WIDES goes beyond standard labelling requirements

To compare the hazard potential of disinfectants, users and procurers rely primarily on information from product labelling under the CLP Regulation and manufacturers’ safety data sheets (SDS). But do product labels and SDS provide appropriate assistance when it comes to substituting one disinfectant with a less hazardous one? We believe that this information on its own is a poor tool for the following reasons:

• Under the CLP Regulation, labelling and classification requirements are only triggered at generic concentration limits. For example, an ingredient classified as skin or respiratory sensitizer (category 1), labelling is triggered only above a concentration of 0.1%. Below a concentration of 1% the product is not classified nor labelled as hazardous.

The origins of WIDES in green procurement
Every year, the City of Vienna spends approximately five billion euro for a wide variety of goods and services. Given this considerable purchasing power and responsibility, the City Administration decided to implement a green procurement program, “ÖkoKauf Wien” (EcoBuy Vienna), set up in 1998 as a leading programme of the Vienna Climate Protection Procurement.” “ÖkoKauf Wien” is organised across all departments of the City to develop ecological criteria and selection tools for product groups purchased by the City by executive decree, the list of criteria is binding for all departments of the City Administration. Within “ÖkoKauf Wien”, a working group on disinfectants was set up to help ensure a responsible and safe handling of disinfectants within Vienna hospitals, nursing homes, nurseries and schools. Partners are comprised of the Vienna Hospitals Association, the Austrian Microbiology, Hygiene, Microbiology and Preventive Medicine (ÖGKMHMP) and the Austrian Workers Compensation Board (ÖAUV), together with a team of experts in toxicology from a number of universities and NGOs. This team has developed the Vienna Disinfectant Database, WIDES.

The European Commission has endorsed “Green Public Procurement” defining it as “… a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.” 1

Note: The WIDES database has been developed exclusively for professional users. Routine disinfection should not be undertaken in households.

References:
2. Grillitsch B, Gans O, Kreuzinger N, Scharf S, Uhl M, Fuerhacker M. “Evaluating the health and ecological effects of disinfectant products.” Health Care Without Harm (HCWH) Europe, with a team of experts in toxicology from a number of universities and NGOs. The authors of this leaflet gratefully acknowledge the financial support of the European Commission. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document. The City of Vienna, the partner institutions and HCWH Europe are solely responsible for the content of this document and the views expressed in this document.
Chemical disinfection — currently indispensable

Disinfectants, belonging to the group of biocides, are widely used in healthcare settings to prevent and control infections. Routine disinfection measures are indispensable to protect people’s health. Disinfectants are used at many points, such as working surfaces, flooring, furnishings, medical devices and last but not least on the skin. They are applied to kill or inactivate infectious agents such as bacteria, viruses or fungi. Where thermal disinfection is not possible, the use of chemicals is essential. … but with the threat of toxic and ecotoxic impacts

Disinfectants don’t just attack infectious agents. Due to their ability to kill cells they also pose certain hazards for human health. They may contain a variety of substances — surfactants, solvents, fragrance, etc. — which may have skin degrading, irritant, corrosive or sensitising properties in addition to the systemic impacts of a disinfectant. Where disinfectants have been used routinely and professionally, cases of skin and mucous membrane irritation, allergic and contact eczema, bronchitis and allergic asthma are well documented.1

In the wider environment, disinfectants can also pose a threat. Sewage treatment plants may receive disinfectants through the drainage systems, and the biological treatment of sewage treatment plants may receive disinfectants from hospitals. This poses a particular threat to aquatic life. The Austrian Federal Environment Agency, for example, has found high levels of antimicrobial compounds in some rivers and could not rule out the possibility that these levels were harmful.1

Choosing the most appropriate disinfectant — the WIDES database — an innovative tool for substitution

The WIDES database (Wiener Desinfektionsmittel-Datenbank) has been developed by the Vienna City Administration to directly address the difficulties in choosing appropriate disinfectants while at the same time considering the wider health and environmental impacts. WIDES is a user-friendly information system which compiles and analyses the hazards of commercially available disinfectants. WIDES enables purchasing departments and those respon- sible for sanitation in healthcare settings to compare products with a mouse click. Disinfectants that pose less risk to hospital staff, patients and the environment can be chosen — a triple payback which is likely to be cost-effective in the long term through reduced illnesses and environmental protection. WIDES enables purchasing departments and those responsible for sanitation in healthcare settings to compare products with a mouse click. Disinfectants that pose less risk to hospital staff, patients and the environment can be chosen — a triple payback which is likely to be cost-effective in the long term through reduced illnesses and environmental protection.

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WIDES provides product safety and the user interface is designed to inform the user about the different properties of the product, as well as the hazards arising from the different properties of the substances. WIDES provides a colour-coded scheme to indicate the level of hazard of each individual ingredient. Each ingredient is assigned an assessment number, which is then used to indicate lack of data and an inability to make an assessment. Because the information for the individual hazard categories is not combined, the user is able to decide which categories are relevant against the background of exposure to humans and the environment caused by the particular application being considered.

How WIDES works

WIDES has been developed in collaboration with interna- tional experts in occupational health and environmental protection. The assessment scheme of WIDES is two-tiered. First, the database applies an evaluation of the hazardous properties of chemical ingredients in disinfectants and the flammability of products. Secondly, a comparison of the adverse properties of different products is provided, taking into account their dilution for a particular application.

Scoring the hazards of chemical ingredients

For each disinfectant to be assessed, the necessary informa- tion on the hazards of the individual ingredients is recorded in the WIDES database, with references indicating the source of the information. The hazards of such ingredients are scored in six categories by assigning assessment numbers. These hazard scores are independent of any dilution, being intrin- sic to the properties of the ingredients.

Ignition sources, such as open flames and hot plates in kitchens or ovens in operating rooms, can set alight alcohol-containing disinfectants. Therefore, in addition to the four health-based and two environmental catego- ries, the flammability of alcohol-containing products is scored in WIDES. The assess- ment is based on the physical properties of the product, as specified in the product’s safety data sheet.

Features of the WIDES database

- Available in English and German, and free of charge to all users: www.wides.at (English), www.wides.at (German). 
- In addition to toxicity and ecotoxicity, WIDES provides information on consumer safety, and includes safety and product data sheets that fulfil sufficient quality criteria.
- WIDES applies a colour code from pale yellow (relatively low hazard) to red (high hazard). Where information on a particular ingredient is not available, a white field is displayed with an indication of the source.
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Comparison of disinfectants as diluted for use

Then these scores are added to take into account the final concentrations of the ingredients (using a straight- forward calculation). If more than one ingredient with a particular hazard is present, the adjusted scores are then summed for each hazard, so each disinfectant ends up with 6 scores (or 7 if flammable). This comprises a disinfectant’s hazard profile (or product assessment). The scores are represented visually by a colour code, from pale yellow (relatively low hazard) to red (high hazard). Where infor- mation on a hazard has not been available, a white field is used to indicate lack of data and an inability to make an assessment. Since the information for the individual hazard categories is not combined, the user is able to decide which categories are relevant against the background of exposure to humans and the environment caused by the particular application being considered.