



European Committee for Standardization
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Press Release CEN Workshop Agreement

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CWA 16938 Standard documentation of chemical exposure models

Today models are intensively used to predict exposure of the environment or of humans to chemicals and these models are now established as being useful in overcoming existing data gaps. However, the underlying hypotheses, limitations, computations and data inputs of exposure models are often not transparent to the user, leading to errors and lack of confidence. To overcome these inefficiencies, a standard documentation of chemical exposure models has been proposed in a new CEN workshop agreement (CWA). The CWA establishes terms and definitions for exposure models and their elements, proposes minimum requirements for the amount, type and structure of information to be provided in the documentation of exposure models, and establishes guidelines for a tiered presentation of the information facilitating the understanding of different user groups.

The CWA was developed under a EU-funded FP7 project "4FUN" (<http://4funproject.eu/>, Grant Agreement Nr. 308440) together with other stakeholders including the Joint Research Centre (JRC) of the European Commission, the German Federal Institute for Risk Assessment, the French Institute for Radiological Protection and Nuclear Safety (IRSN) and the Netherlands Organisation for Applied Scientific Research (TNO). The objective of the 4FUN project was to develop a software containing multimedia models, pharmacokinetic models and uncertainty and sensitivity analysis tools for the purpose of chemical exposure assessment into a broadly used and viable platform for chemical exposure assessment. All models on the 4FUN platform have been documented according to CWA 16938.

The framework for model description as proposed by the CWA is expected to promote appropriate model application, be in support of decision making for choosing the right model and in general facilitate the use and comparability of models, as well as their potential coupling. A wide range of models, simple or complex, are covered such as environmental models, multimedia models, exposure models and toxicokinetic models. Appendixes provide examples of the documentation of an environmental exposure model, an occupational exposure model and a consumer exposure model, respectively, based on the proposed framework. The target audiences include model developers, model users, policy makers who work with models and others.

Philippe Ciffroy, Senior Scientist at EdF and Chairperson of the CEN Workshop agreement says: "Documentation of exposure models can be a mixture of general considerations, lengthy verbal descriptions of processes, lengthy justifications of the specific model formulations chosen and mathematics. This makes reading many exposure model descriptions cumbersome, inefficient and ambiguous and this makes it hard to extract the information relevant for understanding and implementing the model. The aim of this CWA was to make model description more transparent, comprehensive and unambiguous".