



COMAR - the international database for certified reference materials

Access: <https://www.comar.bam.de>

COMAR Central Secretariat:

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Certified reference materials:

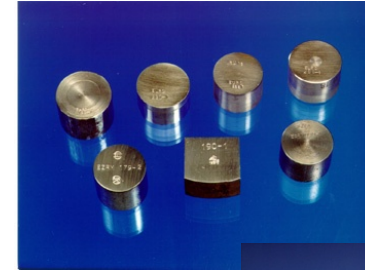
- are measurement benchmarks
- ensure reliability and comparability
- help to create confidence
- provide traceability in chemical analysis
- are required in quality assurance (ISO 17025)

One main problem for users:

- How to find the proper CRM needed?

Ways out:

- catalogues of producers
- websites of producers
- **COMAR database (world wide scope)**
- other databases of regional orientation or for special kinds of materials (GoeReM, JCTLM, VIRM)





What is *COMAR*?

COMAR has been developed to assist users in finding the reference materials they need.

Performance:

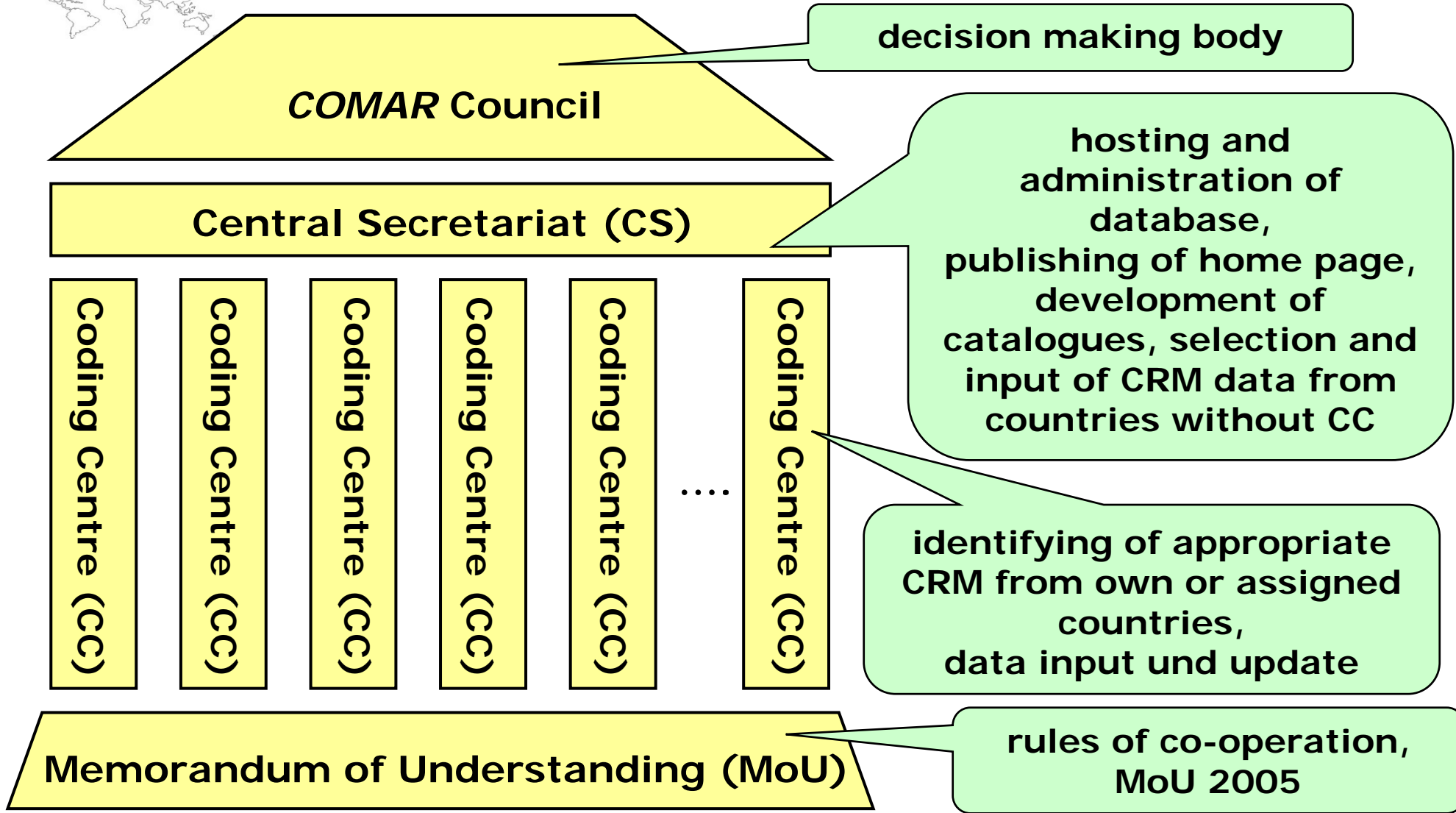
- Browser independent (Microsoft, Mozilla Firefox, Opera,...)
- CRM information language is English
- Navigation language can be multilingual
- Update rights are given to the *COMAR* coding centres (national or international institutes)
- CRM classification by harmonised catalogues



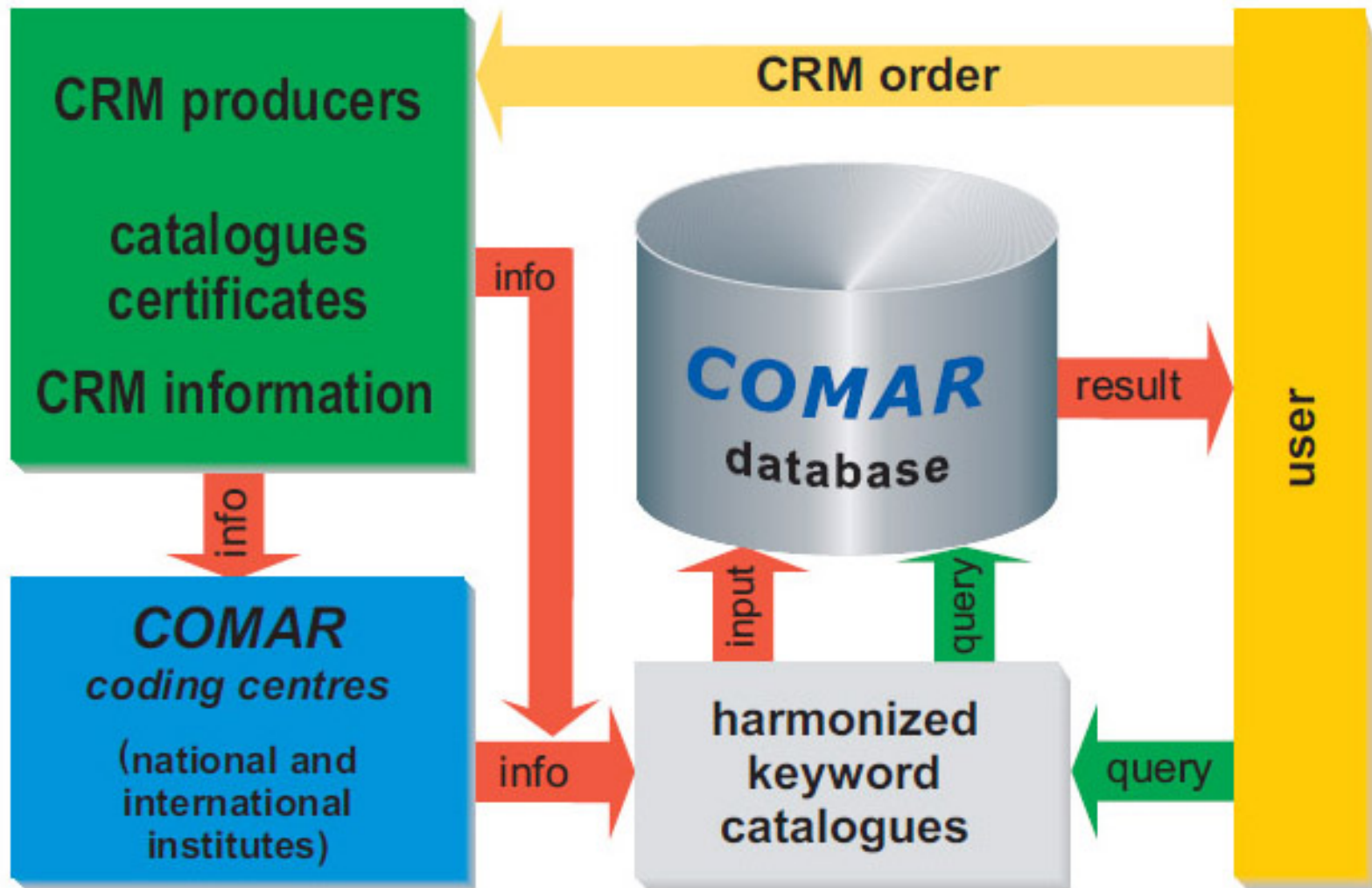
History of *COMAR*

- Late 1970s: French LNE proposed an RM database
COde d'Indexation des **MA**tériaux de **R**éférence
- Mid-1980s: *COMAR* was improved and established by LNE (France), LGC (United Kingdom) and BAM (Germany)
 - not free of charge
 - floppy disks updated and distributed once a year
- May 1990: broadening co-operation, 7 institutes, first MoU
- 2001/2002: development of an internet based version by BAM
 - free of charge for users since March 2003
 - available via internet and can be directly updated
- 2005: Memorandum of Understanding (MoU) renewed
- 2007/2008: software update and extension of search tools
- 2013/2014: software update
- Currently *COMAR* is supported by 20 national or international institutes (coding centres)

COMAR organisation structure



COMAR management





Improvement of *COMAR* database (version released March 2008)

- New update right level for CRM producers:
 - Can be assigned to individual CRM producers
 - Allows closer involvement of CRM producers in the update process
 - Intended to make update more efficient and to keep *COMAR* more up-to-date
- Internal use of CAS (Chemical Abstract Service) numbers in the search process:
 - Search for particular molecule name now results in all CRM hits referring to the same CAS number, whatever molecule name was used for the data input or was selected for query
- Extension of the searchable CRM description field to 1000 characters:
 - Allows to enter more information in the easy-to-handle search tool (string search)
- The search tool “chemical composition” has been combined with the search in the “CRM description field”
 - Makes database handling much easier and allows for more carefully targeted queries



COMAR coding centres (CC)

	BAM	Germany		LGC	United Kingdom
	BelGIM	Belarus		LNE	France
	BIM	Bulgaria		NMiJ	Japan
	CENAM	Mexico		NIRM	China
	CGL	Mongolia		NMIA	Australia
	CMI	Czech Republic		VSL	The Netherlands
	GUM	Poland		NPL	India
	INMETRO	Brazil		SMU	Slovakia
	IRMM	European Union		SP	Sweden
	KRISS	Republic of Korea		UNIIM	Russian Federation

Statistics January 2017

About **8000** CRMs from about **195** producers in 26 countries

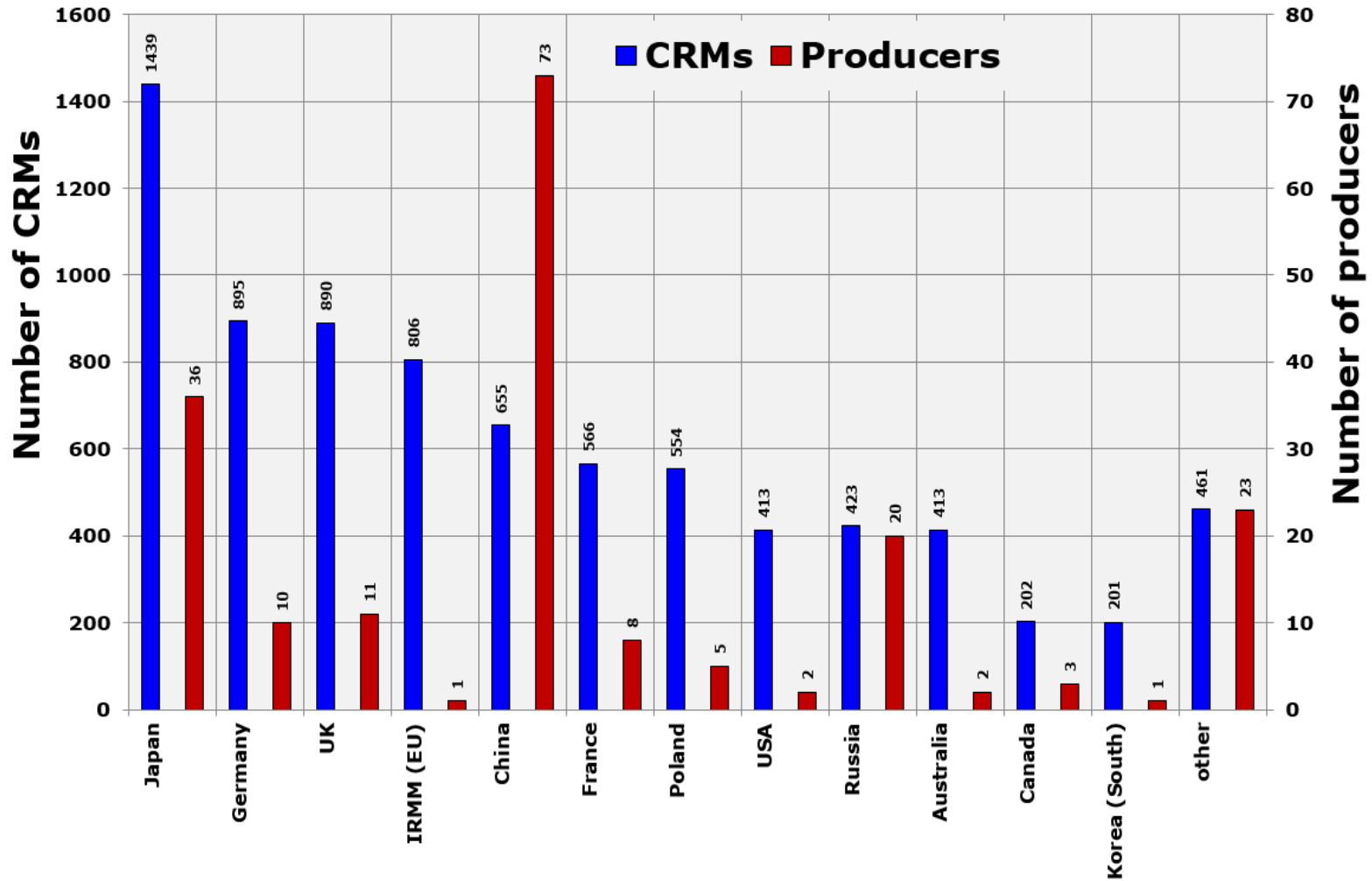
Australia	Germany	Slovakia
Austria	India	South-Africa
Belarus	Japan	Spain
Brazil	Korea (South)	Sweden
Canada	Mexico	The Netherlands
Chile	Mongolia	Turkey
China	Poland	UK
Czech-Republic	Russian Federation	USA
France		

European and international institutions:

IRMM/BCR

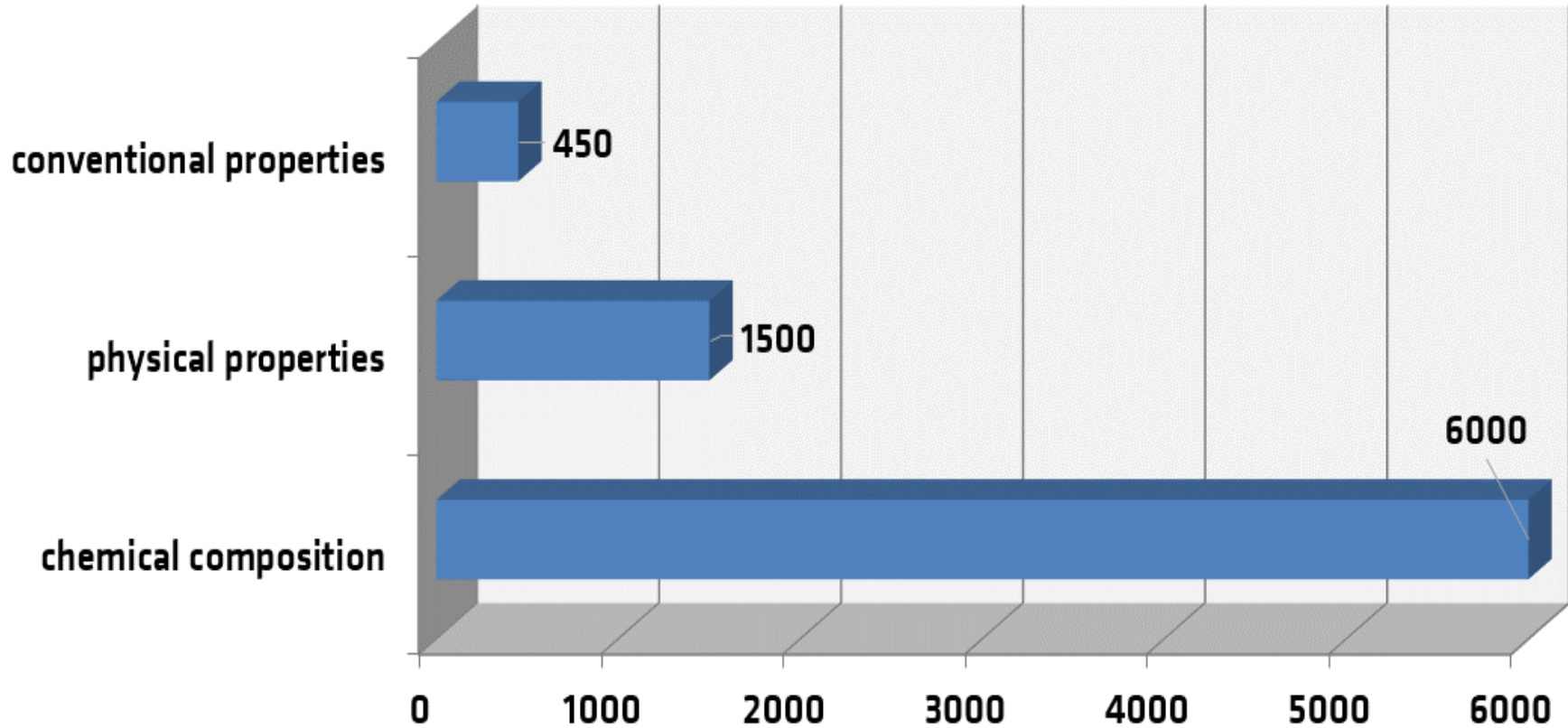
IAEA

Number of CRMs and producers by countries

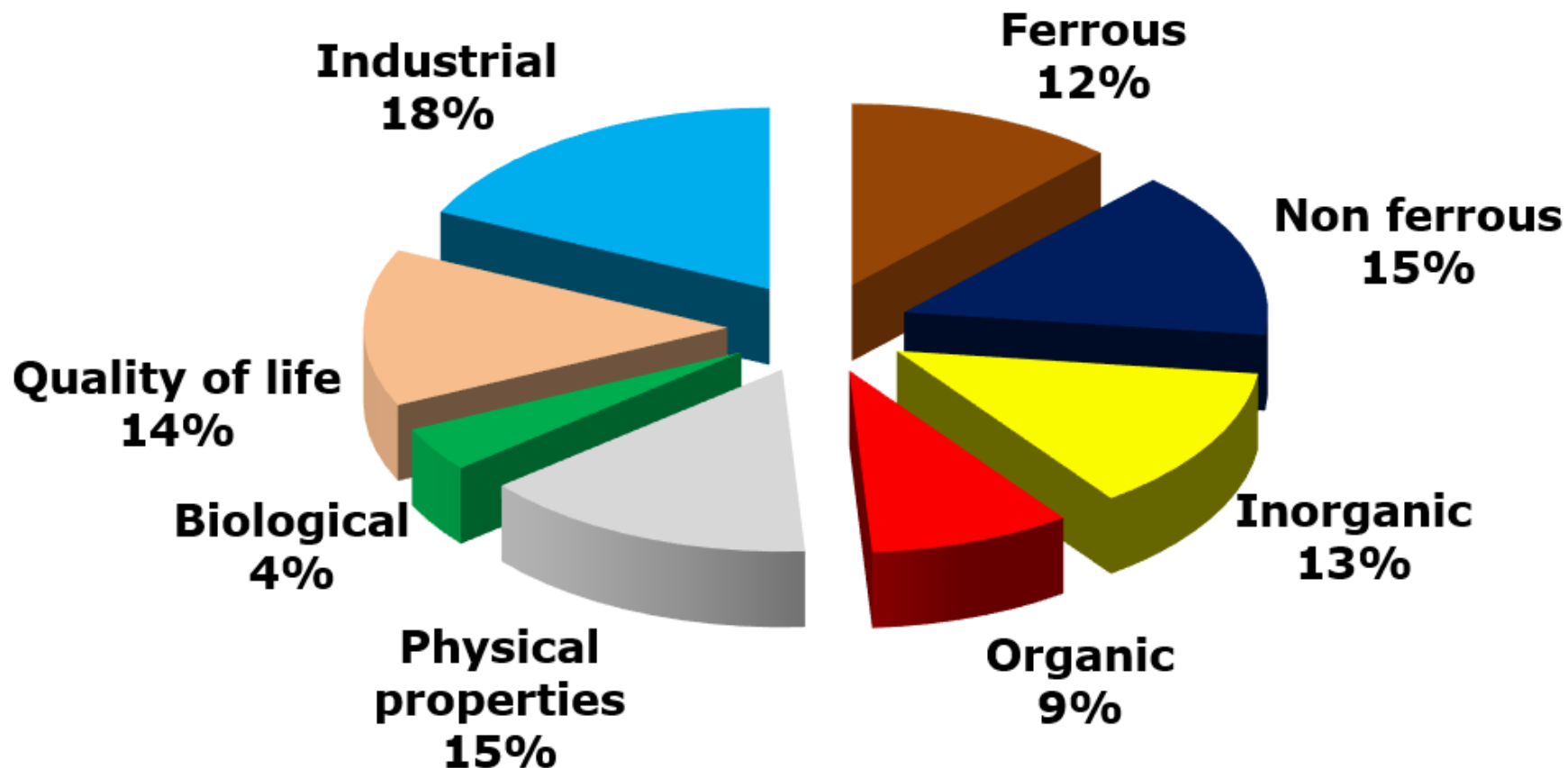




Number of CRMs according to certified properties



Distribution of CRM by fields of application





Searching in *COMAR*

- Full text search in the CRM description field
- Search using harmonized catalogues
 - ✓ certified properties
 - ✓ field of application
- Setting lower and upper limit values for quantity of interest
- Combining search strings using Boolean operators
- Restrict search to selected producers or countries
- Important:
 - ✓ Use only *COMAR* navigation tools (not “back” and “forward” of your browser) !
 - ✓ Comprehensive user guide available from *COMAR* website



Contained CRM information

Producer

Additional information (purchase, experts, QMS)

complete address of the producer

(pdf files, if available)

CRM name

e.g. BAM-376a

Description

Application description

e.g. pure copper, Cu 99,5

Packaging / storage

e.g. intended use

Form of material

e.g. 40 g bottle; storage at -20 °C

Chemical composition

Elements

e.g. Ag 163.0 µg/g

Molecules (CAS-No.)

e.g. alpha-HCH (319-84-6) 32.0 µg/kg

Physical/conventional properties

Physical properties (ISO-No.)

e.g. Activity / 9-33 4 - 400 kBq

Conventional properties

e.g. Flash point /ISO 1516 10.3 - 9.8 °C

Data files

certificate, report, references (if available)

Quality

CRM, RM

Status

available, out of stock, under development



COMAR catalogues

Search is supported by following catalogues:

- fields of application (e.g. environment)
- physical properties (e.g. kinematic viscosity)
- conventional properties (e.g. hardness Vickers)
- form of material (e.g. powder)
- elements (e.g. As)
- molecules (e.g. alpha-HCH, CAS No. 319-84-6)

under development:

- matrix (e.g. soil)



Login screen

<https://www.comar.bam.de/home/>

This site uses cookies to handle your session data. It will not work with cookies turned off.

Welcome to the COMAR database. Please login (existing user) or sign up (new user) - free of charge.

User

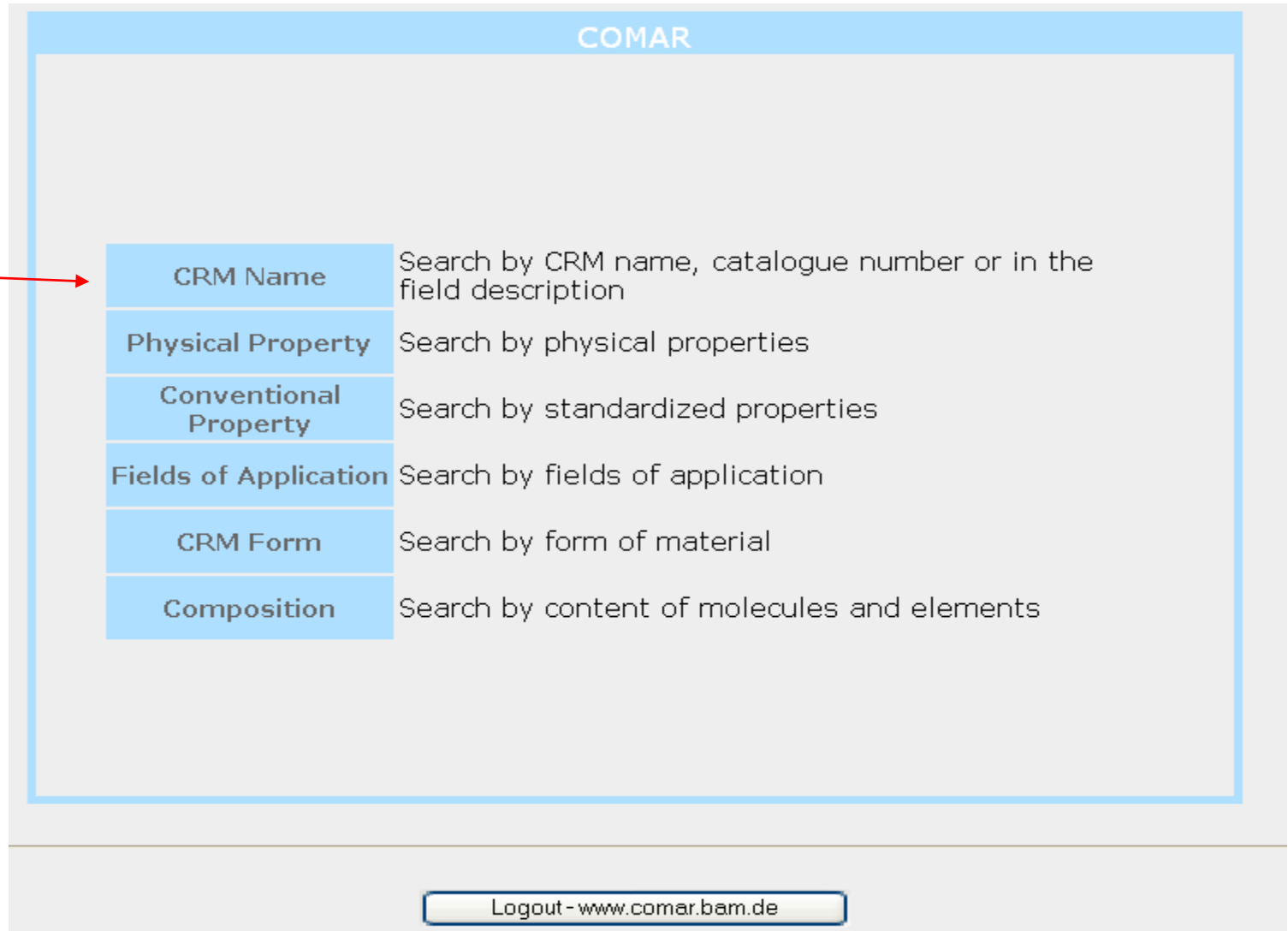
Password

[Logout - www.comar.bam.de](#)

click button "Sign Up"

Start screen for users

**Click one
of the
buttons**



Search Option	Description
CRM Name	Search by CRM name, catalogue number or in the field description
Physical Property	Search by physical properties
Conventional Property	Search by standardized properties
Fields of Application	Search by fields of application
CRM Form	Search by form of material
Composition	Search by content of molecules and elements

Logout - www.comar.bam.de



Access and search

Monthly there are about 350 user logins and 3300 displayed search results.

