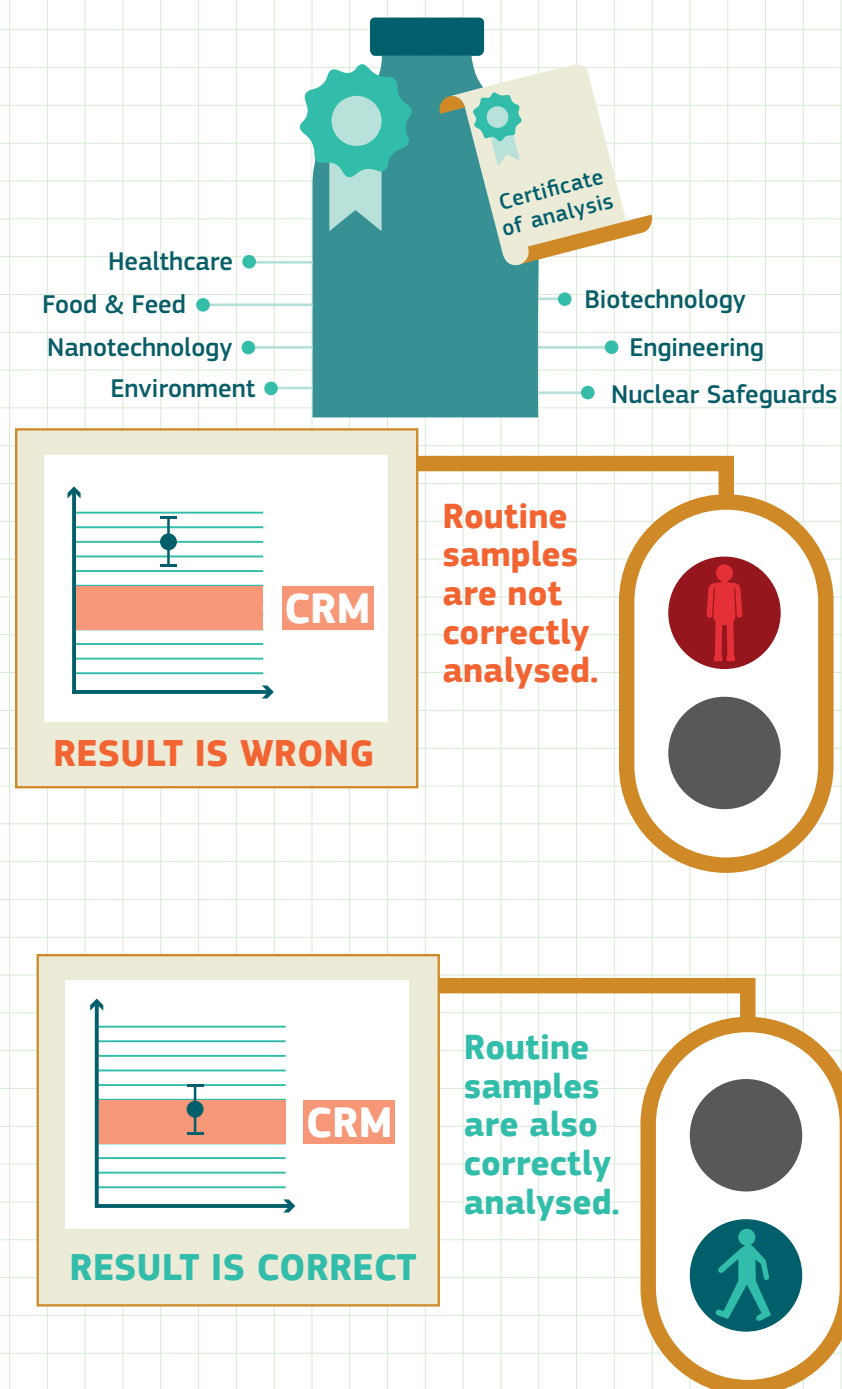


Confidence in measurements

Laboratories around the world need to check if they can measure correctly. They analyse Certified Reference Materials (CRMs) and compare their results with the certified values.



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**CREATING
IMPACT**



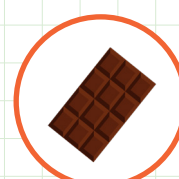
Bacterial toxins

Cereulide in rice (ERM-BD300)
(Supporting ISO 18465:2017)



Processing contaminants

MCPDs in infant formula (ERM-BD087)
(Commission Regulation (EU) 2023/915)



Heavy metals

Elements content in dark chocolate (ERM-BD512) (Commission Regulation (EU) 2023/915)



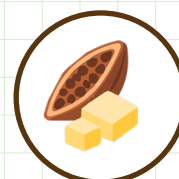
Pesticides

Pesticides in wheat flour (ERM-BC706)
(Regulation (EC) No 396/2005)



Environmental contaminants

PFAS in drinking water (IRMM-428)
(Directive (EU) 2020/2184)



Food composition

Triglycerides in cocoa butter (ERM-BD801)
(Directive 2000/36/EC)



Species verification

Genetic identification of Atlantic Halibut
(EURM-020) (Regulation No. 1379/2013)

Science for Policy
Joint Research Centre



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European
Commission

Joint Research Centre



Reference Materials

From the European Commission
Food and Feed Safety

1957

Treaties of Rome

“The Commission shall set up a Joint Nuclear Research Centre. It shall organise a **Central Bureau of Nuclear Measurements.**”(CBNM)

1973

The **Bureau Communautaire de Référence (BCR)** was established and the first activities of the EC in the field of metrology started.

1994

Institute for Reference Materials and Measurements (IRMM) took over the BCR tasks (responsibility for the management of all existing CRMs).

2004

Accreditation to ISO Guide 34 (first in Europe) which became ISO 17034 in 2016.

2016

RM activities of IRMM continue under the name **Joint Research Centre (JRC)** located in Geel (Belgium).

Reference materials food and safety

Chemical contaminants and emerging pollutants in food and feed

- Polybrominated diphenyl ethers (PBDEs)
- Polychlorinated biphenyls (PCBs)
- Organochlorine pesticides
- Pesticides
- Perfluoroalkyl substances (PFASs)
- Processing-induced contaminants: Short and medium-chain chlorinated paraffins (SCCPs, MCCPs), monochloropropanediol fatty acid esters (MCPDs)



Food safety biomarkers and contaminant indicators

- Mycotoxins
- Cereulide
- Somatic cell count
- Genomic DNA of food pathogens
- Staphylococcus aureus enterotoxin A (SEA)



Nutritional quality indicators and food composition parameters

- Vitamins
- Food proximates and essential elements
- Dietary fibre
- Fatty acid methyl esters profile
- Sugar and starches



Veterinary drug residues and hormonal modulators in food

- β antagonists
- Synthetic estradiol
- Antibiotics
- α -Trenbolone



Food authenticity, species verification and adulteration testing

- Identity of fish species
- Adulteration of oils and fats
- Testing of wine and sugar
- Calibration kits for detection of ruminant, porcine and poultry proteins by PCR



Elemental profile in food toxic heavy metals and essential minerals



Genetically modified organism (GMO) detection and quantification



Certified Reference Materials
CRM catalogue
crm.jrc.ec.europa.eu