

Elucidating pathways of halogenated FR migration from products and material into indoor dust ESR2

At UB, forensic microscopic techniques (e.g. environmental scanning electron microscopy (ESEM) and energy dispersive X-ray microanalysis (EDX)) will be applied to elucidate the mechanisms via which halogenated FRs enter indoor dust. The project will test the hypothesis that more volatile FRs evaporate from treated goods before partitioning to dust, thus leaving a fingerprint of homogeneous distribution of halogen throughout the dust (detectable via XRF). In contrast, non-volatile FRs are hypothesised to enter dust via abrasion of particles or fibres from treated goods, thus leaving a highly heterogeneous halogen distribution within dust. A significant component of the project will involve the use of trace analytical chemistry techniques including GC-MS and/or LC-MS/MS.