



Chlorine-Based Disinfectants: Requirements for VAH Certification

Requirements for manufacturer certification extended and clarified

Increasingly more applications are being currently submitted to the VAH for certification of products whose principle active substances are chlorine-releasing compounds. The VAH explicitly draws attention to **special features of the production of these compounds through electrodiaphragmalysis**. For example, there may be widespread variability in the pH values of the active substance solutions generated depending on the diaphragmalysis method used, with consequently a major impact on the efficacy as well as on corrosiveness. Furthermore, the active substances generated are subjected to different disintegration processes which also affect the usability of the active substance solutions.

The Disinfectants Commission of the German Association for Applied Hygiene (VAH) has passed a resolution whereby for certification of products based on chlorine-releasing compounds and produced via electrodiaphragmalysis, **in addition** to the hitherto applicable requirements set out in the test report and expert opinion (as per the Methods Book, Chapter 3.2 [1]), **the total and free chlorine content (active chlorine)** as well as the redox potential of the test product must, **with immediate effect**, be recorded at least on the first and last test day of using the respective test sample and be specified in the test report. To determine the free chlorine and total chlorine, for example the colorimetric method with N,N-diethyl-1,4-phenylenediamine based on DIN EN ISO 7393-2 can be used (as applicable, following predilution with distilled water). To determine the redox potential, for example the method set out in DIN 38404-C 6 can be used. Moreover, the manufacturer must provide data to demonstrate the period of time during which the concentrate continues to contain the certified content of free chlorine (active chlorine) with daily sampling.

The minimum free chlorine (active chlorine) active substance content of the product as well as the utilization period during which this active substance content is guaranteed are listed in the **VAH Certificate**.

Warnings for purchasers and users

Hand disinfection

To date, no experience on the use of sodium hypochlorite as a hand disinfectant is available in Germany. So far there are no biocidal products authorized for this type of use, i.e. which have been evaluated in terms of their quality and safety in addition to efficacy by a licensing authority.

It is urgently advised not to use chlorine-based products for hand disinfection because of the **instability** and **skin irritation** potential of the now commercially available chlorine-based products.

Surface disinfection

If chlorine-based products are used for surface disinfection, attention must be paid to the active chlorine content because of its instability.

If used, please note that **corrosive effects** may occur and that **mixing chlorine-based solutions with acidic detergents must be strictly avoided**. If used in enclosed spaces, the maximum admissible concentration (MAC) values must be observed. Ensure adequate **ventilation**.

The German Association for Applied Hygiene (VAH) is aware that products are being increasingly advertised as *VAH Certified* or *VAH List* for application areas for which no VAH certificate has been issued. We recommend always verifying these claims by checking the VAH Online List [3] and ask that the VAH be informed about such matters.

References

1. VAH (Edited by). Requirements and Methods for VAH Certification of Chemical Disinfection Procedures. Wiesbaden: mhp Verlag. Basic edition with supplements, as of 15 June 2020.
2. VAH (Edited by). Quality Marks for Purchasing Hand Disinfectants. HygMed 2020; 5 (in print). Advance online publication: <https://vah-online.de/de/news-detail/qualitaetskennzeichen-fuer-den-einkauf-von-haendedesinfektionsmitteln>
3. VAH (Edited by). VAH List of Disinfectants. Online Portal (in German and English) <https://vah-liste.mhp-verlag.de/>

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Please note the recent publication on chlorine-based hand disinfectants (10 September 2020). https://vah-online.de/files/download/news/Chlorbasierte%20Haendedesinfektionsmittel_VAH_2020.pdf