Organisation for the Prohibition of Chemical Weapons

World Customs Organisation

TRAINING COURSE FOR THE CUSTOMS AUTHORITIES OF THE GULF COOPERATION COUNCIL (GCC) COUNTRIES AND OTHER ARABIC SPEAKING STATES PARTIES TO THE CWC ON TECHNICAL ASPECTS OF THE TRANSFERS REGIME DOHA REGIONAL CENTRE FOR CBRN TRAINING

DOHA , QATAR
20 - 21 MARCH 2016

Major General Staff (Pilot)
Nasser Mohammed Al-Ali
Chairman of NCPW

The State of Qatar which enjoys, thank God, security, peace and stability, is highly keen to maintain international peace and security. Hence, comes its accession to all the conventions of humanitarian nature, including Chemical Weapons Convention. Since accession to the Convention, Qatar spares no effort in supporting the implementation of the Convention, promoting its activities and achieving its objectives. Qatar's keenness, in this regard, was manifested hosting the training events of the Organization for the Prohibition of Chemical Weapons (OPCW). These events were numerous and diversified at both the regional or sub-regional level. In December 2012, the "Doha Regional Centre for CBRN Training" was opened. Training services will be provided through the Centre, not only in respect of the Chemical Weapons Convention, but will also cover all WMD other conventions.

Article VI of the Convention, has taken the situation of some chemicals relevant to chemical weapons and have peaceful uses into account . That is by finding a balance between the security requirements and the economic activities relevant to these chemicals as well as developing a kind of control to ensure that the licensed chemicals are not diverted to non-peaceful purposes. That is achieved through the submission of annual declarations to the OPCW, and the development of verification and tracking mechanism.

Customs administrations, in the world today, where smuggling methods and illegal acts are diversified, represent the first and the last defense line to protect the national security. As Arabian Gulf region and its Arabic-speaking neighboring countries, represent a geographically connected entity, this training program targeted Customs staff in these countries to train and qualify cadres on the verification of the movement of the related chemicals.

It gives me pleasure to welcome all participants. I would also like to thank the OPCW and its Director General for their constructive cooperation and their efforts in maintaining international peace and security.

Ambassador Ahmet Üzümcü

Message from the Director General

I am pleased to welcome you to the Training Course for Customs Authorities of the States Parties from the Gulf Cooperation Council and other Arabic Speaking States Parties on the Technical Aspects of the Transfers Regime of the Chemical Weapons Convention. This course has been organised at the Doha Regional Centre for CBRN Training, in collaboration with the World Customs Organisation and with the gracious support of the Government of the State of Qatar.

The Chemical Weapons Convention is hailed as one of the most successful disarmament instruments in the world. The number of States Parties to the CWC today stands at 192, reflecting a near-universal acceptance of the Convention. Much of the credit for the success of the CWC goes to National Authorities and the many other stakeholders, who provide the foundation for effective implementation of the Convention at the national level.

Indeed, the goals of the CWC can only be achieved through full and effective implementation of the Convention by all States Parties. In this regard, the Technical Secretariat continues to provide support to States Parties through various means, including courses such as this. Customs Authorities, as one of the most important stakeholders at the national level, must have a good understanding of the requirements of the Convention in order to implement its provisions effectively. The course is designed to enhance the knowledge of the participating customs officials, sensitize them to essential provisions of the CWC and provide them with the necessary information and tools to undertake the monitoring of traded chemicals. As an added benefit, the course will also facilitate the creation of networks among the Customs Authorities in the region, through which experiences and best practices can be disseminated.

I hope that you will apply the knowledge and skills gained from this Course in your daily work, improving the implementation of the CWC in your country. The Secretariat remains available to provide any further support and assistance that may be required by Customs Authorities in this endeavour.

I wish to thank Major-General Staff (Pilot) Nasser Mohammad Al-Ali, Chairman of Qatar's National Committee for the Prohibition of Weapons and all the members of his team. I also wish to acknowledge the valuable support of the World Customs Organisation and H.E. Mr. Khalid Fahad Al-Khater, Ambassador and Permanent Representative of the State of Qatar to the OPCW.

I wish you a pleasant and fruitful stay in Doha.

(Ahmet Üzümcü)

TRAINING COURSE FOR CUSTOMS AUTHORITIES OF THE GULF COOPERATION COUNCIL (GCC) AND OTHER ARABIC SPEAKING STATES PARTIES TO THE CWC ON TECHNICAL ASPECTS OF THE TRANSFERS REGIME

DOHA REGIONAL CENTRE FOR CBRN TRAINING
DOHA, QATAR

20 March – 21 March 2016

PROVISIONAL PROGRAMME

Time	Activity
Sunday, 20 March 2016	
08:30-09:00	Registration
09:00-09:15	Opening of training course
09:15-09:30	*Tea/Coffee Break*
09:30-10:00	History of the use of chemical weapons
10:00-10:30	Introduction to the OPCW
10:30-11:15	Chemicals monitored under the CWC • Chemicals covered under CWC • Most traded Schedule chemicals • Examples of commercial uses of selected CWC Scheduled chemicals
11:15 – 11:30	*Tea/Coffee Break*
11: 30- 12:00	Transfer Provisions of the CWC • Reporting requirements for import and export of CWC Scheduled chemicals • Worldwide and Regional trade Statistics of CWC Scheduled Chemicals
12:00-13.15	Exercise 1 Group discussions on Import-Export Scenarios
13:15-14:00	Identification of CWC related chemicals using the Harmonized System of the World Customs Organization (WCO) • Introduction to customs control of chemical shipment • WCO recommendations • Possible future amendments to Harmonized System
Monday, 21 March 2016	
08:00 – 08:30	Identification of CWC related chemicals using OPCW tools • Handbook on chemicals • OPCW online scheduled chemicals database • Most traded schedule chemicals brochure • Demonstration
08:30 – 09:00	Identification of CWC related chemicals using other sources of information • Chemical shipments

	• On-site analysis • Additional resources for chemical information
09:00 – 09:45	Exercise 2 on identification of Scheduled chemicals (computers are required)
09:45-10:15	*Tea/Coffee break*
10:15-11:00	Exercise 2 on identification of Scheduled chemicals (computers are required) (continued)
11:00 – 11:45	Common Problems in reporting Imports and Exports of CWC Schedule Chemicals • Transfer Discrepancies • Sources of Discrepancies • Free ports/zones • Transhipment and transits of chemicals • OPCW decision on voluntary guidelines on import and export • Resolving Transfer Discrepancies
11:45-12:15	*Tea/Coffee break*
12:15-13:15	Practical Issues in controlling chemical trade • Effective national implementation • Strategic trade control system • Risk management, profiling and targeting • Challenges Targeting Strategic Trade. • Practical issues - Case Studies
13:15-14:00	Exercise 3 Group discussions on Import-Export Scenarios
14:00-14:30	Training course conclusions and summing up

Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction

Summary of the Presentation

- A Brief History of Chemical Weapons
- An Overview of the Chemical Weapons Convention (CWC)

Brief History of Chemical Weapons:

Pre World War I

- 1000 B.C. China – arsenical smokes
- 429-424 B.C. Peloponnesian War – sulphur, toxic fumes
- Middle Ages - poisoned arrows, contaminated wells
- Modern chemical warfare has its genesis on the battlefields of World War I.

Brief History of Chemical Weapons:

World War I

- 1914 Small scale attacks with tear gas
- First large scale CW attack with chlorine on 22 April 1915 at Ypres (leper) – 5000 dead, 15000 casualties.
- Choking agents chlorine and phosgene gases initially released from cylinders on the battlefield and dispersed by the wind – many friendly fire casualties.
- Later in the war chemical shells and mortars introduced.

World War I, 1915
Gas attack, Western Front (World War I)

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Brief History of Chemical Weapons:

World War I

- July 1917 blister agent Mustard gas first used
- By end of war ~90000 fatalities and 1.3 million casualties due to CW
- Over 100 000 tonnes of CW used

World War I soldiers in France, blinded from exposure to mustard gas:

10 April 1918

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Brief History of Chemical Weapons:

Post World War I

- Russia (1919)
- Morocco (1923)
- Abyssinia (1935-1936)
- China (1937-45)
- 1936 German discovery of the first nerve gas Tabun
  - ✓never used during WWII
- After WWII several allegations of the use of CW
- Vietnam (1968-75)

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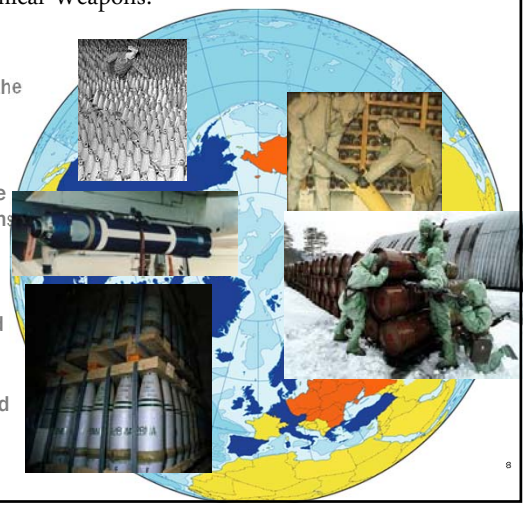
Brief History of Chemical Weapons:

The Cold War Era

- The United States and the Soviet Union both maintained enormous stockpiles of chemical weapons, primarily nerve agents, amounting to tens of thousands of tonnes.
- The amount of chemical weapons held by these two countries was enough to destroy much of the human and animal life on Earth.



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Brief History of Chemical Weapons:

Iran-Iraq War (1980-88)

- Iraq used chemical weapons in Iran during the war in the 1980s.
- Around 100,000 Iranian soldiers and civilians were affected by Iraqi chemical weapons during the 1980-88 war with Iraq.

Victims of Iraqi chemical weapons

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Brief History of Chemical Weapons:

Halabja, Iraq: 1988

- Iraq used mustard gas and nerve agents against Kurdish residents of Halabja, in Northern Iraq, in 1988 resulting in ~5000 deaths

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Brief History of Chemical Weapons:

•Recent examples

- **Japan**:
  Chemical Terrorism: Nerve agent sarin (GB) used by the Aum Shinrikyu doomsday cult
  - Matsumoto : 27 June 1994 &
  - Tokyo : 20 March 1995

- **Syrian Arab Republic**
  - August 2013 (According to the UN Report)

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Brief History of Chemical Weapons: *Steps towards chemical disarmament*

- **1874** : *Brussels Convention on the laws and customs of war*
  - ✓ ban on poison and poisoned weapons
- **1899** : *First International Peace Conference - The Hague*
  - ✓ ban on use of poisoned weapons, asphyxiating and deleterious gases
- **1928** : *Geneva Protocol* (signed in 1925 EIF in 1928)
  - ban on CW use, but no prohibition on development, etc. Some SPs interpret as "no first use"

The Peace Palace

The Hague

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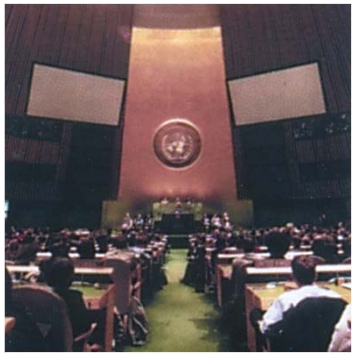
Brief History of Chemical Weapons: *Steps towards chemical disarmament - II*

- **1960s** : focus on chemical and biological weapons
- **1970s :** biological and CWs separated: focus on a multilateral treaty on chemical weapons
- **1971 :** adoption of the Biological Weapons Convention
- **3 September 1992** : CWC draft accepted by the Conference on Disarmament in Geneva on, concluding two decades of negotiations



The United Nations

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Brief History of Chemical Weapons: *Steps towards chemical disarmament - III*

- Chemical Weapons Convention (CWC) opened for signature on 13 January 1993 in Paris
- Preparatory Commission set up in The Hague to prepare for Entry-into-Force (i.e. 180 days after the 65th State ratified the CWC).
- Entry-into Force on 29 April 1997

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Overview of the Chemical Weapons Convention

- Preamble
- 24 Articles
- 3 Annexes on;
  - Chemicals
  - Implementation & Verification
  - Protection of Confidential Information

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The Pillars of the CWC

- Destruction of chemical weapons stockpiles and their associated production facilities (Art. I, III, IV and V)
- Non-proliferation – i.e. only permitted activities (Art. VI)
- Assistance and Protection (Art. X)
- International co-operation (Art. XI)

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The Chemical Weapons Convention (CWC): *Features*

- Eliminates an entire category of WMD
- It is a non-discriminatory and multilateral treaty
- Provides for the destruction of CWs stockpiles and CWs production capacity (disarmament)
- It has an inspection/Verification regime (non-proliferation)
- Provides for assistance & protection against CWs
- Provides for international cooperation through peaceful uses of chemistry

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The Preamble

- Details States Parties purpose in entering the Convention
- Disarmament and elimination of all types of weapons of mass destruction
- Excludes completely the possibility of any use of chemical weapons
- Achievements in chemistry should be used for the benefit of mankind.

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Article I : General Obligations

- Requires States Parties, *inter-alia* to:
  - ✓destroy chemical weapons, chemical weapons production facilities and abandoned chemical weapons
  - ✓not acquire or reacquire chemical weapons
  - ✓not to use chemical weapons
  - ✓not to prepare militarily to use chemical weapons

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Article II : Definitions & Criteria

- Definitions and criteria used in the Articles and Annexes
- Definition of CWs, Toxic chemical, Precursor, old and abandoned CWs, Riot Control Agent, CWPF, Purposes not prohibited and Production Capacity

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Article III : Declarations

- Outlines the reporting requirements for State Parties
- SPs to make declarations in terms of ;
  - ✓Chemical Weapons
  - ✓Old and abandoned CWs
  - ✓CW production facilities
  - ✓Facilities designed, constructed, or used for development of Chemical Weapons
  - ✓Riot Control Agents

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Article IV : Chemical Weapons

- Provides the basis for destruction of CWs and their verification
- SPs to give highest priority to ensuring safety of people and to protect environment during process of destruction
- SPs to cooperate with others on destruction
- CWs buried or dumped at sea may be exempt
- Procedures for implementation set out in VA

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Article V : Chemical Weapons Production Facilities (CWPF)

- Sets out general obligations of States Parties with regard to destruction of chemical weapons production facilities
- SPs to cease all activities at CWPFs at EIF, except activity required for closure
- Also provides for access for verification; immediate cessation of chemical weapons production; prohibition on new or modified CWPF's; closure and destruction of CWPF's; reporting of destruction activities; destruction of CWPF's; safety and environmental standards for destruction; conversion of CWPF to destruction facilities or for purposes not prohibited under the Convention; bilateral and multilateral verification arrangements between or among SP's and costs for verification and destruction
- Procedures for implementation set out in VA

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Article VI : Activities not Prohibited

- Outlines declaration and on-site verification measures pertaining to scheduled chemicals
- Forms basis for industry verification measures
- Sets out activities that are not prohibited by the Convention and general obligation pertaining to verification of the production, processing and consumption of Schedule 1, 2, and 3 chemicals and of other chemical production facilities

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Article VII : National Implementation Measures

- Specifies legal and organizational undertakings required of States Parties in their implementation of the Convention
- SPs to;
  - ✓ adopt the necessary measures to implement their obligations, including enactment and enforcement of penal legislation
  - ✓ cooperate with the Technical Secretariat (TS) and other SPs
  - ✓ protect environment and personnel safety
  - ✓ establish a National Authority
  - ✓ inform TS of necessary measures
  - ✓ treat as confidential and afford special handling to information and data received in confidence from the Organization

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Article VIII : The Organization

- Establishment, functions and structure of the OPCW
- Composition, powers and functions of the;
  - Conference of States Parties
  - Executive Council
  - Technical Secretariat
- Privileges and immunities of the Organisation

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Article IX : Consultations, Cooperation and Fact-Finding

- Procedures for clarifying and resolving compliance concerns, including procedures for challenge inspections

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Article X : Assistance & Protection

- Provides for assistance and cooperation among States Parties in CW protection
- Procedures for;
  - ✓ requesting assistance
  - ✓ exchanging information and equipment
  - ✓ reporting annually on national programmes for protective purposes
  - ✓ informing the TS on what assistance SPs can provide to others
  - ✓ investigation of alleged use

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Article XI : Economic and Technological Development

- Promotion of economic and technological development and the prohibition of impediments to trade and development in the use of chemistry for peaceful purposes
- Encourages free trade in chemicals
- SPs to avoid hampering economic and technological development
- Does not override other treaty obligations or rights under international law such as the right to have export controls

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Article XII : Measures to Redress a Situation to Ensure Compliance, including Sanctions

- Provides for the application of collective measures in response to threats to the object and purpose of the Convention
- Measures to Redress a Situation;
  - Dealing with cases of non-compliance
  - Suspending a SP's rights and privileges
  - Collective measures (only recommendatory)
  - United Nations to be notified of serious breaches of the Convention

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Articles XIII - XIX

- Article XIII : Relation to other International Agreements
- Article XIV : Settlement of Disputes
- Article XV : Amendments
- Article XVI : Duration and Withdrawal
- Article XVII : Status of the Annexes
- Article XVIII : Signature
- Article XIX : Ratification

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Articles XX - XXIV

- Article XX : Accession
- Article XXI : Entry in Force
- Article XXII : Reservations
- Article XXIII : Depositary
- Article XXIV : Authentic Texts

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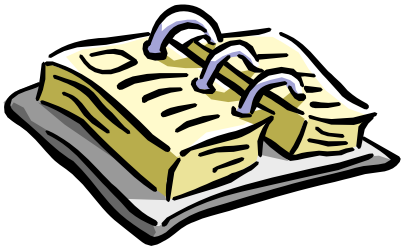
CWC ANNEXES



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CWC Annexes

- 3 Annexes
  - ✓Annex on Chemicals
  - ✓Verification Annex
  - ✓Confidentiality Annex

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CWC: Annexes

- Annex on Chemicals
  - specifies the 3 Schedules of Chemicals
- Verification Annex
  - most extensive
  - provides detailed procedures regarding verification and inspection
- Annex on confidentiality
  - guarantees the protection of sensitive information during inspections

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Schedules of Chemicals

- Schedule 1
  - ✓chemical weapons & high risk precursors with little or no industrial use
- Schedule 2
  - ✓chemical weapons & precursors to Schedule 1 chemicals and has some industrial use
- Schedule 3
  - ✓chemical weapons & precursors or toxic chemicals but used commonly in industry

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Verification Annex

- 11 parts
- Guidelines for the implementation of:
  - ✓ the declaration provisions of the CWC
  - ✓ the monitoring provisions of the CWC
  - ✓ the inspection provisions of the CWC

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Verification Annex - II

- Part I - Definitions
- Part II - General Rules of Verification
- Part III - General Provisions for Verification Measures
- Part IV (A)
  - Destruction of CW and Verification
- Part IV (B)
  - Old and Abandoned CW
- Part V
  - Destruction of CW production facilities

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Verification Annex - III

- Part VI
  - ✓ Activities not Prohibited (Schedule 1 Chemicals)
  - ✓ On-site Inspection
- Part VII
  - ✓ Activities not Prohibited (Schedule 2 Chemicals)
- Part VIII
  - ✓ Activities not Prohibited (Schedule 3 Chemicals)
  - ✓ On-site Inspection
- Part IX
  - ✓ Activities not Prohibited (Other Chemical Production Facilities)
- Part X - Challenge Inspections
- Part XI - Alleged Use Investigations

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Confidentiality Annex

- General Principles
- Employment and Conduct of Personnel
- Measures to protect Information
- *NB: Right of States Parties to protect sensitive information not related to chemical weapons*
- Procedures for breaches in Confidentiality

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The Organisation for the Prohibition of Chemical Weapons (OPCW)

Summary of Presentation

- Post-CWC signature events
- The Preparatory Commission (PrepCom)
- The OPCW

Post-CWC-signature events

- CWC signed in Paris on 13 Jan. 1993
  - ✓ *Considerable preparations required before EIF of the CWC*
- Signatory states approved Paris Resolution
  - ✓ *UN SG mandated to convene the Preparatory Commission*
  - ✓ *Preparatory Commission held on 8 Feb. 1993 in The Hague, The Netherlands*

Preparatory Commission: *Why the Netherlands?*

In a nutshell

- Uninterrupted, continuous interest of the Netherlands in disarmament issues and negotiations
- Practical advantages of The Hague highlighted by the Dutch delegation
- Financial incentives
- Successful bidding against Geneva and Vienna

Preparatory Commission: *1993 - 1997*

- PrepCom immediately established the Provisional Technical Secretariat (PTS) to assist its work and to prepare for eventual Secretariat of the OPCW
- PrepCom stayed in existence until shortly after the EIF of the CWC on 29 April 1997

Preparatory Commission: *Mandate - I*

- To prepare the 1st Session of the Conference of the States Parties after EIF
- To make all necessary practical preparations for the implementation of the CWC
  - ✓ Developing the operational procedures for the CW's verification regime

Preparatory Commission: *Mandate - II*

- To make all necessary practical preparations for the implementation of the CWC
  - ✓ Drafting the program and budget of the OPCW
  - ✓ Establishing the infrastructure for the OPCW Technical Secretariat

Preparatory Commission: *Bodies*

- Primarily 2 working groups
  - ✓ One for administrative and organisational matters
  - ✓ One for verification and technical cooperation and assistance matters
- Others for specific issues, *e.g.* relations with the Host Country, preparations for the 1st CSP

Preparatory Commission: *Achievements*

- Solutions to several substantive verification issues
- Setting up of the OPCW laboratory and equipment store
- Development of a general training scheme for inspectors and the recruitment of inspector trainees
- Arrangements for the new OPCW HQ building

Preparatory Commission: *Achievements – II*

- Development of draft documents, *e.g.*
  - ✓ HQ agreement
  - ✓ OPCW Staff and Financial Regulations
  - ✓ OPCW Confidentiality Policy
  - ✓ OPCW Media and Public Affairs Policy
- Orderly transfer of its property, functions, and recommendations to the OPCW

Preparatory Commission: *Achievements – III*

- 6-23 May 1997: first session of the Conference of States Parties
  - ✓ The "unresolved issues of the PrepCom were handed over to the CSP
- 13 May 1997: the assets of the PrepCom were signed over to the OPCW Director-General

✓ **The OPCW was born**

OPCW Raison-d'être: *Article VIII of the CWC*

- To achieve the object and purpose of the CWC
- To ensure the implementation of the provisions of the CWC
- To provide a forum for consultation and cooperation among the States Parties

OPCW Organs

- Conference of the States Parties (CSP)
  - ✓ Policy making organ of the OPCW (Art. VIII.B)
- Executive Council (EC)
  - ✓ Executive organ of the OPCW (Art. VIII.C)
- Technical Secretariat (TS)
  - ✓ Assists the CSP, the EC, and the SPs (Art. VIII.D)

Conference of the States Parties

Conference of the States Parties

Conference of the States Parties

- Represents all Member States
- Considers and approves in its first session any documents developed by the PrepCom
- Established at its first session the voluntary fund for assistance in accordance with Art. X

Conference of the States Parties - II

- Establishes such subsidiary organs as it finds necessary for the exercise of its functions
- Decides on the scale of financial contributions to be paid by States Parties
- Meets annually
- Holds Review Conferences every 5 years

Conference of the States Parties - III

- Convenes special sessions
- Adopts Programme and Budget of the OPCW
- Appoints the Director-General
- Elects members of the Executive Council
- Takes measures to ensure compliance

Executive Council

Executive Council

- Guides the OPCW's operations
- Responsible to the CSP
- Meets at least 4-5 times per year
- Concludes or approves agreements
- Considers and Submits the draft Programme and Budget to the CSP
- Makes arrangements for the CSP sessions
- Considers doubts concerning compliance

Executive Council: *Composition*

- 41 members
  - Africa - 9 members
  - Asia - 9 members
  - Eastern Europe - 5 members
  - Latin America and Caribbean- 7 members
  - Western Europe and Others - 10 members
  - 1 seat on rotation between Asia and Latin America

Director-General

- Interface between the Technical Secretariat and the CSP and the EC
- Responsible to the CSP and the EC on behalf of the Technical Secretariat and the Scientific Advisory Board
- Appoints the members of the SAB
- Is appointed by the CSP for a 4-year term with the possibility of one renewal only

Technical Secretariat

- Assists the CSP and the EC
- Implements the CWC
- Carries out verification measures
- Prepares the draft Programme and Budget and submits it to the EC

Technical Secretariat - II

- Provides administrative and technical support to CSP, EC and subsidiary organs
- Negotiates agreements
- Administers the voluntary fund for assistance

Technical Secretariat: *Composition*

- Staff
  - ✓ <~480> including <140> inspectors
  - ✓ Citizens of States Parties
  - ✓ <70 nationalities
- Official languages: English, French, Spanish, Russian, Arabic, Chinese

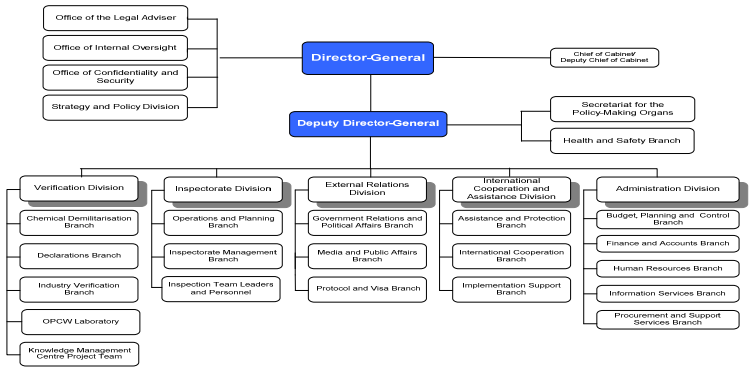
Technical Secretariat: *Structure*

- 5 Divisions
  - ✓ Administration (ADM)
  - ✓ External Relations (ERD)
  - ✓ International Cooperation and Assistance (ICA)
  - ✓ Verification (VER)
  - ✓ Inspectorate (INS)

Technical Secretariat: *Structure - II*

- 4 Offices
  - ✓ Office of the Legal Advisor (LAO)
  - ✓ Office of Internal Oversight (OIO)
  - ✓ Office of Strategy and Policy (OSP)
  - ✓ Office of Confidentiality and Security (OCS)
- Secretariat for the Policy Making Organs (PMO)

Technical Secretariat: *Structure - III*



Subsidiary Bodies:
Scientific Advisory Board

- Established by CSP in accordance with CWC
- Is composed of 25 independent experts
- Keeps abreast of scientific/technological developments
- Reports to the Director-General
- Provides expert advice

Subsidiary Bodies:
Confidentiality Commission

- Is established by the CSP in accordance with CWC
- Settles any confidentiality disputes between States Parties

Subsidiary Bodies:
Advisory Body on Administrative and Financial Issues

- Established by the EC as authorised by the Financial Rules of the OPCW
- Advises the Secretariat and the States Parties on programme and budget issues
- Reviews draft budgets

Subsidiary Bodies:
Advisory Board on Education and Outreach

- Established by CSP in accordance with CWC
- Is composed of 15 independent experts
- To provide expert advice on matters related to Education and Outreach
- Reports to the Director-General

Budget

- Two chapters in the budget
  - ✓ Administrative and other costs
  - ✓ Verification costs

Budget - II

- The budget provided by all States Parties through
  - ✓ Annual contributions according to the UN Assessment Scale
  - ✓ Reimbursement of verification costs

Thank you

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Chemicals to be monitored under CWC

Declarations Branch/Verification Division

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Objectives

- By the end of this session participants should:
  - Be aware of the key CWC definitions of a chemical weapon and a toxic chemical
  - Understand the concept of the dual use nature of chemicals
  - Be familiar with the 3 Schedules of chemicals monitored by the CWC
  - Be familiar with some of the uses of the most common scheduled chemicals

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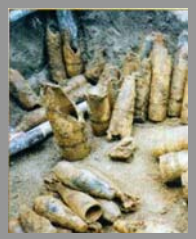
What is a chemical weapon?



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Chemical Weapon

(Article II, Para 1)

Means the following, together or separately:

a) Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention (*)

b) Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals specified in paragraph a)

c) Any equipment specifically designed for use directly in connection with the employment of munitions and devices specified in paragraph b)

(*) General purpose criterion defined by purpose and not by properties

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Toxic Chemicals

(Article II, Para 2)

TOXIC CHEMICAL means any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or of the method of production, and regardless of whether they are produced in facilities , in munitions or elsewhere.

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Article VI of CWC

- Establishes the right of a State Party to manufacture and use toxic chemicals and their precursors for activities not prohibited under the Convention
- Creates legal bases for Declaration, Verification and Transfer regimes related to such chemicals, facilities and activities.

Verification Annex Parts VI to IX

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Activities not Prohibited under the Convention

(Article II, P9)

- Industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes
- Protective purposes
- Military purposes not connected with the use of chemical weapons
- Law enforcement including riot control purposes

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Dual Use Nature of Chemicals

- Many chemicals covered by CWC can be used for legitimate peaceful purposes as well as chemical weapons (CW) purposes.
- Cannot just define a list of "banned" chemicals.
  - Need to define chemicals and activities to be monitored
- The CWC does not just cover toxic chemicals but also many non-toxic precursors that can be used to make toxic chemicals for CW purposes.

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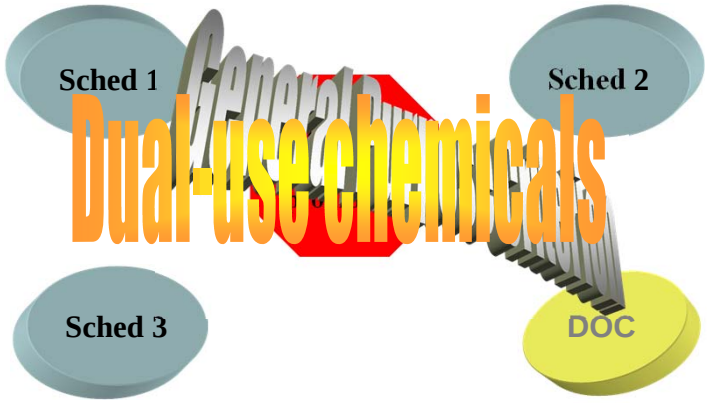
CHEMICALS ROUTINELY MONITORED UNDER CWC



85

Guidelines on Schedules

- **Schedule 1:**
  - Developed / used as CW
  - Poses a ***High Risk*** to object & purpose of CWC
    - Structure / Toxicity closely related to CW
    - Precursor in final stage of CW production
  - ***Little or no use for purposes not prohibited by CWC***
- **Schedule 2:**
  - Poses a ***Significant Risk*** to object & purpose of CWC
    - Could be used as CW
    - Precursor to Schedule 1 chemicals
  - ***Not produced in large commercial quantities for purposes not prohibited by CWC***

Guidelines on Schedules

- **Schedule 3:**
  - Poses a ***Risk*** to object & purpose of CWC
  - Used / could be used as CW
  - Precursor for Schedule 1 or 2 chemicals
  - ***May be produced in large commercial quantities for purposes not prohibited by CWC***

Discrete Organic Chemicals
(Category, not a Schedule)

- All carbon containing compounds with some exceptions
- **Subcategory of DOCs containing the elements P, S or F (PSF chemicals)**
- Vast range of chemicals – interest in capabilities of plants producing them rather than chemicals themselves
- Hence no import/export provisions only production monitored.
- Will not discuss this category further in this course

Schedule 1

Schedule 1 Chemicals

- 12 families or individual chemicals
  - Theoretically over 2 million individual chemicals
  - approx 1300 individual chemicals declared to OPCW
  - Produced and traded in very small amounts (often grams or less)
- Schedule 1A: toxic chemicals
  - Includes well known chemical weapons agents such as
    - Sarin, Soman, VX
    - Sulfur and nitrogen mustards
    - Toxins -Ricin and Saxitoxin
- Schedule 1B - key precursors
  - e.g. methylphosphonic difluoride (DF) or chlorosarin

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Uses of Schedule 1 Chemicals

- No large scale uses
- Ricin
  - Anticancer research
- Saxitoxin
  - Diagnostic kits for Paralytic Shellfish Poisoning
- Nitrogen Mustard
  - Small quantities for skin cancer treatment
- Sarin – Sulfur Mustard – VX
  - Small quantities used for developing protection and detection methods

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Schedule 2 Chemicals

Schedule 2 Chemicals

- 14 families or individual chemicals
  - Theoretically millions of individual chemicals
  - 477 individual chemicals declared to OPCW
- Most Schedule 2 chemicals only ever produced on research scales but several Schedule 2 chemicals produced in thousands of tonnes per year.
- ~32 regularly traded in moderate volume

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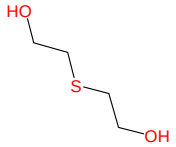
Examples of Uses of a Specific Schedule 2 Chemical



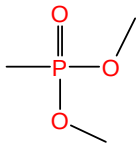
Thiodiglycol

- Carrier for Dyes in Textile & Printing Industry
- Co-solvent in Water-based Pen Inks
- Manufacture of Some Types of Plastics, Resins and Adhesives
- Lubricant Additive

BUT 1 STEP FROM MUSTARD GAS

94

Examples of Uses of a Specific Schedule 2 Chemical



Dimethyl methylphosphonate (DMMP)

- Used as flame retardant for foamed polyurethane plastics and as flame retarding impregnant e.g. for textiles
- Several other chemicals from Schedule 2B04 used in similar applications (e.g. diethyl ethylphosphonate)

BUT KEY PRECURSORS FOR THE NERVE AGENTS

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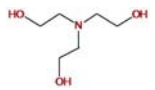
Schedule 3

Schedule 3 Chemicals

- 17 individual chemicals
- Most produced on relatively large scale, some in millions of tonnes per year (hydrogen cyanide and phosgene).
- 15 regularly traded - some very large volume
  - Other 2 not generally traded but produced and used onsite (hydrogen cyanide and cyanogen chloride)

97

Examples of Uses of a Specific Schedule 3 Chemical



Triethanolamine (102-71-6)

- Desulfurisation in Petroleum Refining
- Intermediate in manufacture of Surfactants, Textile Specialties, Waxes, Polishes, Herbicides, Petroleum Emulsifiers, Cement Additives, Cutting Oils
- Making Emulsions with Mineral & Vegetable Oils, Paraffin & Waxes
- Solvent for Dyes

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Examples of Uses of a Specific Schedule 3 Chemical

Triethanolamine

Manufacture of Synthetic Resins

- Increasing Penetration of Organic Liquids into Wood & Paper
- Production of Lubricants for the Textile Industry
- PH balancer in cosmetics

BUT 1 STEP FROM NITROGEN MUSTARD

99

Most Traded Schedule Chemicals with specific HS code

- Specific 6-digit HS code has been assigned to 33 most traded CWC Scheduled chemicals by the Customs Co-operation Council of the WCO
  http://www.wcoomd.org/en/media/newsroom/2014/july/~/media/WCO/Public/Global/PDF/Media/Newsroom/Press/2014/HS%202017%20RECOMMENDED%20AMENDMENTS.ashx

The following slides show the list of the 33 most traded Scheduled chemicals with specific HS code assigned in HS 2017

No	Sch	CAS	Chemical name	HS 2012	HS 2017
1	2B04	170836-68-7	Mixtures and preparations consisting mainly of (5-ethyl-2-methyl-2- oxido-1,3,2-dioxaphosphinan-5-yl)methyl methyl methylphosphonate and bis[(5-ethyl-2-methyl-2-oxido-1,3,2- dioxaphosphinan-5-yl)methyl] methylphosphonate	3824.90	3824.91
2	2B04	18755-43-6	Dimethyl propylphosphonate	2931.90	2931.32
3	2B04	41203-81-0	(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl) methyl methyl methylphosphonate	2931.90	2931.36
4	2B04	42595-45-9	Bis[(5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate	2931.90	2931.37
5	2B04	68957-94-8	2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	2931.90	2931.35
6	2B04	756-79-6	Dimethyl methylphosphonate	2931.90	2931.31
7	2B04	78-38-6	Diethyl ethylphosphonate	2931.90	2931.33
8	2B04	84402-58-4	Mixture: 50% Methylphosphonic acid / 50% (Aminoiminomethyl)urea	2931.90	2931.38
9	2B04	84962-98-1	Sodium 3-(trihydroxysilyl)propyl methylphosphonate	2931.90	2931.34
10	2B08	76-93-7	2,2-Diphenyl-2-hydroxyacetic acid (benzilic acid)".	2918.19	2918.17
11	2B10	4261-68-1	2-(N,N-Diisopropylamino)ethylchloride hydrochloride	2921.19	2921.14
12	2B10	4584-46-7	2-(N,N-Dimethylamino)ethylchloride hydrochloride	2921.19	2921.12
13	2B10	869-24-9	2-(N,N-Diethylamino)ethylchloride hydrochloride	2921.19	2921.13
14	2B11	96-80-0	2-(N,N-Diisopropylamino)ethanol	2922.19	2922.18
15	2B12	100-38-9	2-(N,N-Diethylamino)ethanethiol	2930.90	2930.60
16	2B13	111-48-8	Bis(2-hydroxyethyl)sulfide (Thiodiglycol (INN))	2930.90	2930.70

No	Sched	CAS	Chemical name	HS 2012	HS 2017
17	3A01	75-44-5	Carbonyl dichloride	2812.10	2812.11
18	3A02	506-77-4	Cyanogen chloride	2853.00	2853.10
19	3A03	74-90-8	Hydrogen cyanide	2811.19	2811.12
20	3A04	76-06-2	Trichloronitromethane	2904.90	2904.91
21	3B05	10025-87-3	Phosphorous oxychloride	2812.10	2812.12
22	3B06	7719-12-2	Phosphorous trichloride	2812.10	2812.13
23	3B07	10026-13-8	Phosphorous pentachloride	2812.10	2812.14
24	3B08	121-45-9	Trimethyl phosphite	2920.90	2920.23
25	3B09	122-52-1	Triethyl phosphite	2920.90	2920.24
26	3B10	868-85-9	Dimethyl phosphite	2920.90	2920.21
27	3B11	762-04-9	Diethyl phosphite	2920.90	2920.22
28	3B12	10025-67-9	Sulfur monochloride	2812.10	2812.15
29	3B13	10545-99-0	Sulfur dichloride	2812.10	2812.16
30	3B14	7719-09-7	Thionyl chloride	2812.10	2812.17
31	3B15	139-87-7	Ethyldiethanolamine	2922.19	2922.17*
32	3B16	105-59-9	Methyldiethanolamine	2922.19	2922.17*
33	3B17	102-71-6	Triethanolamine	2922.13	2922.15

* HS code 2922.17 Provided for Methyldiethanolamine and Ethyldiethanolamine

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Most Traded Scheduled Chemicals not yet assigned specific 6-digit codes in HS

(INTERNATIONAL CONVENTION ON THE HARMONIZED COMMODITY DESCRIPTION AND CODING SYSTEM)

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16 Most Traded CWC scheduled Chemicals to be included in HS 2022

N	CAS	Chemical Name	Schedule	HS 2012 / WCO Recommandation code
1	108-02-1	2-(N,N-Dimethylamino)ethanethiol	2B12	2930.90
2	129788-86-9	Product from the reaction of Methylphosphonic acid and 1,3,5-Triazine-2,4,6-triamine	2B04	2931.90
3	1619-34-7	3-Quinuclidinol	2B09	2933.39
4	25333-42-0	R-(-)-3-Quinuclidinol	2B09	2933.39
5	3001-98-7	3,9-Dimethyl-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane 3,9-dioxide	2B04	2931.90
6	4708-04-7	Propylphosphonic dichloride	2B04	2931.90
7	676-97-1	Methylphosphonic dichloride	2B04	2931.90
8	7526-26-3	Diphenyl methylphosphonate	2B04	2931.90
9	849-29-6	O-(3-chloropropyl) O-[4-nitro-3-(trifluoromethyl)phenyl] methylphosphonothionate	2B04	2930.90
10	993-13-5	Methylphosphonic acid	2B04	2931.90
11	99580-93-5	Product from the reaction of methylphosphonic acid and 1,2-ethanediamine	2B04	2931.90
12	294675-51-7	Phosphonic acid, methyl-, polyglycol ester (Exolit OP 560 TP)	2B04	
13	663176-00-9	Phosphonic acid, methyl-, polyglycol ester (Exolit OP 560)	2B04	
14	363626-50-0	Bis(polyoxyethylene) methylphosphonate	2B04	3907.20
15	63747-58-0	Poly(1,3-phenylene methyl phosphonate)	2B04	3911.90
16	70715-06-9	Dimethylmethylphosphonate, polymer with oxirane and phosphorus oxide	2B04	3824.90

Additional Commercial Uses of schedule 2 & schedule 3 Chemicals

Examples of Sch 2 Commercial Uses

Amiton	Was a commercial pesticide withdrawn due to toxicity
PFIB	Waste Constituent
BZ	Pharmaceuticals, Medical Research
Schedule 2B4 Family	Flame retardants, Anti-Foam agents, Gasoline/Oil Additives Viscosity depressants, Textiles, Drugs,
Dialkylphosphoramidic Dihalides Family	None
Dialkyl N,N-dialkyl-Phosphoramidates Family	Polyamide Fibers, Fireproofing agents

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Examples of Sch 2 Commercial Uses

Arsenic Trichloride	Purifying Arsenic, Semiconductor manuf. Catalyst in CFC Manuf. Organoarsines/Chloroarsines
Diphenyl-2-hydroxyacetic acid	Polishing stainless steel, Catalyst for Urethanes, Hydantoin manufacture Antichigger Clothing Treatment
Quinuclidin-3-ol	Organic Ammonium Bromides Drug Research Laboratory Reagent/Catalyst
N,N-Dialkylaminoethane-2-ols Family	Manufacturing organic thiols
N,N-Dialkylaminoethane-2-thiols Family	Drugs, Food Flavourings, Antibacterials

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Examples of Sch 2 Commercial Uses

N,N-Dialkylaminoethyl-2-chlorides Family	Drugs, Agrochemicals, Dyes, Calcium Filler for Paper/Plastics
Thiodiglycol	Wetting agent in textile dyeing, Dye solvent, Antioxidant, Anticorrosives, Inks, Epoxy resins, Fabrics
Pinacolyl alcohol	Organic synthesis

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Examples of Sch 3 Commercial Uses

Phosgene	Polyurethanes, Polycarbonates, Drugs, Perfumes, Fumigants, Dyes, Chlorinating agent
Cyanogen chloride	Herbicides, Dyes, Vitamins, Rubber vulcanization, Laboratory reagent
Hydrogen cyanide	Adiponitrile, Acetone cyanohydrin, Drugs, Sodium Cyanide, Cyanuric chloride, Methionine, Plastics, Pesticides, Bleaches, Sanitizers, Fumigants
Chloropicrin	Fumigants, Rodenticides, Antioxidants

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Examples of Sch 3 Commercial Uses

Phosphorus oxychloride	Flame retardants, Plasticizers, Plastics, Elastomers, Surfactants, Pesticides, Lube Oils, Greases, Catalyst
Phosphorus trichloride	
Phosphorus pentachloride	Catalyst, Chlorinating agent, Polymers, Flame retardants, Surfactants, batteries
Trimethyl phosphite	Insecticides, Adhesives, Polyolefins, Flame retardants, Other phosphites
Triethyl phosphite	Pesticides, Plastic additives, Antioxidants, Flame retardants, Corrosion inhibitors, Viscosity depressant
Dimethyl phosphite	Corrosion Inhibitor, Antioxidant, Stabilizer Adhesives, Pesticides, Antifungals, Fire retardants

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Examples of Sch 3 Commercial Uses

Diethyl phosphite	Catalyst, Antifungals, Insecticides, Lube oil additives, Color preventative
Sulfur monochloride	Vulcanizing rubber, Lube oil additives, Antioxidants, Crosslinking, Solvent, Catalyst
Sulfur dichloride	Chlorinating agent, Antibiotics, Pesticide, Lube oil additives, Antioxidants, Funguicide
Thionyl chloride	Acid chlorides, Herbicides, Insecticides, Fumigants, Thermoplastics, Surfactants, Drugs, Vitamins, Dyes, Catalyst, Batteries, Chlorinating agent, Photography

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Examples of Sch 3 Commercial Uses

Ethyldiethanolamine	Surfactants (cosmetics, detergents, cleaners) Gas Purification Electroplating Lubricants Derusting Pickling steel Coagulants Softening agents Antistatic agents Synthetic fibers Flame retardants Urethanes Pesticides Propellants
Methyldiethanolamine	
Triethanolamine	

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Key Points (1)

- Chemicals which can be used as CW or to make CW often have other important peaceful uses (e.g. industrial, medical, agricultural)
- CWC does not ban any chemical but requires routine monitoring and control of production, use and trade in toxic chemicals and precursors set out in three lists of individual chemicals and chemical families:
  - Schedule 1 – high risk chemicals with little peaceful use, e.g Sarin, ricin or mustard gas
  - Schedule 2 – significant risk and not produced in large commercial quantities for peaceful purposes, e.g. thiodiglycol used for textile dyeing or DMMP as a flame retardant

Key Points (2)

- Schedule 3 – pose a risk but produced (and traded) in large commercial quantities for peaceful purposes, e.g. phosgene used for plastics or triethanolamine for cosmetics/toiletries and cement
- Schedule 3 chemicals in particularly are widely traded

TRAINING COURSE FOR CUSTOMS AUTHORITIES OF THE GCC COUNTRIES AND OTHER ARABIC STATES PARTIES TO THE CWC ON TECHNICAL ASPECTS OF THE TRANSFERS REGIME OF THE CHEMICAL WEAPONS CONVENTION

DOHA, QATAR 20-21 MARCH 2016

CWC Transfer Provisions

Branch/Verification Division

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Objectives

- By the end of this session participants would:
  - Be acquainted with CWC notification and reporting requirements for imports and exports of scheduled chemicals
  - Be aware of restrictions on trade in scheduled chemicals with States not Party to CWC
  - Be acquainted with some statistics of trade in scheduled chemicals Worldwide and in GCC countries

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Article I Prohibitions

1. Each State Party to this Convention undertakes never under any circumstances:
   (a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;
   (b) To use chemical weapons;
   (c) To engage in any military preparations to use chemical weapons;
   (d) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention. …

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General Schedule 1 Provisions

- Shall not produce, acquire, retain, transfer or use S1 chemicals unless:
  - for research, medical, pharmaceutical or protective purposes only
  - types and quantities are strictly limited to those justified for that purposes
  - max aggregate of 1 tonne of all S1 chemicals stored at any time in State Party or acquired in any 1 year

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S1 Transfer Provisions

- A state party may transfer schedule 1 chemicals outside its territory only to another state party and only for research, medical, pharmaceutical or protective purposes
- Schedule 1 chemicals transferred shall not be retransferred to a third state

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S1 Transfer Provisions (cont.)

- Both States Parties shall notify Technical Secretariat 30 days before transfer
  - exemption for 5mg or less of Saxitoxin for medical/diagnostic purposes (test kits for Paralytic Shellfish Poisoning) – notification at time of transfer
- Each state party shall make a detailed annual declaration regarding transfers during the previous year.
  - For each transfer: details of chemical, quantities, recipient and purpose (end use).

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Schedule 2 Aggregate National Data

- Annual declaration of AND for the previous calendar year on the quantities produced, processed, consumed, imported and exported of each Schedule 2 chemical
- plus quantitative specification of import and export for each country involved

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Schedule 3 Aggregate National Data

- Annual declaration of AND for the previous calendar year on the quantities produced, imported and exported of each Schedule 3 chemical
- plus quantitative specification of import and export for each country involved.

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Guidelines for Aggregate National Data (AND) Declarations

C-7/DEC.14 dated 10 October 2002

- AND shall include activity by natural and legal persons transferring a declarable chemical (includes traders – not limited to declarable plant sites)
- A Sch 2 and Sch 3 chemical shall be included if the total AND for the year for that activity (e.g. import or export) is more than the threshold specified in Verification Annex for that chemical
  - 1 kg for Schedule 2A* (BZ)
  - 100 kg for Schedule2A
  - 1 tonne for Schedule2B
  - 30 tonnes for Schedule 3
- E.g. if total imports of a S2 or S3 chemical in a year for the country as a whole (not individual shipments or imports by a single company) goes above threshold must declare

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Low Concentration Limits for Declarations of Schedule 2/3

- Chemicals mixtures containing 30% or less of a Schedule 2B or 3 chemical are not subject to any declarations obligations (C-V/DEC.19, May 2000)
- For import/export, chemicals mixtures containing 1% or less of Schedule 2A or 2A* are not subject to any declarations obligations (C-14/DEC.4, December 2009)

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Transfers to States Not Party

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States Not Party to CWC (as at 31 December 2015)

- **Asia**
  - Israel
  - Democratic Peoples Republic of Korea
- **Africa**
  - Egypt
  - South Sudan

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Summary of Trade Restrictions with States Not Party

- Schedule 1
  - Total ban on transfer of any quantity to States Not Party, NO exceptions
- Schedule 2
  - Ban on transfers of any quantity to or from States Not Party with some exceptions
- Schedule 3
  - No ban currently but End Use Certificate required for transfers to States Not Party with some exceptions

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S2 Transfers to States Not Party

(C-V/DEC.16, May 2000)

- Schedule 2 chemicals shall only be transferred to or received from States Parties (as of 29 April 2000
- Transfers of Schedule 2 chemicals to or from States Not Party are prohibited except for
  - products containing one percent or less of a Schedule 2A or 2A* chemical;
  - products containing 10 percent or less of a Schedule 2B chemical
  - products identified as consumer goods packaged for retail sale for personal use or packaged for individual use

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S3 Transfers to States not Party

- End-Use Certificate (EUC) required for transfers to States not Party from "competent government authority" in the State not Party (not importer)
- EUC should state for the transferred chemical:
  - That they will only be used for purposes not prohibited under the Convention
  - That they will not be retransferred
  - Their types and quantities
  - Their end-use(s)
  - The name(s) and address(es) of the end-user(s)

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S3 Transfers to States not Party

NO EUC required for (C-VI/DEC.10, May 2001):

- Products containing 30 % or less of a Schedule 3 chemical
- Products identified as consumer goods packaged for retail sale for personal use, or packaged for individual use

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SOME STATISTICS

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Worldwide Trade in CWC Scheduled Chemicals

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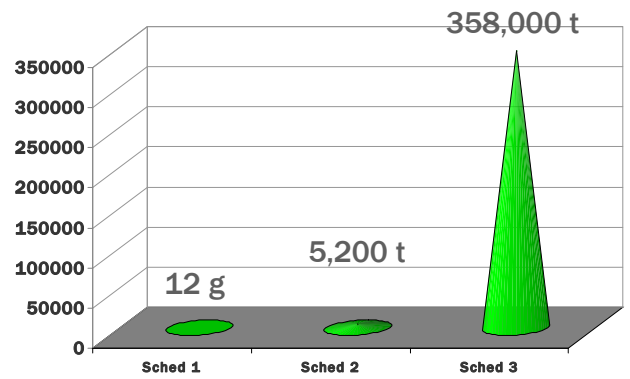
Quantities Imported/Exported in 2014



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Most Traded Schedule 2 Chemicals

	Main Uses (Commercial)	2012	2013	2014
Dimethyl methylphosphonate (CAS: 756-79-6)	Flame retardant	1130 t	1600 t	1290 t
Thiodiglycol (CAS: 111-48-8)	Textile dyeing, inks, resins	1010 t	910 t	871 t
2-(N,N-Diethylamino) ethylchloride hydrochloride (CAS: 869-24-9)	Pharmaceuticals	760 t	640 t	620 t
Mixture of CAS RN 41203-81-0 and CAS RN 42595-45-9 (CAS: 170836-68-7)	Flame retardant	460 t	620 t	711 t
Diethyl ethylphosphonate (CAS: 78-38-6)	Flame retardant	770 t	280 t	306 t
TOTAL (all S2)		5200 t	5200 t	5200 t

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Most Traded Schedule 3 Chemicals

	Main Uses (Commercial)	2012	2013	2014
Triethanolamine (CAS: 102-71-6)	Cement/concrete, cosmetics, surfactants (soaps and waxes), etc	205 000 t	215 000 t	209 330 t
Methyldiethanolamine (CAS: 105-59-9)	Natural gas treatment	64 000 t	58 000 t	61 550 t
Phosphorous trichloride (CAS: 7719-12-2)	Chlorinating agent and precursor for many P containing chemicals	38 000 t	31 000 t	40 880t
Thionyl chloride (CAS: 7719-09-7)	Chlorinating agent	17 000 t	15 000 t	16490t
Phosphorous oxychloride (CAS: 10025-87-3)	Precursor for many P containing chemicals	9 000 t	10 000 t	7530
TOTAL (all S3)		345 000 t	340 500 t	358 000t

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Trade in Scheduled Chemicals in GCC

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Trade in Scheduled Chemicals in GCC in 2014

- All States Parties in GCC reported to be involved in S2/S3 trade in 2014
- Trade in Schedule 1 chemicals - no transfer took place in 2014
- Trade in Schedule 2 chemicals - very small amount traded
- Trade in Schedule 3 chemicals Appr.- 32, 000 tonnes (9 % of world trade of S3 chemicals (358 000 t)

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Trade in Schedule Chemicals in GCC (in tonnes)

Years	S2 chemicals	S3 chemicals
2014	0	32,000
2013	0	49,600
2012	0	24,300

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Most Traded S3 Chemicals in GCC in 2014

Sched	CAS	Chemical name	Quantity (in tonnes)
3B17	102-71-6	Triethanolamine	23,200
3B16	105-59-9	Methyldiethanolamine	8, 000
3B06	7719-12-2	Phosphorus trichloride	800

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Introduction to
Customs Control of Chemical
Shipments

Range of chemicals of interest to Customs

- Narcotics and their precursors
- Explosives and their precursors
- Propellants and their constituent chemicals
- Miscellaneous chemicals used in producing WMD
- Chemical weapons (CW) agents and their precursors
- CWC focuses on “Scheduled chemicals”

Precursors are chemical ingredients from which other chemicals are produced, or “synthesized”

Identifying Shipments of Chemicals

- To control transfers and collect data, Customs needs to identify shipments of chemicals
- Customs Officers do not need chemical expertise to take positive steps toward identifying chemicals
- Documentation, labels, and markings can provide valuable information while reducing contact with hazardous chemicals
- Coupled with technical reachback – and possibly sampling and analysis – this information can aid in the identification of chemicals

Strategies for Identifying Chemicals

- Identify by physical appearance
  - Mainly colorless or yellow liquids or white powders, just like normal chemicals = **not reliable**
- Identify by declarations, labels, and documents
  - Declarations, labels, markings, and certain documents can contain identifying information = **useful, if correct**
- Identify by chemical analysis
  - More definitive, but requires proper sampling and analysis = **time, money, equipment, and expertise**

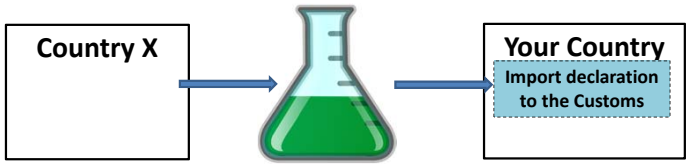
Front-line officers focus on using **declarations, documents, labels, and markings** for chemical identification

Summary

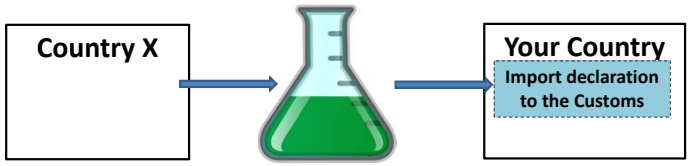
- Chemicals often difficult for customs to identify
  - Many different forms of packaging
  - Many different trade and common names for the same chemical
  - Sampling and analysis too costly to use routinely
  - Safety issues
- Declarations, documents, labels, and markings provided with the chemical have a number of useful chemical identifiers that customs can use to check the identity of chemicals
  - We will consider the use of these identifiers in detail in subsequent presentations

Identification of CWC related chemicals using the Harmonized System (HS)

(Q) When an importation of a certain chemical is declared, how Customs can identify whether or not the chemical is controlled by the CWC ?

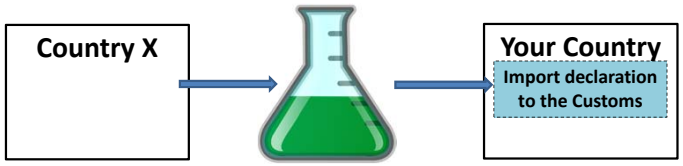


(Q) When an importation of a certain chemical is declared, how Customs can identify whether or not the chemical is controlled by the CWC ?



(A) The chemical should be classified correctly in the HS

(Q) Why chemicals should be classified correctly in the HS ?



(Q) Why chemicals should be classified correctly in the HS ?

(A) The HS is the most valuable tool for identifying and screening whether chemicals under declaration are to be controlled by the CWC

(Q) Why chemicals should be classified correctly in the HS ?

(A) The HS is the most valuable tool for identifying and screening whether chemicals under declaration are to be controlled by the CWC

HS headings and subheadings specify certain categories of commodities.
Customs can apply many kinds of trade measures (e.g., duty rate, control or prohibition of trade, etc.) to each category of commodities specified by the HS.

(Example)

If a chemical is classified in :

HS Subheading

2811.19 (as an inorganic acid) → ? Hydrogen cyanide ? (? CWC Chemical ?)

(Narrow down the possibilities)

2939.19 (as a cocaine) → !! Narcotic Drug !!

(Identify drugs)

(Example)

Correlation between the HS and International Conventions published by the WCO for facilitating the monitoring and control of certain products covered by other international conventions

Code SH HS Code	DECHETS A-I WASTE A-I	DECHETS A-II WASTE A-II	DECHETS B-I WASTE B-I	DECHETS B-II WASTE B-II	OZONE	CITES	STUPEFIANTS NARCOTICS	CAC CWC	AERONEFS CIVILS CIVIL AIRCRAFT	DCI INN	ROTTERDAM/ STOCKHOLM
2903.82											X
2903.89											EX(S)
2903.92										EX	X
2903.99										EX	EX(S)
2904.10										EX	
2904.90								EX		EX	EX(S)
2905.19								EX			
2905.29										EX	

http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools/interconnection-table.aspx

WCO Recommendations

Insertion in National Statistical Nomenclature of Specific Subheadings to Facilitate the Control and Monitoring of International Trade in CWC Substances

- **Recommendation (2009)**
  - Limited to the most relevant and traded 34 individual chemicals
- **Recommendation (1996)**
  - 73 chemicals and groups of chemicals for more than 20,000 individual chemicals

http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools/hs_recommendations.aspx

(Example) WCO Recommendations (2009)

Insertion in National Statistical Nomenclature :

Subheading 2811.19

--- Hydrogen cyanide (<= CWC Chemical)

2012HS

28.11 Other inorganic acids and other inorganic oxygen compounds of non-metals.

- Other inorganic acids :

2811.11 -- Hydrogen fluoride

2811.19 -- Other

National Statistical Nomenclature

28.11 Other inorganic acids and other inorganic oxygen compounds of non-metals.

- Other inorganic acids :

2811.11 -- Hydrogen fluoride

-- Other :

2811.191--- Hydrogen cyanide

2811.199--- Other

(Example)

If a chemical is classified in :

HS Subheading

2811.19 (as an inorganic acid) ➡ ? Hydrogen cyanide ? (?Chemical Weapon?)

National Statistical Nomenclature

2811.191 (as a Hydrogen Cyanide) ➡ ! Chemical Weapon !

Among HS members who accepted this Recommendation Only (72 members as of Sep. 2015)

2017 HS Amendment

New HS subheadings for the 33 most traded CWC scheduled chemicals are to be inserted in the 2017 HS Nomenclature (as requested by the OPCW)

2017 HS Amendments Enhance the Effectiveness of the Control and Monitoring of International Trade in CWC Substances on an uniform basis among all HS members (153 members, Sep. 2015)

2012HS	2017HS
28.11 Other inorganic acids and other inorganic oxygen compounds of non-metals.	28.11 Other inorganic acids and other inorganic oxygen compounds of non-metals.
- Other inorganic acids :	- Other inorganic acids :
2811.11 -- Hydrogen fluoride	2811.11 -- Hydrogen fluoride
2811.19 -- Other →	2811.12 -- Hydrogen cyanide
	2811.19 -- Other

2017 HS Amendment

New HS subheadings for the 33 most traded CWC scheduled chemicals are to be inserted in the 2017 HS Nomenclature (as requested by the OPCW)

2017 HS Amendments Enhance the Effectiveness of the Control and Monitoring of International Trade in CWC Substances on an uniform basis among all HS members (153 members, Sep. 2015)

Practical Cooperation Between the OPCW and WCO

Positive References to 33 Chemicals in the HS Provide Highest Clarity in the Classification (Identification)

2017HS New Subheadings for 33 Most Traded Schedule Chemicals sorted by HS-code

No	Sched	CAS	Chemical name	HS 2012	HS 2017
1	3A03	74-90-8	Hydrogen cyanide	2811.19	2811.12
2	3A01	75-44-5	Carbonyl dichloride	2812.10	2812.11
3	3B05	10025-87-3	Phosphorous oxychloride	2812.10	2812.12
4	3B06	7719-12-2	Phosphorous trichloride	2812.10	2812.13
5	3B07	10026-13-8	Phosphorous pentachloride	2812.10	2812.14
6	3B12	10025-67-9	Sulfur monochloride	2812.10	2812.15
7	3B13	10545-99-0	Sulfur dichloride	2812.10	2812.16
8	3B14	7719-09-7	Thionyl chloride	2812.10	2812.17
9	3A02	506-77-4	Cyanogen chloride	2853.00	2853.10
10	3A04	76-06-2	Trichloronitromethane	2904.90	2904.91
11	2B08	76-93-7	2,2-Diphenyl-2-hydroxyacetic acid	2918.19	2918.17
12	3B10	868-85-9	Dimethyl phosphite	2920.90	2920.21
13	3B11	762-04-9	Diethyl phosphite	2920.90	2920.22
14	3B08	121-45-9	Trimethyl phosphite	2920.90	2920.23
15	3B09	122-52-1	Triethyl phosphite	2920.90	2920.24
16	2B10	4584-46-7	2-(N,N-Dimethylamino)ethylchloride hydrochloride	2921.19	2921.12
17	2B10	869-24-9	2-(N,N-Diethylamino)ethylchloride hydrochloride	2921.19	2921.13
18	2B10	4261-68-1	2-(N,N-Diisopropylamino)ethylchloride hydrochloride	2921.19	2921.14
19	3B17	102-71-6	Triethanolamine	2922.13	2922.15
20	3B15	139-87-7	Ethyldiethanolamine	2922.19	2922.17*
21	3B16	105-59-9	Methyldiethanolamine	2922.19	2922.17*
22	2B11	96-80-0	2-(N,N-Diisopropylamino)ethanol	2922.19	2922.18
23	2B12	100-38-9	2-(N,N-Diethylamino)ethanethiol	2930.90	2930.60
24	2B13	111-48-8	Bis(2-hydroxyethyl)sulfide	2930.90	2930.70
25	2B04	756-79-6	Dimethyl methylphosphonate	2931.90	2931.31
26	2B04	18755-43-6	Dimethyl propylphosphonate	2931.90	2931.32
27	2B04	78-38-6	Diethyl ethylphosphonate	2931.90	2931.33
28	2B04	84962-98-1	Sodium 3-(trihydroxysilyl)propyl methylphosphonate	2931.90	2931.34
29	2B04	68957-94-8	2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	2931.90	2931.35
30	2B04	41203-81-0	(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl) methyl methyl methylphosphonate	2931.90	2931.36
31	2B04	42595-45-9	Bis[(5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate	2931.90	2931.37
32	2B04	84402-58-4	Mixture: 50% Methylphosphonic acid / 50% (Aminoiminomethyl)urea	2931.90	2931.38
33	2B04	170836-68-7	Mixture of CAS RN 41203-81-0 and CAS RN 42595-45-9	3824.90	3824.91

* No more 6 digits code left

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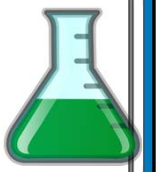
2017HS New Subheadings for 33 Most Traded Schedule Chemicals

(Q) Benefits ?

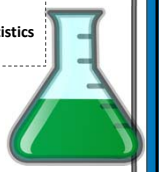


2017HS New Subheadings for 33 Most Traded Schedule Chemicals

(Q) Benefits ?

- **Control**
  33 Chemicals can be identified based on their HS classifications
- **Monitor**
  International Trade Statistics Data can be collected

(Obligations : HS Convention Article 3 (b))
Each Contracting Party shall make publicly available its import and export trade statistics in conformity with the six-digit codes of the HS



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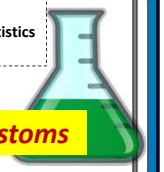
As far as chemicals are correctly classified in the HS

Most Important for Customs

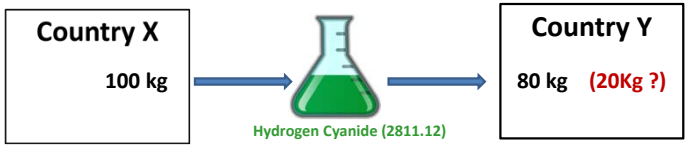


2017HS New Subheadings for 33 Most Traded Schedule Chemicals

(Examples)

Benefits of Monitoring of International Movements of 33 Chemicals based on their trade statistics data

- Trend of Trade => Risk assessments
- Comparison of Trade Statistics Data between Exporting and Importing Countries => Prevent Illegal Trade



Summary

- **How Customs can identify whether or not chemicals under declaration are controlled by the CWC?**
  - Chemicals should be correctly classified in the HS
  - The HS is the most valuable tool for identifying and screening
  - Recommendations : Insertion of specific subheadings for CWC chemicals in National Statistical Nomenclature
  - 2017HS : New HS subheadings for the 33 most traded CWC chemicals => Control and Monitor International Trade in CWC substances on an uniform basis among all HS members
  - Most Important for Customs?

Summary

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  - Most Important for Customs?

Thank you for attention

TRAINING COURSE FOR CUSTOMS AUTHORITIES OF THE GCC COUNTRIES AND OTHER ARABIC STATES PARTIES TO THE CWC ON TECHNICAL ASPECTS OF THE TRANSFERS REGIME OF THE CHEMICAL WEAPONS CONVENTION

DOHA, QATAR
20-21 MARCH 2016

Identification of Scheduled Chemicals: using OPCW tools

Declarations Branch/Verification Division

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Objectives

- By the end of this session participants would:
  - Be acquainted with how to use Handbook on Chemicals and Online Scheduled Chemicals Database
  - Be able to identify scheduled chemicals using Handbook on Chemicals and Online Scheduled Chemicals Database

Handbook on Chemicals

- Facilitates the identification of scheduled chemicals

Contains:

- Chemical names as used by IUPAC and CAS and other synonyms, trade names and military designations and HS Codes
- UN Number for selected chemicals
- CAS number or OPCW key
- Chemical structures and molecular formulas

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Handbook on Chemicals

2014 Version: recently released (October 2014)

- 1800 Scheduled chemicals
  - 1306 Schedule 1 chemicals
  - 477 Schedule 2 chemicals
  - 17 Schedule 3 chemicals
- All chemicals included have been declared
- NOT a list of all declarable chemicals
- Based on information from declarations

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The structure of the Handbook on Chemicals

- Hard copy
  - Ordered by Schedule
  - Ordered by CAS or Key if CAS is not assigned
    Electronic version

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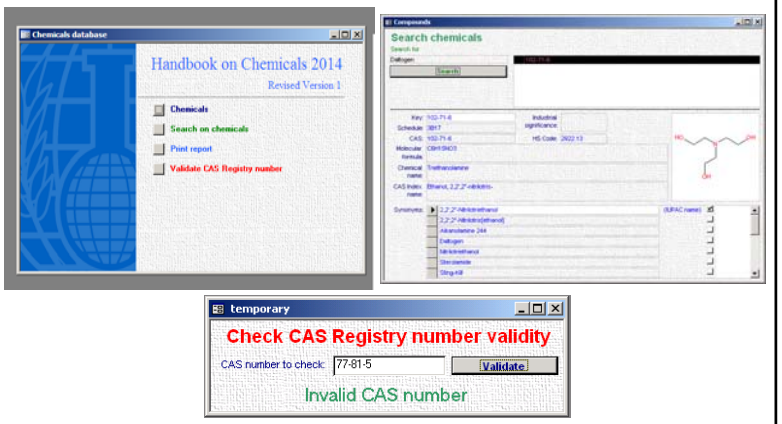
The electronic version



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Handbook on Chemicals (Electronic Version)

- Search by
  - Chemical name (full or partial)
  - Trade name
  - Military designator / code name
  - CAS number
  - HS code
  - Molecular formula
  - Schedule number (e.g., 2B04)
- Check validity of CAS numbers

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How to get a copy of the Handbook on Chemicals

- Hard copies are available at the OPCW Document Counter, or can be mailed to you upon request
- Can download from the OPCW's Web site, www.opcw.org
  http://www.opcw.org/our-work/national-implementation/declarations-adviser/
- Electronic version is available on CD-ROM upon request

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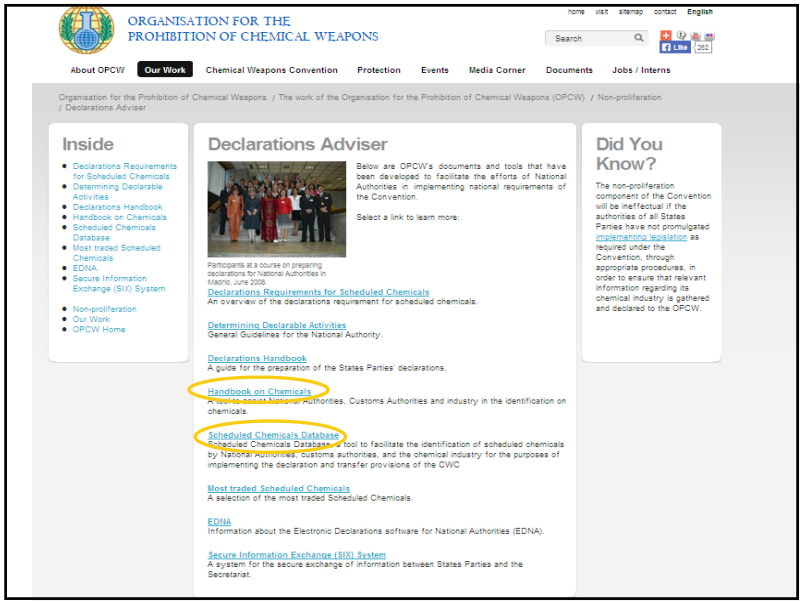

ONLINE SCHEDULED CHEMICALS DATABASE

- Available on the OPCW website since 29 May 2009 : http://www.opcw.org/our-work/national-implementation/declarations-adviser/
- Aimed at facilitating the identification of scheduled chemicals by National Authorities, Customs Authorities and the Chemical Industry
- Contains same information of the Handbook on Chemicals plus all scheduled chemicals that had been assigned Chemical Abstracts Service (CAS) Registry Numbers as at 01 October 2014
- Although the database contains information on 32,000 scheduled chemicals, it does not contain all possible scheduled chemicals

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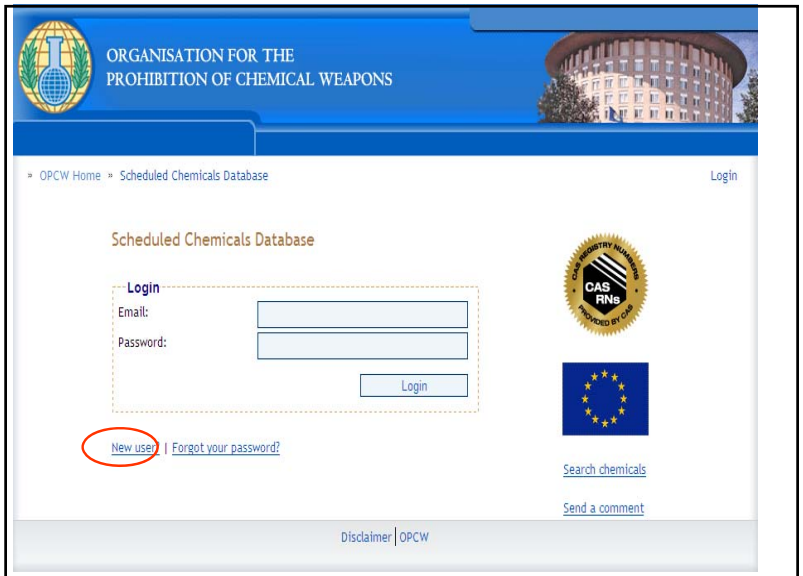

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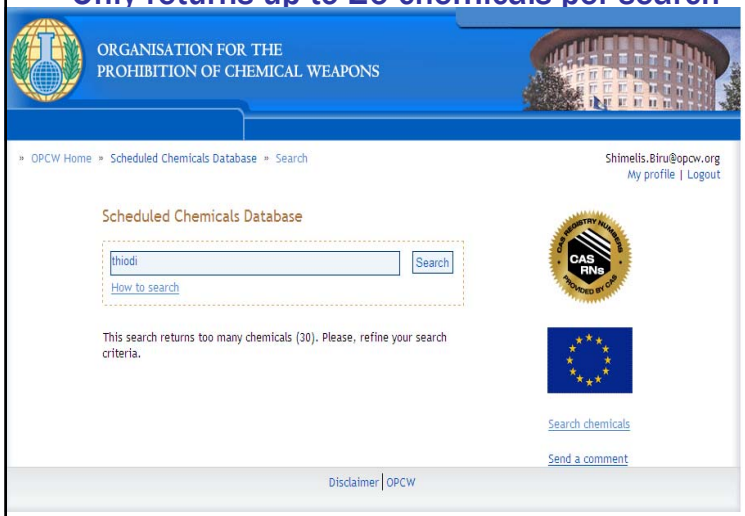
Only returns up to 20 chemicals per search



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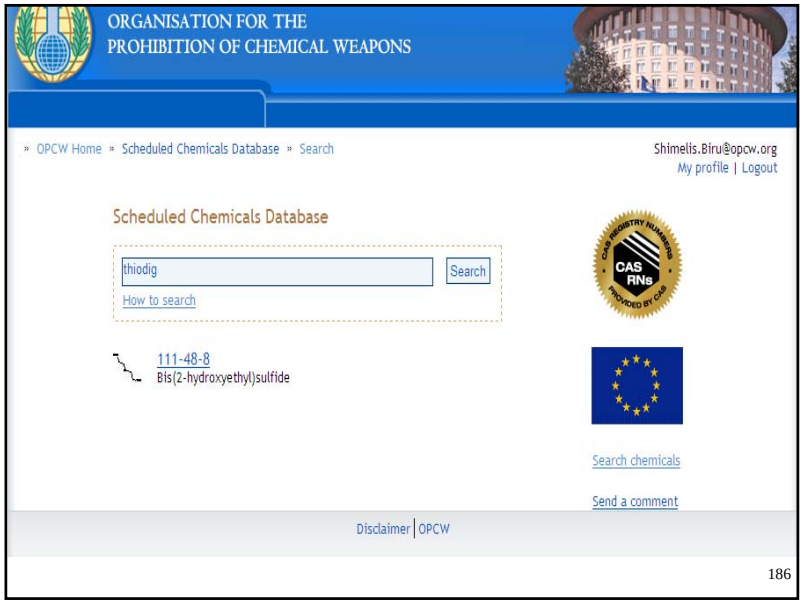

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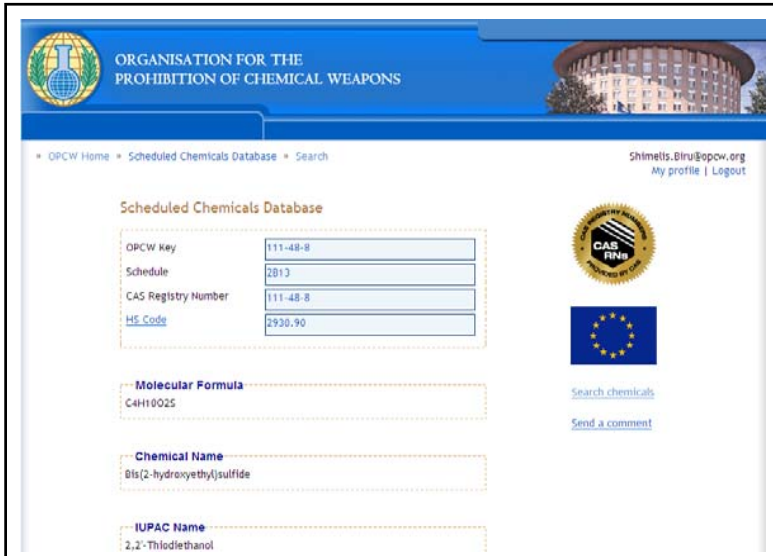

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Most Traded Scheduled Chemicals 2014 (Brochure)

- Contains the 49 most traded Schedule 2 and Schedule 3 chemicals
  - Selection based on the declarations submitted by the States Parties 1997 to 2014.
  - Serves as a tool to assist the States Parties in the identification of scheduled chemicals
  - Contains chemical identifiers such as: Chemical Name, Schedule, CAS RN, Chemical Structure, HS code, IUPAC Name and synonyms if available.
  - Contains some examples of commercial applications and industrial uses of the chemicals
  - To be updated and revised on a regular basis
  - Also contains list of these 49 chemicals ordered by CAS RN
  - Downloadable as PDF from OPCW website

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Most Traded Scheduled Chemicals 2014

Introduction

This Brochure contains the 49 most traded Schedule 2 and Schedule 3 chemicals of the Chemical Weapons Convention (hereinafter "the Convention"). These 49 chemicals have been identified as the most traded scheduled chemicals based on the declarations submitted by the States Parties under the Article VI of the Convention since 1997 up to 2014.

The 2014 version of Brochure updates the previous 2006 version and it serves as a tool to assist the States Parties in the identification of scheduled chemicals.

The Brochure contains several identifiers for each chemical e.g. Chemical Name, Schedule, CAS RN, CAS Index Name, Chemical Structure, HS code, CAS Index Name, IUPAC Name and synonyms if available. The Brochure also covers some examples of commercial applications and industrial uses of the chemicals obtained from the open sources.

The chemicals in the Brochure are arranged in increasing order of schedule number (Schedule 2 and Schedule 3), then in increasing order of entry number in each Schedule (e.g. 2B04, 2B05, 2B06, etc.), and by CAS Registry Number (CAS RN) in each entry of the schedule.

The Brochure is to be updated and revised on a regular basis to incorporate new most traded scheduled chemicals identified in the future declarations submitted by the States Parties.

Download:

- Most Traded Scheduled Chemicals 2014 [PDF - 504 KB]
  - Most Traded Scheduled Chemicals ordered by CAS RN [PDF - 58 KB]

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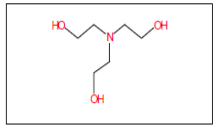
Chemical Name:	**Triethanolamine**
CAS RN:	102-71-6
Schedule:	3B17
HS code:	2922.13
Molecular Formula:	C6H15NO3
CAS Index Name:	Ethanol, 2,2',2"-nitrilotris-
IUPAC Name:	2,2',2"-Nitrilotriethanol
Synonyms:	Trolamine Tris-(2-Hydroxyethyl)amine Tris(beta-hydroxyethyl)amine Tris(2-hydroxyethyl)amine Triethanolamin TEOA TEA (amino alcohol) TEA Sting-Kill Sterolamide Nitrilotriethanol Daltogen Alkanolamine 244 2,2',2"-Nitrilotris[ethanol]

Chemical Structure



Commercial Applications & Industrial Uses

Production of: emulsifiers, detergents, textile and leather chemicals, drilling and cutting oils (impregnating materials, soaps, cosmetics and toiletries, agricultural products, pharmaceuticals. Production of cleaners: all-purpose cleaners, cleaners that involve skin contact because of the mildness of this chemical, waterless hand cleaners. Wax formulations: cream waxes and polishes used for furniture, floors and automotive car wax. Production of cement and concrete: milling additive. Production of adhesives. Application in coatings technology: metal coating preparations, glass coating (shatter proofing, anti-frosting, antifogging and-dirt resistant films on glass and plastics), accelerator for photo-polymerisation coating (improves thermal properties and reduces cracking in prepared wire coatings). Used as corrosion inhibitor, gas purification processes, metal working, mining, petroleum and coal, polymers, textiles, pigment dispersion, pesticides and herbicides.

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Key Points for Individual Customs Officer (1)

- In order to control transfer in Schedule Chemicals and to collect data, customs officers should be able to use OPCW database (Handbook on chemicals (Electronic version) and online scheduled chemicals database) for identifying Schedule chemicals .(Other sources of information can be used.)

<u>How to search chemicals</u>

Search by

- **CAS Registry number,**
- **Chemical name,**
- **Synonyms,**
- **IUPAC names,**
- **CAS Index Names,**
- **Molecular formula,**
- **Trade name or**
- **HS code.**

- The easiest way to search is by CAS Registry Number

DEMONSTRATION

How to search chemicals using Handbook on chemicals (Electronic version)

and online scheduled chemicals database

Identification of CWC related chemicals using other sources of information

Summary (Last day)

- **How Customs can identify whether or not chemicals under declaration are controlled by the CWC?**
  - ➢Chemicals should be correctly classified in the HS
  - ➢The HS is the most valuable tool for identifying and screening
  - ➢Recommendations : Insertion of specific subheadings for CWC chemicals in National Statistical Nomenclature
  - ➢2017HS : New HS subheadings for the 33 most traded CWC chemicals => Control and Monitor International Trade in CWC substances on an uniform basis among all HS members
  - ➢Most Important for Customs?

Identification of CWC related chemicals using other sources of information

The HS is the most valuable tool for identifying and screening

➢**What information is necessary to decide the HS Classification of Chemicals (=Identify CWC Chemicals) ?**

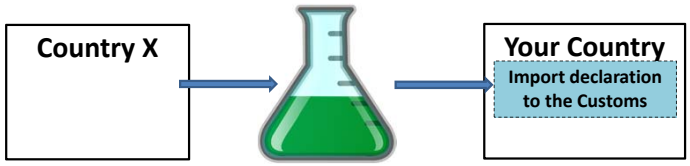
(Q) What information is necessary to decide the HS Classification of Chemicals (=Identify CWC Chemicals) ?

(Q) What information is necessary to decide the HS Classification of Chemicals (=Identify CWC Chemicals) ?

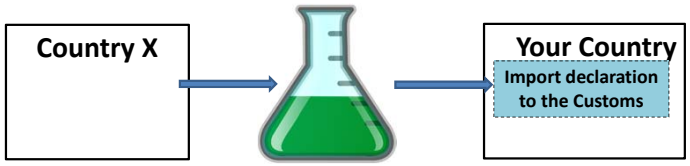
(A) Information which can specify the Chemical Structure

The HS Classification of Chemicals in Chapters 28 and 29 are to be decided based on their Chemicals Structures

(Q) When an importation of a certain chemical is declared, what kinds of information are available to Customs?



(Q) When an importation of a certain chemical is declared, what kinds of information are available to Customs?



(A) Information contained in the Declaration & certain Documents and Information obtained from the Cargo

- Information contained in the Declaration and Documents
  - Declaration form (Chemical Name)
  - Invoice (Chemical Name, Chemical Formula)
  - Import and Export License (Chemical Name, Relevant Regulations)
  - Safety Data Sheet (Chemical Name, CAS register number)
  - Dangerous Goods Transport Documents (UN Number)
- Information obtained from the Cargo
  - Labeling and Marking
    - Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (https://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev04/English/ST-SG-AC10-30-Rev4e.pdf)
    - UN Recommendation on the Transport of Dangerous Goods (Model Regulations) for outer packing and cargo transport (http://www.unece.org/trans/danger/publi/unrec/12_e.html)
  - Taking Samples for Analysis by Customs laboratory

Safety Data Sheet (SDS)

- Also known as Material Safety Data Sheet or MSDS
- Provides detailed hazard information on chemicals
- Structured format, multiple pages
- Compiled by the manufacturer of the chemical
- Should be provided with chemical shipment
  - Requirements for delivery depend on national regulations

Does your country require SDS to be provided with chemical shipments?

SDS Sections

Sections	
1. Identification	9. Physical and chemical properties
2. Hazard(s) identification	10. Stability and reactivity
3. Composition/information on ingredients	11. Toxicological information
4. First-aid measures	12. Ecological information
5. Fire-fighting measures	13. Disposal information
6. Accidental release measures	14. Transport information
7. Handling and storage	15. Regulatory information
8. Exposure controls/personal protection	16. Other information

Circled sections provide useful information for chemical identification

SDS Excerpts

SAFETY DATA SHEET

Hydrogen Fluoride

Section 1. Identification

GHS product identifier	: Hydrogen Fluoride
Chemical name	: Hydrofluoric acid
Other means of identification	: anhydrous hydrofluoric acid; hf-a; hydrofluoric acid
Product use	: Synthetic/Analytical chemistry.
Synonym	: anhydrous hydrofluoric acid; hf-a; hydrofluoric acid
SDS #	: 001077
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Emergency telephone number (with hours of operation)	: 1-866-734-3438

SDS Excerpts, Continued

Section 3. Composition/information on ingredients

Substance/mixture	: Substance
Chemical name	: Hydrofluoric acid
Other means of identification	: anhydrous hydrofluoric acid; hf-a; hydrofluoric acid

CAS number/other identifiers

CAS number	: 7664-39-3
Product code	: 001077

Ingredient name	%	CAS number
hydrogen fluoride	100	7664-39-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

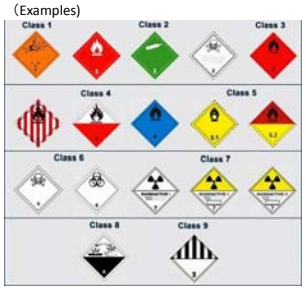
Occupational exposure limits, if available, are listed in Section 8.

GHS Pictograms

Globally Harmonized System of Classification and Labeling of Chemicals
https://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev04/English/ST-SG-AC10-30-Rev4e.pdf

UN Hazard Classes and Warning Diamonds

(Examples)



UN Recommendations on the Transport of Dangerous Goods - Model Regulations
http://www.unece.org/trans/danger/publi/unrec/12_e.html

Examples of Proper Labeling, Marking, and Placarding

Proper Labeling and Marking

Box containing bottles

Individual plastic bottle

Chemical drum ("single packaging")

Improper Labeling and Packaging

Missing or incomplete labels

Destroyed label

Proper label, unsafe packaging

Identification of CWC related chemicals using other sources of information

When an importation is declared

- **Declarations, certain documents (Invoice, License, SDS, etc.), Labels and marking can contain useful information, if correct**
- **Chemical analysis of samples is more definitive, but requires proper sampling technic including safety considerations and analysis expertise and facilities**

Information for Identifying Chemicals

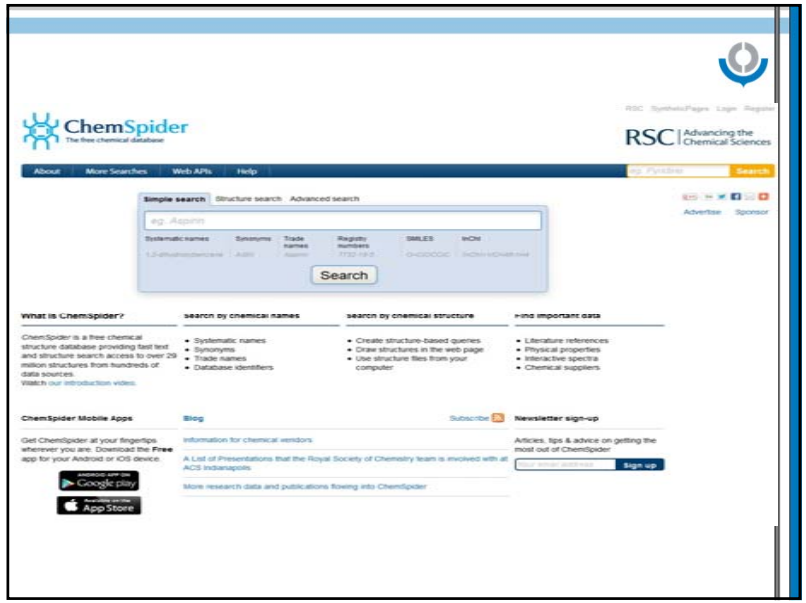
Identifier	Where to find	Comments
Chemical name	Readily available in documents	One chemical can have many names; Very slight differences in chemical names can indicate completely different Chemicals
Molecular formula	Sometimes available in Invoice	Many different chemicals have the same formula
CAS register number	Readily available in SDS some specification sheets	Unique; Millions of registered chemicals
UN number	Readily found on outer packing; Dangerous goods transport documents	Not always unique; Only assigned to hazardous chemicals

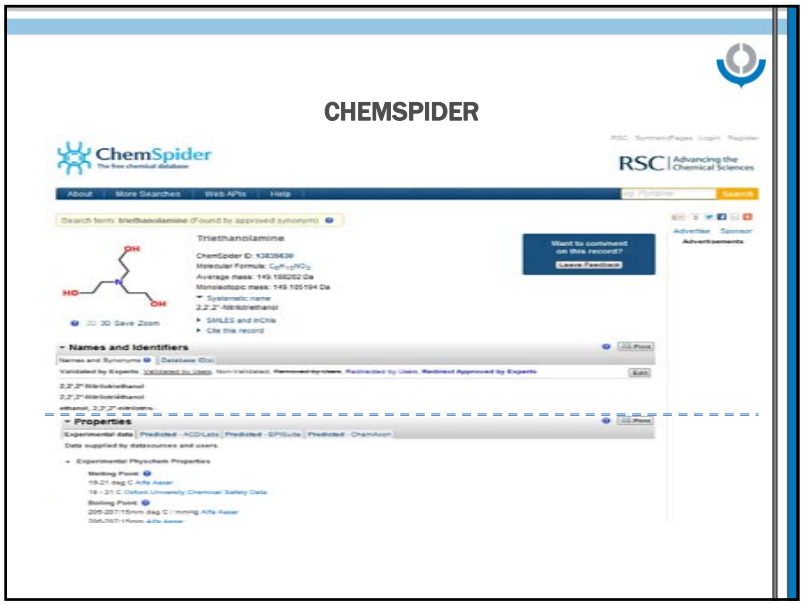
Summary

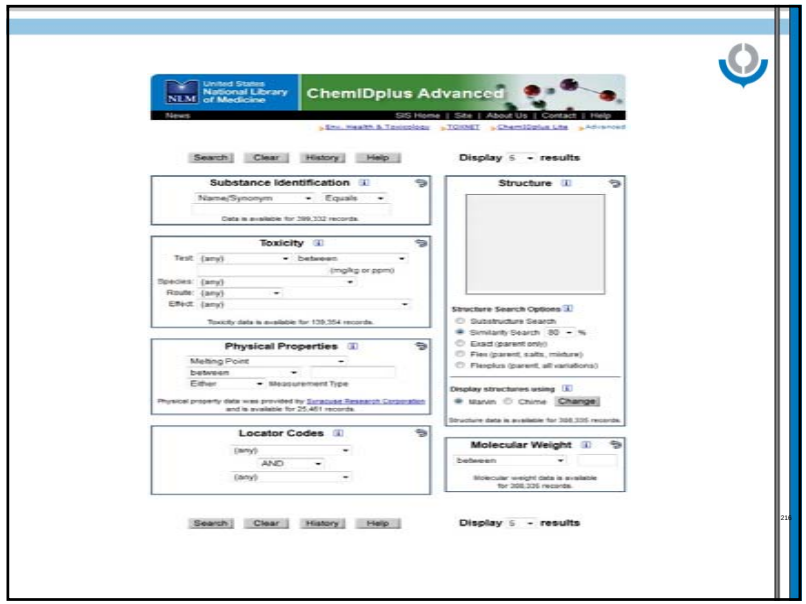
- **Identification of CWC related chemicals using other sources of information**
  - ➢The HS is the most valuable tool for identifying and screening
  - ➢What information is necessary to decide the HS Classification of Chemicals (=Identify CWC Chemicals) ?
  - ➢Information which can specify the Chemical Structure
  - ➢Declarations, certain documents (Invoice, SDS, etc.), Labels and marking can contain useful information (chemical name, CAS registered number), if correct
  - ➢Chemical analysis of samples is more definitive, but requires proper sampling technic including safety consideration and analysis expertise and facilities

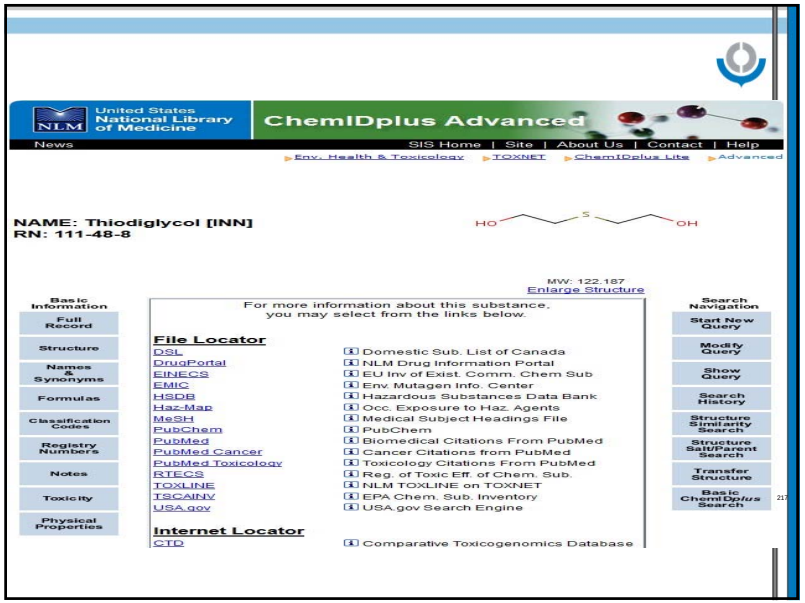
Additional resources for chemical information

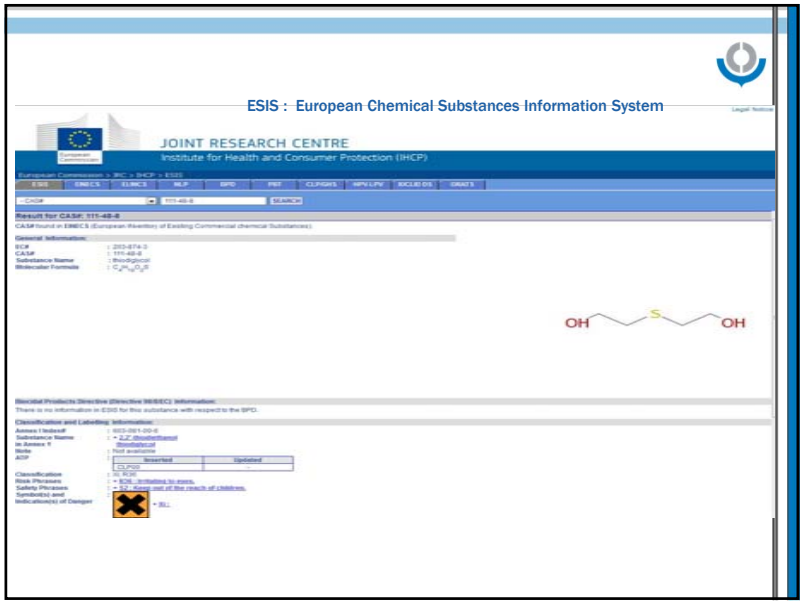
- Chemspider
  - http://www.chemspider.com
- ChemID
  - http://chem.sis.nlm.nih.gov/chemidplus/
- ESIS
  - http://esis.jrc.ec.europa.eu/
- EUROPEAN CHEMICALS AGENCY (ECHA)
  - http://echa.europa.eu/
- ECICS
  - http://ec.europa.eu/taxation_customs/common/databases/ecics/index_en.htm
- Transport Canada
  - http://www.tc.gc.ca/eng/canutec/guide-menu-227.htm
- Scifinder
  - https://scifinder.cas.org

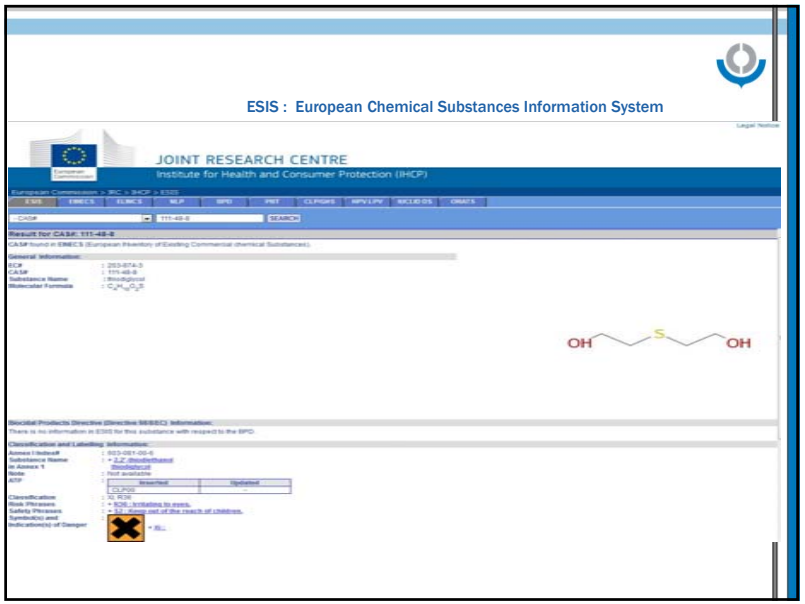







United States National Library of Medicine
ChemIDplus Advanced
News
SIS Home | Site | About Us | Contact | Help
Env. Health & Toxicology | TOXNET | ChemIDplus Lite | Advanced
NAME: Thiodiglycol [INN]
RN: 111-48-8
HO S OH
MW: 122.187
Enlarge Structure
Basic Information
Full Record
Structure
Names & Synonyms
Formulas
Classification Codes
Registry Numbers
Notes
Toxicity
Physical Properties
For more information about this substance, you may select from the links below.
File Locator
DSL Domestic Sub. List of Canada
DrugPortal NLM Drug Information Portal
EINECS EU Inv of Exist. Comm. Chem Sub
EMIC Env. Mutagen Info. Center
HSDB Hazardous Substances Data Bank
Haz-Map Occ. Exposure to Haz. Agents
MeSH Medical Subject Headings File
PubChem PubChem
PubMed Biomedical Citations From PubMed
PubMed Cancer Cancer Citations from PubMed
PubMed Toxicology Toxicology Citations From PubMed
RTECS Reg. of Toxic Eff. of Chem. Sub.
TOXLINE NLM TOXLINE on TOXNET
TSCAINV EPA Chem. Sub. Inventory
USA.gov USA.gov Search Engine
Internet Locator
CTD Comparative Toxicogenomics Database
Search Navigation
Start New Query
Modify Query
Show Query
Search History
Structure Similarity Search
Structure Salt/Parent Search
Transfer Structure
Basic ChemIDplus Search


ESIS : European Chemical Substances Information System
JOINT RESEARCH CENTRE
Institute for Health and Consumer Protection (IHCP)
OH S OH


ESIS : European Chemical Substances Information System
JOINT RESEARCH CENTRE
Institute for Health and Consumer Protection (IHCP)
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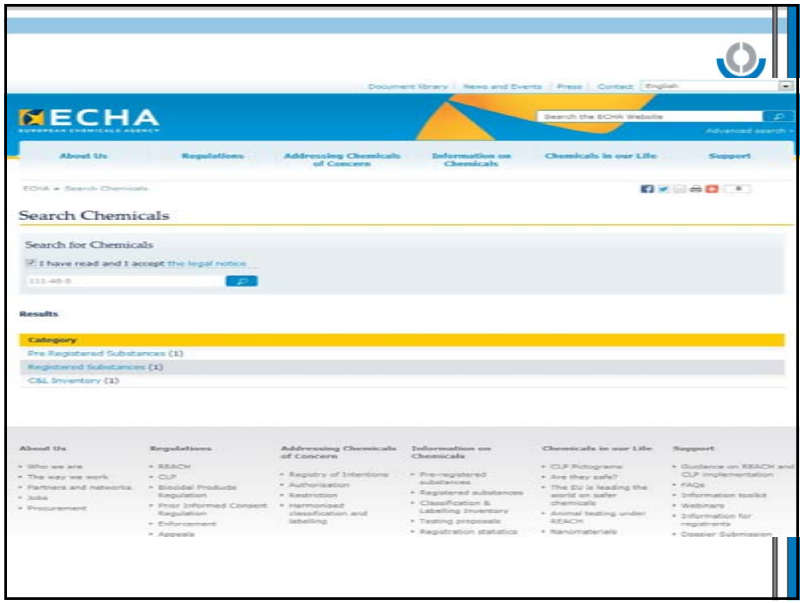
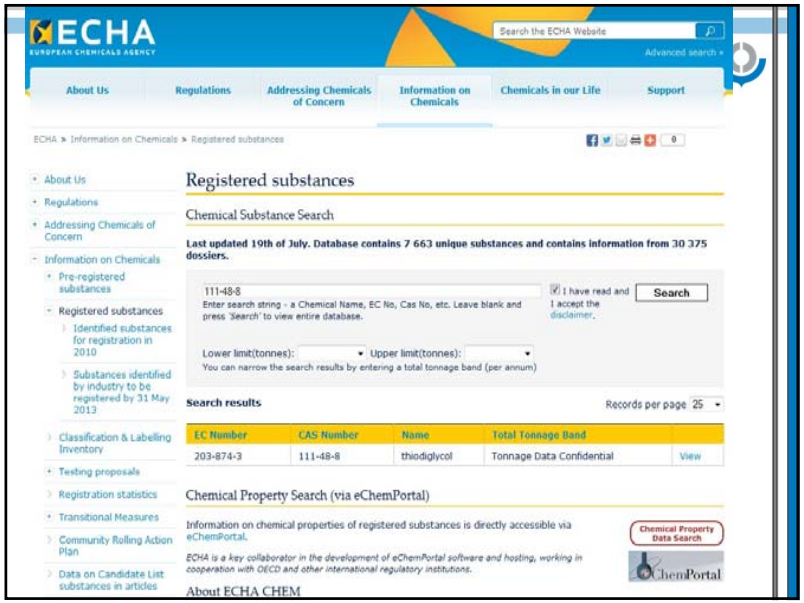
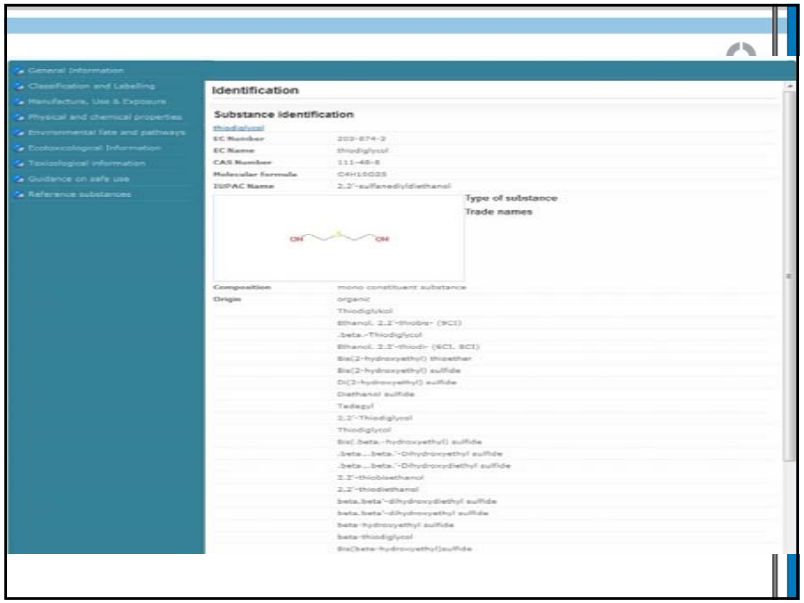
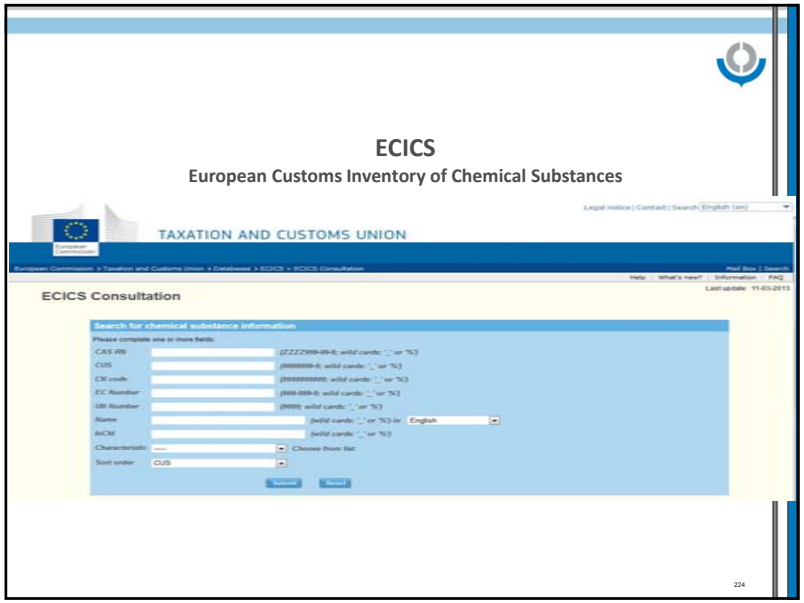
ECHA
About Us
Regulations
Addressing Chemicals of Concern
Information on Chemicals
Chemicals in our Life
Support
News
Search for Chemicals
ECHA 8th Stakeholders' Day
26 March 2013 - Helsinki, Finland
ACT NOW! REACH 2013
Document Library
REACH IT
IUCLID 5
CHESAR


ECHA
Search Chemicals
Search for Chemicals
Results


ECHA
Registered substances
Chemical Substance Search
Search
Search results
Chemical Property Search (via eChemPortal)
About ECHA CHEM

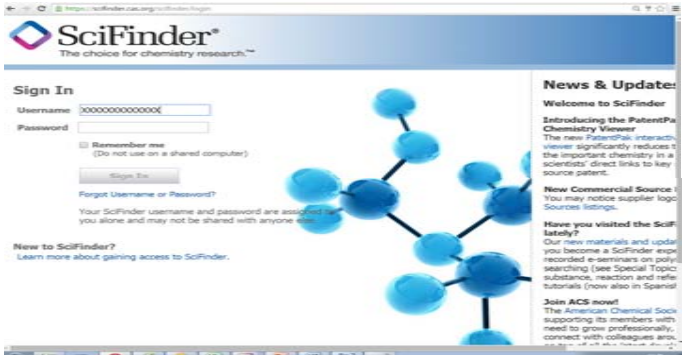

Identification
Substance identification


ECICS
European Customs Inventory of Chemical Substances
TAXATION AND CUSTOMS UNION
ECICS Consultation

Transport Canada

225

Scifinder
https://scifinder.cas.org



Thank you for attention

TRAINING COURSE FOR CUSTOMS AUTHORITIES OF THE GCC COUNTRIES AND OTHER ARABIC STATES PARTIES TO THE CWC ON TECHNICAL ASPECTS OF THE TRANSFERS REGIME OF THE CHEMICAL WEAPONS CONVENTION

DOHA, QATAR 20-21 MARCH 2016

Common Problems in Reporting Imports and Exports

Declarations Branch/Verification Division

Objectives

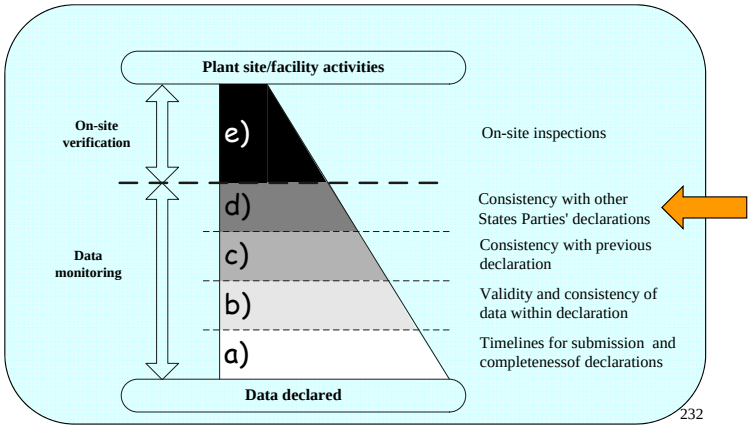
- By the end of this session participants should:
  - Be aware how import/export data is evaluated and monitored by the OPCW
  - Be aware of the main causes of transfer discrepancies and potential ways of avoiding or reducing their impact
  - Be familiar with the CWC guidelines on declaring imports and exports agreed in 2009
  - Understand the approach to resolving discrepancies and customs role in this.

230

The information evaluation process

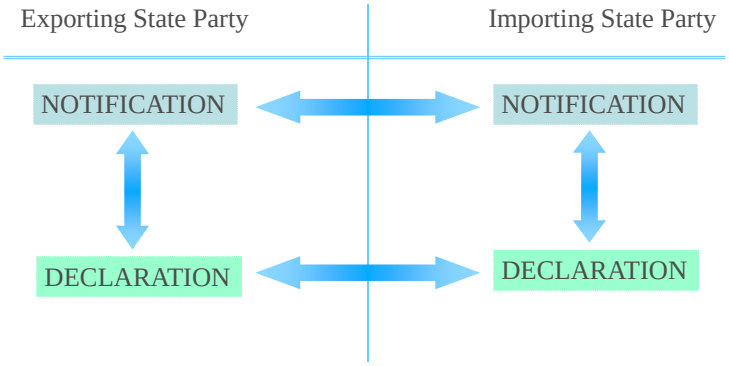
231

Information evaluation



232

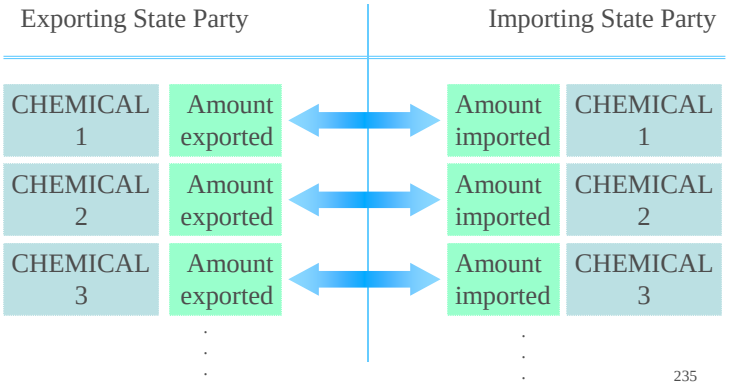
Analysing Schedule 1 declarations and notifications



233

Schedule 2 and Schedule 3 export/import

Analysing Schedule 2 and 3 declarations



235

Transfer Discrepancies

- Discrepancies between declarations of importing and exporting States Parties can indicate:
  - Lack of harmonisation in reporting
  - Ineffective controls – possible proliferation risk
  - Worst case – potential CW programme by State or group within State
- Have to minimise lack of harmonisation to be able to focus on other causes.

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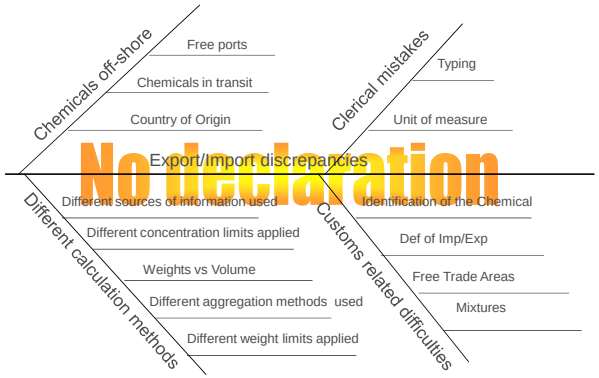
Definition of Discrepancy
Current Criteria

- Since 2006 discrepancy only if difference between total quantity declared by exporting State Party and importing State Party is greater than declaration threshold for that chemical
  - 1 tonne for a Schedule 2B chemical
  - 30 tonnes for a Schedule 3 chemical

Nature of discrepancies



Clerical Mistakes

- Typing errors
- Confusion over units of measure (kg versus tonnes or kt versus t)
- Confusion over decimals and thousand separators
  - 1,495 tonnes or 1.495 tonnes ?
- Particularly a problem in passing information from one organisation to another (Importer to Customs to National Authority to OPCW)

Different calculation methods

- Different low concentration limits applied
- National threshold limits applied
- Declaring the volume, not the weight
- For mixtures containing scheduled chemicals the weight of mixture may be given instead of weight of scheduled chemical within the mixture
  - Recommend always declaring the weight of the scheduled chemical where known

CUSTOMS RELATED DIFFICULTIES

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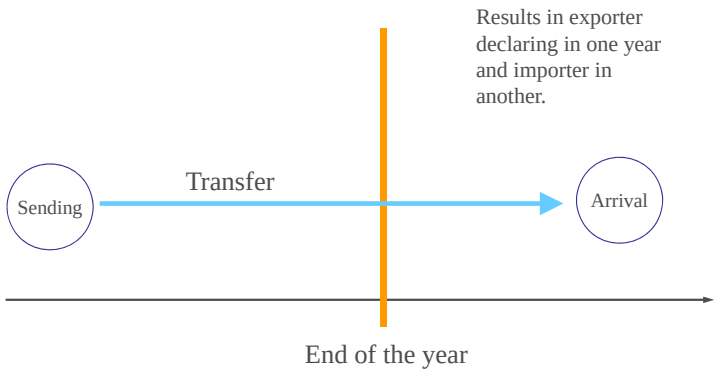
Sources of discrepancies

- The absence of customs borders in free trade areas
- Identification of the Scheduled Chemicals
- Shipments in transit
- Country of Origin or Exporting Country?
- The definition of export/import

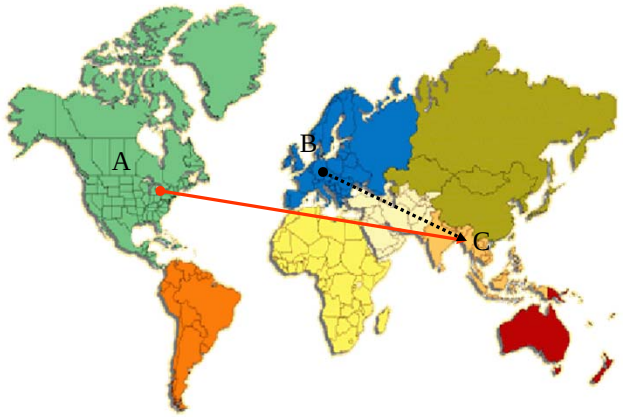
242

End of Year Shipments



243

WHO IS THE EXPORTER OF SCHEDULE CHEMICALS FOR THE CWC ?



244

WHO IS THE EXPORTER OF SCHEDULE CHEMICALS FOR THE CWC ?

245

Who is the exporter?

- Who does the importer report as the exporting country
  - The country of origin
  - The country where the invoicing agent is based
  - The country from which the goods were dispatched to the importer?

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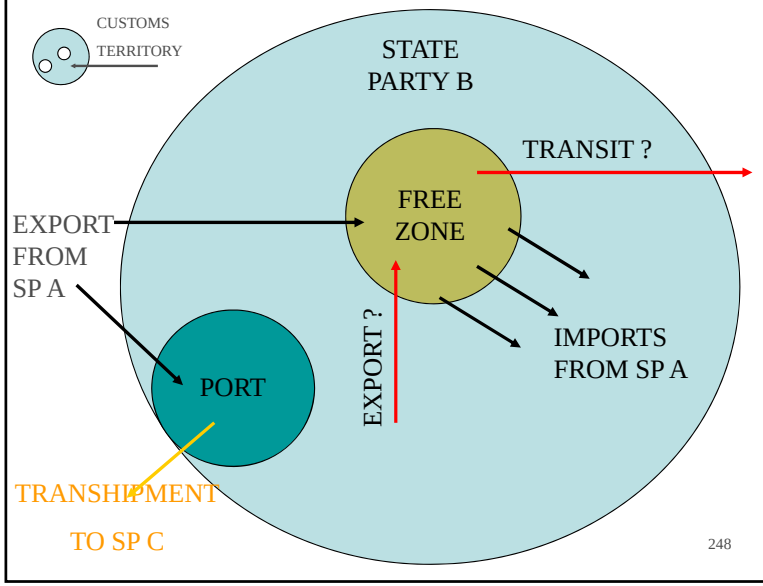
Definition of Import and Export

- Until 2008 no common understanding of terms import and export in relation to transfers of scheduled chemicals.
- Most States Parties restrict import and export to meaning goods moving in and out of their customs territory.
- Goods, including Scheduled chemicals, which have arrived at a port but not yet passed customs are not counted as being imported.

247



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GUIDELINES REGARDING DECLARATION OF IMPORT AND EXPORT DATA FOR SCHEDULE 2 AND 3 CHEMICALS

- The EC approved voluntary guidelines on what the terms import and export mean in relation to declarations of Schedule 2 and 3 aggregate national data. (EC-53/DEC.16, 27 June 2008). CSP approved it in the C-13/DEC.4, 3 December 2008)
  - Guidelines focused on physical movement of goods not Customs procedures or invoicing agents
  - Country of dispatch not country of origin

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Decision C-13/DEC. 4 (1)

The CSP hereby decides:

1. that solely for the purposes of submitting declarations under paragraphs 1, 8(b) and 8(c) of Part VII and paragraph 1 of Part VIII of the Verification Annex, the term 'import' shall be understood to mean the physical movement of scheduled chemicals into the territory or any other place under the jurisdiction or control of a State Party from the territory or any other place under the jurisdiction or control of another State, excluding transit operations;

250

Decision C-13/DEC. 4 (2)

2.... and the term 'export' shall be understood to mean the physical movement of scheduled chemicals out of the territory or any other place under the jurisdiction or control of a State Party into the territory or any other place under the jurisdiction or control of another State, excluding transit operations;

251

Decision C-13/DEC. 4 (3)

3. that transit operations referred to in paragraph 1 above shall mean the physical movements in which scheduled chemicals pass through the territory of a State on the way to their intended State of destination. Transit operations include changes in the means of transport, including temporary storage only for that purpose

252

Decision C-13/DEC. 4 (4)

4. that for the purposes of declaring imports under paragraph 1, 8(b) and 8(c) of Part VII and paragraph 1 of Part VIII of the Verification Annex, the declaring State Party shall specify the State from which the scheduled chemicals were dispatched, excluding the States through which the scheduled chemicals transited and regardless of the State in which the scheduled chemicals were produced;

5. that for the purposes of declaring exports under paragraph 1, 8(b) and 8(c) of Part VII and paragraph 1 of Part VIII of the Verification Annex, the declaring State Party shall specify the intended State of destination, excluding the States through which the scheduled chemicals transited.

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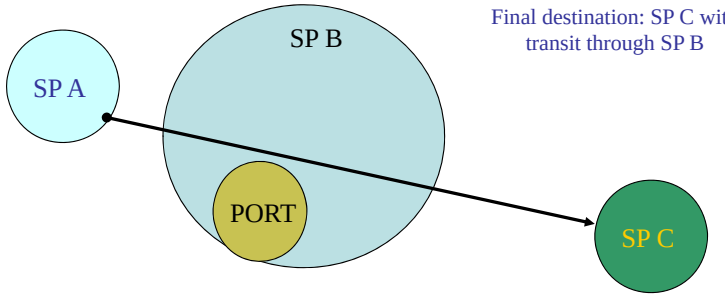
SIMPLE TRANSIT

Chemical Produced in and Dispatched from SPA.

Final destination: SP C with transit through SP B



Approach	SP A declares	SP B declares	SP C declares	Discrepancy
Customs clearance	Exp to SP C	Nothing	Imp from SP A	NO
Country of origin	Exp to SP C	Nothing	Imp from SP A	NO
Country of dispatch C-13/DEC.4	Exp to SP C	Nothing	Imp from SP A	NO

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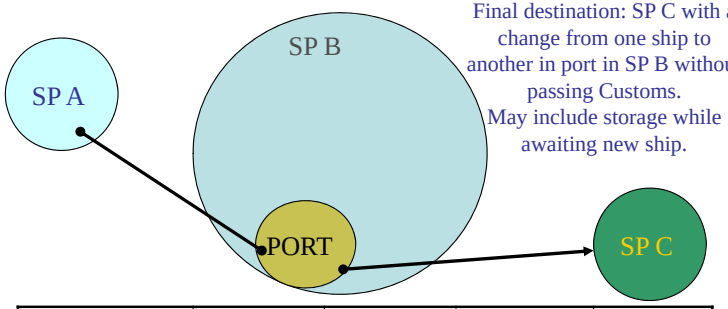
CHANGE IN MEANS OF TRANSPORT

Chemical produced in and dispatched from SP A.
Final destination: SP C with a change from one ship to another in port in SP B without passing Customs.
May include storage while awaiting new ship.

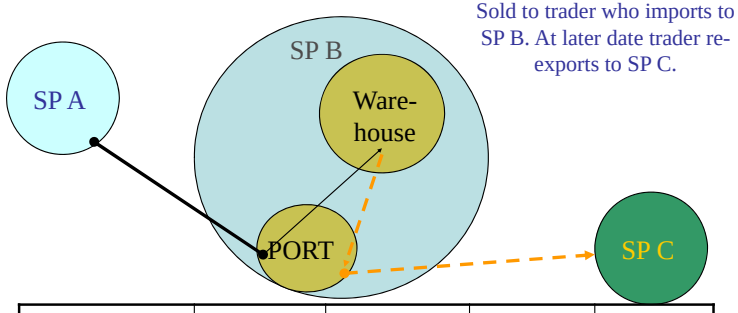


Approach	SP A declares	SP B declares	SP C declares	Discrepancy
Customs clearance	Exp to SP C	Nothing	Imp from SP A	NO
Country of origin	Exp to SP C	Nothing	Imp from SP A	NO
Country of dispatch C-13/DEC.4	Exp to SP C	Nothing	Imp from SP A	NO

255

INVOLVEMENT OF TRADERS

Chemical produced in SP A. Sold to trader who imports to SP B. At later date trader re-exports to SP C.



Approach	SP A declares	SP B declares	SP C declares	Discrepancy
Customs clearance	Exp to SP B	Imp from SP A Exp to SP C	Imp from SP B	NO
Country of origin	Exp to SP B	Imp from SP A Exp to SP C	Imp from SP A	YES
Country of dispatch C-13/DEC.4	Exp to SP B	Imp from SP A Exp to SP C	Imp from SP B	NO

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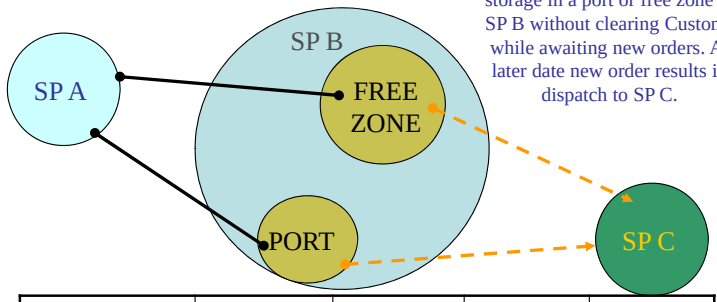
STORAGE OUTSIDE CUSTOMS TERRITORY AWAITING ORDERS

Chemical produced in and dispatched from SP A to trader's storage in a port or free zone in SP B without clearing Customs while awaiting new orders. At later date new order results in dispatch to SP C.



Approach	SP A declares	SP B declares	SP C declares	Discrepancy
Customs clearance	Exp to SP B	Nothing	Imp from SP B	YES
Country of origin	Exp to SP B	Imp from SP A Exp to SP C	Imp from SP A	YES
Country of dispatch C-13/DEC.4	Exp to SP B	Imp from SP A Exp to SP C	Imp from SP B	NO

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Effect of Guidelines on Import and Export

- Hope will have a significant impact on the number of discrepancies, but:
  - Will take some time for States Parties to implement
  - Guidelines are voluntary
- Secretariat reported to EC on progress achieved through the implementation of these guidelines (EC-67/S/1, dated 16 Jan 2012)
  - Limited improvement was seen

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Resolving Transfer Discrepancies

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Reporting of Transfer Discrepancies

- Secretariat writes to each SP which has transfer discrepancies
- Virtually all transfer discrepancy letters are classified hence need to treat other countries classified data appropriately
- Both the importing and exporting SP receive the same data

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Resolution of Transfer Discrepancies

- Best place to start is often by the National Authority (NA) contacting the other State Party involved to see if they can provide any more data (e.g. who the chemical was shipped to, when it was shipped and how)
- Remember data often classified so be careful with emails and phone calls
- Can use OPCW meetings as a chance to meet face to face with other National Authorities
- Some States Parties cannot give out data due to national legislation

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Resolution of Transfer Discrepancies ..cont.

- In some cases it may be more effective for customs to re-examine their records (perhaps something was missed or misclassified)
- Alternatively the NA can establish contact with industry associations or companies who would have a possible use for such a chemical,
  - e.g. triethanolamine imports would most likely be used by cosmetics, surfactant or cement industries

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Resolution of Transfer Discrepancies ..cont.

- Resolution of transfer discrepancies can lead to identification of additional transfers or even of declarable plant sites
  - If a trader is bringing in a scheduled chemical who is selling it to – it is re-exported or for S2 processed or consumed?
- Gives the NA a much better idea of who is trading and using scheduled chemicals in their country and hence is a first step to effective control

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Key Points (1)

- Transfer discrepancies still a major problem despite all the work done in recent years
- Many causes but a lack of any AND declarations by some States Parties a major cause – possibly due to ineffective national implementation
- Resolution of transfer discrepancies can be an effective first step to effective control of transfers.

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Key Points (2)

CUSTOMS RELATED DIFFICULTIES

- The absence of customs borders in free trade areas
- Identification of the Scheduled Chemicals
- Shipments in transit
- Country of Origin or Exporting Country?
- The definition of export/import

265

Key Points (3)

- The EC approved voluntary guidelines on what the terms import and export mean in relation to declarations of Schedule 2 and 3 aggregate national data (Decision C-13/DEC. 4)
- 'import' shall be understood to mean the physical movement of scheduled chemicals into the territory or any other place under the jurisdiction or control of a State Party from the territory or any other place under the jurisdiction or control of another State, excluding transit operations;
- 'export' shall be understood to mean the physical movement of scheduled chemicals out of the territory or any other place under the jurisdiction or control of a State Party into the territory or any other place under the jurisdiction or control of another State, excluding transit operations;
- transit operations referred to in paragraph 1 above shall mean the physical movements in which scheduled chemicals pass through the territory of a State on the way to their intended State of destination. Transit operations include changes in the means of transport, including temporary storage only for that purpose

266

Key Points (4)

- for the purposes of declaring imports of Schedule 2 and 3 aggregate national data ,the declaring State Party shall specify the State from which the scheduled chemicals were dispatched, excluding the States through which the scheduled chemicals transited and regardless of the State in which the scheduled chemicals were produced;
- for the purposes of declaring exports of Schedule 2 and 3 aggregate national data , the declaring State Party shall specify the intended State of destination, excluding the States through which the scheduled chemicals transited.

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Practical Issues in Controlling Chemical Trade

Summary (this morning)

- **Identification of CWC related chemicals using other sources of information**
  - ➢The HS is the most valuable tool for identifying and screening
  - ➢What information is necessary to decide the HS Classification of Chemicals (=Identify CWC Chemicals) ?
  - ➢Information which can specify the Chemical Structure
  - ➢Declarations, certain documents (Invoice, SDS, etc.), Labels and marking can contain useful information (chemical name, CAS registered number), if correct
  - ➢Chemical analysis of samples is more definitive, but requires proper sampling technic including safety consideration and analysis expertise and facilities

Practical Issues in Controlling Chemical Trade

- **The HS is the most valuable tool for identifying and screening**
- **New subheadings for 33 most traded CWC chemicals in 2017 HS**
- ➢ **How to Achieve the Correct Classification of Chemicals in the HS for the Purpose of Controlling Chemical Trade?**

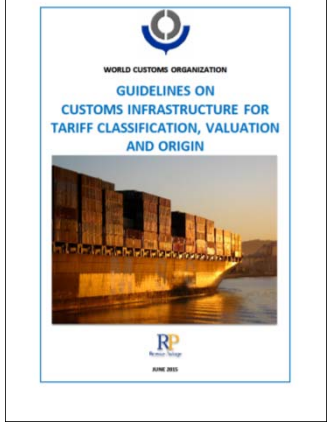
(Q) How to Achieve the Correct Classification of Chemicals in the HS (=Identifying CWC Chemicals) in most efficient and effective fashion?

(Q) **How to Achieve the Correct Classification of Chemicals in the HS (=Identifying CWC Chemicals) in most efficient and effective fashion?**

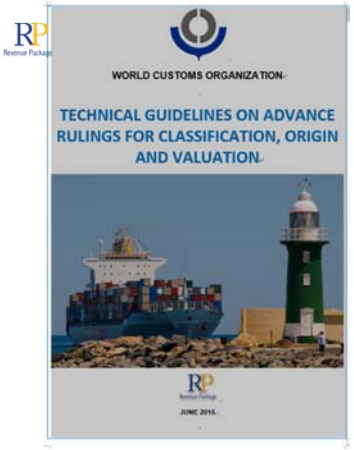
(A) Well-designed and effective classification practice

Well-organized classification infrastructure

Advance Ruling is one of the main components of the classification practice, which must be performed by the well-organized classification infrastructure

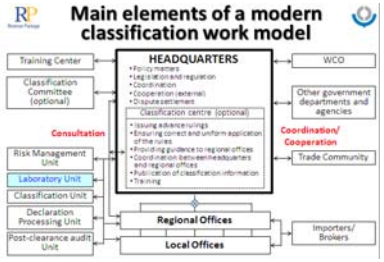


http://www.wcoomd.org/en/topics/key-issues/revenue-package/~/media/WCO/Member/Global/PDF/Topics/Key%20Issues/Revenue%20Package/Plan%20/2%20-%20Revenue%20Package%20Schedule%20Members%20-%202015-FINAL-%20EN.ashx

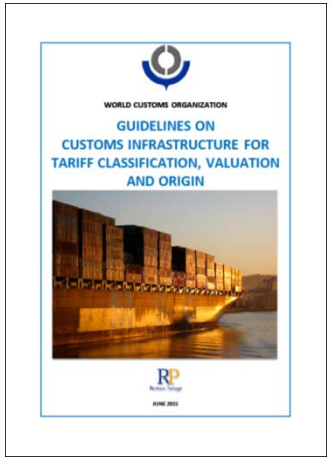


***Advance Ruling*:**
A written decision on the classification, origin, valuation etc. of the good issued by Customs to the applicant prior to import and export transaction

Useful not only for correct collection of duty but also for correct application of trade control measures as the HS is the most valuable tool for identifying and screening whether goods are to be controlled by the trade related regulations including the CWC



Identification and screening of controlled chemicals in terms of the HS classification must be supported by the well-organized Infrastructure



(Q) How to ensure effective Customs controls on CWC Chemicals while facilitating legitimate international trade?

(A) Useful Customs techniques :

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(A) Useful Customs techniques :

Risk Management (Assessment) (WCO Risk Management Compendium)

Pre-Arrival Information

Post-Clearance Audit (PCA) (WCO Guideline for Post-Clearance Audit)

Risk Assessment (Profiling and Targeting)

(Q) What information would be useful to ensure effective Customs controls on CWC Chemicals ?

Risk Assessment (Profiling and Targeting)

(Q) What information would be useful to ensure effective Customs controls on CWC Chemicals ?

(A) Country of Origin

Trans-shipment Country

e.g., Trade from/through Non-Members to the CWC

Risk Assessment (Profiling and Targeting)

(Q) What information would be useful to ensure effective Customs controls on CWC Chemicals ?

(A) Compliance (Importer and Exporter)

e.g., Authorized Economic Operator (Low risk trader)

Compliance based on Previous transactions and results of PCA

Information related to license issued/denied from the Licensing Agency

Risk Assessment (Profiling and Targeting)

(Q) What information would be useful to ensure effective Customs controls on CWC Chemicals ?

(A) The nature of Commodity (HS code)

e.g., Headings and subheadings for 33 CWC Chemicals

(Q) In terms of the Risk Assessment, what effects can be expected from new subheadings for 33 CWC Chemicals ?

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2017HS

28.11 Other inorganic acids and other inorganic oxygen compounds of non-metals.

<< Risk; High/Medium/Low>>

- Other inorganic acids :

		(2012HS) ⟹ (2017HS)	
2811.11 -- Hydrogen fluoride	Similar Chemical	*H / M / L*	*H / M / L*
2811.12 -- Hydrogen cyanide	CWC Chemical	- - - - -	*H / M / L*
2811.19 -- Other	Similar Chemicals	*H / M / L*	*H / M / L*

(Q) In terms of the Risk Assessment, what effects can be expected from new subheadings for 33 CWC Chemicals ?

Import License should be submitted to Customs

<< Risk; High/Medium/Low>>

	(2012HS)		(2017HS)	
	No License	With License	No License	With License
2811.12 -- Hydrogen cyanide	High	Low	High	Low
2811.19 -- Other			Medium	Low

New Subheadings for 33 CWC Chemicals enable Customs to :

- Establish Targeting More Precisely
- Control CWC Chemicals More Effectively while Facilitating Legitimate International Trade
- Conduct Risk Assessment More Effectively

<< Risk; High/Medium/Low>>

	(2012HS)		(2017HS)	
	No License	With License	No License	With License
2811.12 -- Hydrogen cyanide	High	Low	High	Low
2811.19 -- Other			Medium	Low

(Q) How to ensure effective Customs controls on CWC Chemicals while facilitating legitimate international trade?

(A) Useful Customs techniques :

Risk Management (WCO Risk Management Compendium)

Pre-Arrival Information

Post-Clearance Audit (PCA) (WCO Guideline for Post-Clearance Audit)

(Q) What are Merits of the PCA in ensuring effective Customs controls on CWC Chemicals while facilitating legitimate international trade?

(A) To gain better information on and understanding of client business with imported chemicals

Verification of the classification (identification), if analysis of sample at the clearance stage is difficult.

Summary

- **Practical Issues in Controlling Chemical Trade**
  - The HS is the most valuable tool for identifying and screening
  - Well-designed and effective classification practice (Advance Ruling) and well-organized classification infrastructure should be established
  - Risk Management, Pre-Arrival Information and Post-Clearance Audit can ensure effective Customs controls on CWC Chemicals while facilitating legitimate International Trade
  - New Subheadings for CWC Chemicals in 2017HS are useful to make Risk Assessment more effective
  - PCA is useful to gain information on client business and verification of the classification (= Identification)

Thank you for your attention