❖MECHANISM OF ACTION:

The main mechanism of Balsam of Peru is a capillary bed antidepressants that rise circulation in the wound area and it also acts as a mild antibacterial. When balsam of Peru is delivered in mucous tissues is immoderate and it decreases the secretions.It can act as protective covering and reduce pain and odor.

❖ABSORPTION:

When administered dermally, absorption is not expected. When it is applicable topically, the balsam of Peru was noticeable in the skin after 1 hour but no longer after 8 hours. The absorption is significantly rise up in occluded skin and it is moderately infuriating.

❖METABOLISM:

The balsam of Peru has major constituents are easily or rapidly hydrolyzed to with benzyl alcohol which is again oxidized to benzoic acid. This metabolism is further conjugated in the liver with glycine to hippuric acid

❖ROUTE OF ELIMINATION:

The balsam of Peru is quickly metabolized to form hippuric acid it is rapidly excreted by the kidneys and about 75-80% of the dose is remove 6 hours after oral administration.

❖HALF-LIFE:

This pharmacokinetic property has not been determined.

❖CLEARANE:

This pharmacokinetic property has not been determined.

❖USES:

1. Peru Balsam is used as matricide, to aid in healing of indolent wounds, as scabicide and parasiticide, in skin catarrh, diarrhea, ulcer therapy, as local protestant, and rubefacient.
2. It is an antiseptic and healthful and as a restorative expectorant. It is also employed in perfumery and some chocolate flavorings, also in making of odors.

fig no.5 uses of balsamum peruvianim

3. Balsamum peruvianim is topically administer as an antiseptic to the treatments of burns, frostbites, cracks, erythema, pruritus, ulcers, and wounds.
4. Balsam suppositories are used to heal pain, pruritus, piles, and other anal hell. It is an active involvement ingredient in cosmetic preparation and hygiene products used in daily needs (soups, creams, lotions, detergents) and in fixative. It can cause exposure skin disease in some people.
5. Stimulant, expectorant, parasiticide.
6. Used in scabies and skin diseases; It is a best antiseptic, expectorant, stimulant to heart, increasing blood pressure its action favor benzoic acid.
7. Given inside, it decrease mucous excretion, and is of use in leucorrhoea, chronic bronchitis and asthma.
8. It is use in soap manufacturing for its odour and for that reason it form a soft and smooth creamy lather. And it is useful for chapped hands.
9. Balsam of Peru can be appeal single or as an ointment formed by melting it with an uniforms weight of tallow.

❖SIDE EFFECTS:

1.Through the Mouth:

Likely safe in the small amounts Peru balsam is used as flavoring in certain foods. Balsam of Peru is likely unsafe to take through the mouth as a medicine because it can harmful to the kidneys.

2.Over the Skin:

Balsam of Peru is possibly safe when used over the skin for short period of time (for one week or less than one week). It can cause hypersensitive skin reactions.

fig no .6 hypersensity in skin

❖ SPECIAL PRECAUTONS AND WARNINGS:

1. When taken by mouth: Balsam of Peru is likely safe when the small amounts are used as a flavoring in certain foods. Balsam of Peru is likely unsafe to take by mouth as a medicine because it can harms to the kidney.
2. When applied over the skin: Balsam of Peru is possibly safe when used over the skin for a short time of period (less than one week). It can cause allergic skin reactions.
3. Pregnancy and breast-feeding: Peru balsam is likely harmful to administers by mouth in during pregnancy and when breast-feeding. It can cause kidney damage. Peru balsam is possibly unsafe to appeal to the skin when breast-feeding to the child. At time of breastfeeding nipple, the nursing infant might be poisoned. There is not sufficient reliable direction to know when balsam of Peru is safe to appeal to the skin when pregnant..

❖ DOSING:

The sustainable dose of Peruvian balsam is depends on particular elements such as the patient age, patient health, and particular other situations. At that time it is not sufficient biological information to establish an applicable scale of doses for Balsam of Peru. Keep in mind that natural products are not always defiantly all are safe and dosages can be important. Be sure to follow applicable of directions on product labels and turn to your pharmacist, physician or other healthcare professional before using.

❖ PHARMACOLOGICAL ACTIVITIES AND INTERACTIONS :

Balsam of Peru is initiate in various cosmetics and perfumes and also in a flavoring factor in cough syrup and lozenges and chewing gum, sweetmeats and candies. As a medicinal agent balsam of Peru is use in the local treatment of wounds and burns as the antiseptic.

❖ CONCLUSION :

In the European country like Japan, the knowledge balsam of Peru was constantly modernize , especially through mediation of European physician's also apothecary possessed a solid knowledge on this balsam of Peru, its origin and its medicinal uses. In China, on the oposite, there was no other dissolution or development of the knowledge on more Myroxylon balsamum (L.) Harms var. pereirae Harms or Commiphora gileadensis. By the late 19th century, associated medicinal and even geographic knowledge has most being lost.

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