



## Information on Substances in Poison Centres

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### Why do we need information about substances in conjunction with product and case data?

- Substances are used as the ingredients of products
- Exposures occur with products
- The toxic relevant substances must be identified
- Information about substances is required to assess the toxicological properties of a product or a product category.
- Correct terms of substances are essential

### Evaluation of Substances?

Information about  
toxic Properties

- substance monographs
  - uses
  - kinetics
  - toxic mechanisms
  - clinical signs and symptoms
  - treatment
  - cases

### Information about toxic substances

- The toxicity of products is related to the toxicity of one (mostly) or more of their ingredients
- Poison centres should therefore have access to information about clinical toxicological information, in particular experiences from former cases, in combination with literature data

### Substance information

- **Literature (general available)**
  - monographs (e.g. Martindale, Ellenhorn, other)
  - publications in scientific literature
  - data bases (e.g. HSDB, CHEMIS, other)
  - data from toxicological testing
- **PC prepared specific information**
  - monographs with specific consideration of PC's experience (case data), centre specific or in cooperation between several centres.
- **Further information**
  - from toxicological testing (industry)

### Substance information

- It is important not only to know that a certain substance is toxic and what the quality and the quantity of toxicity is
- It is also important to know that a substance is not toxic

## PC prepared specific information

- Internal Poison Information Monographs (PIM), not generally available for others
- Committee „recognition and treatment of poisonings“ (co-operation of poison centres, general toxicologists, industry, universities, only in germany) prepares PIM's for german PC's
- IPCS-monographs (available on CD-Rom)

## BgVV Poison Information Monographs

- Aim:
  - short overview about common toxicologic properties and toxicokinetics
  - regulatory aspects
  - clinical effects
  - treatment
  - important cases

[List of substances](#)

## Preparation of PIM's

- Committee „Recognition and treatment of poisonings“ under coordination of the BgVV
  - two meetings per year
- Present:
  - PIM's are circulated on CD-ROM to the PC's
- Future:
  - PIM's are available on a platform available for all PC's at any time
- Data exchange approaches are needed

## Identification of substances

- Adequate toxicological information about substances is only possible if the substance's name can be identified adequately
  - main (preferred terms)
  - controlled synonyms
  - CAS-Numbers
    - the only „term“ that identifies without doubt
- Avoid terms that e.g. describe functions
  - filling material, preservative, solvents, et cetera

## Why Evaluation of Substances?

### Information about toxic Properties

- substance monographs
  - uses
  - kinetics
  - toxic mechanisms
  - clinical signs and symptoms
  - treatment
  - cases

### Identification of toxic relevant substances

- Lists of substances of toxic relevance by evaluation of cases and products

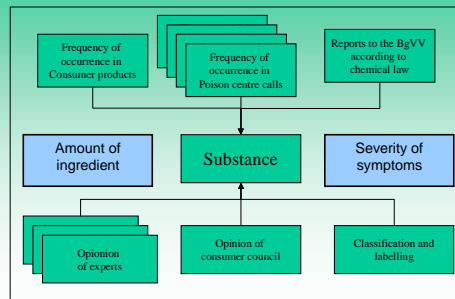
## BgVV survey for identification of toxicological important substances

Priority List for Substances

## BgVV survey of important substances in consumer products

- **Aim:**
  - to identify substances occurring frequently in products and are also involved in exposures
  - with an opinion to perform evaluations by members of the committee and of consumer associations
- **Approach:**
  - systematic evaluation of product data, BgVV data on cases and PC's

## Priority List for Substances



## Calls in Poison Centers

- Basis: Data from five PC's

If the substance is involved in cases	
> 5 %	5
2,5 < 5 %	4
1 < 2,5 %	3
0,5 < 1 %	2
0 < 0,5 %	1
0	0,5

## Number of substances in Products

- Basis: Occurrence of substances in consumer Products (BgVV product data base)

– Number of products evaluated: 21.200

> 5 %	> 1062	5
2,5 < 5 %	532 - 1062	4
1 < 2,5 %	214 - 531	3
0,5 < 1 %	108 - 213	2
0,15 < 0,5 %	32 - 107	1
0 < 0,15 %	0 - 32	0,5

## Expert opinions

substance	Score										mean
	Exp.1	Exp.2	Exp.3	Exp.4	Exp.5	Exp.6	Exp.7	Exp.8	Exp.9		
Acetone	5	4	3	5	4	4	1	2	1	3,2	
Formic Acid	2	5	3	5	4	5	1	3	1	3,2	
Amidosulfonic Acid	5	5	4	3	4	5	1	2	1	3,3	
aqueous Ammonia	3	5	3	5	3	1	1	2	1	2,7	
Ammoniumchloride	2	5	3	4	1	1	1	1	2	2,2	
Bariumsulfate	1	4	3	3	1	1	1	2	1	1,9	
Benzalkoniumchloride	5	4	3	5	5	3	1	4	4	3,8	
Naphtha	3	5	3	5	4	5	1	2	2	3,3	

List of relevant consumer substances

## TOP-TWENTY of relevant substances

- Naphtha
- Benzalkoniumchloride
- Sodiumhydroxide
- Methanol
- Petroleum
- Propylalcohol, i-
- Ethylenglycol
- Formaldehyde
- Potassiumhydroxide
- Dichlormethane
- Ammoniak
- essential oils
- Hydrochloric Acid
- Sodiumhypochlorite
- Xylole
- Benzene
- Sulfuric Acid
- Fluoric Acid
- Phosphoric acid
- Pyrethroides

## conclusions

### Systematic evaluation of substances

- identification of toxic relevant substances
- link to cases
- link to products
- priority setting for substance evaluations
- priority setting for regulators
  - substances where information is poor
  - update

## conclusions

- Circulation of lists of terms for identification
- Circulation of monographs
- How can information be expanded?
  - Networks
  - internet communication
  - e-mail

Thank you for attention