Plate 106 Natural Products: Thin-Layer (Planar) Chromatography  Taxol. Computer graphic of a molecule of taxol, an anti-cancer drug. The atoms and their bonds are colour-coded: carbon (C, dark blue); hydrogen (H, white); oxygen (O, red); nitrogen (N, light blue). Taxol has a chemical formula $C_{47}H_{51}NO_{14}$. It is found in the bark of the Pacific Yew tree, *Taxus brevifolia*, and can also be artificially synthesised. Taxol is particularly effective against advanced breast cancer and ovarian cancer. The drug works by inhibiting the protein tubulin to form microtubules, important structures involved in cell division (mitosis). The presence of taxol stabilises the microtubules, disrupting mitosis in the rapidly dividing cancer cells.(Reproduced with permission from Science Photo Library.)