

CHOICE OF A REFERENCE MATERIAL

The user must choose a reference material taking into account:

- The property applying to the measurement process, a reference material must be used for what it has been created.
- The level of that property, for example the concentration
- The matrix or structure to be closest to unknown sample to be analysed
- The form, powder, cylinder, block, liquid...
- The stability (shelf life, storage conditions and so on...)
- The uncertainties at a stated level of confidence given and certified by the producer

RM, CRM, ECRM and SUS

RM

Reference Material:

Material or substance one or more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus. The assessment of a measurement method, or for assigning values to materials.

CRM

Certified Reference Material:

Reference material accompanied by a certificate, one or more of whose property values are certified by a procedure which establishes its traceability to an accurate realisation of the unit in which the property values are expressed, and for which each certified value is accompanied by an uncertainty at a stated level of confidence.

ECRM

EURONORM Certified Reference Materials:

These certified reference materials are prepared under the auspices of the European Committee for Iron and Steel Standardisation (ECISS) in a collaboration between the producing organisations as follows :

- France : Institut de Recherche de la Sidérurgie IRSID et le Centre Technique des Industries de la Fonderie CTIF
- Germany : Iron and Steel CRM working Group including BAM Bundesanstalt für Materialforschung und Prüfung, Max Planck-Institut für Eisenforschung, Stahlinstitut VDEh
- England : Bureau of Analysed Samples Limited BAS
- Sweden/Finland : Jernkontoret, Swedish Institute for Metals Research Swerea-Kimab

Approximately 20 laboratories from countries from the EEC take part in the certification interlaboratory comparisons to characterise EURONORM CRM's

SUS

Setting-Up-Samples:

These samples are used for a daily adjustment of the analytical instrument calibration. This process is a drift correction. The first quality of that kind of samples is to be homogeneous. It is not necessary to know their exact chemical composition therefore they must not be used as RM's or CRM's.