

Healthy Workplaces Good Practice Awards 2018-2019

CASE STUDY



A disinfectants database — substituting hazardous products in hospitals, schools and other public facilities



ORGANISATION/COMPANY

Vienna Ombuds Office for Environmental Protection

COUNTRY

Austria

SECTOR

Public sector

TASKS

Disinfecting floors, work surfaces, furnishings, medical equipment and skin

Background

Every year, the City of Vienna purchases around 400 tonnes of disinfectants for use in city facilities, including in schools, hospitals and nursing homes. The use of such products — on work surfaces, floors, furnishings, medical devices and the skin — is essential for preventing the spread of infection and protecting health. However, many disinfectants pose risks to human health and the environment: many have allergenic or toxic properties, and some even contain ingredients that are carcinogenic, reprotoxic or mutagenic, such as formaldehyde. Pregnant workers in particular should not be exposed to disinfectants containing harmful substances.

The City of Vienna is committed to 'green' public procurement and, in 1998, it introduced a sustainable public procurement programme — *ÖkoKauf Wien* — aimed at selecting products with minimal risks to workers and the environment. Under this programme, a working group with a specific focus on disinfectants — led by the Vienna Ombuds Office for Environmental Protection — was established to support the selection of disinfectants that do not contain allergenic or toxic ingredients.

Unlike other products containing chemicals, however, the harmful properties of disinfectants are often not immediately apparent, and only recently have the ingredients of such products been subject to systematic recording in the EU, under the Regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Biocidal Products Regulation.

Therefore, to support the selection of safer disinfectants for the City of Vienna's public facilities, it was important to ensure that accurate, up-to-date information on the hazardous properties of such products is available.



Source: Wiener Umweltschutzanstalt.

Aims

To provide systematic support and advice to public service organisations of the municipal administration on the selection of effective and affordable disinfectants with minimal toxicity to human health and the environment.



Source: Wiener Umweltschutzamt.

What was done and how?

The Vienna Ombuds Office for Environmental Protection — in collaboration with international and national experts from the Austrian Worker's Compensation Board (AUVA — *Allgemeine Unfallversicherungsanstalt*), the Austrian Society for Hygiene, Microbiology and Preventive Medicine, the Vienna Hospital Association, the Bureau for Chemical Engineering TB-Klade and other institutions — developed the Viennese Database of Disinfectants, WIDES.

This database is freely available online, in both English and German, and has two functions. First, it provides structured information on disinfectants and their ingredients, including information on efficacy, hazard classification, properties, uses, activity, material compatibility and toxicity/eco-toxicity. Second, it provides an assessment of hazardous properties, ranking ingredients from low to high risk. The hazard categories are as follows: 'Acute toxicity (respiratory tract)', 'Irritation and corrosivity', 'Allergenic potential', 'Mutagenic, carcinogenic, toxic for reproduction, chronically toxic', 'Behaviour in surface water — acute' and 'Behaviour in surface water — chronic'. Thus, the

hazardous properties of more than 200 disinfectant ingredients are compiled in an overview table and are easily accessible and comparable using WIDES.

The database is maintained and updated regularly with financial support from the City of Vienna (the Vienna Municipal Department for Environmental Protection and the Vienna Ombuds Office for Environmental Protection), the Austrian Worker's Compensation Board and the Federal Ministry for Sustainability and Tourism. Staff in the City of Vienna's procurement departments are trained in how to use the database, and training videos are publicly available online in English and German.

What was achieved?

All municipal departments of the City of Vienna are now legally required to use the WIDES database to identify safe disinfectants. This has led to a significant reduction in the use of substances that are harmful to human health and the environment.

For example, in Vienna hospitals:

- The use of surface, instrument and hand disinfectants containing carcinogenic, mutagenic or reprotoxic substances has been largely eliminated, being reduced from approximately 1 tonne to almost zero.
- The amount of allergens in disinfectants used has been reduced from around 1.5 tonnes to almost zero.
- The amount of a potentially carcinogenic substance used in floor scrubber machines has been halved.
- Microbial soaps containing triclosan have been replaced with safer alternatives.

In 2015, the Austrian Federal Ministry for Labour, Social Affairs and Consumer Protection published a decree to protect pregnant workers from exposure to hand disinfectants containing substances classified as carcinogenic, mutagenic, reprotoxic, sensitising or toxic (with chronic or highly acute toxicity). The decree specifically recommends using the WIDES database to select safe products and this has been highly influential in reducing the use of harmful disinfectants in Austrian hospitals.

Because the database is freely available online and is available in two languages, purchasers of disinfectants anywhere in the world can use it to quickly and easily identify products on the market with few or no hazardous properties, based on up-to-date, reliable information. It now has users from every continent and receives approximately 1,500 visits per month.

Success factors

The successful development and implementation of the WIDES database is largely thanks to the collaborative, multidisciplinary approach taken, involving input from the Vienna Ombuds Office for Environmental Protection, Austrian institutes for



Source: Wiener Umweltschutzbehörde.

hygiene and preventive medicine and occupational safety and health, the national labour inspectorate, disinfectant manufacturers and toxicologists. Financial support for maintenance and updating is ensured.

Procurement staff are well trained in the use of the database and are encouraged to consult database operators for advice on choosing the safest, yet still affordable and effective, disinfectants.

The WIDES database is actively promoted and endorsed nationally and internationally. It receives high-level support from local government, being recommended in decrees enacted by the City of Vienna, the Vienna Hospital Association and the Ministry for Social Affairs.

The database is also endorsed by the European Commission, the Austrian Action Plan for Sustainable Procurement and the Austrian Study Group on Indoor Air Quality, and is actively promoted at international meetings and conferences.

The successful implementation of the WIDES database has increased demand for disinfectants that present minimal risks to users and the environment. This, in turn, has encouraged manufacturers to develop safe, effective and affordable products, and apply for their inclusion in the database.

Transferability

The WIDES database and training materials are freely available online in both English and German, so the database is easily transferable to other public and private sector organisations, not only in Austria but worldwide.

Costs and benefits

The WIDES database costs around EUR 50,000 per year to maintain and update. However, this is less than the cost associated with, for instance, a single case of occupational illness resulting from exposure to allergens in disinfectants. Therefore, the benefits of using WIDES far outweigh the associated costs.

Key features of good practice example

- The WIDES database has been successfully implemented in the City of Vienna, leading to substantial reductions in the use of disinfectants containing harmful substances and a shift towards the production of safe disinfectants by manufacturers.
- It provides an example of a sustainable, collaborative approach to occupational safety and health that focuses on collective measures to reduce or eliminate risks from dangerous substances.
- The database is free, available in two languages and fully transferable to other organisations, in both the public and private sectors, and elsewhere in the world.

Further information

Further information can be found at:

<https://www.wien.gv.at/english/environment/ombuds-office/>
<https://www.wien.gv.at/wuawides/internet/Inhaltsstoffsuche/Bewertungen>

References and resources

http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue_81_Case_Study_158_Vienna.pdf

www.procuraplus.org/fileadmin/user_upload/Procura_case_studies/Procuraplus_case_study_Viennese_WIDES_Database.pdf

'This is a successful and sustainable example of systematic substitution to reduce or eliminate risks from dangerous substances which goes beyond the public sector.'