



**Train-the-Trainers Workshop on HCFC and HFC
Control**

United Nations Environment Programme

Risk Profiling and Inspection Technique

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Compliance Assistance Programme



Table of Contents

I . Why Risk Profiling?

II . Risk Indicators

III . Risk Profile Model

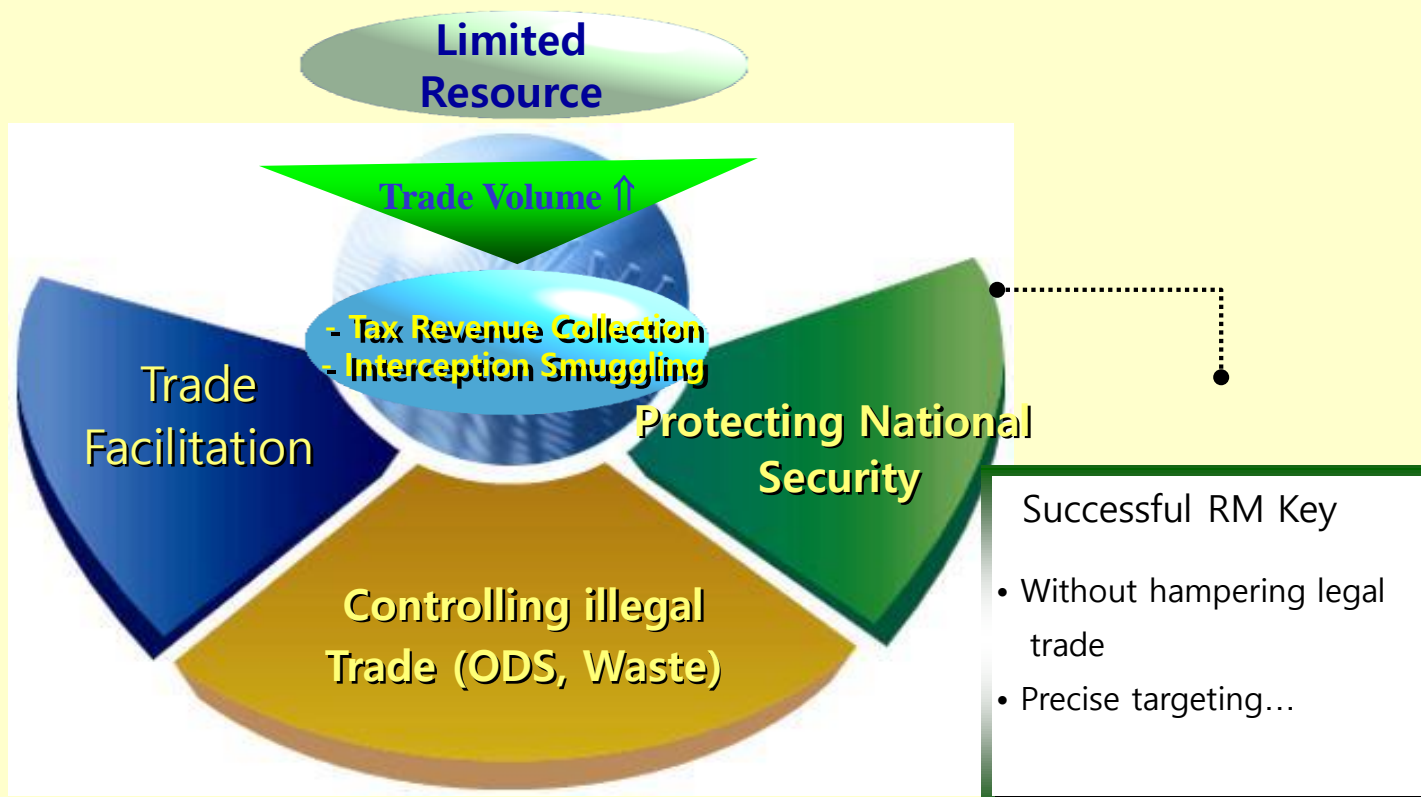
IV . Smuggling Methods

V . Labeling of ODS and HFCs

VI . Inspection Technique



I . Why Risk Profiling for Customs?





II . Risk Indicators

- What? ODS or Non-ODS: H.S codes
- Who? Licensed Im/exporter
- Where? ODS and HFC producing country
- How? Transport Route
- Why? Reasonable trade





Risk indicators

□ General perspective

- Routes
- Paperwork (chemical numbers and names consistent?)
- Shipments declared non-ODS from a producing country
- An unfamiliar supplying company
- Recycled ODS from a country without a recycling facility
- Blacklist/suspicious importers
- Blacklist/suspicious exporting companies (confidential)
- Tip-offs from industry/competitors
- New importers
- Changes in imported commodities following phase-out steps



Risk indicators

□ Indicators per trade phases

- Manifest analysis: Country or Origin, Port of Loading, T/S
Free Trade Zone, Route
↓
- Im/Export declaration: H.S vs. Trade Name, Supplier, Quantity
Supporting documents (Invoice, P/L, etc.)
Price(ODS vs. Non-ODS), License/permit
iPIC through National Ozone Officer
↓
- Inspection: Labeling of Cylinder and packaging(Chemical Name,
AHRI, ASHRAE Code), ODS identifier
↓
- Post Audit: Sales record, end-user, financial record, tip-off

H.S. Code 2017

CORROLATING THE 2017 VERSION TO THE 2012 OF THE HARMONIZED SYSTEM

	2017	2012	Chemical Name	Substance
HCFCs	2903.71.00	2903.71.00	CHLORODIFLUOROMETHANES	HCFC-22
	2903.72.00	2903.72.00	DICHLOROTRIFLUOROETHANES	HCFC-123
	2903.73.00	2903.73.00	DICHLOROFLUOROETHANES	HCFC-141B
	2903.74.00	2903.74.00	CHLORODIFLUOROETHANES	HCFC-142B
	2903.75.00	2903.75.00	DICHLOROPENTFLUOROPROPANES	HCFC-225
	2903.76.00	2903.76.00	BROMOCHLORODIFLUOROMETHANE	HALON 1211
HALONs			BROMOTRIFLUOROMETHANE	HALON 1301
			DIBROMOTETRFLUOROETHANE	HALON 2402
	2903.77.00	2903.77.00	Other perhalogenated only with fluorine and chlorined	
	2903.78.00	2903.78.00	Other perhalogenated derivatives	
MBr	2903.39.10	2903.39.10	METHYL BROMIDE	MBr
HFCs	2903.39.90	2903.39.90	Halogenated derivatives of acrylic hydrocarbons containing two or more halogens	HFCs

CFCs

CFCs TARIFF HEADING IS NO LONGER SPECIFIED IN THE YEAR 2017 HARMONIZED SYSTEM





Mixtures of HCFCs & HFCs

2017	2012	DESCRIPTION
3824.74	3824.74	Containing hydrochlorofluorocarbons (HCFCs), whether or not containing perfluorocarbons (PFCs) or hydrofluorocarbons (HFCs) but not containing CFCs
3824.74.90	3824.74.90	OTHER
3824.78.00	3824.78.00	Containing perfluorocarbons (PFCs) or hydrofluorocarbons (HFCs), but not containing chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs)

- It is unlikely that any CFC will ever be imported as it is being phased-out internationally



H.S. for ODS-based Equipment

Air conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity, including those machines in which the humidity cannot be separately regulated		
8415.10	Window or wall types, self-contained or "split system"	Domestic or small air conditioner
8415.20	Of a kind used for person in motor vehicles	Car or truck air conditioner
8415.81	Other: incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle	Reversible heat pump
8415.82	Other: incorporating a refrigerating unit	Air conditioner with a refrigerating unit
8415.83	Other: not incorporating a refrigerating unit	
8415.90	Parts	Spare parts for an air conditioner



H.S. Code for Refrigerators

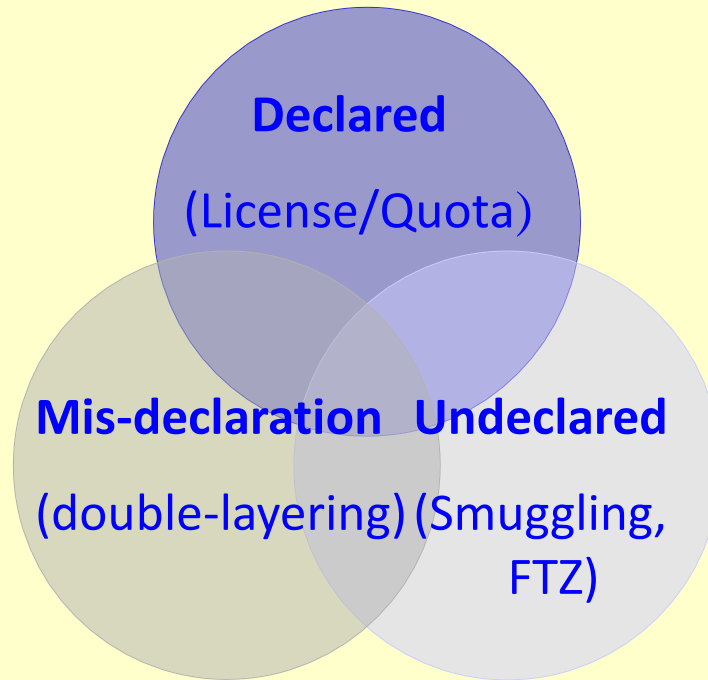
Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading 8415		
8418.10	Combined refrigerator-freezers, fitted with separate external doors	Domestic refrigerators with freezers
8418.21	Refrigerators, household type: Compression-type	Domestic refrigerators
8418.29	Refrigerators, household type: Other	Domestic refrigerators
8418.30	Freezers of the chest type, not exceeding 800L capacity	Chest freezer (800 L or less)
8418.40	Freezers of the upright type, not exceeding 900L capacity	Upright freezer (900L or less)
8418.50	Other furniture (chests, cabinets, display counters, show-cases and the like) for storage and display, incorporating refrigerating or freezing equipment	Commercial refrigerators and chillers
8418.61	Other refrigerating or freezing equipment; heat pumps: heat pumps other than air conditioning machines of heading 8415	Heat pumps
8418.69	Other refrigerating or freezing equipment; heat pumps: other	Heat pumps
8418.91	Parts: furniture designed to receive refrigerating or freezing equipment	Spare parts for refrigerators or freezers
8418.99	Parts: other	Spare parts others






III. How to conduct risk profiling(1)

□ Types of illegal Trade





How to conduct risk profiling(1)

□ Collection of indicators per trade types

◆ Declared ODS entry


License/Permit, iPIC, Communication with NOO, Quantity, Quota,
Price check of ODS(HCFC) : Non-ODS(HFC)

◆ Mis-declaration

Supplier/Importer analysis, Trade record, Price, HS-trade name,
Cylinder marking and packaging(R-22, R-134a), ODS identifier
What else?

◆ Undeclared (double-layering and concealment)

X-ray scanning, Physical inspection, Supplier/Importer analysis,
What else? Post Clearance Activities?



How to conduct risk profiling(2)

❑ Systematic approach

Program
Method

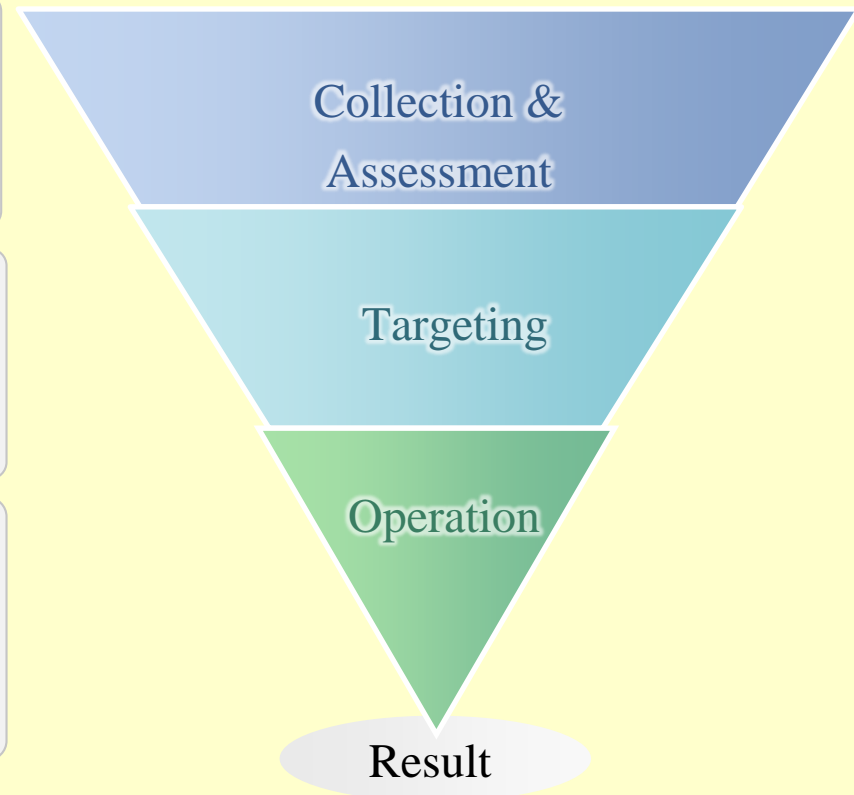
- Programming of Risk Indicator

Rule
Base

- Combination of Risk Indicators

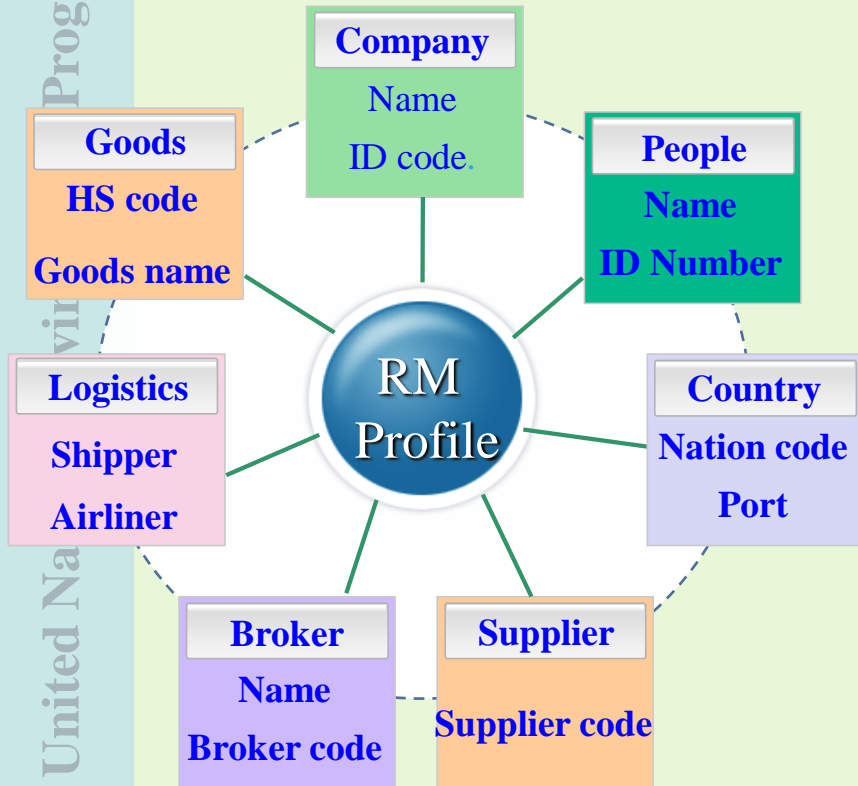
Data
Mining

- Making use of Data warehouse
- Risk Modelling



How to conduct risk profiling(3)

Profile Integration



Monitoring in real time

Drastic fluctuation



Suspicious transaction



High risk Traveler

연월일	이름	ID	위험도
2009-01-01	김민준	1234567890	High
2009-01-02	이준호	2345678901	High
2009-01-03	박지민	3456789012	High
2009-01-04	정민준	4567890123	High
2009-01-05	최민준	5678901234	High
2009-01-06	한민준	6789012345	High
2009-01-07	정민준	7890123456	High
2009-01-08	최민준	8901234567	High
2009-01-09	한민준	9012345678	High
2009-01-10	정민준	0123456789	High

Import/Export

Money Flowing

In & Out People

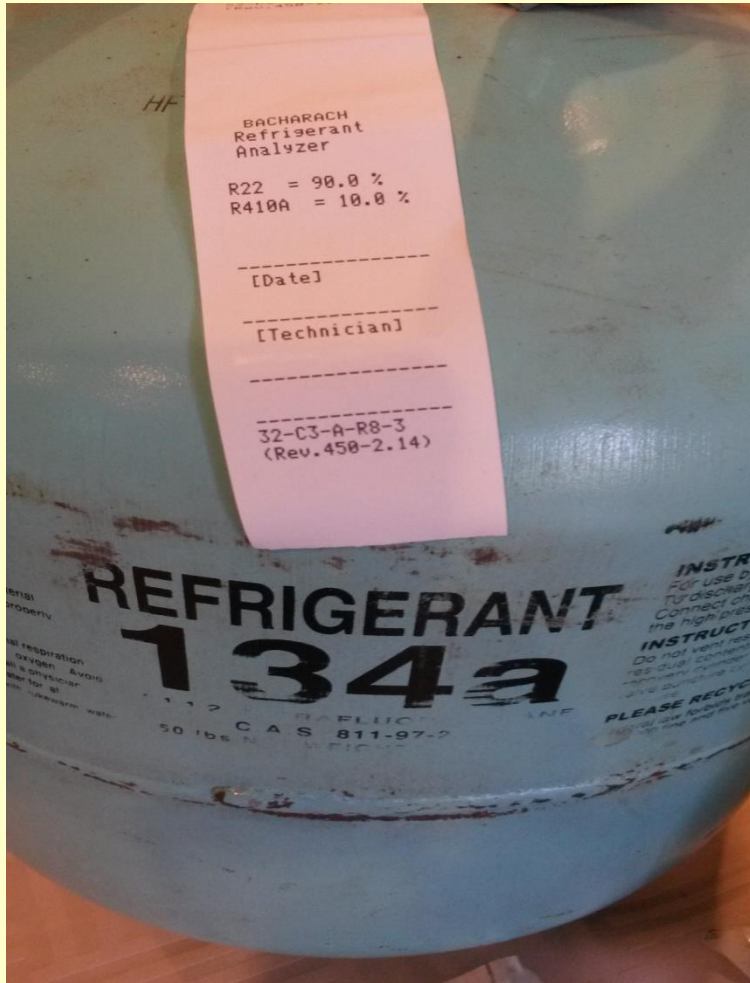
Express cargo

Legitimacy


연월일	이름	ID	합법성
2009-01-01	김민준	1234567890	High
2009-01-02	이준호	2345678901	High
2009-01-03	박지민	3456789012	High
2009-01-04	정민준	4567890123	High
2009-01-05	최민준	5678901234	High
2009-01-06	한민준	6789012345	High
2009-01-07	정민준	7890123456	High
2009-01-08	최민준	8901234567	High
2009-01-09	한민준	9012345678	High
2009-01-10	정민준	0123456789	High



IV. Smuggling methods

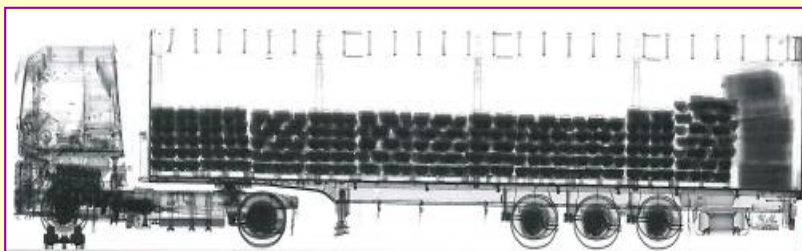


- ❑ False labeling
 - Disguised ODS(R-22) to Non-ODS(R-134a)
 - Because R-134a is not a controlled ODS



Smuggling methods

❑ Double-layering



Smuggling methods

❑ Mis-declaration

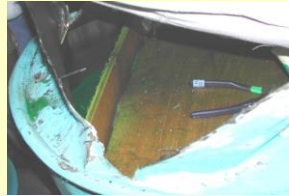


- ODS(R-22) Mis-declared as Orange
- Risk analysis by comparing weight

CFC CYLINDERS IN AN OIL DRUM



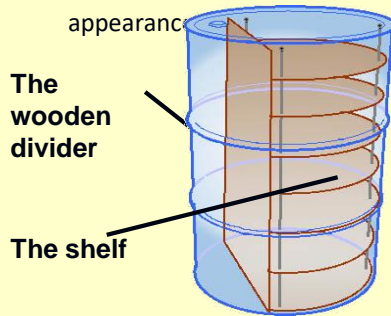
An oil drum with no unusual appearance



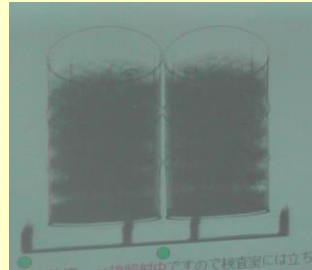
Cut and opened top part of the oil drum



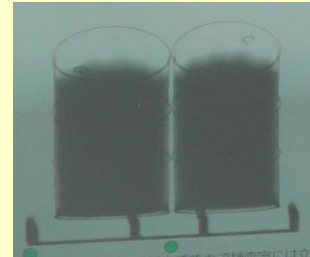
The top shelf was taken off, and then cylinders were



Aspect of concealment re-created after cutting vertically the oil drum



Oil drums containing cylinders



Oil drums containing antifreeze only





Smuggling methods

❑ Concealment





V . Labeling of ODS



Trade & chemical names

- Trade names
 - The names companies give their products, e.g. Brom O Gas
 - See Annex B of UNEP's Customs Training Manual
- Chemical names
 - Different names and formulas can be used
 - Chemical names, e.g. methyl chloroform or 1,1,1-trichlorethane
 - See Annex B of UNEP's Customs Training Manual





Numbers



ASHRAE & UN numbers

- ASHRAE number
 - American Society of Heating, Refrigerating, & Air-conditioning Engineers
 - Letter R (for refrigerant) + Number designation for refrigerants based on their chemical structure, e.g. R-12
- UN number
 - United Nations Substance Identification Number (UNSI or UN number)
 - A four digit international standard number which identifies a particular chemical or group of chemicals, e.g. CFC-12's UN number is 1028

See Customs Quick Reference Tool for details





Numbers



CAS numbers

- CAS number
 - Chemical Abstract Service number to identify a chemical. The CAS number contains from 5 to 9 digits separated into three groups by hyphens.
 - The first group, starting from the left, has up to 6 digits;
 - The second group always has 2 digits; the third group always has 1 digit.
 - The CAS number is specific for single chemicals and for some mixtures, e.g. CFC-12 is 75-71-8

[See Customs Quick Reference Tool for more details](#)





VI. How to inspect ODS

ASHRAE No. ←

Chemical Name ←

CAS No. ←

UN No. ←

→ Chemical Formula

→ GHS Symbol

→ Hazard Class

→ AHRI Colour



ODS Cylinder

Same labeling?



Re-Painting



False labeling

Counterfeit ODS – frequently found in West-Asia and other regions



Above: A counterfeit R-134a cylinder. Note the incorrect spelling of Honeywell's *Genetron* brand name



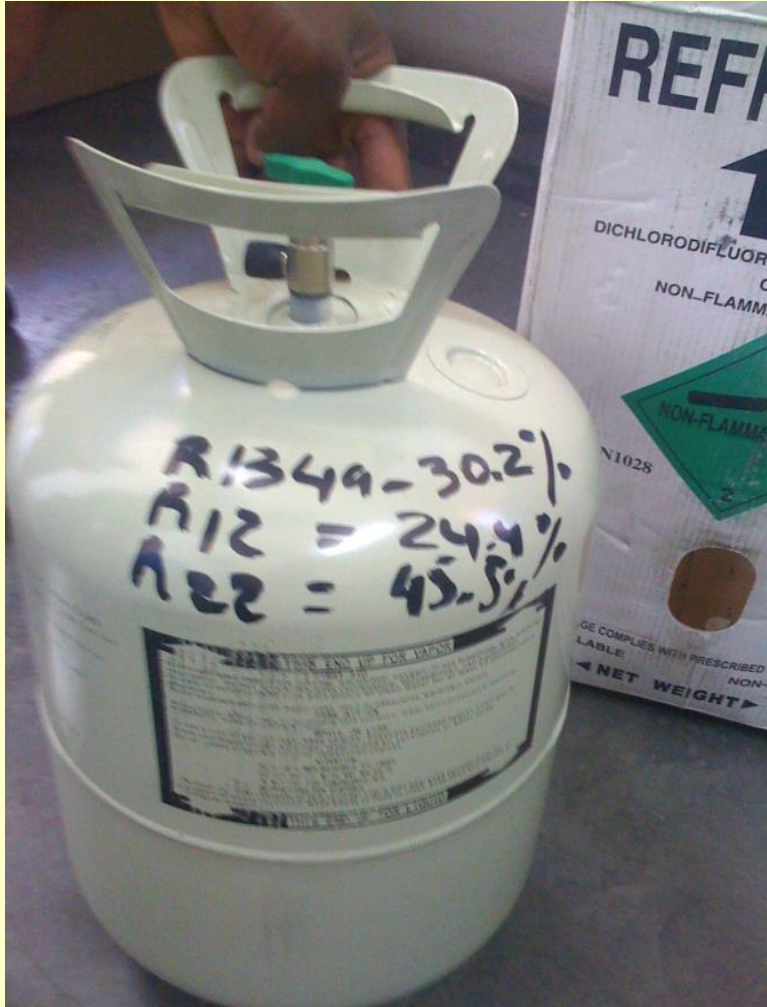
False labeling



Above: CFC-12 in a counterfeit R-134a cylinder. Note the incorrect spelling of Honeywell's *Genetron* brand name



Contaminated mixtures



Contaminated mixture
labelled as R-134a

These have appeared in
many countries...





How to inspect ODS

- Check misspellings and inconsistencies on the cylinder, packaging and documents
- Check if the cylinder been painted or tampered
- Check the manufacture date is consistent with the paperwork
- Sampling and testing either by refrigerant identifier or laboratory



ODS identifier





Example of Results

Neutronics, Inc.
Refrigerant
Identifier

R134a = 100.0%
R12 = 0.0%
R22 = 0.0%
HC = 0.0%
AIR = 2.8%

Tested R134a....
Conclusion:
R134a: PASS<<<

(Date)

(Technician)

Analyze
(% Weight)

Neutronics, Inc.
Refrigerant
Identifier

R134a = 92.7%
R12 = 7.3%
R22 = 0.0%
HC = 0.0%

Tested R134a....
Conclusion:
R134a: FAIL<<<
Possible Blend:
FREEZE 12,
FREE ZONE, or
RB-276

(Date)

(Technician)

What if ISO Tank Container?





CUSTOMS CHECKLIST

- ✓ Compare the packing list, bill of entry, & the country of origin to ensure they match.
- ✓ Ensure the customs code on the entry matches the description on the invoice.
- ✓ Compare the invoice & the bill of lading to the outward bound ships manifest.
- ✓ Verify the country of origin. Is the country a party to the Montreal Protocol & its Amendments?
- ✓ Verify that the importer & place of business actually exist.
- ✓ Contact the licensing agency to verify that the importer is licensed to import that specific material.
- ✓ Note the quantity, source, & destination of the ODS. These will serve as important clues that may provide indicators to prohibit illegal importations.
- ✓ Verify that the container number actually exists. Fictitious container numbers are a sign of illegal trade.
- ✓ Review all the necessary documents, if something doesn't match, it may be an illegal shipment.
- ✓ Inspect the merchandise.
- ✓ Check packaging, size, & shape and label on container.
- ✓ Identify the name & description of the chemical, which should match ALL paperwork.
- ✓ Seize the material if the importer does not have the import/export licence.
- ✓ Coordinate this seizure with the customs officer, environment agency, & the prosecution agency. Anyone involved with the seizure may be called to testify in court, so take good notes.





Customs Quick Tool Screening ODS

A good Tool for ODS detections
(Attachments)

WCO e-learning tool (Clikc)

<http://clikc.wcoomd.org/>





Thank you for your attention

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