The Comparative Testing Service of Cepi (Cepi-CTS) is a Proficiency Testing Scheme for the Paper Industry. It comprises a Round Robin programme of more than 100 different test methods to measure paper properties (strength, stiffness, structural, surface, chemical, printability, optical and other properties). It is used by more than 400 paper testing laboratories in most European countries. On average more than 15000 samples are distributed every year.

It is one of the many activities supported by Cepi and it is run by a Working Group whose members are nominated by the national Paper Associations.

Key features of the service:
- A fully independent service that runs continuously since 1976;
- The only Proficiency Testing Scheme for paper test methods that provides samples with assigned reference values and their associated acceptable ranges of results (Warning Limits and Action Limits) so that the client can immediately assess its performance;
- Run by a Working Group that includes the most important European Paper Research Institutes;
- Results processed in accordance with ISO/IEC 17043:2010 and ISO 13528;
- Clients comprise not only paper industries but also its customers and suppliers, with the aim to harmonise their testing procedures so that they can obtain comparable results;
- Deliverables include a final report that for each level of each property shows the statistical distribution of all clients and an annual Newsletter. Annual technical meeting and workshop are organized in combination with the WG Plenary Meeting and preferably close to another Paper Industry event.
- Supported by calibration, training and consultancy services.

Cepi-CTS explained

The Cepi-CTS is a quantitative, simultaneous and continuous proficiency testing scheme that aims at assessing the performance of a participating laboratory against pre-established criteria by means of interlaboratory comparisons. These criteria are obtained by consensus values from expert participants. According to ISO/IEC 17043 and ISO 13528, this means that:
- the objective is to quantify one or more measurands for each proficiency test item;
- proficiency test samples are distributed for concurrent testing by participating laboratories within a defined time period;
- test items are provided at regular intervals: the Cepi-CTS runs in fact twice per year.
- the performance of the participating laboratories is assessed against assigned values (Cepi Assigned Value or Cepi A-Value) and their associated acceptable ranges of results (Warning Limits and Action Limits) as determined by a preliminary interlaboratory comparison (the so-called pre-test round) of a network of Qualified Laboratories (QLs).

Confidentiality of results is assured through the use of anonymous laboratory identification.

The members of the WG that runs the Cepi-CTS have one or more roles: in addition to the QLs mentioned above, the Co-ordinating Laboratories prepare the samples, run the pre-test round, collect
results, perform all statistical analysis and issue all reports; the national Distributing Laboratories make the Cepi-CTS available in their countries.

The range of available tests includes those typically used for process control and material specification. The samples are available in a representative range of test levels for each assessed property. The test substrates have been selected to meet a range of industrial needs, consequently, unprinted papers and boards, as well as printed papers, corrugated boards, tissue products and labels are used as sample materials.

**Cepi-CTS history**

In the mid-Seventies a number of comparative testing services run by the foremost European paper research institutes were unified under the umbrella of what was then CEPAC, “Confédération Européenne de l’Industrie des pâtes, papiers et cartons” and its Working Group “Étalonnage”, thanks to the illuminated vision of such scientists as Mr Ramaz (CTP, France), Mr Lemm (BAM, Germany), Mr Fuit (TNO, The Netherlands), Mr Attwood (PATRA, GB) and Mr Luciani (ENCC, Italy).

The name of the Service was then CEPAC Calibration Check Service; its functioning was not much different from today: Co-ordinating, Authorised (today they are called Distributing) and Qualified Labs were the Working Group components.

Reports were almost the same, the real big difference was that samples were not identified with reference values and their Warning and Action Limits. Such important deliverables were introduced in 1992, at the same time that CEPAC merged with EPI to form Cepi (Confederation of European Paper Industries): Swiss and Scandinavian Institutes joined the WG: EMPA and KCL, STFI and PFI brought new impulse to the Service.

Cepi-CTS as we know it today is the result of the work done uninterruptedly during all these years by many dedicated scientists and technicians and it bears the fruit of continual innovations.

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