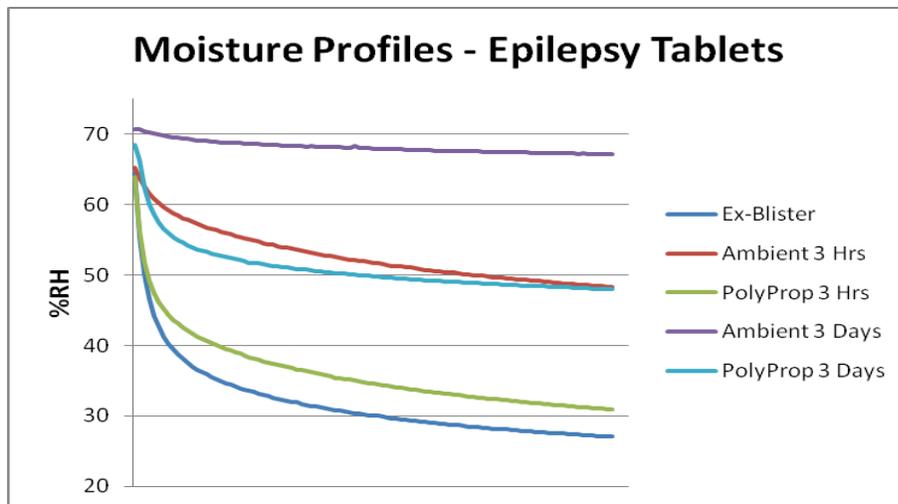


A Prospective Re-Packing Investigation

A recent initiative in pharmacies to improve patient compliance particularly in the elderly is re-packing supplies of medicines so that the patient has their daily requirement individually dispensed. We were asked by a pharmacist to investigate re-packing a popular brand leader epilepsy tablet into polypropylene type sachets. The pharmacist was concerned that the tablets are supplied in Alu-Alu blisters suggesting that moisture protection may be important.

An initial moisture profile was performed on the tablets taken directly from the blisters. Tablets were exposed to open to ambient conditions and packed in a good quality polypropylene zip-lock bag to simulate the re-packing conditions. Moisture profiles were run after 3 hours and 3 days on the exposed and re-packed tablets. The initial part of the moisture profiles, which contain the most significant comparative information in this case, are shown in the graph below.



The tablets from the blister pack have a low Water Vapour Equilibrium Point (WVEP) and will interact with atmospheric moisture at any humidity above about 24% RH. This low WVEP means that the tablets must be protected from atmospheric moisture using a good moisture barrier such as the Alu-Alu blister material in which they are supplied.

Exposure to ambient conditions of 60-70% RH caused a change in the moisture profiles after only 3 hours showing moisture uptake had occurred. Exposed tablets rapidly absorbed moisture. The polypropylene bag gave some protection but insufficient to prevent moisture uptake by the tablets.

After 3 days ambient exposure the film coat had cracked at the sides due to swelling of the tablet matrix. Tablets within the polypropylene bag had continued to take up moisture.

We concluded that these tablets must not be re-packed in polypropylene sachets as physical damage will occur and most likely also result in chemical changes putting the patient at risk.