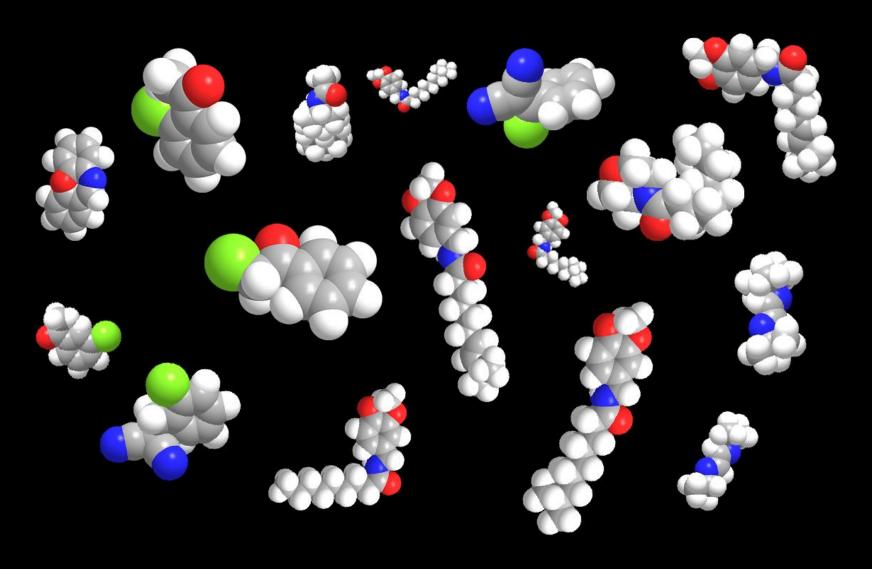# What Defines a Riot Control Agent?

Any chemical not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure.
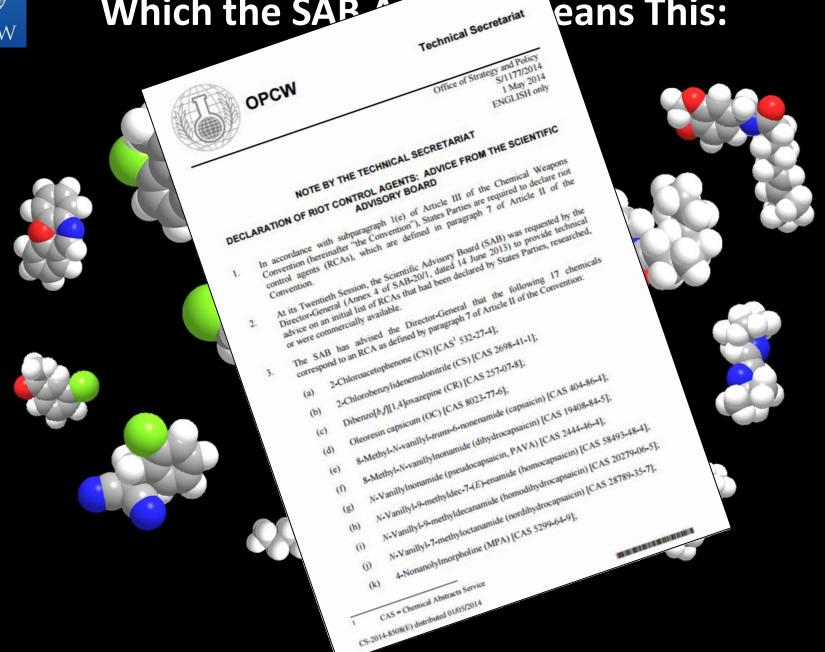*(Article II, paragraph 7)*

OPCW

Technical Secretariat

Office of Strategy and Policy
S/1177/2014
1 May 2014
ENGLISH only

NOTE BY THE TECHNICAL SECRETARIAT

DECLARATION OF RIOT CONTROL AGENTS: ADVICE FROM THE SCIENTIFIC ADVISORY BOARD

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2. At its Twentieth Session, the Scientific Advisory Board (SAB) was requested by the Director-General (Annex 4 of SAB-20/1, dated 14 June 2013) to provide technical advice on an initial list of RCAs that had been declared by States Parties, researched, or were commercially available.

3. The SAB has advised the Director-General that the following 17 chemicals correspond to an RCA as defined by paragraph 7 of Article II of the Convention:

    (a) 2-Chloroacetophenone (CN) [CAS¹ 532-27-4];

    (b) 2-Chlorobenzylidenemalonitrile (CS) [CAS 2698-41-1];

    (c) Dibenzo[b,f][1,4]oxazepine (CR) [CAS 257-07-8];

    (d) Oleoresin capsicum (OC) [CAS 8023-77-6];

    (e) 8-Methyl-N-vanillyl-trans-6-nonenamide (capsaicin) [CAS 404-86-4];

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    (g) N-Vanillylnonamide (pseudocapsaicin, PAVA) [CAS 2444-46-4];

    (h) N-Vanillyl-9-methyldec-7-(E)-enamide (homocapsaicin) [CAS 58493-48-4];

    (i) N-Vanillyl-9-methyldecanamide (homodihydrocapsaicin) [CAS 20279-06-5];

    (j) N-Vanillyl-7-methyloctanamide (nordihydrocapsaicin) [CAS 28789-35-7];

    (k) 4-Nonanolylmorpholine (MPA) [CAS 5299-64-9];

¹ CAS = Chemical Abstracts Service

CS-2014-8508(E) distributed 01/05/2014

A Hands-On Science Lesson

A Hands-On Science Lesson

A Hands-On Science Lesson

Image from TOMOSTYLE

A Hands-On Science Lesson

Science for Diplomats at EC-84
What Defines a Riot Control Agent?

Data Collection Sheet (circle your answer)

No.	Countermeasure Before	Impact (discomfort)	Persistence (duration)	Countermeasure After	Identity*
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	

*prize available for the highest number of correctly identified samples

OPCW

How This Works

How This Works

Science for Diplomats at EC-84
What Defines a Riot Control Agent?

Data Collection Sheet (circle your answer)

No.	Countermeasure Before	Impact (discomfort)	Persistence (duration)	Countermeasure After	Identity*
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
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	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none			Ice cream/water/none	
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10		
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10		
	Ice cream/water/none	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10		

*prize available for the highest number of correctly identified samples

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How This Works

SCOVILLE UNITS

NO HEAT		MILD			HOT			VERY HOT		EXTREMELY HOT	
0 - 100	100 - 1,000	1,000 - 1,500	1,500 - 2,500	2,500 - 5,000	5,000 - 15,000	15,000 - 30,000	30,000 - 50,000	50,000 - 100,000	100,000 - 350,000	350,000 - 855,000	855,000 - 2,100,000
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**10+**
Sweet Bells, Sweet Banana, Pimento	Mexi-Bells, Cherry, New Mexica, New Mexico, Anaheim, Big Jim	Ancho, Pasilla, Espanola, Anaheim	Sandia, Cascabel	Jalapeno, Mirasol, Chipotle, Poblano	Yellow Wax, Serrano	Chile De Arbol	Aji, Cayenne, Tabasco, Piquin	Santaka, Chiltecpin, Thai	Habanero, Scotch Bonnet	Red Savina Habanero, Indian Tezpur	Ghost Pepper (Naga), Trinidad Moruga, Scorpion

Scoville Scale Only Applies to Peppers...

source:http://www.peri-peristore.com/index.php/scoville/

*prize available for the highest number of correctly identified samples

1

A — A1
B
C
D
E
F
G
H

Presentation by
Dr Christopher Timperley

Which the SAB Advises Means This:

Technical Secretariat

OPCW

Office of Strategy and Policy
S/1177/2014
1 May 2014
ENGLISH only

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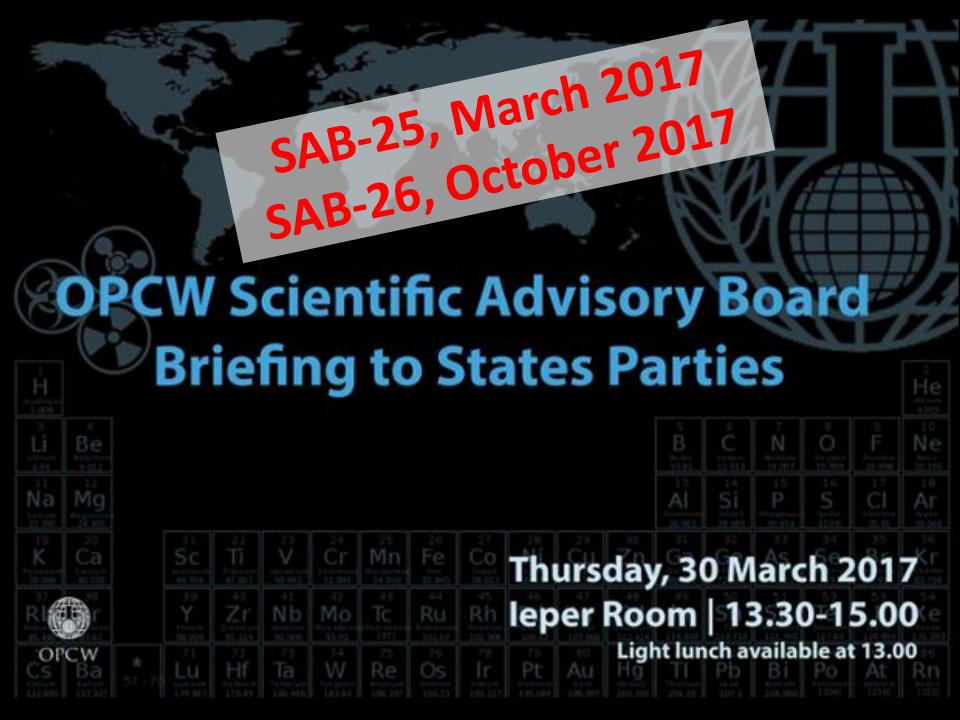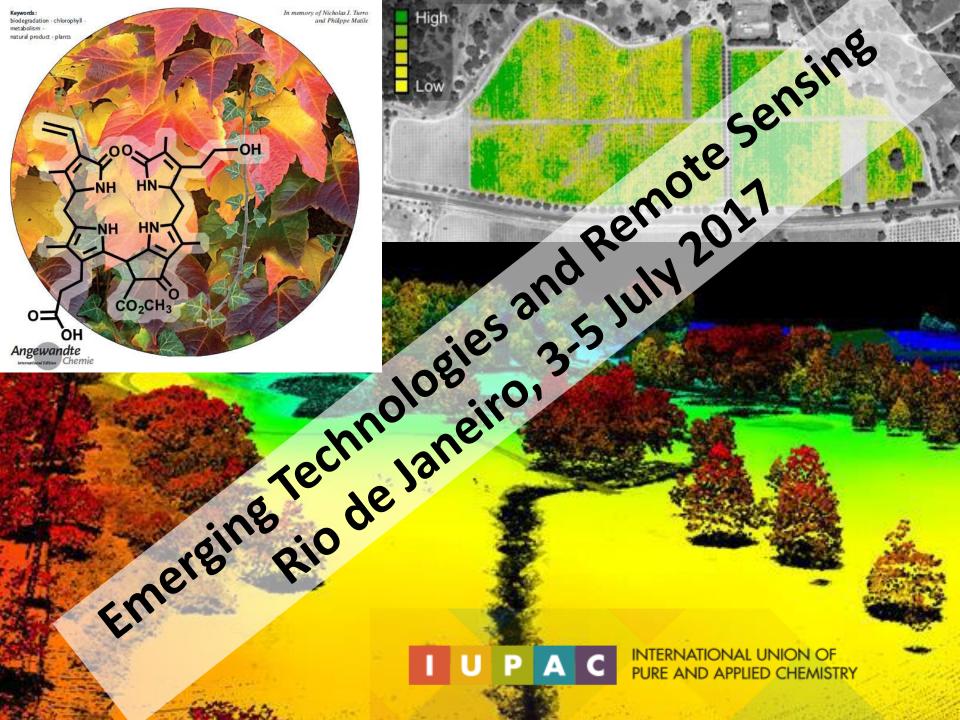
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CS-2014-8508(E) distributed 01/05/2014

Full data set to be updated and published for SAB-25

Emerging Technologies and Remote Sensing
Rio de Janeiro, 3-5 July 2017

Trends in Industrial Chemical Production
Zagreb, September 2017 (TBC)

OPCW Science and Technology Resources

- Chemical Weapons Convention
- S&T Monitor
- Fact Sheets
- Science & Technology Resources
- Resources for Students and Teachers
- Science for Diplomats
- Director-General Speeches
- Capacity Building Programmes
- The Hague Ethical Guidelines
- OPCW Today
- Scientific Advisory Board
- Social Media

https://www.opcw.org/special-sections/science-technology/science-technology-resources/

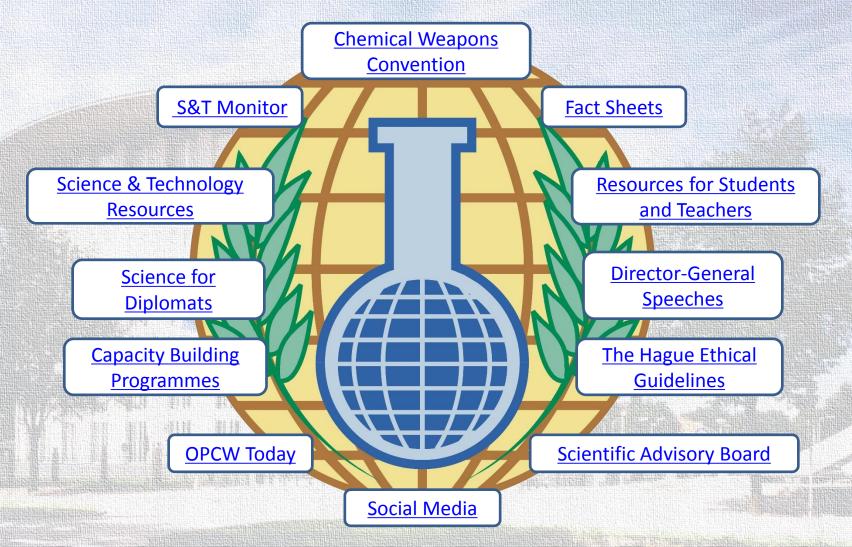# OPCW Science and Technology Resources

https://www.opcw.org/special-sections/science-technology/science-technology-resources/