



ITAK

PLAN

PROFICIENCY TESTING PROGRAM
FOR **FeNb ALLOY**
2019

INTRODUCTION

ITAK has emerged as one of the most important proficiency testing program providers for various matrices and materials, assisting its clients in the continuous improvement of its performance in carrying out chemical analysis worldwide.

Continuing this important work, the **ITAK** will promote in **2019**, one round of **Proficiency Testing Program for FeNb Alloy**, and invites the laboratories of this segment to join the group of participants.

BENEFITS

In addition to representing an impartial tool of assessment laboratory performance, participation in round-robin programs brings several specific benefits, such as:

- ✓ Adherence to one of the requirements of **ISO / IEC 17025** for companies seeking or already possess the Accreditation on this ISO standard or other quality systems;
- ✓ Increased metrological reliability of the results obtained by the laboratory from their levels of precision and accuracy;
- ✓ Comparison with other industry laboratories and finding improvement opportunities to raise the level of performance (benchmarking);
- ✓ The opportunity of evaluation and comparison of methodologies seeking one that best suits the level of accuracy required for specific parameters and levels;
- ✓ Knowledge of the type of the deviations that may be committed by the laboratory (systematic or random) directing actions in eliminating/minimizing them;
- ✓ Identify staff training needs; and/or normalization or improvement of analytical methods.
- ✓

CONFIDENTIALITY

According to a confidentiality protocol adopted by the **ITAK**, the labs are identified by specific numerical codes, and the participant knowledge and access only to their own code, avoiding collusion among participants, which in case of occurrence or suspicion of occurrence, it will be properly investigated and handled by the program coordination team.

The performance comments described in the final reports are also confidential and are intended to provide important information to responsible for laboratories so that they have a thorough evaluation of the quality aspects of their analysis and know where to act effectively to correct possible deviations.

The experimental results obtained by the Participant Laboratory or even their performance in the Proficiency Testing may be disclosed to third parties with the consent of the Participant Laboratory.

STATISTICAL TREATMENT

For this Proficiency Test, it is necessary a number of participants greater than 6 (six) laboratories. The results obtained by the participants of the Proficiency Program are evaluated according to methodologies and statistical tools referenced by the ISO standards.

According to the results for accuracy assessments, the participating laboratory can be classified as **proficient (satisfactory performance)** for the analysis of a specific parameter, or **not proficient** if its performance is **unsatisfactory** or **questionable**.

Each used statistical technique has its use limited and conditioned to the number of participants who reported numerically valid results and approved in the Evaluation and Treatment Outliers.

SAMPLES AND ANALYSES

In 2019, **ITAK** will launch one round of **Proficiency Testing Program for FeNb Alloy**, consisting of 05 samples referring one reference materials being evaluating the analysis of the element **FeNb Alloy**.

The samples used in the Proficiency Testing Program are Reference Materials (MR's) with proven homogeneity and stability. MR's are produced by ITAK in accordance with the ISO 9001: 2015 Quality Management System and ISO quality protocols (ISO Series Guide 30 to 35) and ABNT NBR ISO 17034 - General requirements for the competence of reference materials producers.

To the participating laboratory is required to undertake one (1) independent determination in each sample, preferably in five (05) different days, analyzing a couple a day, employing one or more validated analytical methods. The methods used should be reported with the results. The samples must be analyzed as ordinary routine samples of the laboratory, without any special treatment.

For this round, **ITAK** will send five (05) sachets containing **25 g** each.

The samples will be sent by the **ITAK** from the city of João Monlevade / MG, under the guidance of the Participant Laboratory, using an appropriate and viable type of transportation. In case of loss or damage to any item test, **ITAK** will evaluate the possibility of replacement of the same, which will depend on the types of transportation and delivery time so as not to compromise the program schedule.

Together with the samples also follow instructions directing participant Laboratory on how to report the analytical results.

Communications about this Proficiency Testing, such as doubts, reporting of results, technical reports and certificates of participation, will be sent using the software developed by ITAK that will be available on website www.itak.com.br/app for the participating laboratories.

ANALYTICAL METHODS

It is recommended to each Participant Laboratory of the PT to use routine procedures to analyze the requested parameters.

The suggested analytical methods for the **Proficiency Testing Program for FeNb Alloy Analysis** are:

✓ **Niobium (Nb):** Fusion and determination by XRF or Acid dissolution followed by AAS or ICP-OES determination;

✓ **Iron (Fe), Silicon (Si), Phosphorus (P), Lead (Pb), Aluminum (Al), Titanium (Ti) and Tantalum (Ta):**

Fusion and determination by XRF or Acid dissolution followed by AAS or ICP-OES determination;

✓ **Sulfur (S):** Determination by Infra Red Analyzer (Leco) or Gravimetric Method.

SCHEDULE FOR 2019 ROUNDS

The proposed schedule for 2019 is presented in the table below but can be adjusted as required. The official schedule should be visited through the PTP Management System.

Etapas do Programa	Rodada 2017 (2ª rodada)
1-Envio de convites aos laboratórios proponentes.	Até 01/03/2019
2- Confirmação dos laboratórios participantes.	Até 01/03/2019
3- Distribuição/expedição das amostras	Até 06/03/2019
4- Recebimento das amostras pelos participantes	Até 18/03/2019
5- Conclusão das análises e emissão dos resultados ao ITAK.	Até 05/04/2019
6- Confeção e entrega do Relatório de Desempenho aos participantes.	Até 19/04/2019

Attention: the dates in bold (item 5) must be met in order to avoid delays in issuing the results, which can compromise the subsequent rounds of the program. On the verge of delays occur, the Program Coordination must be contacted to assess the possibility of extending the deadline without compromising schedule or injury to the other participants. In the event of an undue delay, the ITAK may close the round without the results of the participant(s) in arrears.

For each round, will be sent along with the samples, an instruction sheet containing guidelines on how the laboratory should proceed and specific information about the samples such as expected levels of the analyte (s) in question.

REQUIREMENTS FOR PARTICIPATION

The Laboratory interested in participating in the Proficiency Testing Program for FeNb Analysis – ITAK - 2019 should be a legally responsible organization, possess technical capacity and equipment to carry out the chemical analysis of its scope, complete the registration form in the ITAK website at: <http://www.itak.com.br/peps> , confirming its participation until the deadline stated in the schedule.

PERFORMANCE REPORT

For the **Proficiency Testing Program in FeNb Alloy Analyses – 2019**, ITAK will issue a personalized Interlaboratory Performance Evaluation Report (pdf file) under confidentiality identification for the internal evaluation of the Participant Laboratory and identifying improvement opportunities.

The Performance Evaluation Report presents, among other aspects:

- ✓ A description of statistical techniques used;
- ✓ Type, origin and metrological traceability of the assay items used;
- ✓ List of participating laboratories;
- ✓ Tables with results, analytical methods, assigned values , and uncertainty;
- ✓ Comments about the performance of the participating laboratory and possible types of errors.

If the participant wishes to receive the report of another unit of the same company group, it must be

requested directly to the person responsible for that unit, or through a formal authorization from the responsible sent to **ITAK**. Preliminary reports will not be issued.

The Performance Evaluation Report is accepted as a requirement of **ISO 17025**.

INVESTMENT

Request us a proposal by email: tecnologia@itak.com.br.

There are promotional prices for the participation of several units of the same Business Group.

All customs duty are the responsibility of the participant.

SUBCONTRACTED ACTIVITIES

For this PTP, homogeneity tests analyses of Reference Materials used as samples (test items) can be subcontracted from competent laboratories.

Regards,

Coordination Team:



Bráulio de Freitas Pessoa
Diretor Técnico - ITAK – CRQ: 02202008



Smarck de Jesus Lelis
Diretor - ITAK