

Precautionary matrix for synthetic nanomaterials – updated versions

The precautionary matrix for synthetic nanomaterials is updated regularly to reflect the current state of knowledge. Updates are carried out in collaboration with industry and the scientific community.

Main updates in version 3.1 (2018):

- **Reactivity:** The latest results on the reactivity of nanomaterials have been taken into account. Unified criteria have been introduced for assessing reactivity as 'high', 'medium' and 'low';
- A comparison can now be made between cell-free measurements and cellular measurements of reactivity with in vivo data on acute and subchronic pulmonary toxicity. Correlation is the best when cell-free and cellular tests are combined to determine reactivity. This is thus considered when calculating reactivity.

Main updates in version 3.0 (2013):

- **Field of application:** In addition to the existing precautionary approach, the EU definition proposal 2011/696/EU may now also be used as a basis for establishing nano-relevance; users decide their preferred approach on their own;
- **Reactivity:** In addition to the currently used properties, two new reactivity parameters may now be used to determine the reactivity of nanomaterials;
- **Recommendations:** If the precautionary matrix reveals a need for precaution, the guidelines now provide information on which clarifications are useful and at what point;
- **Evaluation:** If the data available for a particular parameter are missing or insufficient, there is now the option to select "unknown". The evaluation will then show the share of the need for precaution that is achieved based on missing data and where data acquisition may significantly affect the need for precaution.