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REACHing out: The safe transfer of chemicals between collaborators

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Aims and Objectives

- The changed landscape
- Determination of properties (Physical, Toxicological, Environmental)
- *In silico* methods
- Practical approach to unknowns
- Labelling considerations
- Packaging considerations

CLP Regulation

- From 01/10/2010 Novel compounds (single substance)
- From 01/06/2015 Mixtures >10% hazardous component
- Notify within 1 month
- SDS, in appropriate language

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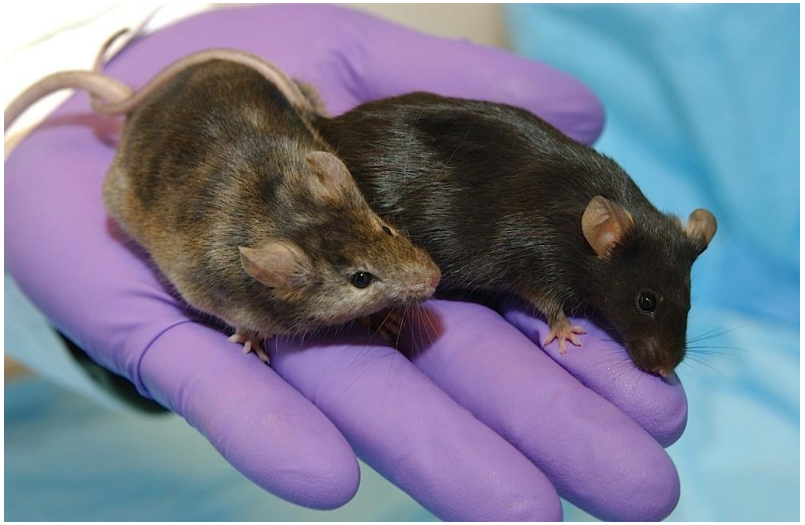
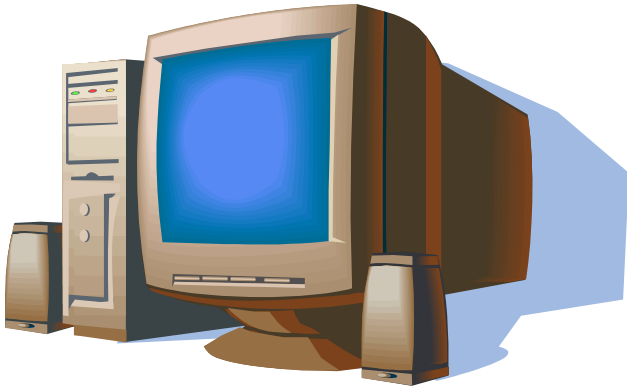
On the Market?

FOR SALE!

freecycle.org®

How to determine hazard of unknowns?





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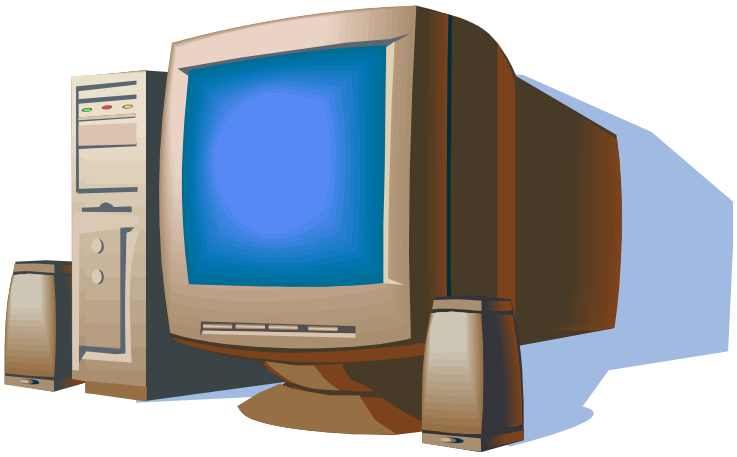
In Silico Methods 1

- Pharmaceutical Industry
- Preliminary Screening
- Relatively cheap
- Minimisation of animal testing (REACH)
- High throughput

In Silico Methods 2

- Quantitative Structure Activity Relationships (QSARs)



- Evidence based tools used in toxicology/causation analysis
- Statistical machine based computational methods – learning algorithms
- Nominally no human bias/error – depends on programme

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Warning 

- No user input as to molecular fragments used as comparators in some models
- Comparator fragments vary with origin of model
- Need a reality check on the output data – errors can be huge!

REACH and CLP

- SDS Required (REACH) if pictograms necessary
  - Further information from http://www.HSE.gov.org
  - ECHA Guidance on the compilation of safety data sheets
  - http://echa.europa.eu

- Notify (CLP via REACH-IT Portal)

Product Information Datasheet (PIDS)

- Where SDS inappropriate (and justified)
- Details known information for end user
- Do not need to notify
- Complies with duty of care

- Organised into same 16 Sections as SDS
- Same requirement for manufacturers name and address, date of preparation of PIDS, review date and retention for 10 years

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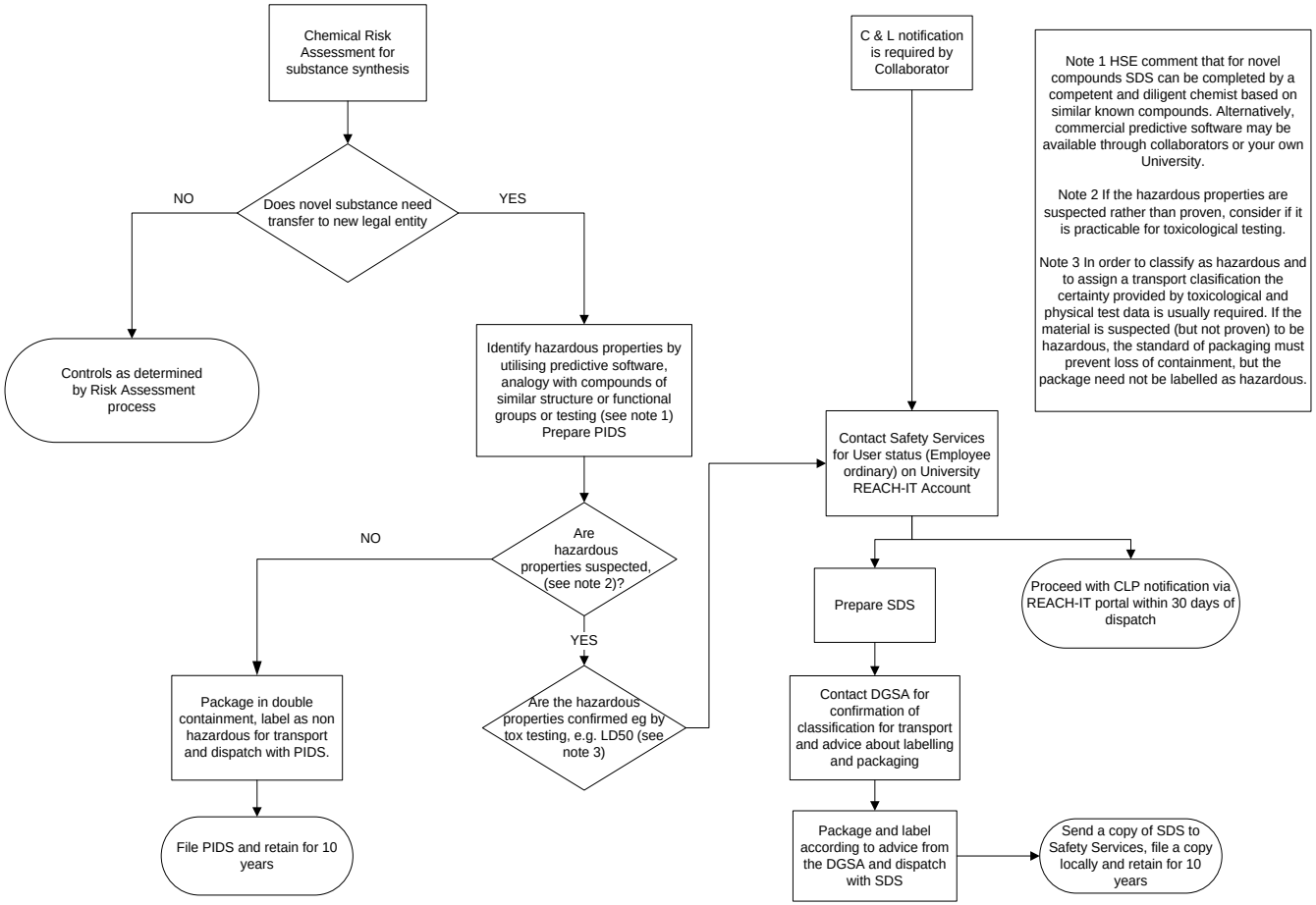
Transferring novel substances between institutions – flow chart



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Labelling 1

- Name, address tel. no of Supplier
- Quantity in package
- Substance Identifier
- Hazard Pictograms (wa)
- Relevant Signal Word (wa)
- H Statements (tog, free choice)
- P Statements (tog, free choice)
- NB same language together

Labelling 2 (SDS)

If Explosive pictogram used, Flame and Oxidizer pictograms are optional (except self reactives and organic peroxides)

If Flame or Skull and Cross bones used, Gas Cylinder optional

With Skull and Cross bones, or Corrosive or STOT, exclamation mark must not be used

Labelling 3 (SDS)

- CLP Pictograms required on every inner and intermediate layer of packaging

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Packaging General

Designed, constructed, fastened so contents are secure

Materials forming packaging and fastening not damaged by contents or react with them

Replaceable fastenings must not deteriorate with use