DNEL versus OELV, and other serious business!

Theo Scheffers

www.DOHSBase.com

The take off & landing of everything

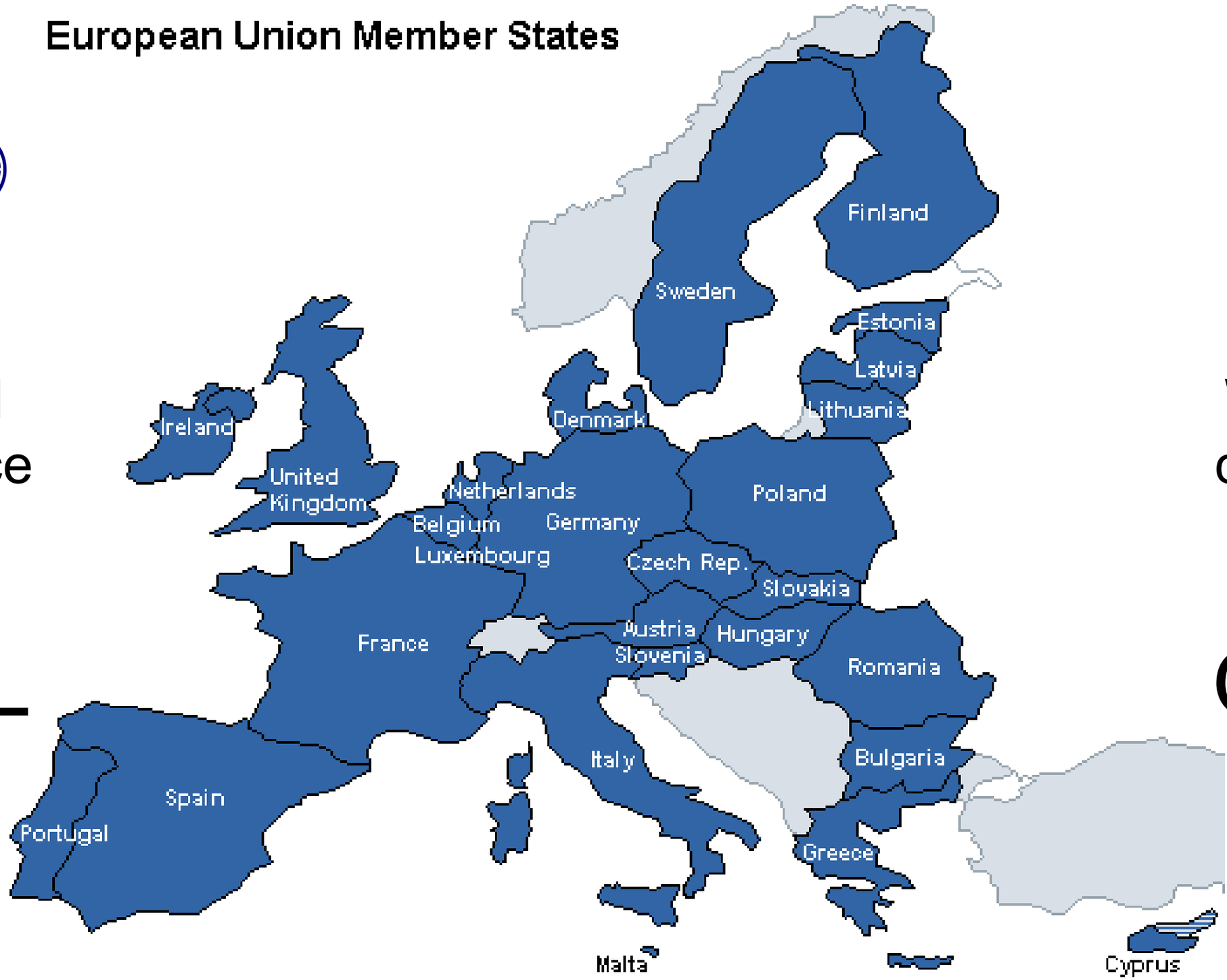
Since 2010, 2 independent types of workplace exposure limits exists in the Europe

REACH substance liability:

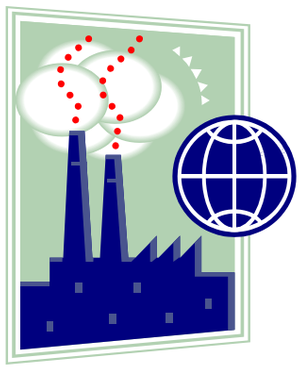
DNEL

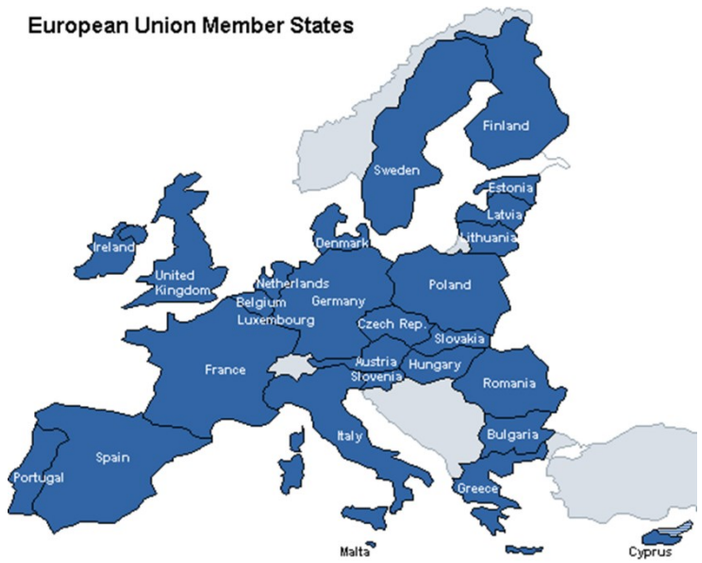
Working condition Control:

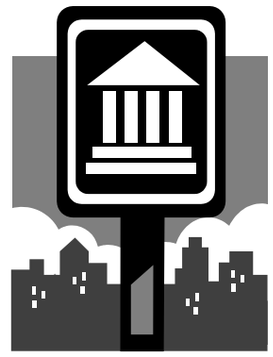
OELV



2 types of workplace exposure limits in the EU







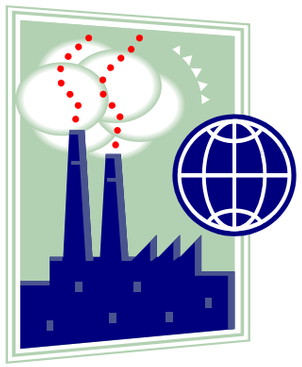
REACH substance liability:

DNEL

Working condition Control:

OELV

2 types of workplace exposure limits in the EU



REACH substance liability:

Working condition Control:

DNEL

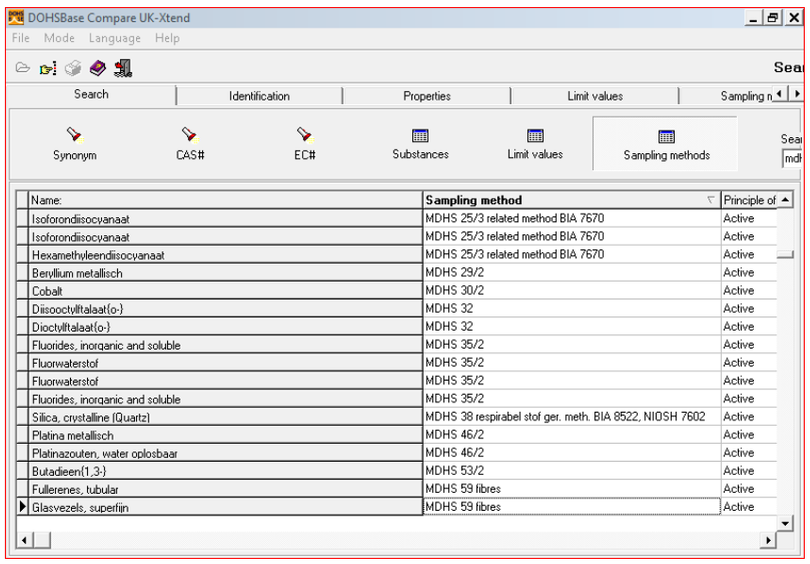
Do they differ?

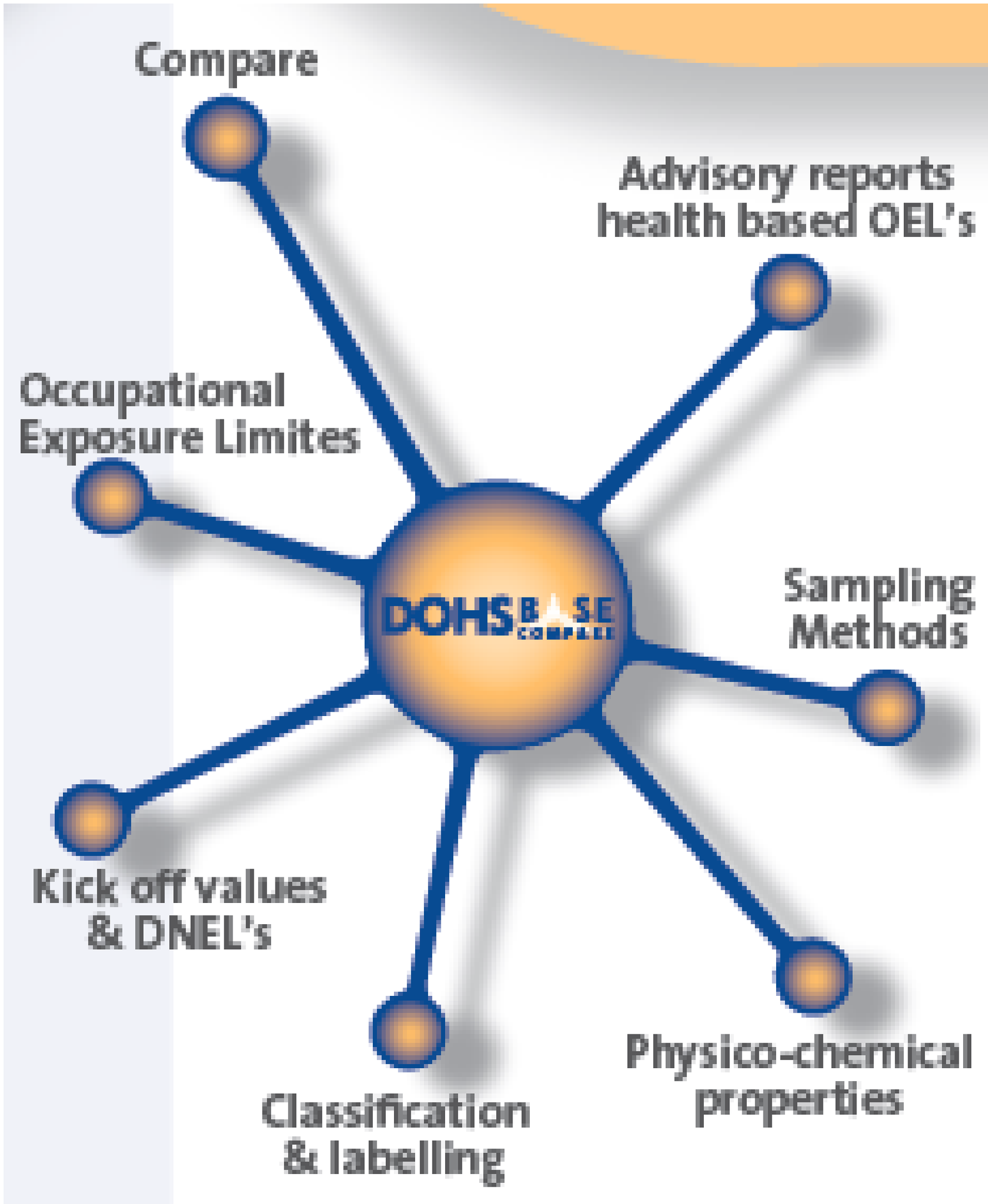
- Systematic or random?
- To what extend?

OELV

DOHSBase Compare
www.dohsbase.com

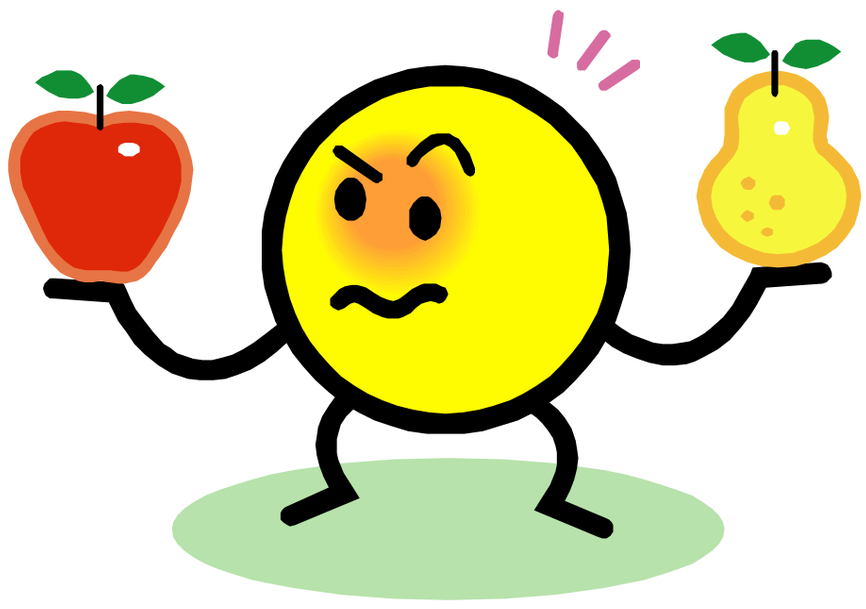
172000 substances
225000 synonyms
40000 PhysChem properties
8000 harmonized CLPs
3800 OELV
2000 Kickoff levels
2600 REACH DNELs
2500 analytical methods



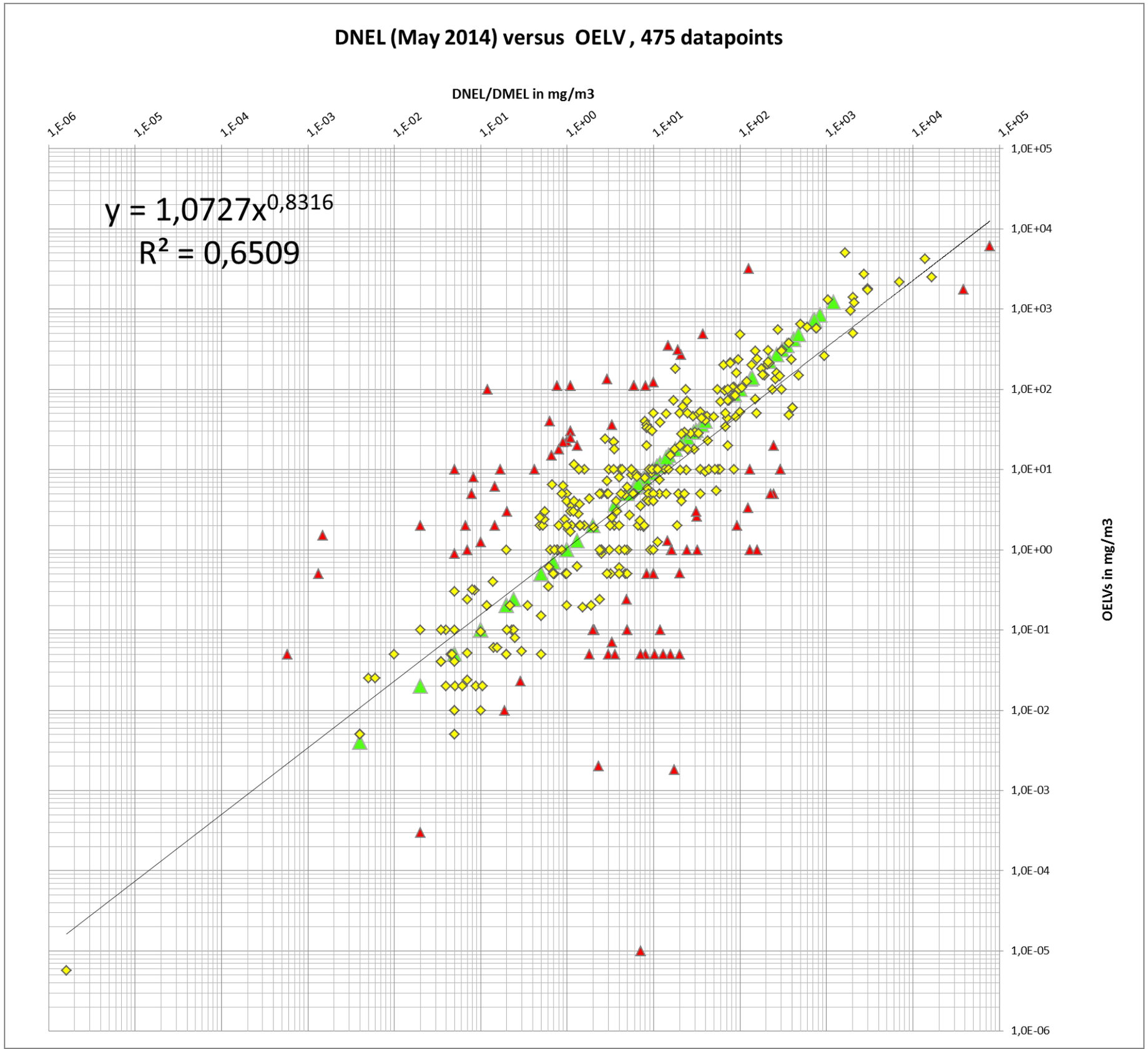


Compare!

1. OELV : approx. 3800
2. DNEL: approx. 2600
3. 475 substances with both!

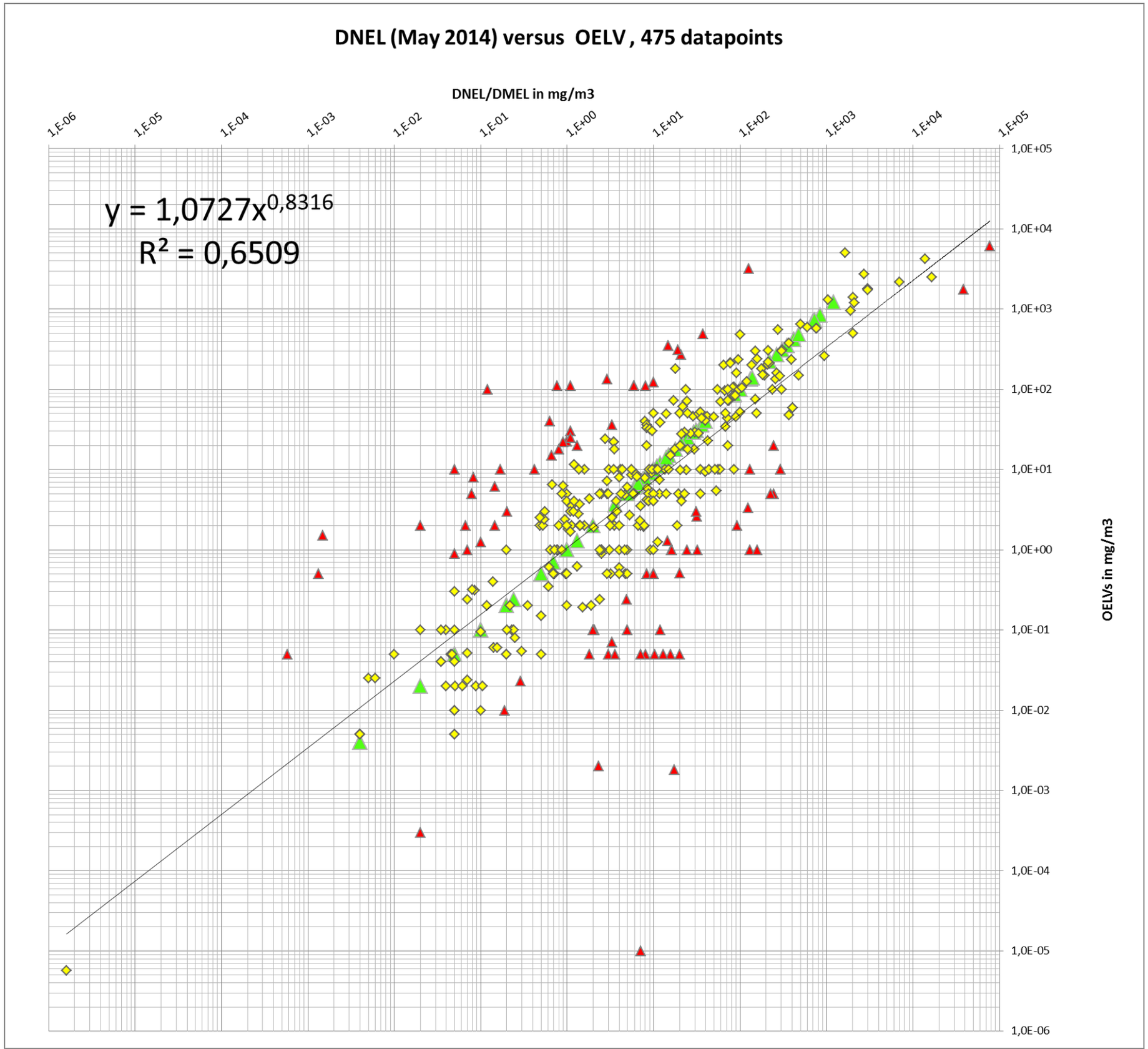


REACH DNEL

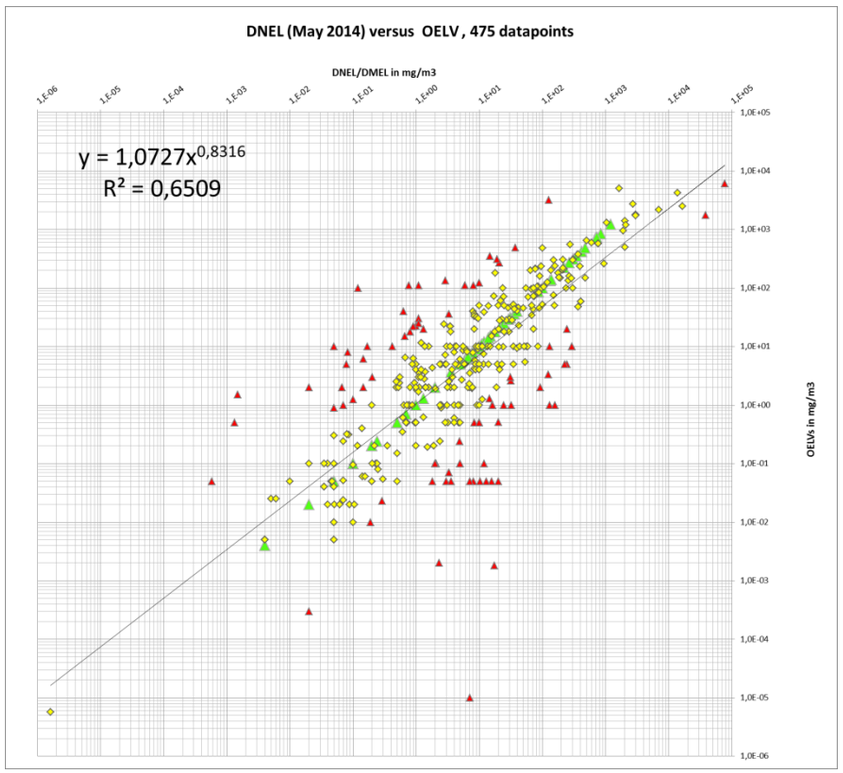


OELV

REACH DNEL



OELV



Results & differences

Numbers of DN\MELs and OELVs that are

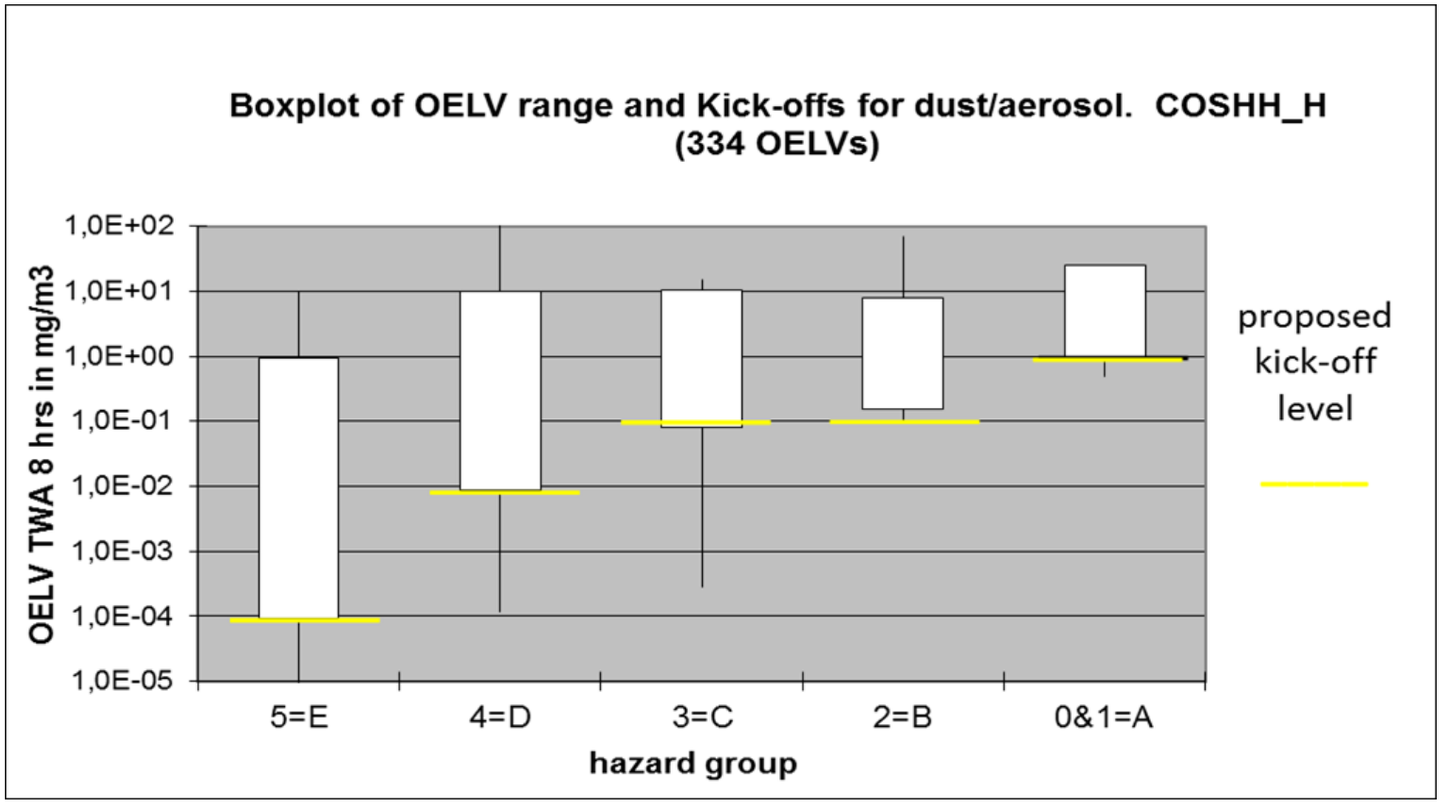
- equal: 87 [18%]
- within one order of magnitude: 298 [63%] !!
- more than one order of magnitude: 89 [19%] !!!!!!

The labyrinth of workplace limit values

Status	US	Europe
Legal, Federal	PEL	BLV/IOLV
Legal, States/Nations	California etc.	All
Health based (independent)	ACGIH	DFG etc.
Responsible Care/ Product stewardship	WEEL	AGS (Germany)
Product Liability		REACH

License to operate (PO#136)

Kick-off



"OELV ⟶ license to operate"

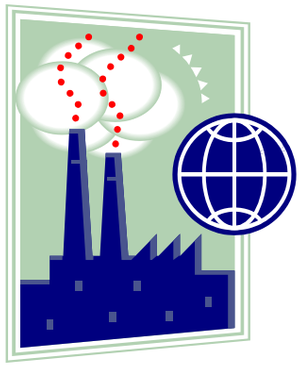
no OELV ->law enforcement noncompliance (Netherlands) !

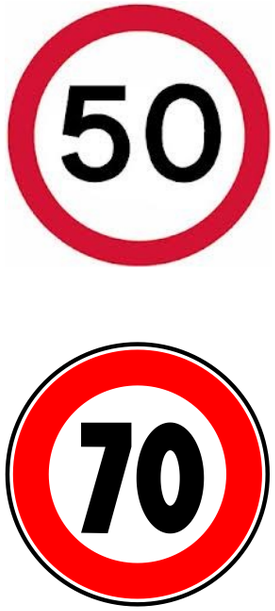
Kick-off: a starting point exposure max. for substances without OELV or DNEL

Session "IH Legal Issues"

PO#136 Wednesday June 4, 13:30

Many types of workplace exposure limits





REACH substance liability:

DNEL

- Yes, they differ!
- Orders of magnitude!
- Hierarchy?
- Which one to use?
- **Why not harmonize?**

Working condition Control:

PEL,TLV, WEEL,BLV, IOLV, MAK, WEL, DLEP, Kick-off

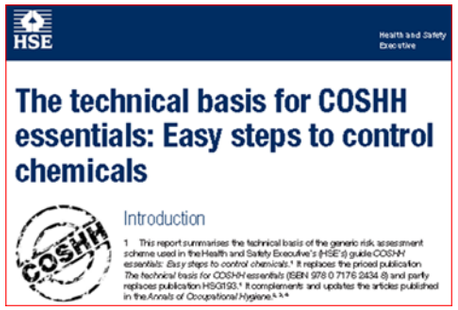
Harmonisation

“The big IH challenge for the 21e century” ?!

The labyrinth of chemicals workplace assessment and management tools

- Control Banding
- Compliance statistics
- Exposure modelling
- Hazard classifications
- mixtures
- Skin

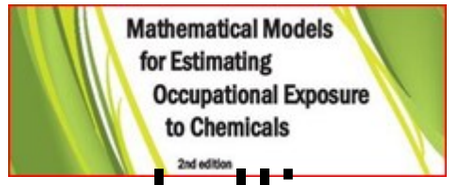
BW stat

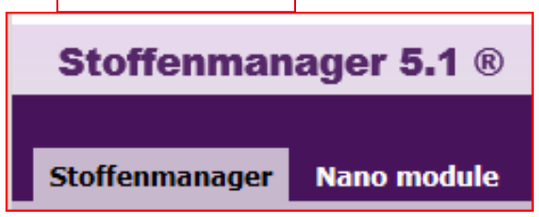


IHDataAnalyst Altrex Chimie

HYGINIST
HYGINIST version 4.3.4

Multilingual IHSTAT+





CLP GHS

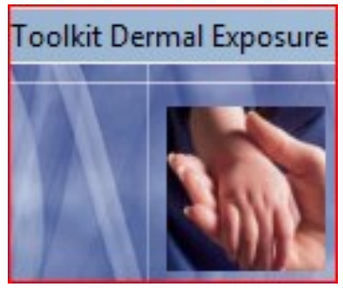
International Agency for Research on Cancer
World Health Organization

XLUNIFAC

$$\sum_{i=1}^{i=n} \left(\frac{C_i}{OELV_i}\right) \leq 1$$

Lead substance

IH SkinPerm

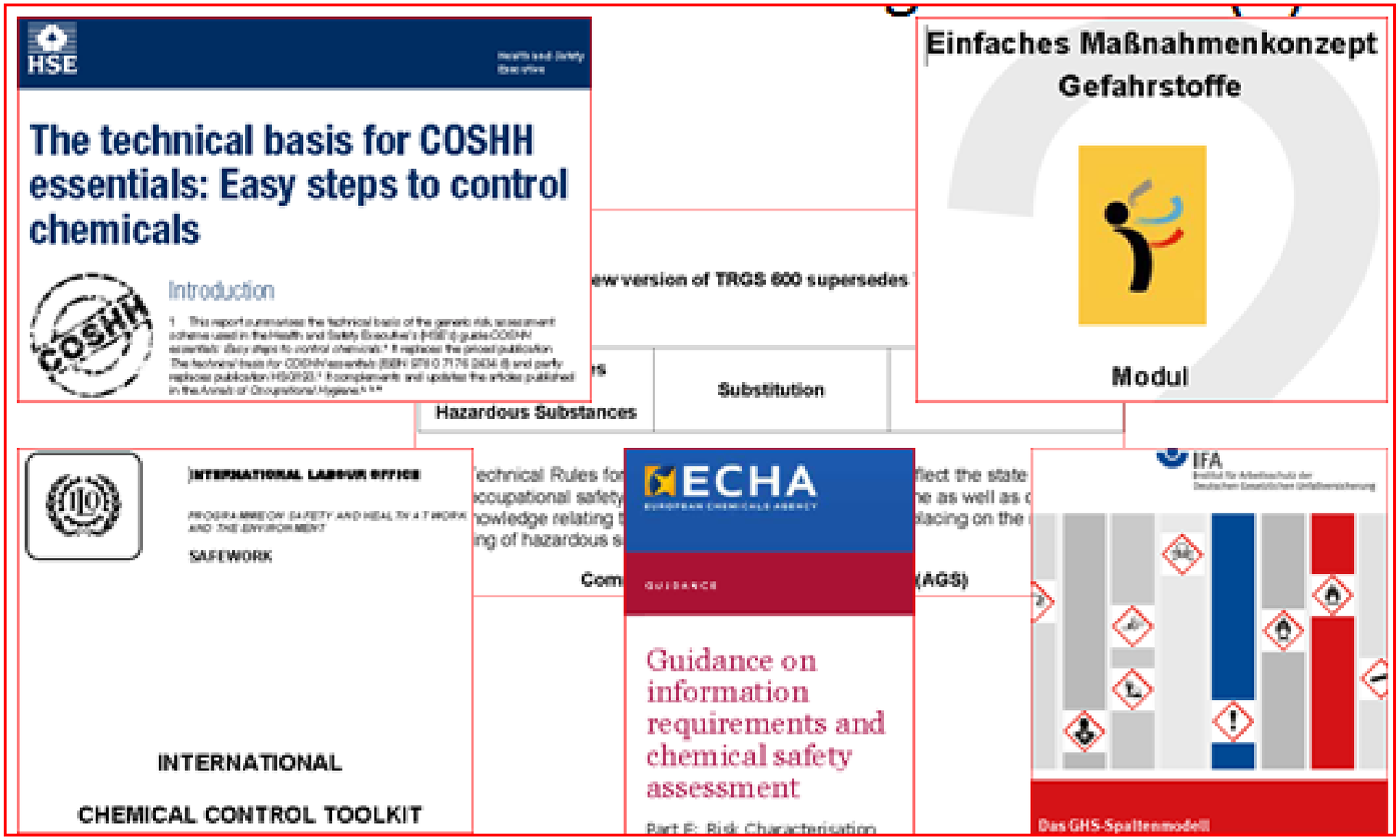


There is a labyrinth and abundance of chemicals workplace assessment and management tools

- Control Banding: ≥10 schemes
- Compliance statistics: ≥ 4 tools
- Exposure modelling: ≥ 5 tools
- Hazard classifications: ≥ 3 systems
- Dealing with mixtures ≥ 3 approaches
- Skin contribution ≥ 2 tools

Some tools perform better than others

Come to session "IH Legal Issues",
PO136 Wednesday June 4, 13:30
“On the validation Control Banding schemes”



Benefits of harmonization:

- Credibility
- World wide exchange of Exposure Scenario's
- Education simplicity
- Savings in time and money
- International acceptance

Disadvantages of harmonization

???

REACH DNEL:
Try this at home(land)!
But not in the same way

Let’s harmonize! The IH global future !!!

Harmonization of IH tools

‘Building on Occupational Hygiene Together’