PROFICIENCY TESTING PROGRAM
CEMENT

CEMENT CONCRETE & AGGREGATES AUSTRALIA

This program is organised and coordinated by Cement Concrete and Aggregates Australia (CCAA). It is designed to provide laboratories with an opportunity to assess the reliability of their testing facility, as well as the operational skills of their technicians. With a successful history of over 70 years, the program has attracted and maintains regular participations of laboratories within Australia and internationally.

This program meets the requirements specified in ISO 17025 for comparing testing through an inter laboratory program; is recognised by NATA and IANZ; and follows the principles of ISO 17043.

Testing of the same category is performed under the same standards, similar conditions and on strictly controlled cement samples. On that basis, by employing in-depth statistical analyses based on the data-rich collection of test results contributed by all participating laboratories, their accuracy/reliability statuses can be determined and reported. Testing frameworks include the following categories:

1. CHEMICAL COMPOSITIONS OF CEMENT

COMPONENT	UNIT	COMPONENT	UNIT	COMPONENT	UNIT	COMPONENT	UNIT
CaO	%	SO_3	%	TiO_2	%	Chloride	%
SiO_2	%	MgO	%	P_2O_5	%	Free lime	%
Al_2O_3	%	Na_2O	%	Mn_2O_3	%	Loss on ignition	%
Fe_2O_3	%	K_2O	%			Insoluble residue	%

2. PHYSICAL CHARACTERISTICS OF CEMENT

COMPONENT	UNIT	COMPONENT	UNIT	COMPONENT	UNIT
Normal consistency	%	Soundness	%	Residue on 45µ sieve	%
Initial set time	min	Specific gravity	-	Autoclave expansion	%
Final set time	min	Fineness	m^2/kg	Heat of hydration 7d & 28d	kJ/kg

3. PHYSICAL PROPERTIES OF CEMENT MORTAR

COMPONENT	UNIT	COMPONENT	UNIT	COMPONENT	UNIT
Peak temperature rise	°C	Compressive strength	MPa	Sulfate expansion	µε
Time to peak temperature	hour	Drying shrinkage	µε		

Participants may choose to conduct either a full program, an individual category, or a combination of the categories listed above.

All experiments must comply with Australian Standard test suite, European Standard test suite, British Standard test suite or other suitable locally developed methods. Statistical analyses of test results, including repeatability and reproducibility assessments, are conducted based on ISO 5725-2, ISO/TR 22971 and ASTM E691.

It should be noted that a carefully selected reference cement will be supplied to participants, once registration is closed, without type and source identification. All analysis results are reported without attribution, to ensure the confidentiality of participants. Each participant laboratory will be assigned with a unique Laboratory Identification then be advised separately when the final report is released.

For mortar testing (Category 3), CCAA recommends a consistent use of the standard sand complying with EN 196-1 (CEN-Normsand) produced by Normensand. Participants who do not have the standard sand in stock will be supplied with a sufficient amount for the test component(s) they have registered by CCAA at no extra cost.

For further information, visit CCAA website or contact CCAA at info@ccaa.com.au.

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CCAA PROFICIENCY TESTING PROGRAM FOR CEMENT

EXPRESSION OF INTEREST

Corresponding email: info@ccaa.com.au

Laboratory Name: _____

Contact Person: _____

Country: _____

Email Address: _____

We are interested in the following testing component:	We wish to receive notifications from CCAA regarding the proficiency testing program for the following year(s):
(Please select ONE) ◯ Individual Components ☐ Chemical Compositions of Cement ☐ Physical Characteristics of Cement ☐ Physical Properties of Cement Mortar ◯ Full Program	(Please select or specify the most appropriate year(s)) ◯ The nearest program ◯ Every year

Signature: _____
(for and on behalf of laboratory)

Name: _____

_____

Date: _____