



**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 CONCRETE CUBE**  
**(MECHANICAL PARAMETERS): ILS/PT/42**

**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 mechanical field covers: cement; fly ash; aggregate; mortar/concrete; tile (ceramic); burnt clay building brick; steel bar.

**1.2 PT Scheme on Concrete Cube**

ILS is launching PT scheme on mechanical testing of concrete cube. The study is being coordinated by Dr. S.K. Breja. The programme envisages testing of two homogenized samples of concrete cube as per Indian standard methods of testing in mechanical field. Around 15 laboratories would be accommodated. 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 throughout 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 ingredient materials
- Preparation of M-25 grade concrete cubes
- 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 blending, sample casting 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 prepared & packed PT items/samples will be checked for homogeneity and 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 – each sample comprising three specimen. Necessary instructions and data reporting sheets also will be provided. Replacement would be provided in case of damage or loss during transit.

### 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	Method of Test
Mass	-
Density	-
Area	-
Compressive strength	IS 516:1959

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

### 2.4 Reporting of Results

The participating laboratories will be required to conduct the tests as required in the specification and report individual result for each specimen for each test, 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(E). Z-score of laboratory performance for each test parameter will be calculated. The laboratory's performance would be indicated in terms of Z-score.

### 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 mechanical testing of concrete cube 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 **31<sup>st</sup> July, 2018**. The test samples would be dispatched to participants by **31<sup>st</sup> August, 2018**. The study is scheduled to be completed by **30<sup>th</sup> September, 2018**.

#### **5.0 PARTICIPATION FEE**

Rs. 30,000.00 (Thirty Thousand) plus GST @ 18%.

#### **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  
(PT Coordinator)

Date: 07.05.2018

#### **Contact Details of PT Coordinator:**

**Dr. S. K Breja**

**Joint Director & Head  
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**National Council for Cement and Building Materials  
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**CONSENT FORM FOR PARTICIPATION IN PT SCHEME**

**TITLE: NCB PROFICIENCY TESTING SCHEME ON CONCRETE CUBE  
(MECHANICAL PARAMETERS): ILS/PT/42**

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](http://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.