



**NOTE BY THE TECHNICAL SECRETARIAT**

**REPORT OF THE FIFTY-SECOND MEETING OF THE VALIDATION GROUP  
FOR THE UPDATING OF THE OPCW CENTRAL ANALYTICAL DATABASE  
22 SEPTEMBER 2021**

1. The Validation Group met on 22 September 2021 to discuss the evaluation of new analytical data for possible inclusion in the OPCW Central Analytical Database (OCAD) and to consider matters related to this database. Mr Armando Alcaraz (United States of America) served as the interim Chairperson of the meeting, as Mr Brian Mayer (United States of America) was unable to attend. The meeting was held remotely via video conference, due to travel challenges related to the COVID-19 pandemic. The subgroup meetings addressing data review were held prior to the main Validation Group meeting.
2. The evaluators for the analytical techniques evaluated new data and reported to the coordinators for each analytical technique. The names of the coordinators who were present at the meeting, along with the technique for which each was responsible, are listed below.

Mr Ferdinand Visser (South Africa)	Gas chromatography (retention index) (GC(RI))
Ms Karin H�jjer Holmgren (Sweden)	Mass spectrometry (MS)
Mr Armando Alcaraz (United States of America)	Infrared (IR) spectroscopy
Mr Damian Magiera (Germany)	Nuclear magnetic resonance (NMR) spectroscopy

3. The coordinators provided an evaluation summary of the data to the Validation Group for discussion at the meeting. The evaluators finalised the evaluation of the analytical data and confirmed that the approved data was technically valid.
4. The MS subgroup updated the guidelines for MS data submission to include the addition of the requirement relating to split/splitless conditions for the inlet system of a gas chromatography-mass spectrometry (GC-MS) instrument.
5. The Validation Group had a discussion regarding the addition of a category of non-scheduled chemicals for certain derivatives. The Group decided to consider the topic at its next meeting.



6. This document presents the sets of validated analytical data on scheduled chemicals (Annex 1) and derivatives (Annex 2) recommended for inclusion in the OCAD.
7. Furthermore, this document presents the sets of validated analytical data of non-scheduled chemicals to be added to the Validation Group Working Database (Annex 3).
8. Annex 4 to this document lists the members and evaluators of the Validation Group.
9. The available data from all analytical techniques will be sent to the Validation Group at least six weeks before its next scheduled meeting, which is set to take place on 30 and 31 March 2022. The evaluators agreed to send their evaluation reports to the appointed coordinators no later than 16 March 2022. The evaluators agreed to come to the meeting prepared to finalise the evaluation of the analytical data provided to the Group. If travel to the OPCW Headquarters is still not possible at that time, the evaluators agreed to meet virtually on 30 March 2022, and to ensure that the data evaluation by the subgroups is completed prior to the meeting.

Annexes:

- Annex 1: Lists of Approved Data on Scheduled Chemicals Recommended for Inclusion in the OPCW Central Analytical Database
- Annex 2: Lists of Approved Data of Derivatives Recommended for Inclusion in the OPCW Central Analytical Database
- Annex 3: Lists of Approved Data on Non-Scheduled Chemicals Relevant to the Chemical Weapons Convention
- Annex 4: List of Members of the Validation Group

**Annex 1****LISTS OF APPROVED DATA ON SCHEDULED CHEMICALS RECOMMENDED FOR INCLUSION IN THE OPCW CENTRAL ANALYTICAL DATABASE**

Note: In the “Decision” column of the tables that follow, “A” means “accepted” and “B” means “accepted subject to minor corrections”.

**TABLE 1: LIST OF APPROVED MS DATA ON SCHEDULED CHEMICALS**

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Schedule</b>	<b>Decision</b>
28-2-0322	N-(1-(Dimethylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	A
28-2-0324	N-(1-(Dipropylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	A
28-2-0325	Methyl N-(1-(dimethylamino)ethylidene)phosphoramidofluoridate	1.A.14	A
28-2-0328	Ethyl N-(1-(dimethylamino)ethylidene)phosphoramidofluoridate	1.A.14	A
28-2-0329	Ethyl N-(1-(diethylamino)ethylidene)phosphoramidofluoridate	1.A.14	A
28-2-0330	Ethyl N-(1-(dipropylamino)ethylidene)phosphoramidofluoridate	1.A.14	A

**TABLE 2: LIST OF APPROVED GC(RI) DATA ON SCHEDULED CHEMICALS**

Note: Under the “Column” heading for GC(RI) data, a “1” means an HP5 or an SE54 column, and a “2” means a DB-5MS column.

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Schedule</b>	<b>Column</b>	<b>RI(a)</b>	<b>RI(b)</b>	<b>Decision</b>
28-4-0325	N-(1-(Dimethylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	1	1434		A
28-4-0326	N-(1-(Diethylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	1	1540		A
28-4-0327	N-(1-(Dipropylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	1	1675		A
28-4-0328	Methyl N-(1-(dimethylamino)ethylidene)phosphoramidofluoridate	1.A.14	1	1511		A
28-4-0329	Methyl N-(1-(diethylamino)ethylidene)phosphoramidofluoridate	1.A.14	1	1606		A
28-4-0331	Ethyl N-(1-(dimethylamino)ethylidene)phosphoramidofluoridate	1.A.14	1	1585		A
28-4-0332	Ethyl N-(1-(diethylamino)ethylidene)phosphoramidofluoridate	1.A.14	1	1660		A
32-4-0001	3,3-Dimethylbutan-2-ol	2.B.14	1	775		A

**TABLE 3: LIST OF APPROVED IR DATA ON SCHEDULED CHEMICALS**

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Schedule</b>	<b>Decision</b>
23-1-0001v	N-(1-(Diethylamino)ethylidene)-P-methylphosphonamidic fluoride	1.A.13	A
23-1-0002v	Methyl N-(1-(diethylamino)ethylidene)phosphoramidofluoridate	1.A.14	A
23-1-0003v	Ethyl N-(1-(diethylamino)ethylidene)phosphoramidofluoridate	1.A.14	A

**Annex 2****LISTS OF APPROVED DATA OF DERIVATIVES RECOMMENDED FOR INCLUSION IN THE OPCW CENTRAL ANALYTICAL DATABASE**

Note: In the “Decision” column of the tables that follow, an “A” means “accepted” and a “B” means “accepted subject to minor corrections”.

**TABLE 1: LIST OF APPROVED MS DATA ON DERIVATIVES RECOMMENDED FOR INCLUSION IN THE OPCW CENTRAL ANALYTICAL DATABASE**

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Sched</b>	<b>Decision</b>
28-2-0318	Tributyl arsenotrithiolite	DS	A

**TABLE 2: LIST OF APPROVED GC(RI) DATA OF DERIVATIVES RELEVANT TO THE CHEMICAL WEAPONS CONVENTION**

Note: Under the “Column” heading for GC(RI) data, a “1” means an HP5 or an SE54 column, and a “2” means a DB-5MS column.

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Sched</b>	<b>Column</b>	<b>RI(a)</b>	<b>Decision</b>
28-4-0321	Tributyl arsenotrithiolite	DS	1	2163	A

**Annex 3****LISTS OF APPROVED DATA ON NON-SCHEDULED CHEMICALS  
RELEVANT TO THE CHEMICAL WEAPONS CONVENTION**

Note: In the “Decision” column of the tables that follow, an “A” means “accepted” and a “B” means “accepted subject to minor corrections”.

**TABLE 1: LIST OF APPROVED MS DATA ON NON-SCHEDULED CHEMICALS  
RELEVANT TO THE CHEMICAL WEAPONS CONVENTION**

<b>OPCW Code</b>	<b>Chemical Name</b>	<b>Schedule</b>	<b>Decision</b>
28-2-0308	Dipropyl methylarsonodithiolite	NS	B
28-2-0309	Dibutyl methylarsonodithiolite	NS	B
28-2-0310	Diethyl ethylarsonodithiolite	NS	B
28-2-0311	Dipropyl ethylarsonodithiolite	NS	B
28-2-0314	Dipropyl phenylarsonodithiolite	NS	B
28-2-0315	Dibutyl phenylarsonodithiolite	NS	B
28-2-0316	Triethyl arsenotrithiolite	NS	A
28-2-0317	Tripropyl arsenotrithiolite	NS	A
28-2-0319	Ethyl diphenylarsinothiolite	NS	A
28-2-0320	Propyl diphenylarsinothiolite	NS	A
28-2-0321	Butyl diphenylarsinothiolite	NS	A

**TABLE 2: LIST OF APPROVED GC(RI) DATA ON NON-SCHEDULED CHEMICALS RELEVANT TO THE CHEMICAL WEAPONS CONVENTION**

Note: Under the “Column” heading for GC(RI) data, a “1” means an HP5 or an SE54 column, and a “2” means a DB-5MS column.

OPCW Code	Chemical Name	Sched	Column	RI(a)	Decision
28-4-0310	Diethyl methylarsonodithiolite	NS	1	1275	B
28-4-0311	Dipropyl methylarsonodithiolite	NS	1	1454	B
28-4-0312	Dibutyl methylarsonodithiolite	NS	1	1646	B
28-4-0313	Diethyl ethylarsonodithiolite	NS	1	1362	B
28-4-0314	Dipropyl ethylarsonodithiolite	NS	1	1536	B
28-4-0315	Dibutyl ethylarsonodithiolite	NS	1	1724	B
28-4-0316	Diethyl phenylarsonodithiolite	NS	1	1831	B
28-4-0317	Dipropyl phenylarsonodithiolite	NS	1	2000	B
28-4-0318	Dibutyl phenylarsonodithiolite	NS	1	2189	B
28-4-0319	Triethyl arsenotrithiolite	NS	1	1628	A
28-4-0320	Tripropyl arsenotrithiolite	NS	1	1885	A
28-4-0322	Ethyl diphenylarsinothiolite	NS	1	2021	A
28-4-0323	Propyl diphenylarsinothiolite	NS	1	2106	A
28-4-0324	Butyl diphenylarsinothiolite	NS	1	2203	A



## Annex 4

## LIST OF MEMBERS OF THE VALIDATION GROUP

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