

ANALYSIS OF BLISTER PACKED TABLETS

D. Beckers, J. Bolze, PANalytical B.V., Almelo, The Netherlands

X-ray powder diffraction (XRPD) has become a key analytical technique in the pharmaceutical industry and is being used for the discovery, development and manufacture of drugs. It allows, for example, quantitative phase analysis with very low detection limits and control of the final dosage form. In addition polymorphic changes can be detected that may occur during production or storage.

Here we will demonstrate that XRPD also allows the effective, quick and reliable analysis of pharmaceutical tablets inside their blister pack. The high penetration depth of X-rays means that these investigations can be carried out on even fully opaque blisters, with only a moderate attenuation of the signal from the tablet. In most cases, scattering from the mainly amorphous polymer used for the blister material produces only a slightly increased background; the aluminum lid is evidenced by just a few characteristic Bragg reflections at higher angles. Thus the packaging material disturbs the signal from the tablet itself very little. This allows monitoring batch uniformity or structural changes taking place during the final production steps of tableting and packing or during storage of the packaged drugs.