

EU industry groups release criteria to identify 'sound science' on chemicals

17 October 2019 / Business initiatives, Chemical industry, Europe, Germany

Germany's surface treatment trade association, ZVO, and the European Committee for Surface Treatment, CETS, have released guidance that they say will help identify sound scientific information on chemicals.



The guidance includes a set of criteria that aims to help policymakers and "non-experts" make a "rapid distinction between relevant and non-relevant information that is declared to be scientific".

The associations say that "many decision-makers rely on statements made by 'experts', while apparently lacking the ability to conduct their own review".

"Data sources should only be considered in the continued decision-making process if they yield adequately plausible and scientifically sound findings," they add.

The criteria will help policymakers arrive at such a conclusion, they say. The method applies five criteria that are arranged within a hierarchical structure:

reproducibility: have the reported results been found by others under the same conditions? In particular, can the results be generalised and applied to other locations, people, times and facilities?

informative value: can the study make quantifiable predictions about the topic it covers? Is the scope of the study applicable to the situation that could be regulated?

representativeness: does the underlying information cover the scope of the regulation in question? Are people, locations, times and other conditions applicable/similar and do they cover the entire situation that shall be regulated?

correctness: are quantitative results correct? Are possible systematic errors discussed and excluded in a plausible manner? Have the quantitative results been confirmed by other scientists (compare to reproducibility criterion)? Are the causalities and mechanisms assumed plausible and scientifically proven? And

precision: how accurate are the measurements and quantitative results? Is the accuracy of the study discussed and quantified? Can the results be distinguished from background noise signals?

The guidance says that, where one of the criteria returns an inadequate assessment, the rest become "meaningless", and the source of information is excluded as a basis for further decisions.

'Bogus findings'

The trade bodies say the guidance should make it possible to prevent any consideration of "apparently untrustworthy bogus findings on the basis of fundamental criteria that are always valid".

This approach should also provide a competent, targeted process to uncover data manipulation and avoid the resulting interpretations, as well as handle supposedly scientifically sound statements rationally and critically.

"Pure correlations without knowledge of the quantitative interdependence based on a rationally and objectively determined mechanism are not suitable as a basis for political decisions," they say.

The associations apply the criteria to a number of real-life situations, including a recent study on the long-term effects of nanoparticles.

The 2018 study, by the Environmental Research of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, uses cerium oxide (CeO₂) to assess the chronic toxicity of nanomaterials.

Applying the criteria to the study "indicates that it is not suitable as a basis for political action and regulations".

The study, it says, makes specific statements on the effects of CeO₂, and therefore identical findings obtained independently should be available, such as papers by other working groups.

"Given that suitable findings are not available for comparison and/or are not discussed – although the index of references lists other, as of yet unpublished, studies on nanoscale CeO₂ – reproducibility can not be proven."

It adds that sound science cannot be "based on singular observations". "At best, they can be used to formulate scientific (not political) hypotheses.

However, the trade bodies are "aware that simple criteria do not make it possible to recognise incorrect data that is carefully presented".

"Professionally manipulated data deliberately hides a more subtle intent, while information that is compiled in a negligent and shoddy manner is often easier to identify," it adds.



Leigh Stringer¹
Global Business Editor

Further Information:

Guidance (in German)²

<https://chemicalwatch.com/search/?author=Leigh%20Stringer>

<https://www.zvo.org/presse/pressemeldungen/details/news/sound-science-wissenschaft-als-basis-politischer-entscheidungen-ein-beispiel-zur-pruefung-von-stud.html>

© CW Research Ltd. You may circulate web links to our articles, but you may not copy our articles in whole or in part without permission, except for the purposes of circulation to colleagues who are also licensed users

CORRECTIONS: We strive for accuracy, but with deadline pressure, mistakes can happen. If you spot something, we want to know, please email us at: reportanerror@chemicalwatch.com

We also welcome YOUR NEWS: Send announcements to news@chemicalwatch.com