



Fachklinik Gaißach

Case study Germany

Chemical substitution of disinfectants

Overview hospital

- 220 beds
 - 140 staff members
- Children up to 12 years old and older can be accompanied by a parent or any other family member and siblings when indicated
- Treatment of chronic diseases during childhood and adolescence (e.g. Diabetes, Obesity, Asthma, Inflammatory bowel diseases)
 - No ICU
 - No sterilising facility for equipment
 - External cleaning company





Green & healthy hospital



Product Analysis of disinfectants

	Product name	SUBSTITUTION DEMAND**	Justification
1	Sterilium virugard	No	-
2	Microbac forte	Yes	3 ingredients category A
3	Perform	No	-
5	Sterillium med	No/Limited	1 ingredient category B
7	Cutasept F	No/Limited	1 ingredient category B
8	Octenisept (farblos)	No/Limited	1 ingredient category B
9	Braunol (gefärbt)	No	-
10	Bacillol 30 tissues	Yes	1 ingredient category A
11	Neodisher Z / Neodisher Mielclear	No	-
12	Gigasept FF	Limited	2 ingredients category B
13	Octenisept (see also: octenisept farblos)	No/Limited	1 ingredient category B
15	Apesin KDR food	No	-
16	Kiehl-RapiDes	No	-
17	Apesin SDR san	Yes	2 ingredients category A
18	Kiehl-AciDes	Yes	2 ingredients category A
19	Sensox	Limited	2 ingredients category B
20	Eltra (60°C)	Yes	3 ingredients category A
21	AciDes plus	Yes	1 ingredient category A

Analysis of products

- Analysis of 21 disinfectants
 - High standard of occupational and environmental safety
 - Five disinfectants contained allergenic fragrances
 - One product (*Bacillol 30 tissues*) contained *N-Alkylaminopropylglycin* that is classified as chronic toxic and reprotoxic (A category)



6 products have been recommended for replacement and substitution

- Bacillol 30 Tissues
- Apesin SDR San
- Kiehl AciDes
- Eltra 60°
- AciDes plus
- Microbac forte



Conditions a substitute has to fulfil

- Product must be listed by national institutes (Robert Koch Institute) or associations (VAH¹)
- Hospital has to follow the public procurement rules
- The alternatives should consider the interactions between cleaning products used and the disinfectant product
- Must be easy and practical to apply
- The price of the alternative product should be comparable to the replaced product

¹Verbund für angewandte Hygiene



Bacillool 30 tissues

- Replacement recommended as substance (*N-Alkylaminopropylglycin*) is classified as chronic toxic (H372)
 - Descosept sensitive wipes were tested. Under clinical conditions the wipes were not soaked enough so excessive amounts had to be used to cover the surfaces -> higher costs, nurses did not want to use them
 - Oxywipes are a better substitute but the price is more than 3 times higher



Apesin SDR San

- Substitution demand: 2 allergenic fragrances, H317, categorized with A („high concern“), suspected of damaging fertility or the unborn child
 - Still used but only for special purpose (bathtub after special medical therapy)
 - Replacement with Budenat azid plus D587 for regular cleaning



Kiehl - AciDes

- 2 allergenic fragrances Category A (allergenic skin reaction)
 - No longer in use



Eltra 60°

- Substitution demand because of 3 allergenic fragrances, H317, categorized with A („high concern“), suspected of damaging fertility or the unborn child (H361)
 - Used for laundry
 - Replacement took place. Alternative product: Lavo Des 60 Kompakt
 - There are no sensitising substances inside, hence no additional instruction is necessary; lower costs



Acides plus



- Substitution demand because of two allergenic fragrances, H317, categorized with A („high concern“), toxic if inhaled
 - Used by external cleaning provider only for the swimming pool area, no replacement possible because the pool is a very sensitive area (e.g. pool chemicals) and external cleaner has a constant contract
 - Unfortunately, the hospital has no saltwater pool (less hazardous chemicals and chlorine)



Microbac forte

- 3 allergenic fragrances, classified with H317, categorised with A („high concern“)
 - Used in hospital for floor cleaning
 - The cleaning staff wears gloves all the time; no allergic reaction occurred until now
 - Replacement is difficult as the price for replacement products is higher



Learning outcomes and next steps

- Ongoing investigation of other alternative products.
- Oxygen-based alternatives are expensive. The recommended alternative is associated with an intense smell.
- National guidelines for sustainable procurement would be very helpful.
- When purchasing products the carbon footprint should be considered as well, e.g. impact of transportation when not produced locally.
- Products could be labeled accordingly (A=no hazardous substances, no allergic fragrances, produced locally).



Thank you!



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