Another way to answer the question! Practial question two

- Secondary materials = bibliographic databases – developed to match the increased volume of primary materials = journal articles.
  - **TOXNET - collection of free databases**
  - Toxline – public
  - Medline – public
  - CISDOC – public

  - Biosis -- commercial
  - Embase – commercial
  - Chemical Abstracts – commercial
  - Web of Science – commercial

Toxnet: site is one of the most useful sites for toxicity information. The most helpful sections are generally the HSDB (Hazardous Substances Databank) and Toxline (abstracts from various documents) sections.

Practical question two

- "You work as an occupational physician for a specialized cleaning firm. They use cleaning agents that contain chloramine-T. After various reports of employees with asthma the firm asks your help in formulating a preventive policy.
-
- Specifically, they want to know if it is legally allowed to use chloramine-T and what are its TLV's. In addition they want to know what kind of interventions are most effective in decreasing the exposure of employees to the chemical".

Search strategy: Analysis of information needs

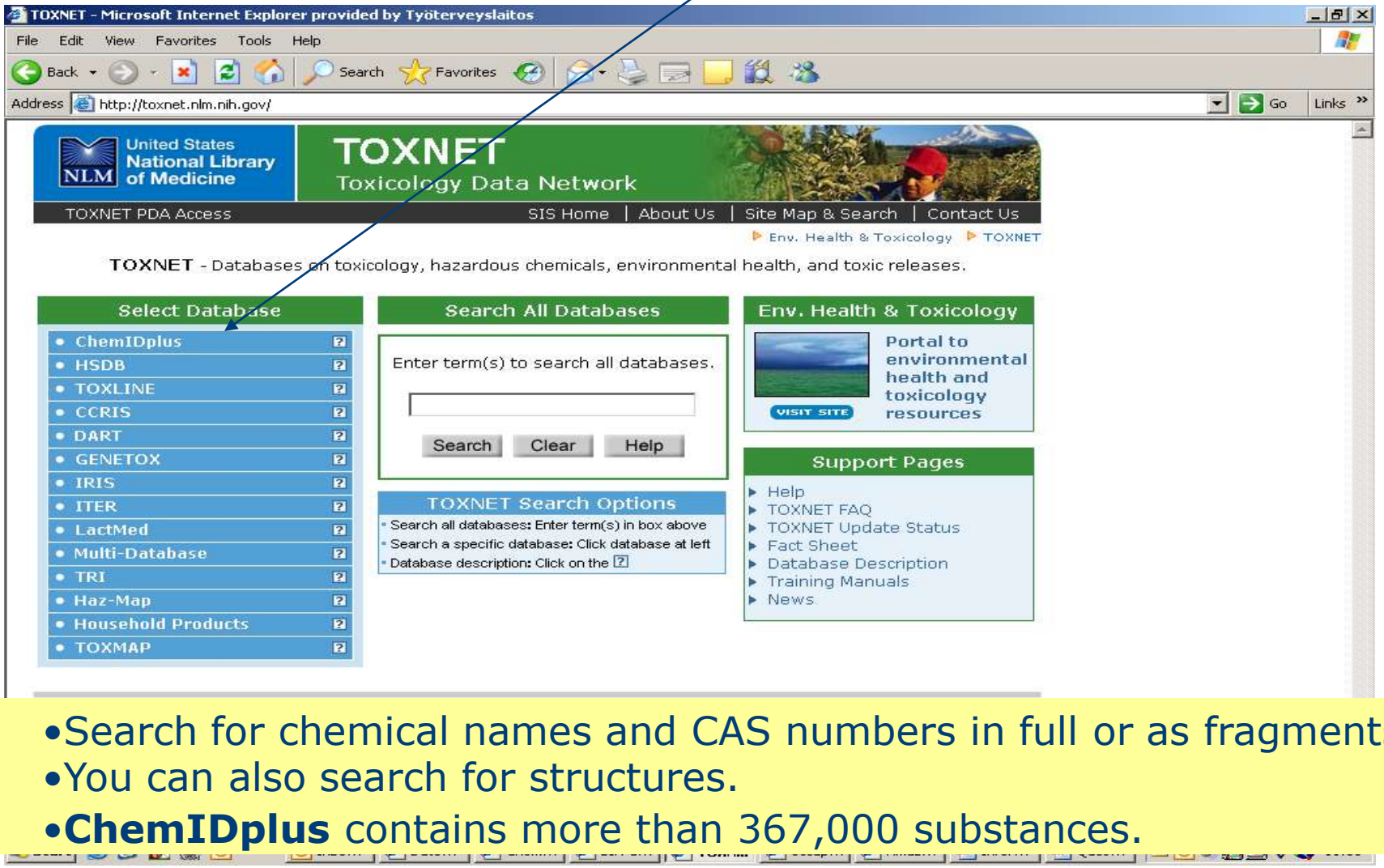
- Name and identity of chemical, right name!!!
- Toxicological profile: Information on the substance.
- Information on health effects
- Legal information
- Scientific information => reviews, interventions and prevention measures etc.
- Assessment of information found to use it for risk assessment, evaluation, protection, prevention guidelines etc.

Search strategy: Name and identity of the chemical

- **CAS number**
  - the substance´s unique number

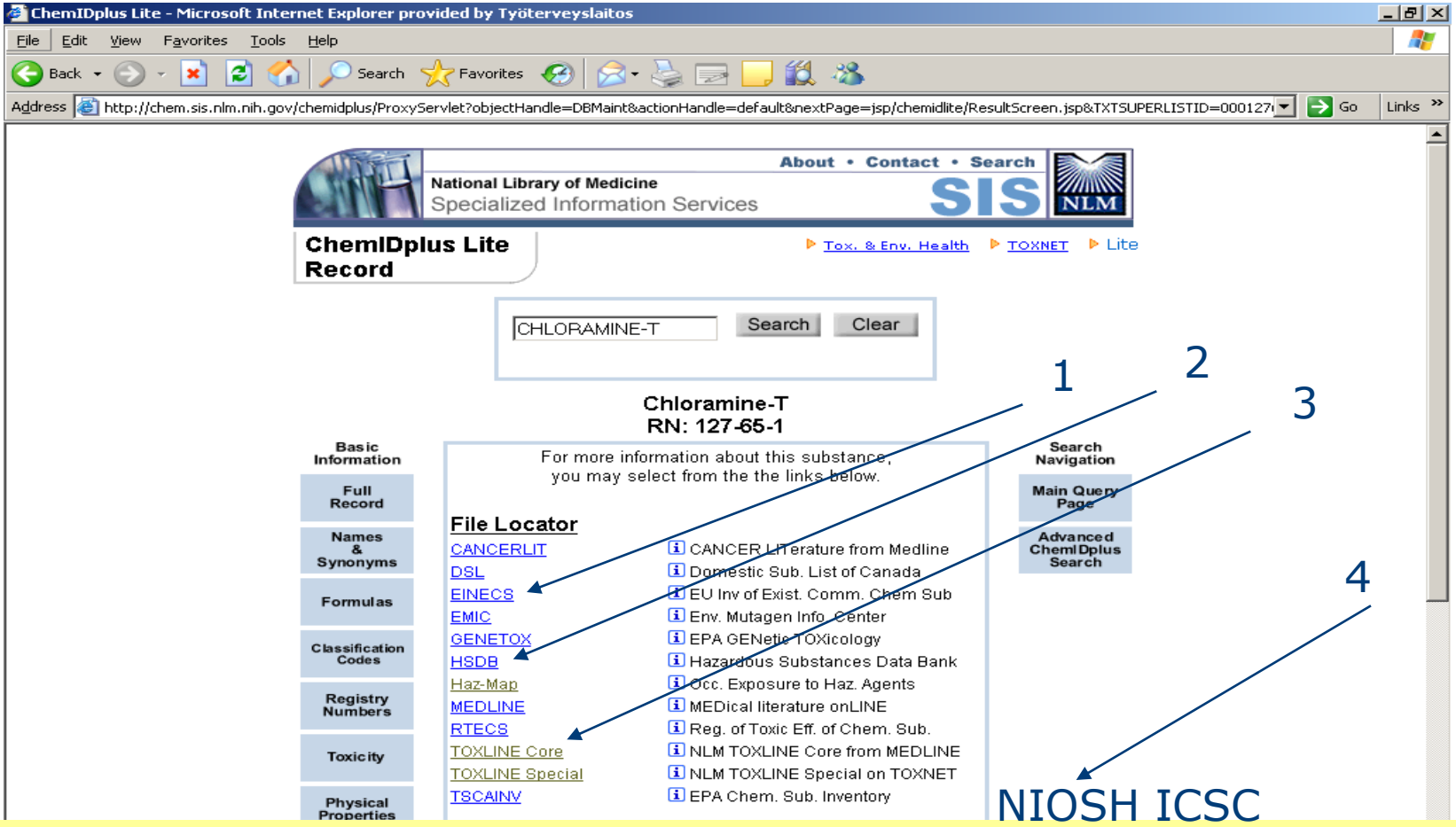
- **Go to Toxnet**
  - **can be found from PubMed pages : www.pubmed.gov**
  - **or toxnet.nlm.nih.gov**

Search strategy: In TOXNET click ChemIDplus



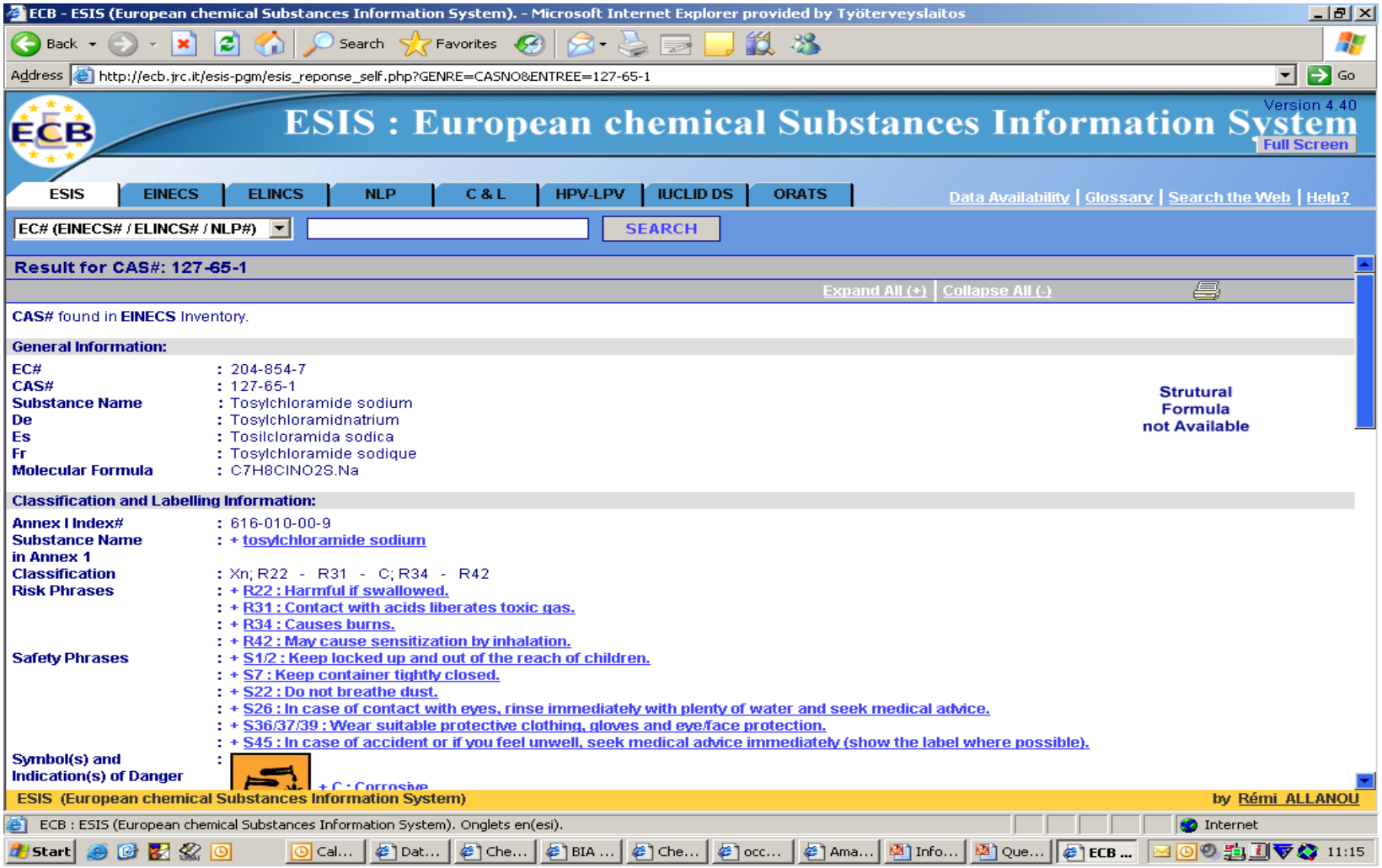
- Search for chemical names and CAS numbers in full or as fragments.
- You can also search for structures.
- **ChemIDplus** contains more than 367,000 substances.

Search strategy: In ChemIDplus type CHLORAMINE-T and search and get the following results =>

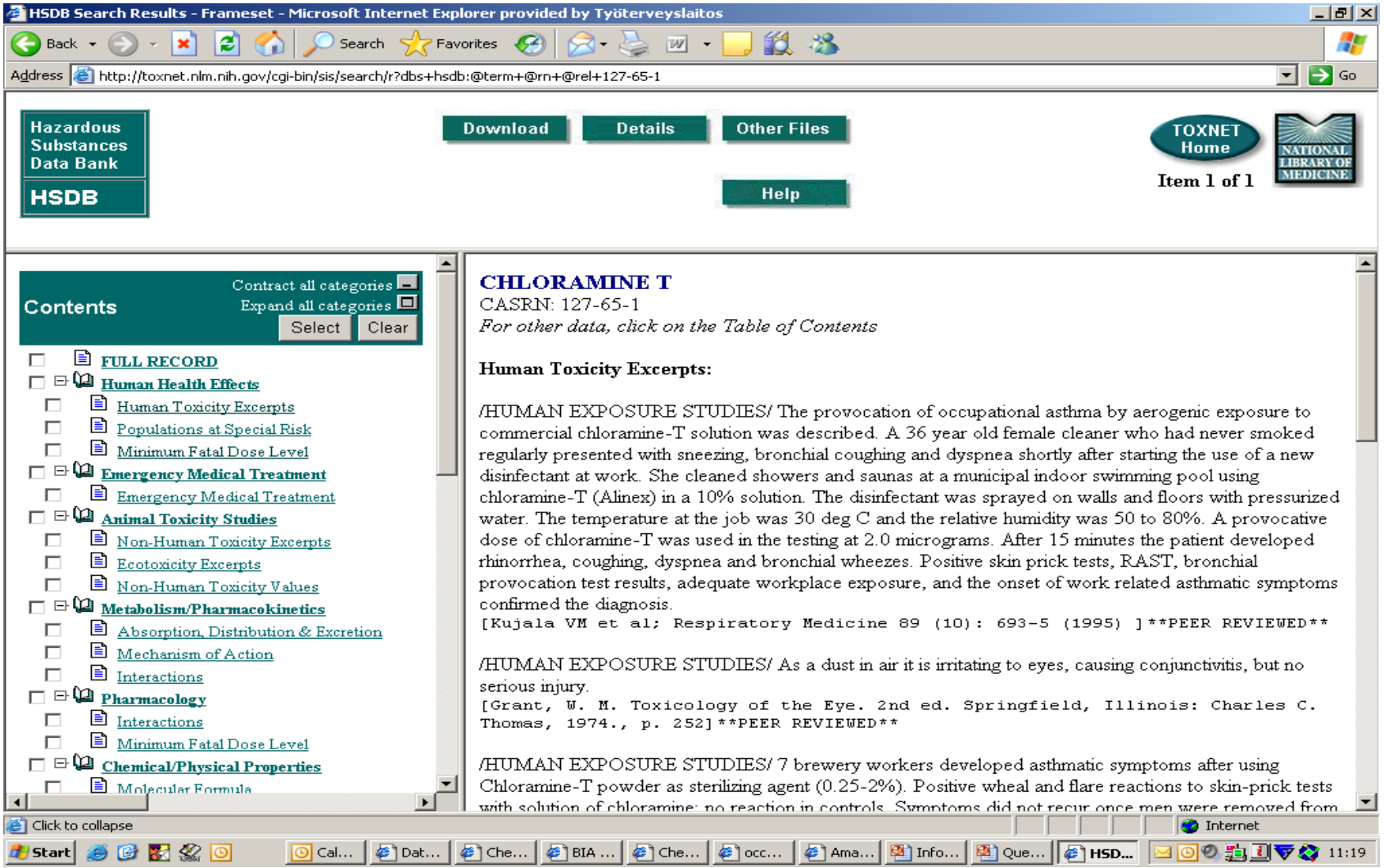


- Search results include information on nomenclature, structure and references to other databases.

Search strategy: From ChemIDplus go to EINECS etc

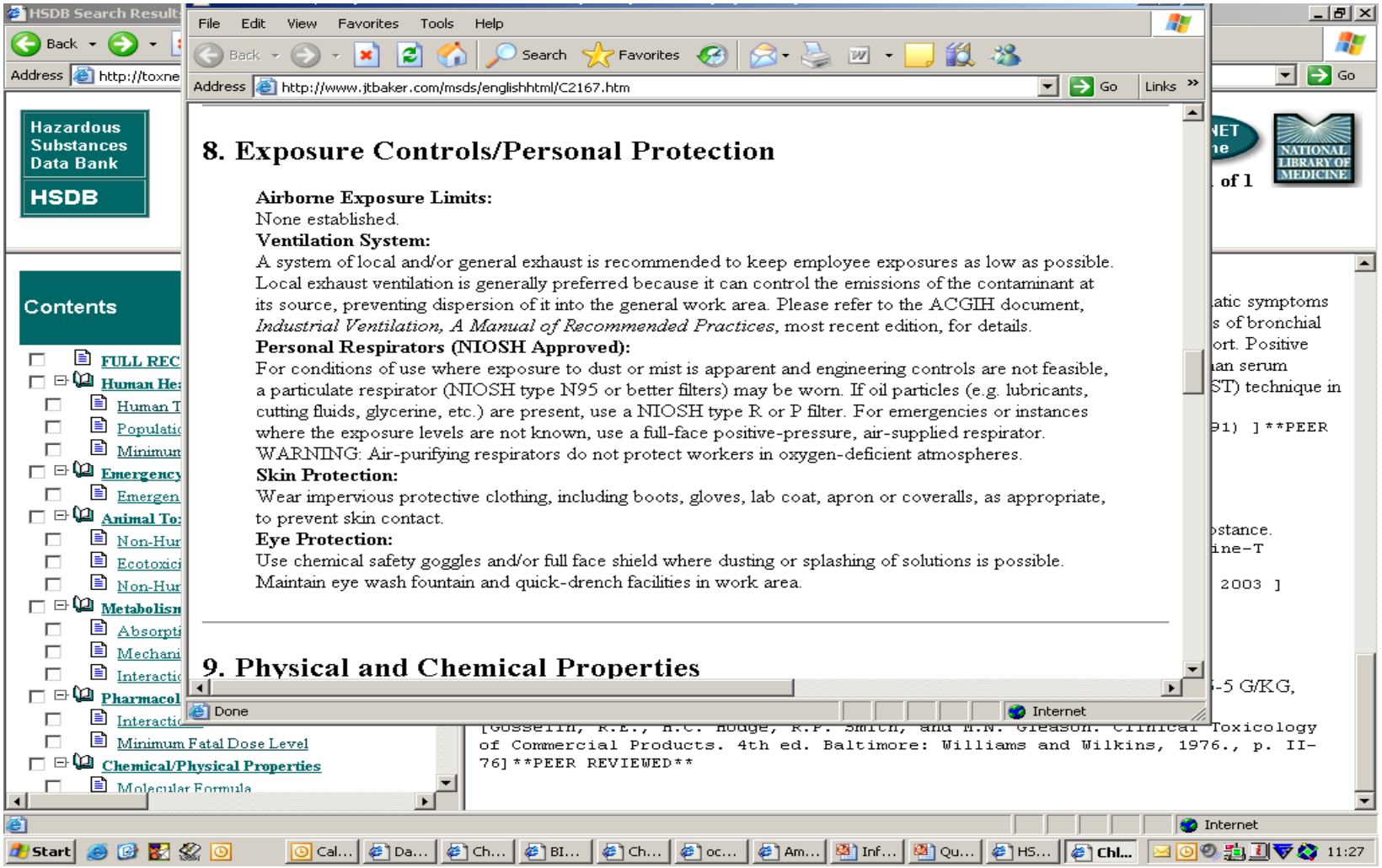


Search strategy: From ChemIDplus go to HSDB

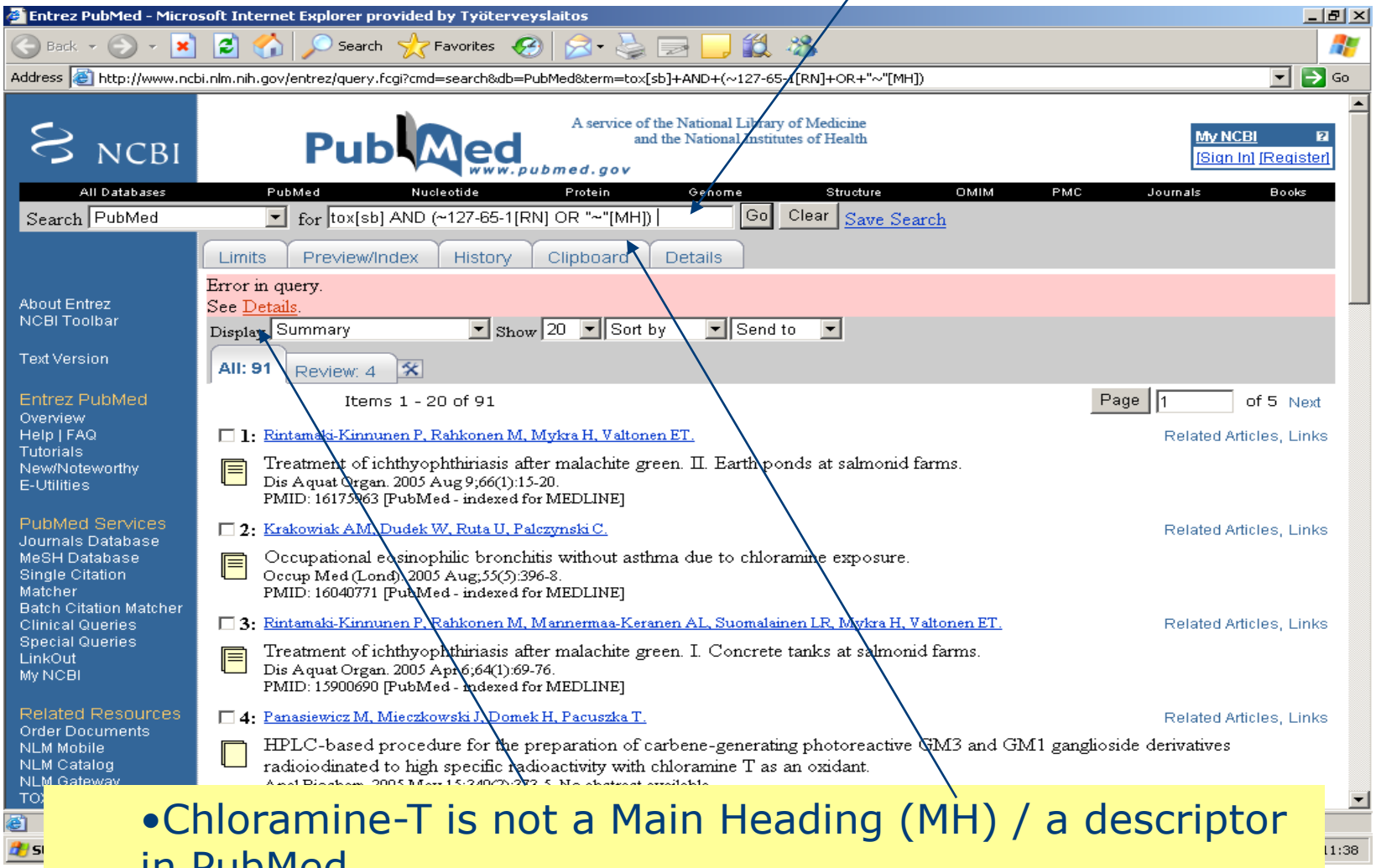


Search strategy: From HSDB go to human health effects in another site

http://www.jtbaker.com/msds/englishhtml/C2167.htm

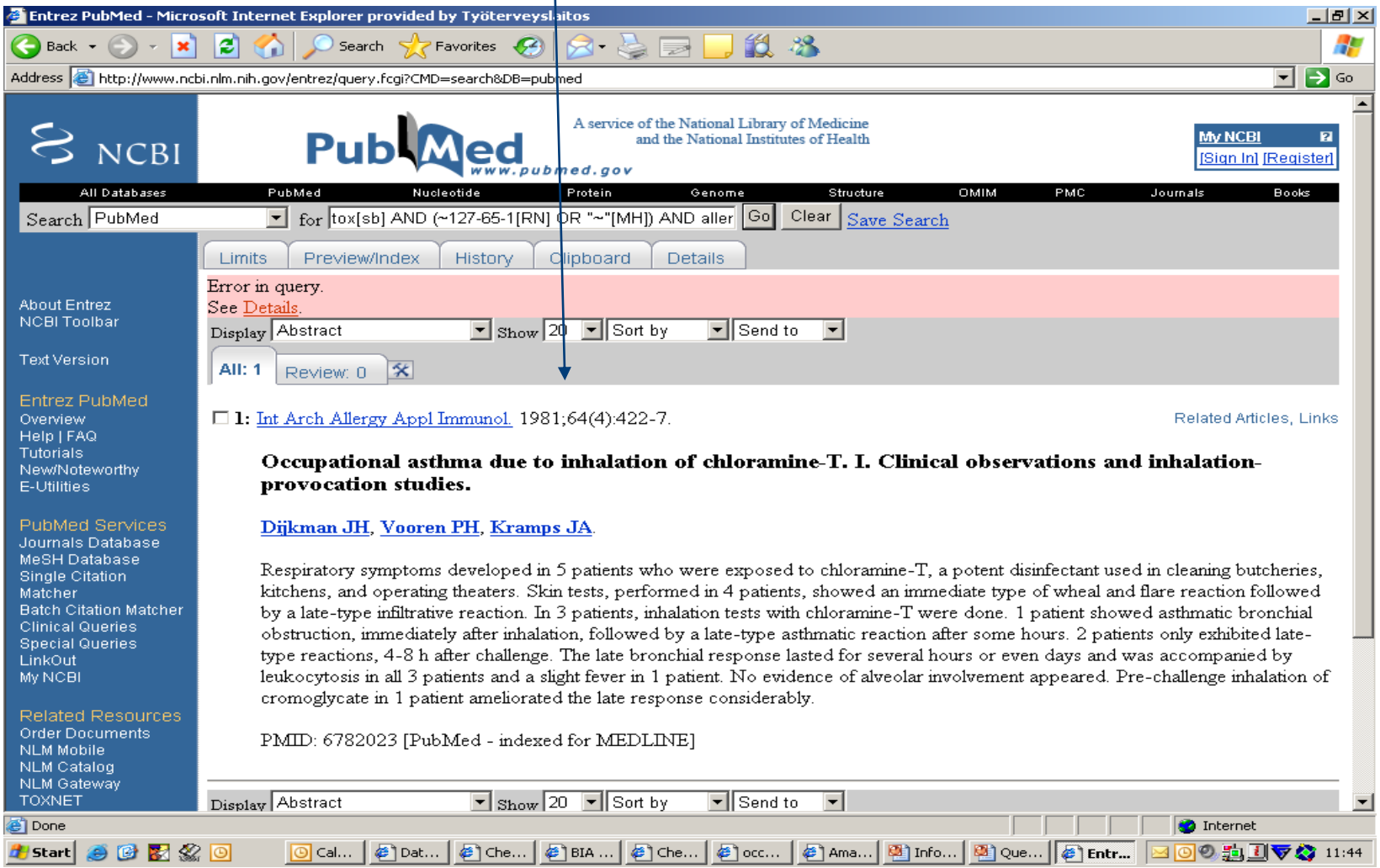


Search strategy: From ChemIDplus to Toxline core. You can continue the automatically processed search by adding your own terms



- Chloramine-T is not a Main Heading (MH) / a descriptor in PubMed.

Search strategy: When adding : AND allergy AND cleaning, you get

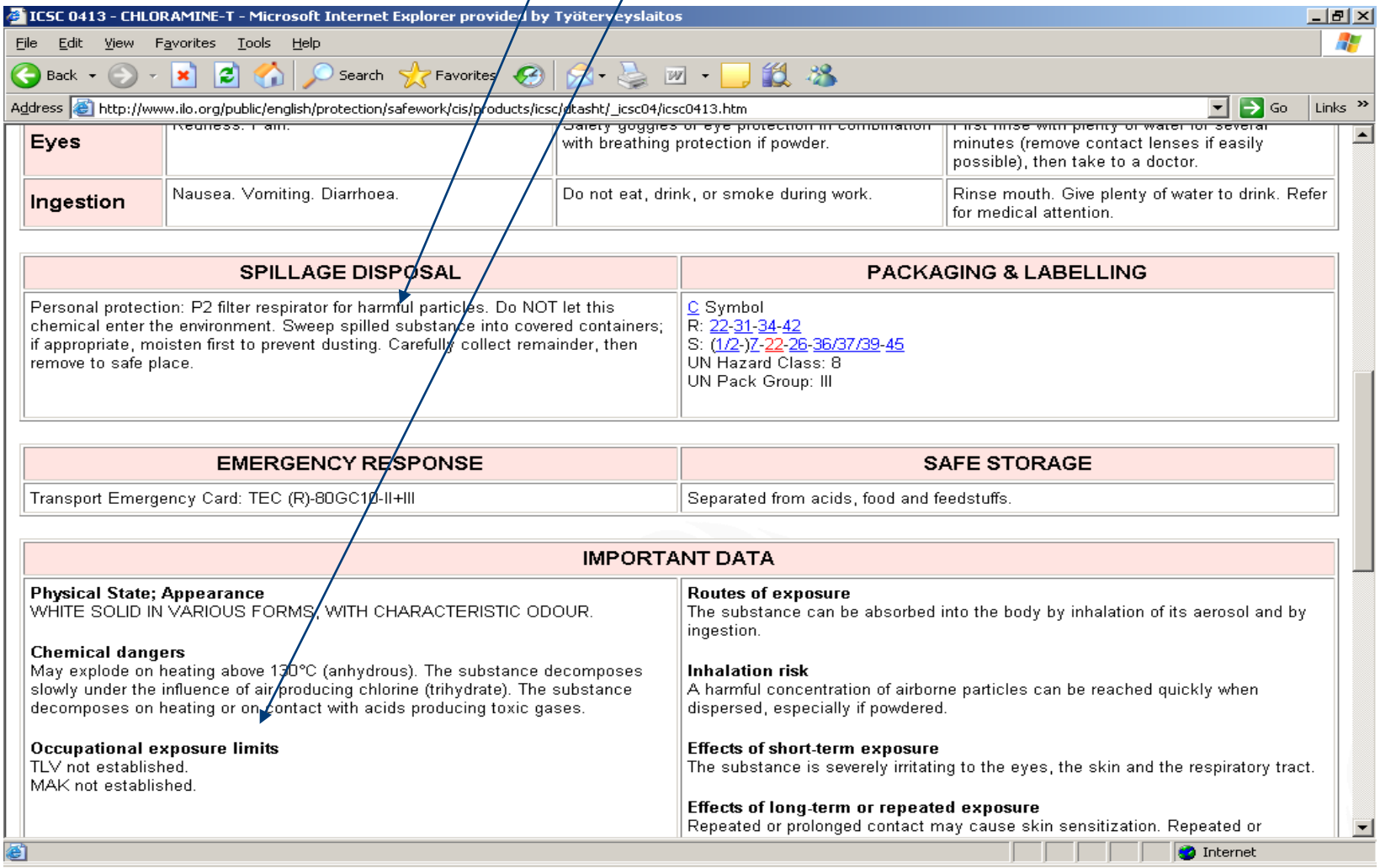


Search strategy: When removing previous terms on slide 36 and adding : AND regulations

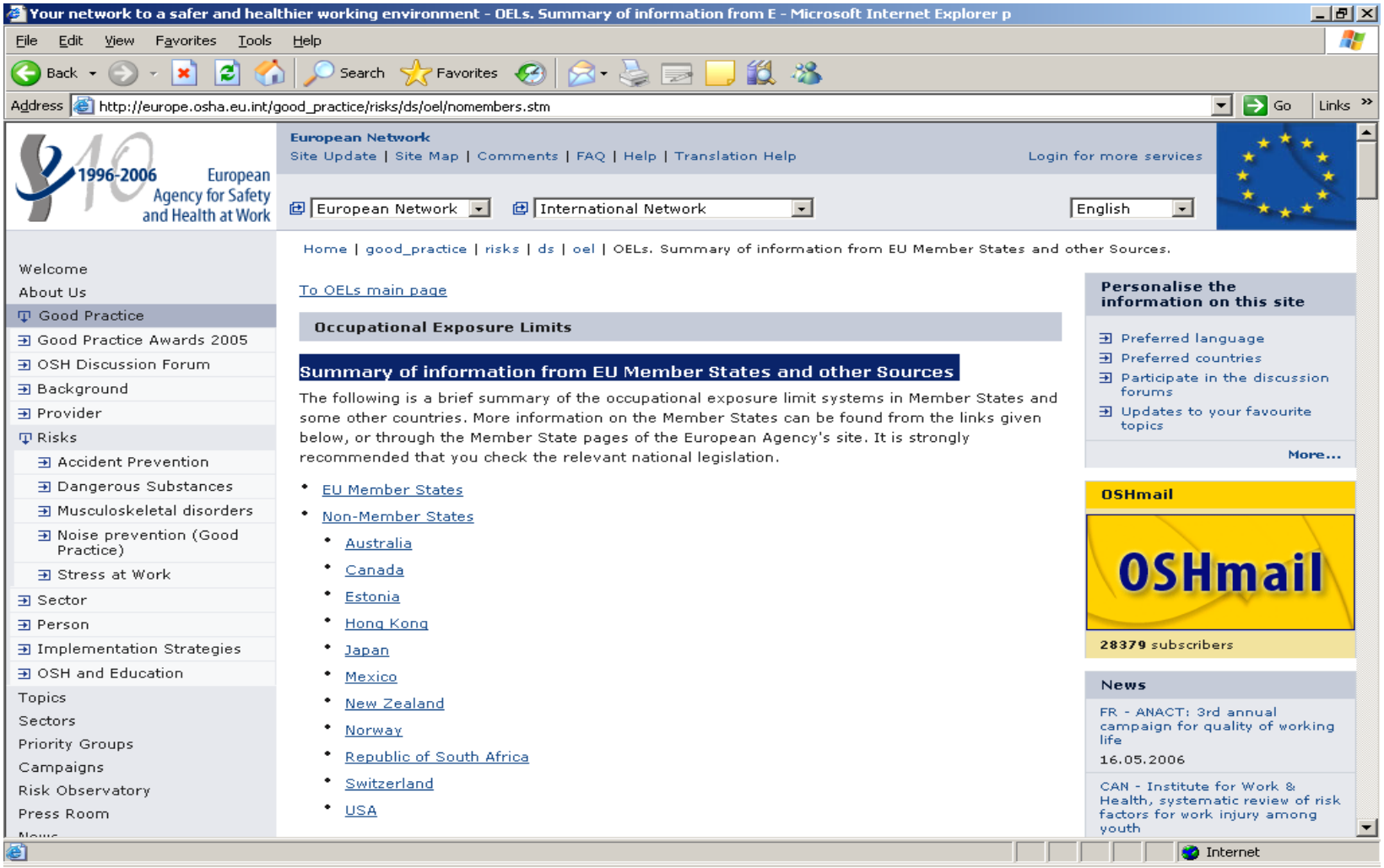
Search strategy: Short reviews in fact sheets

- **International Chemical Safety Cards (ISCS)**
- summarizes essential health and safety information on chemicals for their use at the "shop floor" level by workers and employers in factories, agriculture, construction and other work places.
- http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/index.htm
- **ISCS cards** are in 18 languages and found from NIOSH pages :
- http://www.cdc.gov/niosh/ipcs/icstart.html

Search strategy: From ICSC cards

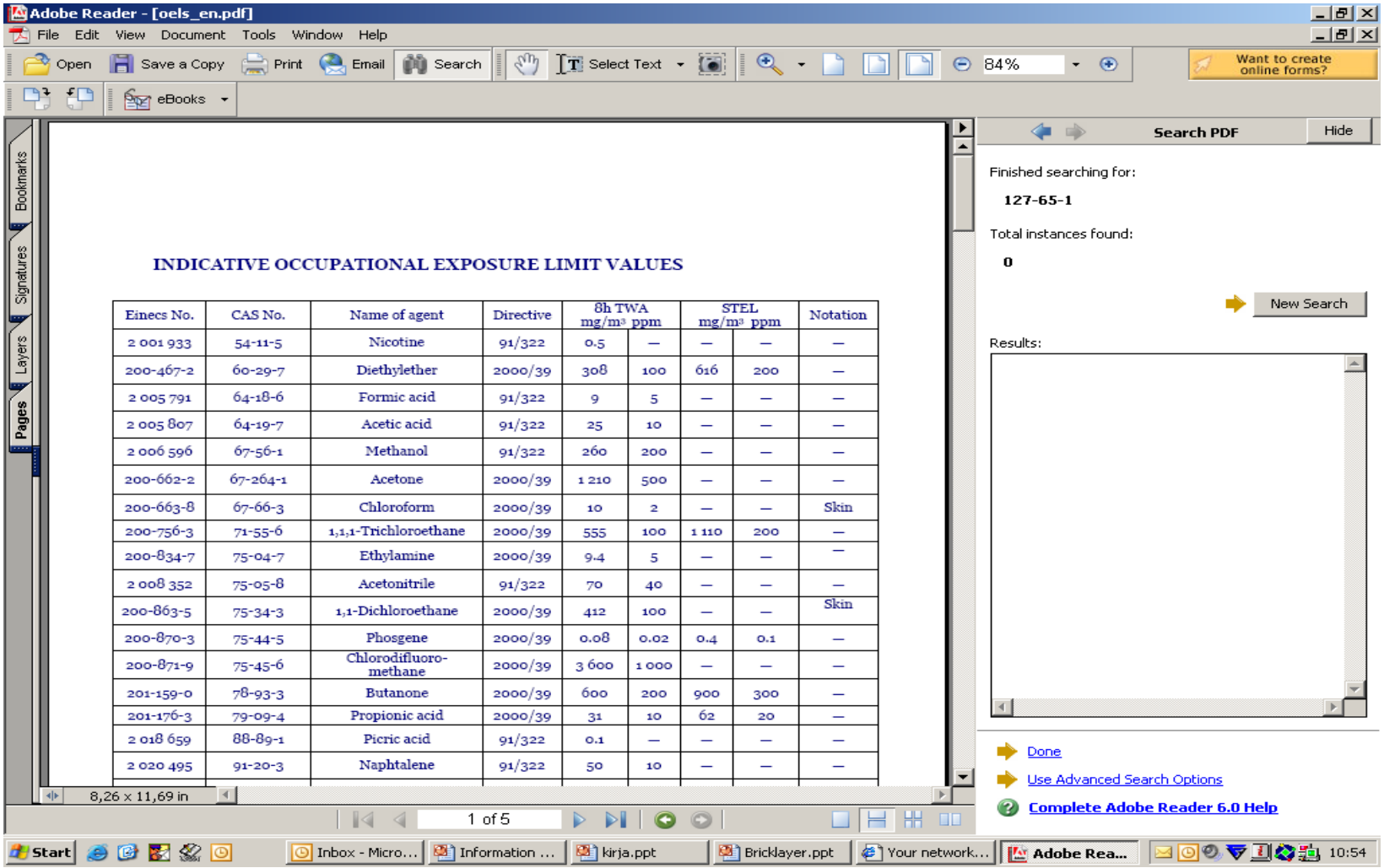


Occupational Exposure Limits not included in Toxnet http://europe.osha.eu.int/good_practice/risks/ds/oel/nomembers.stm



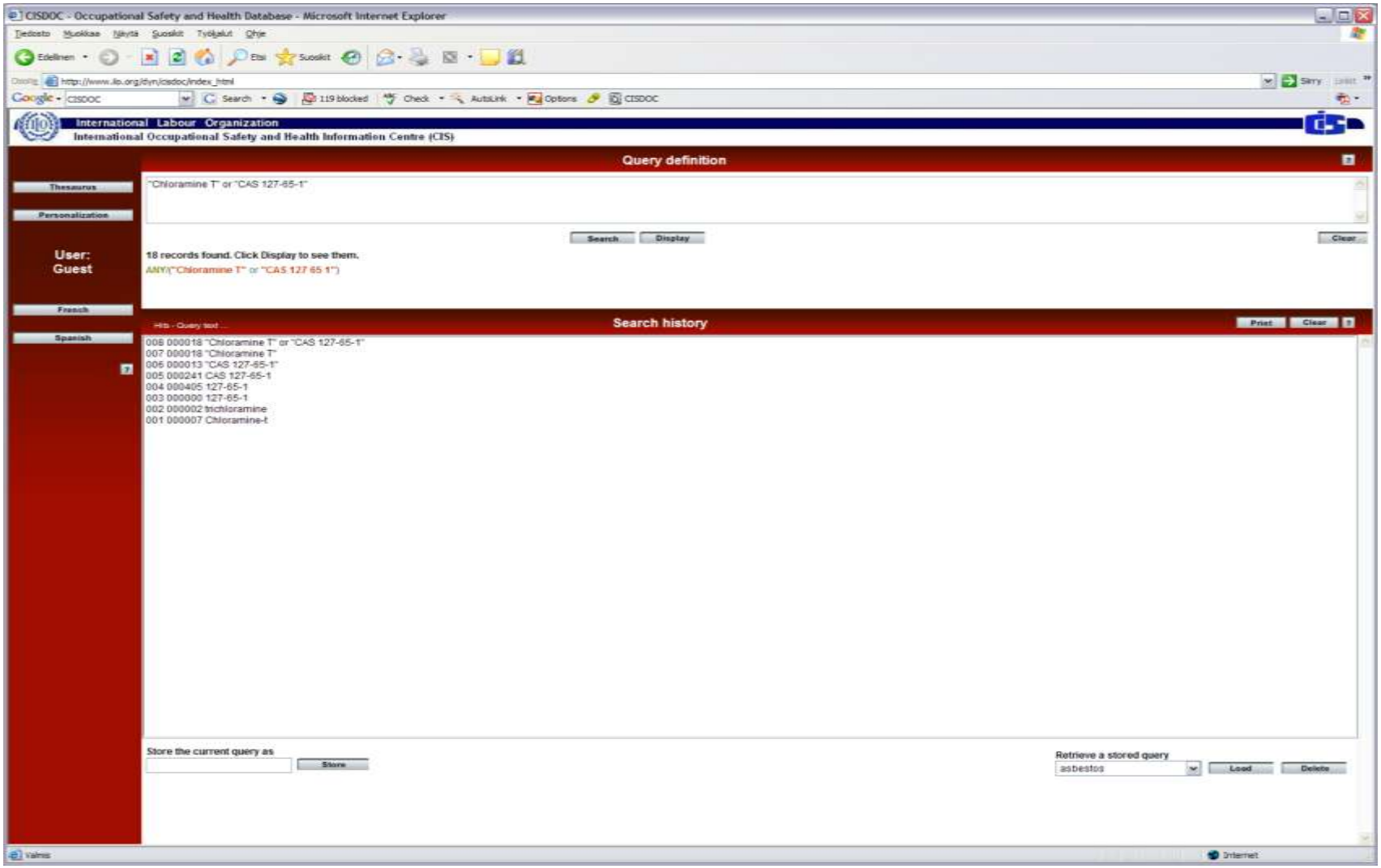
PDF is found: Preparation of the EU Commission Indicative occupational Exposure Limit values

http://europa.eu.int/comm/employment_social/health_safety/docs/oels_en.pdf

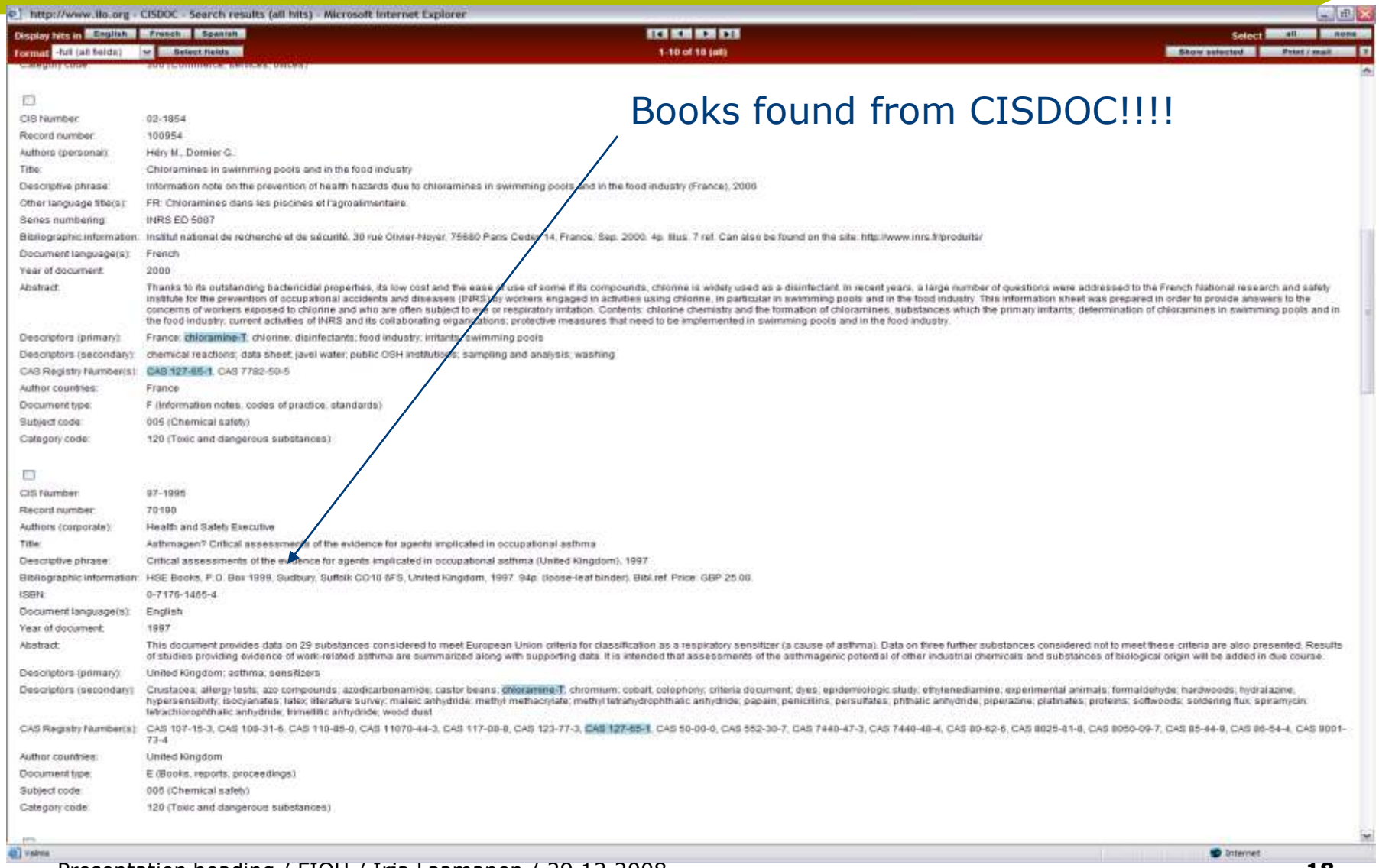


Einecs No.	CAS No.	Name of agent	Directive	8h TWA mg/m³	8h TWA ppm	STEL mg/m³	STEL ppm	Notation
2 001 933	54-11-5	Nicotine	91/322	0.5	—	—	—	—
200-467-2	60-29-7	Diethylether	2000/39	308	100	616	200	—
2 005 791	64-18-6	Formic acid	91/322	9	5	—	—	—
2 005 807	64-19-7	Acetic acid	91/322	25	10	—	—	—
2 006 596	67-56-1	Methanol	91/322	260	200	—	—	—
200-662-2	67-264-1	Acetone	2000/39	1 210	500	—	—	—
200-663-8	67-66-3	Chloroform	2000/39	10	2	—	—	Skin
200-756-3	71-55-6	1,1,1-Trichloroethane	2000/39	555	100	1 110	200	—
200-834-7	75-04-7	Ethylamine	2000/39	9.4	5	—	—	—
2 008 352	75-05-8	Acetonitrile	91/322	70	40	—	—	—
200-863-5	75-34-3	1,1-Dichloroethane	2000/39	412	100	—	—	Skin
200-870-3	75-44-5	Phosgene	2000/39	0.08	0.02	0.4	0.1	—
200-871-9	75-45-6	Chlorodifluoro-methane	2000/39	3 600	1 000	—	—	—
201-159-0	78-93-3	Butanone	2000/39	600	200	900	300	—
201-176-3	79-09-4	Propionic acid	2000/39	31	10	62	20	—
2 018 659	88-89-1	Picric acid	91/322	0.1	—	—	—	—
2 020 495	91-20-3	Naphtalene	91/322	50	10	—	—	—

CISDOC database – not included in Toxnet



Results from CISDOC



Summary of results

- Chloramine-T is allowed to be used.
-
- EINECS: This chemical substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.
- There is no established TLV for chloramine-T
- Preventive measures are found in HSDB and in EU ESIS safety phrases and in International Chemical safety cards (IPCS).

Euroworksafe – a site of occupational cancer