

1st Japan Manufacturing Awards, Excellence Award

Development of lipo-gel adhesive gentle on the skin

== Date of Award ==

August 3, 2005

== Award Recipients ==

SHIRAI Fumiya
YAMAMOTO Toshiyuki
FURUMORI Kenji
KUNIYA Masayoshi
AKEMI Hitoshi
KINOSHITA Takashi

== Features of Award ==

The prime-ministerial award system known as the Japan Manufacturing Awards was instituted in 2005 mainly through the agency of the Ministry of Economy, Trade and Industry. The



award was established with the aim of ensuring the secure continuation and further development of the manufacturing activity which has supported the development of Japanese industry and culture and has made a great contribution to enriching the life of the Japanese people.

== Reason for Award and Product Outline ==

Medical-use adhesive tape is the tape generally used for instance to hold gauze dressings in place. We developed a lipo-gel adhesive based on a new concept that reduces the damage to the stratum corneum when the tape is removed from the skin and lessens skin irritation. The award was granted in recognition of this development.

The developed lipo-gel adhesive is composed of an acrylic-based polymer, arranged in a net-like structure, containing a large amount of liquid. It is much softer than the conventional medical-use acrylic-based adhesive tape and has less adhesive force at micro-level.

As a result, when the tape is removed from the skin, very little of the stratum corneum is taken with it, allowing the tape to be removed almost painlessly and thus reducing the burden on the



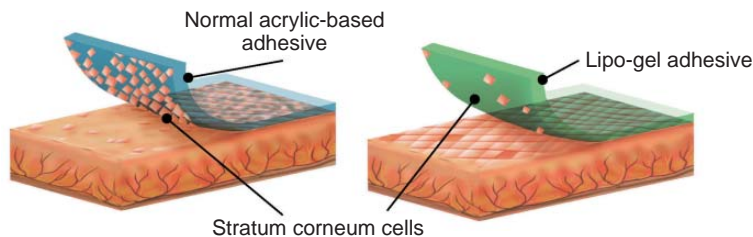
Yu-Ki Series product group

patient.

Regarding its practical usefulness from the point of view of holding medical materials in place, immediately after application it fits to the skin surface irregularities to secure an adequate adhesive surface area, thus providing excellent skin adhesion so that in normal use the basic holding function of the tape is adequately maintained.

The product range includes the Yu-Ki Ban[®] series of surgical tapes and the Yu-Ki Perme-Aid[®] and Yu-Ki Perme-Roll[®] film dressings used to hold catheters in place.

Meanwhile, the lipo-gel adhesive has excellent ability to retain and disperse the drug within the adhesive material. We also produce a transdermal absorption preparation containing isosorbide dinitrate (cardiac drug in transdermal patch form). The cardiac drug developed requires long-term continuous use through repeated patch application for prevention of cardiac infarction; the adoption of the lipo-gel adhesive has made a great contribution to relieving patient skin irritation and improving comfort of application.



Difference in tape surface after removal from skin