



National Council for Cement and Building Materials
Interlaboratory Services
(India's First NABL Accredited PT Services Provider)

NCB PROFICIENCY TESTING SCHEME ON CLINKER
(CHEMICAL PARAMETERS): ILS/PT/99

PROTOCOL

1.0 PROFILE

1.1 Background

NCB is the apex body providing R&D and technical services in cement and allied building materials. In 2013, Interlaboratory Services (ILS) of NCB was granted NABL accreditation as per ISO 17043:2010 for providing PT services on cement and fly ash. The present scope of accreditation in chemical field covers: limestone; clinker; cement; fly ash; concrete admixture; water for concrete; coal/coke/pet coke.

1.2 PT Scheme on Clinker

ILS is now launching PT scheme on Clinker (ILS/PT/99). The study is being coordinated by V Naga Kumar. The programme envisages testing of single homogenized sample of clinker as per Indian standard methods of testing in chemical field. Around 30 laboratories are expected to participate. The registration for participation would be done on first-come-first-served basis. The scheme will be implemented as per ISO 17043:2010. The channels of communication will remain open through out the scheme implementation period with all the participants.

1.3 Salient Features of the New Scheme

Each participating laboratory would be provided single sample for testing. Salient features of the scheme are as under:

- Simultaneous participation
- Sourcing of material
- Material homogenization and sample preparation
- Testing for homogeneity and statistical check of homogeneity
- Safe delivery of samples to participating laboratories
- Standard followed for the scheme as per ISO 17043:2010 and ISO 13528:2015(E)
- Feedback of performance to participating laboratories
- Data confidentiality

All the PT activities will be coordinated by ILS. Material testing for initial checking, material homogenization and testing for homogeneity will be subcontracted by ILS to other laboratories of NCB. Activities like statistical check of homogeneity, data compilation, analysis of results and report preparation will not be subcontracted. Complete confidentiality will be observed in the implementation of the scheme.

2.0 TECHNICAL DETAILS

2.1 Material Selection, Homogenization and Preparation of PT Item

The material for preparing PT item will be acquired from a suitable source. The quality of the material will be checked for suitability. The material will be homogenized and evaluated statistically for homogeneity for preparation of PT item. The prepared & packed PT item/sample will be checked for stability.

2.2 Sample Packaging and Delivery

The PT item (test sample) would be packed properly and safely for dispatch to the participants. Each participating laboratory would be provided single test sample. Necessary instructions and data reporting sheets also will be provided. Replacement would be provided in case of damage or loss during transit.

Indian participants would receive the sample at their address.

2.3 Sample Testing

The scheme covers testing of homogenized sample provided by ILS as per IS specification, for the following test parameters at participants' laboratories.

| Chemical | IS Code* |
|---|------------------------------------|
| Loss on ignition (LOI) | IS 4032:1985 |
| Silicon dioxide (SiO ₂) | IS 4032:1985 |
| Iron oxide (Fe ₂ O ₃) | IS 4032:1985 |
| Aluminium oxide (Al ₂ O ₃) | IS 4032:1985 |
| Calcium oxide (CaO) | IS 4032:1985 |
| Magnesium oxide (MgO) | IS 4032:1985 |
| Sulphur trioxide (SO ₃) | IS 4032:1985 |
| Sodium oxide (Na ₂ O) | NCB standard procedure, MS-13-2010 |
| Potassium oxide (K ₂ O) | NCB standard procedure, MS-13-2010 |
| Chloride (Cl) | IS 4032:1985 |

*Latest IS code may consider for the above parameters.

Note: 1. The laboratories are required to ensure availability of calibrated equipment, glassware, reference material, maintain required environmental conditions, and meet all IS requirements during testing. Conformance to the respective test procedures will have to be ensured.

2. Copy of MS-13-2010 will be provided.

2.4 Reporting of Results

The participating laboratories will be required to conduct the tests as required in the specification and report average result for each test for the sample, to the accuracy mentioned in the results reporting sheet; deviation, if any, will have to be reported. Test results would have to be sent to the coordinator through e-mail for quick transmission, followed by hard copy.

2.5 Analysis of Results

Received test results will be evaluated as per ISO 17043:2010 and ISO 13528:2015. Evaluation would be done for variation, for each test parameter and 'Z' score of laboratory performance calculated.

2.6 Statement of Confidentiality

All laboratories would be given code number, upon receipt of test results. Confidentiality of received data, analysis and feedback would be ensured. Identity (list) of participants will not be disclosed. However, it may be disclosed to NABL, if required.

2.7 Report

Report containing details of the scheme, evaluation, laboratory performance sheet would be prepared and provided to the participating laboratories. Copy of the report may be given to NABL, if required.

2.8 Appeal

Participants may appeal to NCB against the evaluation of their performance for the scheme within a month. Delay submission of appeal may not consider for revalidation.

2.9 Feedback

All the participating laboratories will be individually conveyed the status of their performance, with remarks.

3.0 REGISTRATION FOR PARTICIPATION

The laboratories having facilities for chemical testing of clinker can register by sending filled up Form 1 (enclosed) to NCB, for participation in the scheme.

4.0 TIME LINE

The last date for registration in the scheme is **15th February 2023**. The test sample would be dispatched to participants by **28th February 2023**. The study is scheduled to be completed by **31st March 2023**.

5.0 PARTICIPATION FEE

Rs. 15,000.00 (Rs. Fifteen Thousand) plus GST @ 18%. Total Rs. 17,700.00 (Rs. Seventeen Thousand Seven Hundred only) including sample shipping charges.

6.0 POST-PROGRAMME SUPPORT

Laboratories willing to take assistance for improving their performance in the aftermath of the programme would receive support at the cost agreed upon.

V Naga Kumar
(PT Coordinator)

Date: 05.01.2023

Contact Details:

Amit Trivedi

**Head of Centre
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**National Council for Cement and Building Materials
Interlaboratory Services**

CONSENT FORM FOR PARTICIPATION IN PT SCHEME

**TITLE: NCB PROFICIENCY TESTING SCHEME ON CLINKER
(CHEMICAL PARAMETERS): ILS/PT/99**

Name of the Laboratory.....

Address:

.....

Pin code:Telephone:

e-mail: GST No.:

Name of the Contact Person:

Designation: e-mail:

Telephone: Mobile:

Is your laboratory accredited with ISO 17025: YES NO

If, NO: Laboratory shall need to provide the traceability of the measurement equipment along with Form 1.

We are interested to participate in the above scheme.

The participation fee alongwith applicable taxes for the scheme is being made as per the following:

Payment details: RTGS/NEFT/SB Collect** ----- dated -----

for **Rs.** -----

Date:

Authorized Signatory

Participation Fee : Rs. 15,000.00

GST @ 18% : Rs. 2,700.00

Total : Rs. 17,700.00

PAN No.: AAATN2477N; GST No. 06AAATN2477N1Z6

RTGS/NEFT: Saving Account No. (SBI): 37301477161, IFSC: SBIN0003794; Address: Cement Research Institute of India, Sector – 4, Faridabad, Haryana – 121004 **OR**

****SB Collect:** www.onlinesbi.com → SBI collect → Proceed → State of corporate/Institution: (All India) → Type of corporate/Institution: (Govt. Department) → National Council for Cement and Building Materials → Proficiency Testing → Submit.

Please forward scanned copy of payment details separately