

ABOUT TRANSDERMAL PATCH TECHNOLOGY

Transdermal medical delivery and release systems have been on the market since the 1980's, after more than 20 years of extensive market research and development. Most major pharmaceutical companies now market transdermal systems for dispensing a great variety of solid and liquid medical agents and other solutions, including the now widely recognized anti-smoking Nicotine, clonidine, nitroglycerine and estradiol, with many more about to hit the market place.

Transdermal delivery technology has evolved to a flexible system of multi-layered polymeric laminates and reservoir system which stores and releases active ingredients under strict rate control, which can provide zero-order constant release for the life of the device. The life can be programmed to range from one hour to several months. This technology eliminates any possibility of dosage dumping.

The Transdermal delivery and release system provides a highly efficient, safe, and easy to use method for delivering active ingredients and other compounds to the body through intact skin, thereby offering many other advantages over the traditional dosage forms.

The Transdermal System consists of two integral technologies, the delivery and controlled release system and the chemical composition.

Delivery and Controlled Release

The Transdermal infusion of various ingredients into and through the dermis depends on osmosis through and between the squamous cell walls as they are presented in the epidermis and dermis of human tissue. Osmosis is the "flow of ions or molecules through a semi-permeable membrane (cell wall)." The rate and quantity of osmosis of the ingredients are directly dependent upon the size of the individual molecule and the selection and quantity of the specific enhancer. The transdermal patch consists of ingredients suspended and micro-dispersed in a unique matrix.

All of our patches utilize advanced technology based on multi-layered laminated polymeric structure, in which a layer of vinyl chloride copolymer or terpolymer, containing the chemical compound to be released sandwiched between two or more layers of polymeric films. The chemical solution is released from the Transdermal System at a controlled rate by a process of diffusion through the reservoir and one of the outer layers, which can function as a rate controlling membrane. Patch manufacturers have successfully utilized this unique technology for the development and commercialization of the Nitroglycerine and Nicotine Transdermal Systems and other chemical compounds to meet a variety of therapeutic and other uses. Our patches utilize Nano patch technology utilizing transdermal adhesives which contain "skin softener" properties that prepare the skin for receipt of ingredients. Also, the adhesives contain "carrier properties" that allow the ingredients to be "pulled" into the skin.

Chemical Compound and Interaction

All of our patches consists of proprietary formulas. The system and formulas resulted from years of extensive research and development. The proprietary formulas consists of a unique combination of active ingredients and Acrylic Polymers that are generally regarded as safe.

