



**The mission of the IRMM is to promote
a common and reliable
European measurement system
in support of EU policies.**

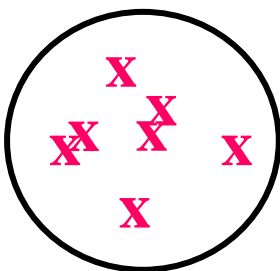
Metrology Institute of the European Commission

<http://www.irmm.jrc.be>

**Compliance with
Legislation**

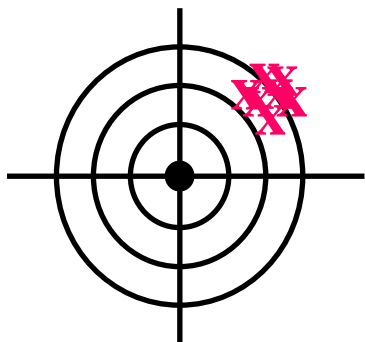
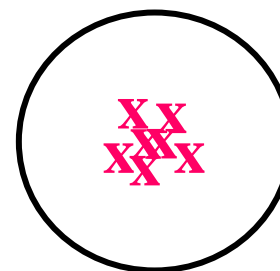
Health & Quality of life

Global trade

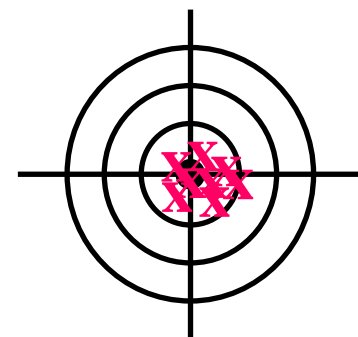


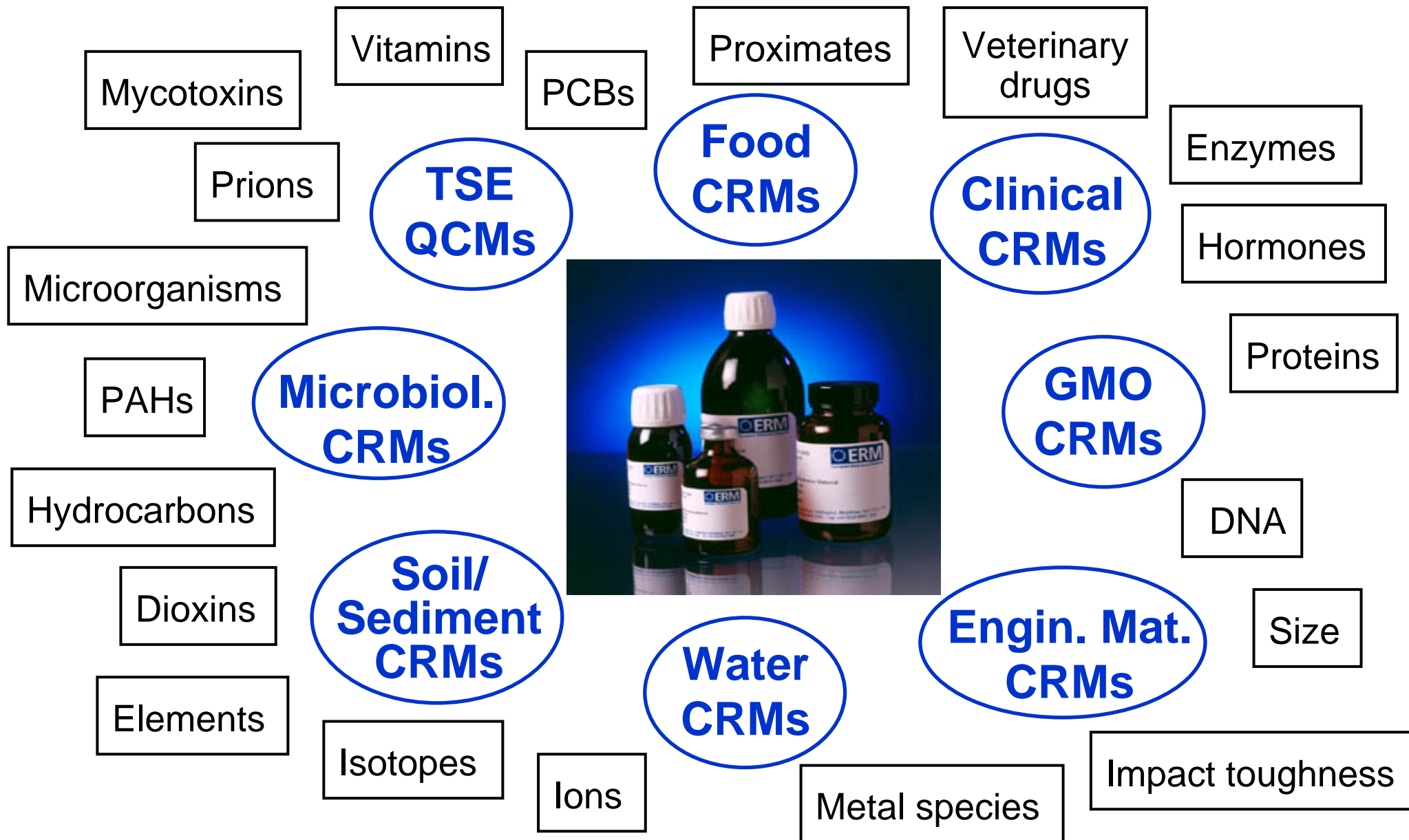
Comparability

- ◆ in time
- ◆ between labs



Reliability
(‘accuracy’)



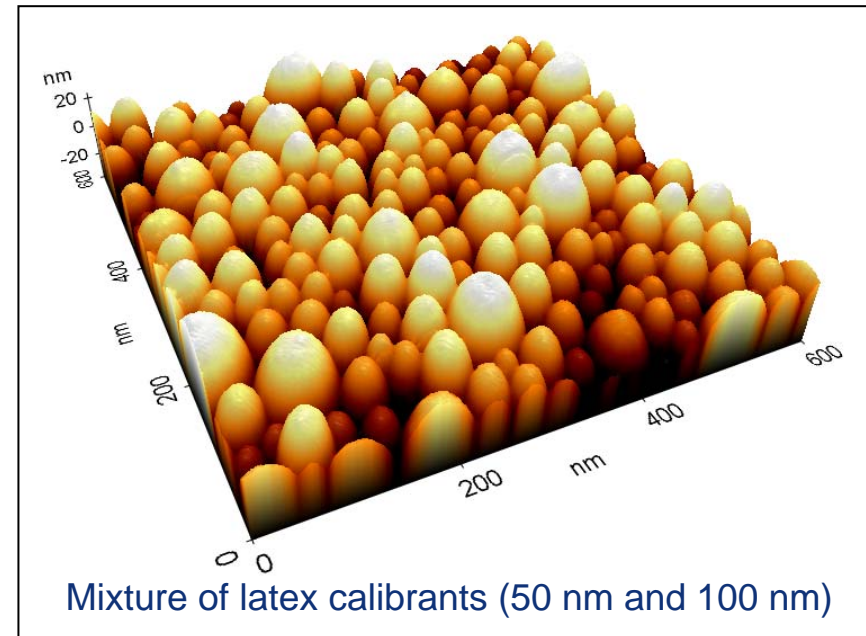


- ◆ **Metrology for the reliable sizing of dispersed nanoparticles**
 - Definition of measurands
 - Metrological traceability and uncertainty
 - International networking (CIPM, VAMAS)
- ◆ **Development and certification of reference materials**
 - including in-house and interlaboratory comparisons of measurement techniques
- ◆ **Standardization**
 - Harmonisation of terminology and concepts for measurement standards (ISO/TC229, ISO/TC24, ISO/REMCO, CEN/TC352)

EC Interservice Groups

**“Nanosciences & Nanotechnologies” and new:
“Measurements Standards for European Legislation”
(chair: JRC-IRMM)**

- **BCR-704, -705: zeolite powder**
 - certified median micropore width < 1 nm, collaboration with BAM (DE)
- **BCR-564: SiO₂ on Si**
 - certified film thickness 10, 50 and 120 nm, collaboration with IMEC (BE)
- **BCR-261: Ta₂O₅ on Ta**
 - certified film thickness 30 nm and 100 nm, collaboration with NPL (UK)
- **IRMM-304 colloidal silica**
 - Quality control material for nanoparticle size analysis
 - Value assignment method-defined
 - Release foreseen Spring 2008
- **Facilities: nanoparticle size analysis**
 - Atomic Force microscope with liquid cell for physiological conditions
 - Dynamic light scattering
 - Disc centrifugation
 - Electron microscopy



many collaborating labs/institutions

