

PHARMSOL NEWS

HERBAL PATCHES TRADITIONAL AND HOLISTIC APPROACH FOR TREATMENT

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Herbal products are widely used and accepted in the prevention, diagnosis, and treatment of an extensive range of ailments which are available in various dosage forms like tablets, capsules, transdermal patches etc., These are produced by subjecting herbal materials to extraction, fractionation, purification, concentration, or other physical or biological processes.

In this article, we will emphasize on herbal patches. These patches are an attractive alternative to conventional dosage forms based on oral and parenteral routes. While conventional patches can be effective, they often contain synthetic chemicals that may come with unwanted side effects or cause concerns about long-term use.

What are Herbal patches:

Herbal patches, also known as medicated adhesive patches, are designed to control release of active constituent at a constant rate over a period of several hours or days after applying to the skin. Herbal patches are mostly used as anti-inflammatory, analgesic, pain relievers, cooling effect, Rheumatoid arthritis etc.,

Advantages:

1. These are painless, non-invasive way to deliver substances to the targeted site.
2. Increased therapeutic value of the active.
3. Provides extended therapy with single application.
4. It provides a controlled, steady delivery of medication over long periods.
5. It has fewer side effects than oral medications or supplements.
6. Medication can be terminated anytime as per requirement.

Key components of Herbal Patches

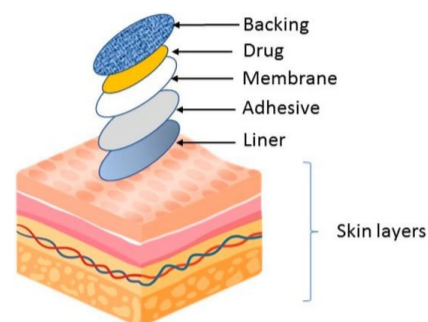
Component	Role	Example
Active agent	Therapeutic effect	Any desired drug
Polymer matrix	To release drug from the patches	Polyvinylpyrrolidone (PVP), starch etc.,
Penetration enhancer	promote skin permeability by altering the skin as a barrier to the flux of the desired penetrant	Solubilizers, ethanol, Euge-nol, etc.,
Plasticizers	Reduces brittleness of the patches	Propylene glycol
Backing membrane	Provides the strength and support on the skin	Adhesive foam pad (flexible polyurethane) with occlusive base plate (aluminum foil disc)
Adhesive layer	Helps the patch to adhere to the skin	Drug in combination with adhesives materials
Release liner	It acts as a protective layer	Coating layer made up of silicon, Teflon, polyester foil, and metalized laminate.

Mechanism of Action

The patches are formulated mainly to deliver active moiety through skin. The skin is a special membrane to control the rate at which the drug contained within the patches which can enter (I) into the skin (dermal patches or topical

Types of patches includes

Single layer drug in adhesive, multi-layer drug in adhesive, Vapour patch, Reservoir patch, Matrix system



Manufacturing of patch:

Most of the patches are prepared by mixture of the active and polymer solution which is spread as a film on suitable support and dried to form the patch which can be cut into desired sizes.

Factors Influencing the Patches:

Physicochemical properties of the penetrant	Physicochemical properties of the delivery system	Physiological and pathological skin condition
Partition coefficient	Affinity of the vehicle and the active	Skin condition & blood supply
pH condition	Composition of drug delivery system	Lipid film
Composition of the active	Enhancement of transdermal permeation	Skin hydration & temperature

Key challenges in the development:

- Patches should have sufficient mechanical strength and adhesion properties.
- Compatibility between the Active moiety, excipient, backing membrane and packaging material to be established.
- Non availability of analytical methods for herbal extracts
- Lack of specific regulatory guidelines for herbal product development requirements
- Maintaining the dose uniformity, batch uniformity, impurity profile along with monitoring the skin irritation and sensitization properties.

Conclusion:

Herbal patches when manufactured in controlled environment with desired properties offer an effective, safe, and targeted solution for managing many complications like pain, discomfort, bruise etc., without concerns associated with synthetic chemicals.

How PharmSol can help you?

- PharmSol helps in development of technology, analytical methods, and regulatory filling of dossiers for topical and transdermal patches.
- PharmSol help in establishment of manufacturing facility for patches with required Regulatory certification (EU, US, GCC etc.,)



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