123 Impurities of resorcinol bis(diphenyl phosphate) in plastics and A. Ballesteros-Gomez, VU University Amsterdam / in dust Chemistry and BiologyIVM; . Aragón, VU University Amsterdam / IVM Chemistry and Biology; N. Van den Eede, University of Antwerp, Toxicological Center; J. de Boer, VU University Amsterdam / Institute for Environmental Studies; A. Covaci, University of Antwerp, Toxicological Center / Toxicological Center Dept of Pharmaceutical Sciences. Flame retardants are added to a variety of materials (electronic equipment, textile, furniture, etc.) in order to prevent quick combustion and to delay the spread of fire. After the phase-out of polybrominated diphenyl ethers (PBDEs), phosphorus flame retardants (PFRs) have been increasingly used as suitable alternatives. However, concern about their widespread presence and potential toxicity has also increased in the last years.Resorcinol bis-(diphenylphosphate) (RDP) is a PFR widely used in electric and electronic equipment and ubiquitous in house dust according to recent literature. Similar to other flame retardants, RDP formulations and products treated with RDP can contain impurities, byproducts and breakdown products that could influence the total toxicity of RDP formulations. In this study, we investigate the presence of RDP impurities in plastics from electrical/electronic equipment and in indoor dust collected on electronics, in order to study the possible migration of these compounds into the environment. A variety of RDP-related products, such as meta-HO-triphenyl phosphate (meta-HO-TPHP), RDP with the loss of a phenyl ring (RDP-[Phe]) and meta-HO-RDP were observed in both plastic and dust samples collected on/around electronics. Regarding the dust samples (n=30), the detection frequency of the compounds were in the order TPHP (n=30), RDP (n=27), meta-HO-TPHP (n=25), RDP-[Phe] (n=8) and meta-HO-RDP (n=5). The concentrations measured in dust for the three compounds for which standards were available (222-50,728 ng/g for TPHP, 23-29,118 ng/g for RDP and 20-14,227 for meta-HO-TPHP) are in agreement with those previously reported for RDP and TPHP and for other FRs in samples collected on/around electronics . The high levels of RDP, TPHP and meta-HO-TPHP (reaching the $\mu g/g$ levels) that were found in some of the dust collected on electronics suggest that dust could be a significant route of human exposure to these compounds via ingestion/dermal adsorption. This could happen especially when touching these surfaces, e.g. switching on a TV or a router. Giving these first results, more data on the presence and potential toxicity of meta-HO-TPHP (and of other RDP impurities) is necessary in future monitoring studies to assess the human exposure and risks of RDP related compounds. Besides, due to its specificity and ubiquity as RDP impurity, meta-HO-TPHP could be a suitable marker/tracer of RDP