MO064 In vitro bioaccessibility of plasticisers present in indoor dust using simulated human lung fluids K. Kademoglou, University of Reading / geography and Environmental Sciences; G. Giovanoulis, IVL Swedish Environmental Research Institute Ltd / IVL Swedish Environmental Institute; J.A. Magnér, IVL Swedish Environmetal Research Institute Ltd / IVL Swedish Environmental Institute; C.D. Collins, Reading University / Soil Research Centre; C.A. de Wit, Stockholm University / Department of Environmental Science and Analytical Chemistry ACES. Plasticizers are additives imparting durability, elasticity and flexibility in the manufacture of polymeric products such as PVC flooring, retailing and packaging materials. The lack of migration stability has resulted into their classification as major indoor contaminants. Despite their extensive everyday use, the process of assessing human exposure and possible health effects arising from indoor air contamination only began the past decade with limited results so far. This study forms a part of the EU Marie Curie Initial Training Network “Advanced Tools for Exposure Assessment and Biomonitoring” (A-TEAM) aiming to develop and establish novel methods on human exposure biomonitoring of pseudo-POPs including phthalate esters (PEs) and alternative plasticisers, having as a study group indoor dust originating from N=61 participants’ houses in Norway. In the present study, we investigate the *in vitro* bioaccessibility (i.e. uptake/absorption) of plasticisers present in indoor dust collected from vacuum cleaner bags with respect to potential routes of exposure including inhalation and respiration. Simulated artificial human body fluids are used regarding the relevant exposure route, i.e. lung fluids. Indoor dust is sieved at 63 ?m using an methanol-washed metallic sieve. 200 mg of sieved dust samples are incubated with 20 mL of artificial lung fluid (ALF) at 37^{o}C for the artificial lung fluid in order to set up a realistic exposure scenario. All media incubations are conducted continuously for 96h. After the incubation step has finished, the samples are centrifuged at 3000rpm for 10min and the supernatant is subjected for a liquid-liquid extraction (LLE) using MTBE:Hexane 3:1. A selective and sensitive method to determine the analytes of interest is employed by using triple quadrupole gas chromatography mass spectrometry (GC-MS/MS) in multiple reaction monitoring (MRM) mode. The method validation was performed using Standard Reference Material for indoor house dust (i.e. SRM 2585) in replicate analysis and the results show that low molecular weight phthalates (e.g. DMP & DEP) are more than 85% bioaccessible through the simulated lung fluids, while the high molecular weight phthalates and alternative plastisisers (e.g. DEHP and DEHT) presented bioaccessibility values less than 5%.