DOCTORAL CANDIDATE:	
DEGREE:	Philosophiae Doctor
FACULTY:	Faculty of Mathematics and Natural Sciences
DEPARTMENT:	Department of Chemistry
AREA OF EXPERTISE:	Human exposure to environmental pollutants
SUPERVISORS:	Line Småstuen Haug Cathrine Thomsen Elsa Lundanes
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DISSERTATION TITLE:	*Poly- and perfluoroalkyl substances (PFASs): from external exposure to human blood*

This thesis contributed to the field of human exposure to environmental pollutants called poly- and perfluoroalkyl substances (PFASs). Daily intakes of PFASs via ingestion, inhalation, and dermal absorption were estimated and compared to the internal doses. Overall, the most important exposure for the daily intake of PFASs was diet, followed by house dust, indoor air, and dermal absorption, but some variations were observed on an individual basis.

Significant associations between concentrations of PFASs measured in serum, and estimated intakes based on direct and indirect (precursor) exposure were observed. Measured serum concentrations and modelled serum concentrations based on external exposure estimates were in the same order of magnitude. The estimated daily intakes of PFASs in this study were lower than the health-based guidance values.

Also, in this study, analytical methods have been developed and validated for the determinations of a broad range of PFASs in serum, plasma, whole blood, dried blood spot, and hand wipes. This study underlines the importance of performing studies considering multiple exposure pathways on an individual basis.