J Chem Eng Process Technol 2018, Volume 9
DOI: 10.4172/2157-7048-C1-012

The impact of different backing films on adhesion properties of transdermal patches

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In this work the impact of different backing films on adhesion properties of Ketoprofen transdermal patches have been investigated. Four backing films, two plastic types and two plaster types, were used as backing layers to prepare transdermal patches containing Ketoprofen. The same formulation was applied for all samples and peel, tack, tensile and contact angle analyses were performed precisely. Contact angle test results indicated the discrepancy in surface energy and hydrophilicity of different backing films. It was also observed that increasing in surface energy of the backing films results higher peel strength of the samples. Otherwise there is an inverse relationship between tack properties of the samples and elastic modulus of the backing material for backing films with not very low elastic modulus. Furthermore, it has been attained that backing films paly a considerable role in design formulation of Ketoprofen patches and the adhesion level depended on backing layer types.

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