

# Cleaning and disinfection - example of implementation of the Vienna's Green Public procurement programme "ÖkoKauf"

Dr. Manfred Klade, Technisches Büro Klade  
Engineering Office Klade

DI Marion Jaros,  
Wiener Umweltschutz  
Environmental Protection

Ing Herbert Nentwich  
Vienna Hospital Association



# Cleaning

Content provided by: Ing Herbert Nentwich

Translation and supplement: Dr Manfred Klade

## Criteria lists to be applied

The Working Group „Cleaning“ issued binding criteria lists for the departments of the City of Vienna

**Products groups are:** detergents, cleaning and care products, floor cleaning products

**Bans and limit values concern:** alkali, bleaching agents, builder components, organic solvents, neutral salts, acids, surfactants, preservatives, additives

Binding also for third-party cleaning companies!

<https://www.wien.gv.at/umweltschutz/oekokauf/ergebnisse.html#reinigung>



## Banned products

- fabric softener
- deodorizing products for WCs and the sanitary area: toilet and urinal blocks, perfumed cleaner, air cleaner
- rinse agents
- drain cleaners, pipe cleaner
- basic cleaner for removal of coatings
- oven and grill cleaner
- carpet cleaners (use of stain remover as required)
- floor coatings (rubber, wood)

## Banned substances

- complexants (EDTA, NTA) capable of remobilising heavy metals from sediments
- bleaching agents on chlorine basis causing environmentally hazardous effects in waste water
- formaldehyde and formaldehyde releasers

## „ÖkoRein“ data base

The „ÖkoKauf“ criteria for cleaning are included in the „ÖkoRein“ database established by the umweltberatung

<http://www.umweltberatung.at/oekorein-datenbank>

The database comprises only cleaning agents classified as low-risk for the environment and human health

Additional information is provided if these products meet the „ÖkoKauf Wien“ criteria. The database can therefore be used when purchasing eco-friendly cleaning products

<https://www.wien.gv.at/umweltschutz/oekokauf/ergebnisse.html#reinigung>

## Switch to microfiber cloth

- Since 2010
- Target
  - Savings in disposable cloth (2011: ca. 29 Mio. units, costs: ca. 945.000 €)
  - Savings in cleaning chemicals (actually ca. 29.000 liters of multi-purpose cleaner and 7.000 Liters of window cleaner per year)
- Minimum requirements: max. 80% Polyester, mind. 20% Polyamid; mind. 1 Decitex; no PU- coating, no Nano-Ag, no antibacterial cloths, washable up to 95°C; no damage in surface application

# Central tender for cleaning agents 2013/2014

- Reduced demand for cleaning agents of 115 tons (37%) between 2009 and 2013 due to better control of the dosage of products.
- Reduction of harmful substances is currently not quantified but generated by reduced procurement volumes.
- Cost savings of about € 113.000 compared to 2009

# Disinfection

How to procure safer disinfectants

[www.wides.at/en](http://www.wides.at/en)

DI Marion Jaros, Wiener Umweltschutz  
Vienna Ombuds Office for Environmental Protection

Dr. Manfred Klade, Technisches Büro Klade  
Engineering Office Klade



# The Vienna Database for disinfectants (WIDES)

Database is a relevant tool of Ecobuy Vienna (ÖkoKauf Wien) programme for green public procurement

Industry-independent, user-friendly, publicly accessible without charge ([www.wides.at](http://www.wides.at), [www.wides.at/en](http://www.wides.at/en))

facilitates the main goal of the working group „disinfection“ which is **substitution** (i.e. selecting those disinfectants with the lowest hazard potential)



# Vienna Database for disinfectants (WIDES)

includes

human & ecotoxicological data on **> 200 ingredients** of disinfectants (antimicrobial substances, surfactants, solvents, etc.) with references.

data regarding the composition, independently certified spectrum of activity (efficacy!), applications and material compatibility of **> 200 disinfectants** for surfaces, instruments, laundry, dishes, hands and skin. Mainly from Manufacturers' data.

a **holistic assessment procedure** to compare human- and ecotoxicological properties of the ingredients of the most important disinfectants available on the Austrian market.



## Our Theses, when we started

- The use of disinfectants in hygiene risk areas is indispensable.
  - Several disinfectants show relevant impacts on health and environment.
  - Disinfectants (with the same application field, efficacy and spectrum of activity) show relevant differences in their toxicological profiles to justify substitution measures.
  - It is possible to identify those products with the lowest impact on health and environment, in spite of data lacking, complex composition and diverse dilution rates.
  - Disinfectants with the lowest impacts are affordable.
-

# Potential adverse impacts of disinfectants to human health

Mucous membrane-irritation

Toxic contact eczemas

Skin irritation

Allergic contact eczemas

Degreasing of skin

Acute or chronic Bronchitis

Corrosivity

Eye conjunctivitis

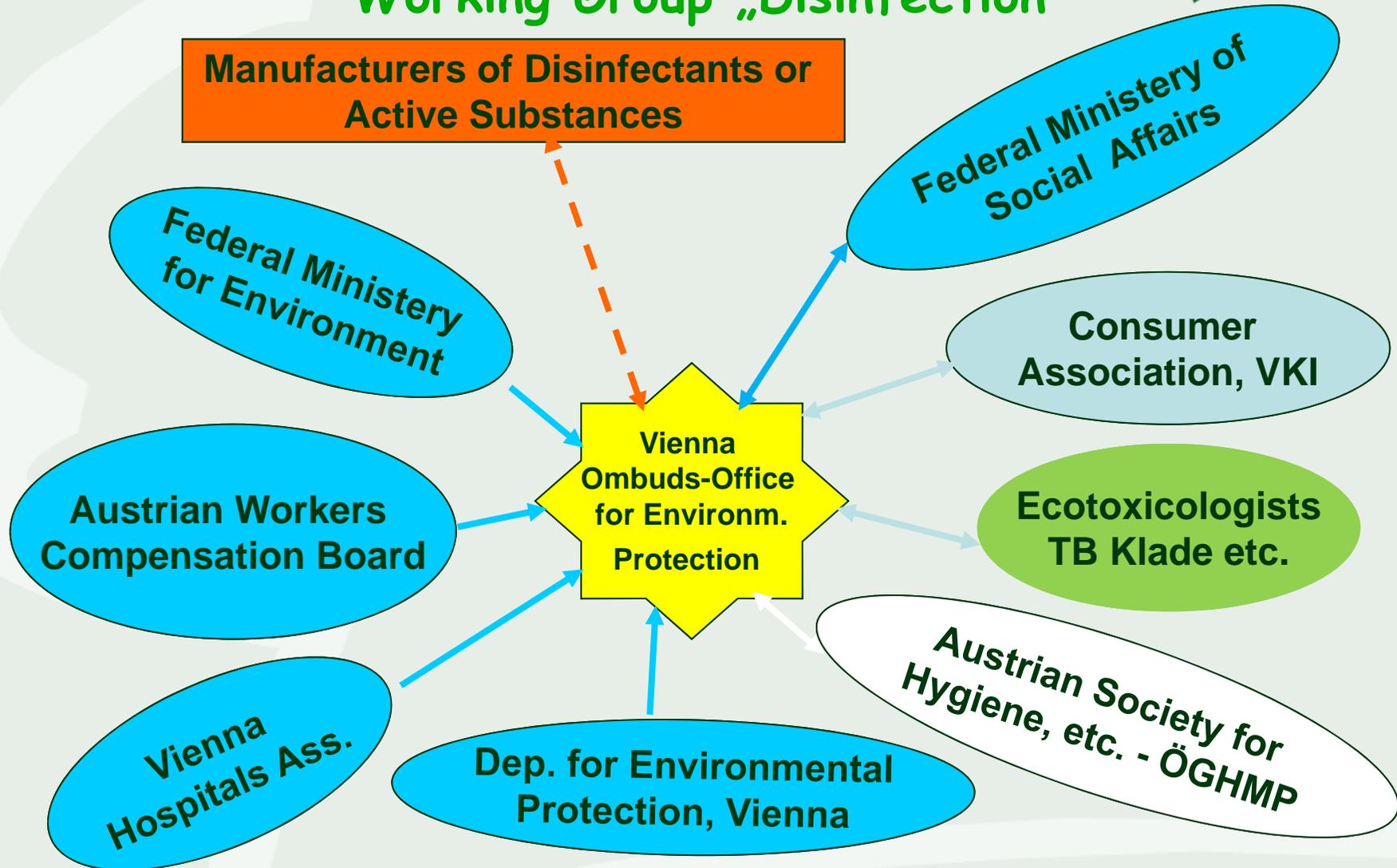
Sensitisation

Allergic Asthma

(Organ Toxicity, Cancer?)

---

# Participants of the „EcoBuy Vienna“ Working Group „Disinfection“



Also HCWH - Look up all Cooperation Partners at  
[www.wides.at/en](http://www.wides.at/en) !

## The main *GOAL* of the working group “Disinfection” was *SUBSTITUTION*

Reduction of possible risks of disinfection measures for health and the environment to a minimum by carefully selecting those disinfectants with the lowest hazard potential from the market supply.

BUT a lot of disinfectants are sold as concentrates. Depending on the specific application the dilution rate changes and also differs between the products.

That´s why the information in Safety Data Sheets do not provide enough basis to carry out comparisons of the diluted products “ready to use”.

This makes **substitution** of disinfectants **difficult**. That´s why we created a Database to compare products at the needed dilution rates.

---

# Assessment Procedure

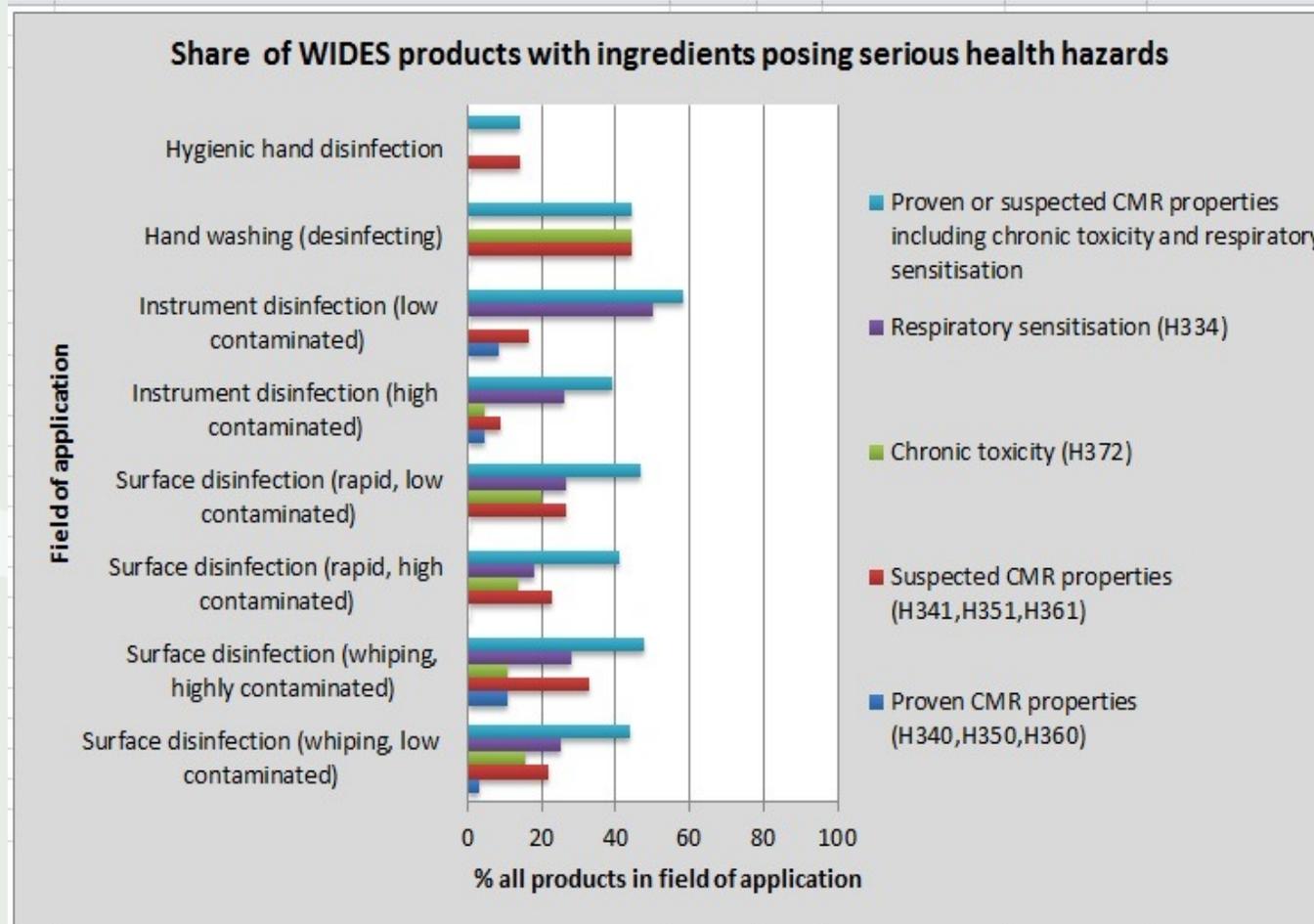
1. Categorising adverse impacts in respect to human health and the environment
2. Substance assessment
3. Product assessment on the basis of substance assessment (considering the respective concentration for application)



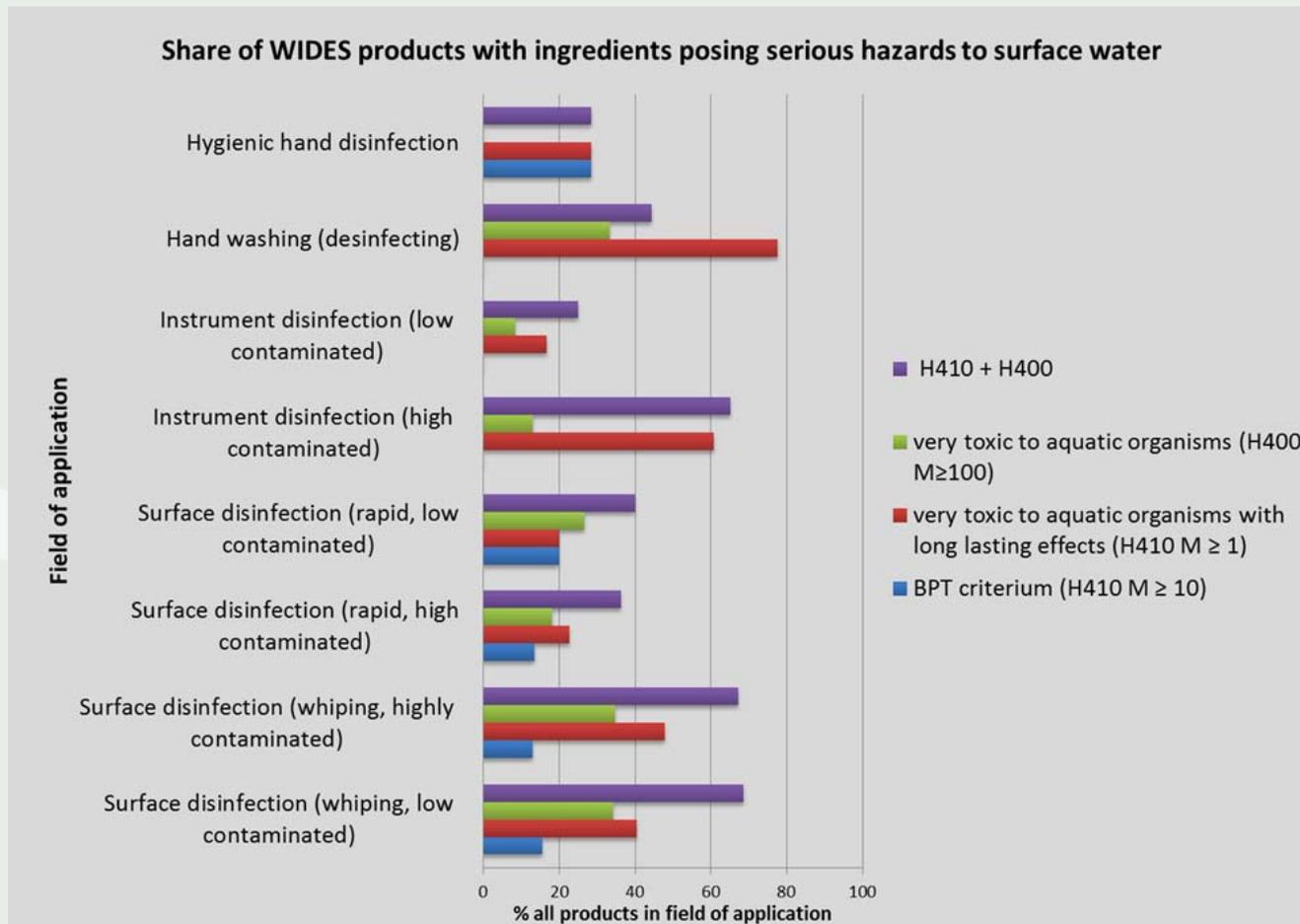
For detailed information see training videos and the pdf [Assessment scheme of the Viennese database for disinfectants](#) on WIDES webpage [www.wides.at/en](http://www.wides.at/en)

---

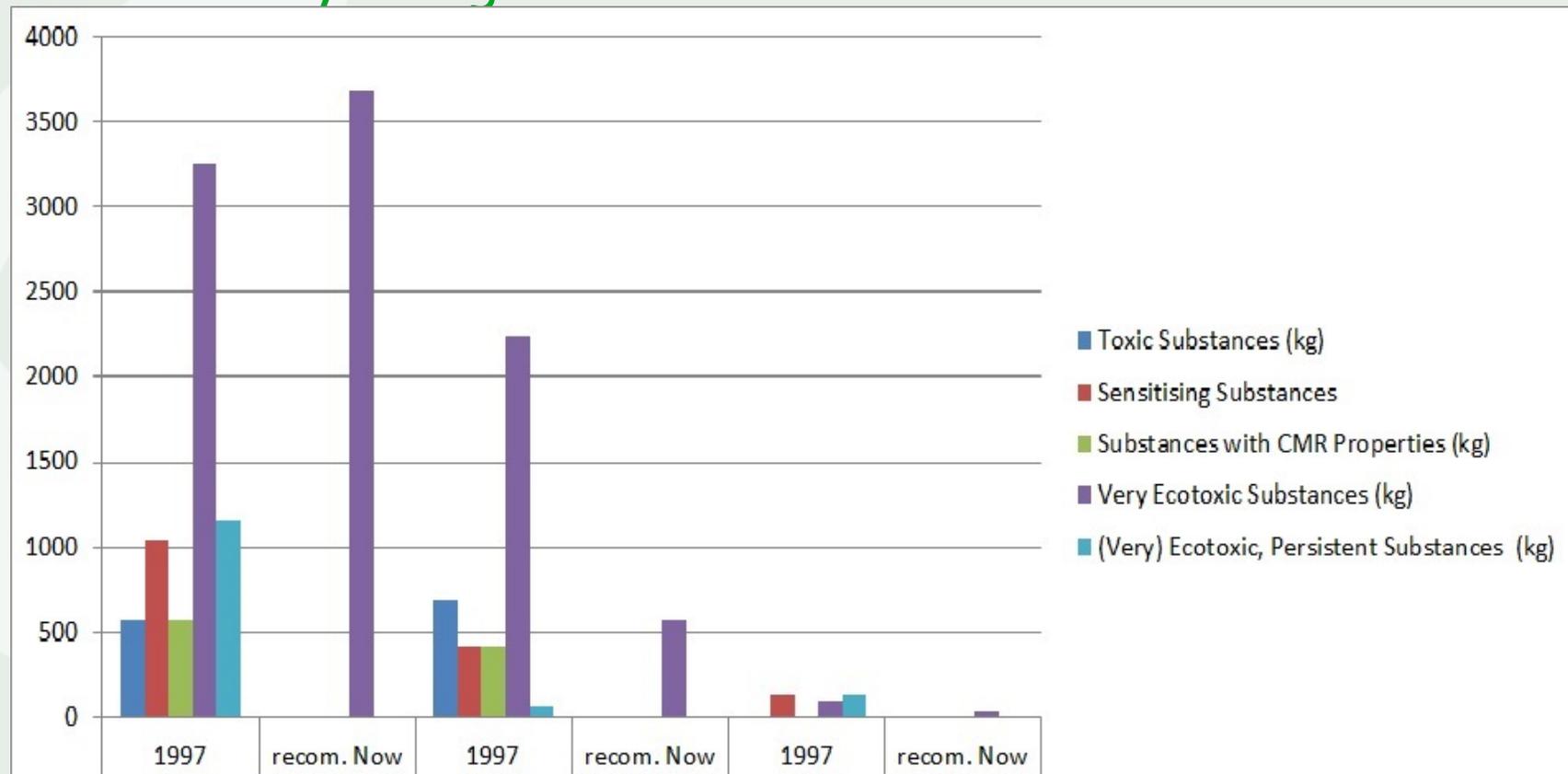
# WIDES products with ingredients of very high concern to health



# WIDES products with ingredients of very high concern to environment



# Achieved Reduction of Hazardous Chemicals by using the WIDES Database



Analysis showed that all chemicals with allergenic, toxic, teratogenic, (potentially) carcinogenic and very ecotoxic chemicals with long lasting effects to aquatic life could be phased out of routine disinfection of surfaces, instruments and hands by using the disinfectants, that are on top of the recommendation list.

# Who uses the WIDES?

## **Its use is binding**

for the Vienna Hospital Association  
for Kindergartens, Schools and Baths of the City of Vienna

## **Its use is recommended by**

the Austrian Action Plan für Sustainable Procurement  
the global NGO „Health Care without Harm“  
by the Austrian Labour Inspectorate  
(Austrian Decree about Hand Disinfectants for Pregnant Employees)  
Publication of WHO und ILO

---

# Thank you for your attention

## CONTACT

**DI Marion Jaros**, [marion.jaros@wien.gv.at](mailto:marion.jaros@wien.gv.at)  
Vienna Ombuds Office for Environmental Protection

**Dr. Manfred Klade**; [office@tb-klade.at](mailto:office@tb-klade.at);  
Engineering Office Klade, 8505 St.Nikolai i.S., Austria



**Ing Herbert Nentwich** [herbert.nentwich@wienkav.at](mailto:herbert.nentwich@wienkav.at)  
Vienna Hospital Association  
(Expert for PVC free med. D, Textiles, Cleaning Products..)



**DI Thomas Mosor** [thomas.mosor@wien.gv.at](mailto:thomas.mosor@wien.gv.at)  
Management Board "Ökokauf Wien"