

5. Data available in The Netherlands

The Netherlands is willing to provide a first set of data. Based on a number of recent publications (25-28) in which CW agents are reviewed, a list of 35 compounds (See Annex 1) has been compiled consisting of nerve agents, vesicants, suffocating agents, paralysants, a psychochemical and military irritants. Starting from these 35 CW agents the related compounds were also compiled in separate classes of compounds. These consist of decomposition products, precursors, impurities, artifacts as well as analytical derivatives. The deviation between the various classes of related compounds is not always clear-cut. For instance, a compound such as thiodiglycol is a decomposition product of mustard, but also its main precursor. Both decomposition products and precursors may be present in a chemical weapon as impurities. The class of precursors also contains additives and side products. A special class is formed by artifacts and analytical derivatives. Artifacts are formed by accident, when for instance the CW agent reacts with solvents (especially alcohols) during the extraction of the samples. Analytical derivatives of a number of less volatile polar compounds were prepared in order to be able to analyse with gas chromatography. Compounds with alcoholic hydroxy groups were derivatized with trifluoroacetylation and trimethylsilylation reagents, whereas acids were converted into alkyl (methyl, occasionally ethyl or isopropyl) and dimethyl-t-butylsilyl esters (29).

In Annex 1 a survey of the data, which are available digitally at the moment, is presented. The list contains several gaps. However, an EI mass spectrum is available for almost all compounds. Some IR and NMR data, which were recorded on spectrometers not connected with a data system in the past, are difficult to digitise. Therefore these spectra only exist in a printed form. However, data are continuously updated in order to fill gaps and to replace older data.

6. References

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