

Equivalence between disinfectant testing according to VAH methods and testing according to current European standards¹

In order to achieve as far-reaching a European harmonisation as possible, the current versions of the European standards of the CEN TC 216/WG1 were integrated into the requirements and methods for VAH certification of chemical disinfection processes in the version of 2 April 2015 [1].

The VAH methods conform to the European standards for testing disinfectants for the medical area (CEN TEC 216/WG1) with respect to the interfering substances to be tested (simulation of clean and dirty conditions) and the monitoring of the validity of test conditions with regard to: non-toxicity of the experimental conditions; non-toxicity of the neutralizer; and effectiveness of the neutralization of the disinfectant at the end of the contact time.

The tiered approach with a quantitative suspension test simulating “in-use” conditions (EN phase 2, step 1) and a practical test under simulated-use conditions (EN phase 2, step 2) has been put into effect, or been in the process of development, for decades, both in the VAH methods (formerly DGHM) and in the European standards. It may be assumed that differences in the details of the actual performance of the experiments, and the use of the non-toxicity test for validation of the experimental conditions (‘water control’) rather than the calculated initial colony count in the test mixture do not result in a significantly different assessment of disinfectants and procedures. This comparability has also been successfully confirmed by the ring trials VAH 2011-2 and VAH 2013-4.

In certain areas the VAH methods make higher demands on the effectiveness of disinfectants than the European methods, but at no point do they make lower ones. It can therefore be guaranteed that disinfectants that are found to be effective according to VAH methods also pass tests according to European methods. Therefore the requirements and methods for the VAH certification of chemical disinfection processes, in the version of 2 April 2015, also comply with the requirements of the corresponding European standards for testing the effectiveness of disinfectants. Through its certification, the VAH guarantees an independent assessment of the conformity of the disinfectant testing with the stipulated requirements.

In the current VAH publication “Requirements and methods for VAH certification of chemical disinfection procedures” (version of 2 April 2015), the equivalent European test procedures that can be used as an alternative to the test are specified in a footnote at the beginning of each chapter. It should be noted that, for VAH certification, it is essential to take note of the *requirements for the efficacy tests*, regardless of whether a VAH test method or an equivalent European method was used for submission. For example, in the case of tests under simulated-use conditions for instrument or surface disinfectants the VAH requirements stipulate the contact times to be chosen in the individual test runs, in order to enable a demarcation to be made between the effective and ineffective areas.

¹ This is an authorized translation of the German original publication, published in HygMed 2016; 41(3). This bulletin replaces the Bulletin no. 2/2007, ‘Statement of the Disinfection Commission of the VAH on the equivalence of tests according to the “standard methods of the DGHM for the testing of chemical disinfection processes” and tests according to European standards (CEN TC 216)’, published in HygMed 2007;32(4): 128–9.

Table 1 gives an overview of the VAH methods that are at least equivalent to the EN standards.

Table 1: Overview of the VAH methods for disinfectant testing whose requirements are at least equivalent to the corresponding EN standards for this field of application. (The numbers in parentheses refer to the number of the pertinent VAH method (1)).

VAH methods	European standards (CEN TC 216/WG1*)
Quantitative suspension test with bacteria (9)	DIN EN 13727 - bactericidal activity
Quantitative suspension test with yeasts and moulds (9)	DIN EN 13624 - yeasticidal and/or fungicidal activity
Quantitative suspension test with mycobacteria (9)	DIN EN 14348 - tuberculocidal or mycobactericidal activity
Hygienic handwash (10)	DIN EN 1499 - hygienic handwash
Hygienic hand disinfection (11)	DIN EN 1500 - hygienic hand disinfection
Surgical hand disinfection (12)	DIN EN 12791 - surgical hand disinfection
Surface disinfection without mechanical action using wipes - test under simulated use conditions with bacteria, yeasts, moulds, mycobacteria (14.1)	DIN EN 13697 (WG 3)*/ DIN EN 14349 (WG 2)*/ DIN EN 16438 (WG 2) - however with interfering substances relevant to the medical area: bactericidal, yeasticidal, fungicidal activity of surface disinfectants for use without mechanical action using wipes
Disinfection of surfaces with mechanical action using wipes - 4-field test under simulated use conditions with bacteria, yeasts, moulds, mycobacteria (14.2)	DIN EN 16615 - bactericidal and yeasticidal activity of surface disinfectants for use with mechanical action using wipes
Chemical and chemical-thermal instrument disinfection - quantitative carrier test under simulated use conditions with bacteria (15)	DIN EN 14561 - bactericidal activity of instrument disinfection
Chemical and chemical-thermal instrument disinfection - quantitative carrier test under simulated use conditions with yeasts and moulds (15)	DIN EN 14562 - yeasticidal or fungicidal activity of instrument disinfection
Chemical and chemical-thermal instrument disinfection - quantitative carrier test under simulated use conditions with mycobacteria (15)	DIN EN 14563 - tuberculocidal or mycobactericidal activity of instrument disinfection
Chemical-thermal textile disinfection - quantitative carrier test under simulated use conditions with bacteria, yeasts, moulds, mycobacteria (17.1 and 17.2)	DIN EN 16616 - bactericidal, yeasticidal, fungicidal or mycobactericidal activity of linen disinfectants

* Working groups of the Technical Committee 216 of the CEN for testing disinfectants and antiseptics: WG 1 = human medical area, WG 2 = veterinary area, WG 3 = foodstuffs area

References

1. Disinfectant Commission of VAH (Ed.): Requirements and methods for VAH certification of chemical disinfection procedures. As of 2nd April 2015. Wiesbaden: mhp-Verlag.

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