

PROTEIN MEASUREMENT ON LABORATORY POWDER DIFFRACTOMETER

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Han egg white lysozyme has been dissolved into 0.1 M sodium acetate-acetic buffer at pH 4.8 to a final concentration of 60mg/ml. This has been mixed with a second solution of 8% sodium chloride in the same 0.1 M puffer and kept at 22°C. Tetragonal crystals of various sizes smaller than 150 μm were obtained after 46 hours. These crystals were removed from the mother-liquor using a pipette, and placed into a 0,5mm glass capillary. The crystals were manually compacted and the remaining mother-liquor has been removed. The sample was measured on an X'Pert PRO Multi-Purpose Diffractometer (MPD), configured in transmission geometry with a focusing mirror on the incident beam side and an X'Celerator detector on the diffracted beam side. The sample was measured at room temperature with a scan range of 1-45° (2Θ), a step size of 0.004° and a total scanning time of 40 hours. The raw data were indexed by the DICVOL program, integrated into the HighScore Plus software suite, giving a tetragonal cell with parameters: $a = 79.58\text{\AA}$, $c = 38.09\text{\AA}$. Both Le Bail and Pawley fit showed good agreement.