



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



Interlaboratory Services
NABL Accredited Laboratories
Certificate No.: PC-1007

NCB PROFICIENCY TESTING SCHEME ON OPC
(CHEMICAL PARAMETERS): ILS/PT/46

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 OPC

ILS is now launching PT scheme on chemical testing of OPC (ILS/PT/46). The study is being coordinated by Sh. V Naga Kumar. The programme envisages testing of two homogenized samples of Ordinary Portland Cement (OPC) 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 two samples 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
- Data analysis 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, compilation and 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 Items

The material for preparing PT items 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 items. The prepared & packed PT items/samples will be checked for stability.

2.2 Sample Packaging and Delivery

The PT items (test samples) would be packed properly and safely for dispatch to the participants. Each participating laboratory would be provided two test samples. 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 samples at their address. Overseas participants would have to make arrangement for picking up the samples from NCB.

2.3 Sample Testing

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

Parameter	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
Insoluble residue	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

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. *Alkalis and chloride are not in scope of accreditation.*

3. Z-score will not be calculated for chloride.

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

2.4 Reporting of Results

The participating laboratories will be required to conduct the tests in duplicate and report average result for each test for each 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/fax 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(E). 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 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 OPC 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 **20th October, 2018**. The test samples would be dispatched to participants by **31st October, 2018**. The study is scheduled to be completed by **31st December, 2018**.

5.0 PARTICIPATION FEE

Rs. 30,000.00 (Rs. Thirty Thousand) plus GST @ 18%.
Overseas Participants: USD 1000 (USD One Thousand)

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.

Dr. S.K. Breja
(Joint Director)

Date: 01.10.2018

Contact Details:

Dr. S. K. Breja

**Joint Director & Head
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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 OPC
(CHEMICAL PARAMETERS): ILS/PT/46**

Name of the Laboratory.....

Address:

.....

Pin code:

Telephone: e-mail:

Name of the Contact Person:

Designation: e-mail:

Telephone: Mobile:

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: NEFT*/SB Collect** ----- dated -----

for **Rs.**

Date:

Authorized Signatory

Participation Fee : Rs. 30,000.00

GST @ 18% : Rs.

Total : **Rs.**

PAN No.: AAATN2477N; GST No. 06AAATN2477N1Z6

***NEFT:** Saving Bank Account No. 10383962218, State Bank of India, Address – Cement Research Institute of India, Sector-4, Faridabad 121004 (Haryana), India, Branch Code-03794, MICR Code – 110002194 and IFSC Code SBIN0003794.

****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

Form 1 Date of Issue: 01.10.2018 Revision: 00
