

## CECB Laboratory Services.....

At CECB Laboratory Services we are equipped to perform traditional laboratory testing for projects in different geographical areas across Sri Lanka. Our highly trained Engineers are more than capable of conducting a range of tests, whether it be soil testing, aggregate testing, concrete testing, cement testing, asphalt testing or testing of clay bricks. Now laboratories are located throughout the country to provide quality laboratory testing in Colombo, Digana, Badulla, Monaragala, Anuradhapura, and Galle.

### Contact Us....

#### Main Laboratory - Colombo

CECB Laboratory Services  
No.11, Jawatta Road,  
Colombo 05, Sri Lanka.  
Tel : +94 112 598 215  
Fax : +94 112 598 215  
E-mail : cecblab@gmail.com  
Web : www.crdcecb.sl.lk



#### Base Laboratories

##### Galle

CECB Laboratory Services  
Southern Province  
No.20, Godakanda Road,  
Karapitiya, Galle, Sri Lanka.  
Tel : +94 91 494 6036  
+94 91 493 0935  
Fax: +94 91 438 1494  
E-mail : cecblssp@gmail.com



##### Ampara

EPC - South East,  
Sri Rathana Mawatha,  
Ampara, Sri Lanka.  
Tel : +94 632 222 434  
Fax: +94 632 222 439  
E-mail : cecblabse@gmail.com



### Our Project Laboratories....

##### Digana

Engineering Geology &  
Site Investigation Unit  
Digana Village, Rajawella,  
Digana, Sri Lanka.  
Tel : +94 81 237 6320  
Fax : +94 81 237 6320  
E-mail : cecbgeo@yahoo.com

##### Badulla

CECB Laboratory Services  
37/2A, Bandaranayake  
Mawatha,  
Badulla, Sri Lanka.  
Tel : +94 55 2222706  
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E-mail : cecblab@gmail.com

## Chemical & Environmental Laboratory

Sri Lanka is one of the world's biodiversity hot spots. The need to preserve and protect the environment is therefore of utmost importance. In view of this CECB has taken the initiative as a government body to establish and implement the Chemical and Environmental Laboratory Services Unit to fulfill the verification needs of construction and industry related environmental issues in accordance to the regulations stipulated by the Central Environmental Authority. At present our main involvements include investigations in Kalu Ganga and Uma Oya Projects. We have also conducted a wide variety of EIA, IEE and Feasibility Studies both locally and internationally.

These Include:

- ☆ Joint Research and Consultancy Services for the Establishment of Alternative Road Construction Processes Using Coral-limestone Base Soil Materials at the Republic of Maldives
- ☆ EIA on ATGS Waste to Energy Project at Karadiyana Municipal Waste Dumping site
- ☆ IEE of the Proposed Badulla, Ella and Hali Ella Integrated Water Supply Scheme.
- ☆ Social and Environmental Assessment (SEA) for the Nyamwamba Small Hydropower Project, Uganda.
- ☆ Feasibility Study for 'Proposed Kurunegala-Habarana Railroad Project'
- ☆ EIA Studies for : Proposed MahagonaWewa Irrigation Project, Kolonna Water Supply Scheme(2012), Morana Reservoir Project in Badulla District (2012), KalugalOya Reservoir Project in Ampara District (2012).
- ☆ IEE studies carried out under the ADB funded Conflict Affected Region Emergency (CARE) Project.
- ☆ Construction Project of Ministry of Defence & Three Forces Head Quarters at Akuregoda

We at Chemical and Environmental Laboratory Services are well equipped and geared to cater for the environmental verification needs of the country in its current infrastructure development movement. We strive to excel in providing proper verification and assurance to support environmental compliance thereby ensuring a healthy environment for a better tomorrow.



### Head Office

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## CECB Laboratory Services



## Chemical & Environmental Laboratory



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*"An Investment in Knowledge Pays the Best Interest."*  
Benjamin Franklin



## Chemical & Environmental Testing

### About Us.....

CECB Laboratory, located in Jawatta, Colombo 05, is a major sub unit of CECB, an institution under the Ministry of Mahaweli Development and Environment. The Chemical & Environmental Laboratory Services established under CECB Laboratory undertakes a range of sample testing for diverse projects, both local and foreign. Environmental chemists operate state-of-the-art analytical instrumentation, testing to government, regulatory, and industry standards. Our core values include:

Scientific Integrity  
Workplace Diversity  
Intellectual Honesty  
Courtesy

### Soil Chemical Tests (Construction & Agriculture)

pH - BS1377 :Part-3 :1990  
Chloride Content W/A - BS1377 :Part-3 :1990  
Sulphate Content W/A - BS1377 :Part-3 :1990  
Mass Loss on Ignition - BS1377 :Part-3 :1990  
Organic Matter Content - BS1377 :Part-3 :1990  
Carbonate Content - BS1377 :Part-3 :1990

### Aggregate Chemical Tests (Construction)

Chloride Content W/A - BS 812 :Part-117  
Sulphate Content W/A - BS 812 :Part-118  
Soundness of Aggregate - BS 812 :Part-121 / ASTM C 88 / AASHTO T 104  
Potential Alkali - Silica Reactivity of Aggregate - ASTM C 829  
Organic Impurities in Fine Aggregate - ASTM C 40  
Insoluble Residue in Carbonate Aggregate - ASTM D 3042  
Acid Soluble Material in Fine Aggregate - BS 812 :Part-118  
Light Weight Particles in Aggregate - ASTM C 123



### Water Quality (Construction/Drinking/Waste Water)

pH - ASTM D 1293  
Electrical Conductivity - APHA-2510-B  
Turbidity - USEPA 180.1  
Chloride Content - ASTM D 512-04  
Sulfate Content - ASTM D 516  
Carbonate Content - USGS Method  
Bicarbonate Content - USGS Method  
Total Hardness - APHA-2340-C, USEPA 130.1 & 130.2  
Acidity or Alkalinity - ASTM D 1076, APHA 2310  
Total Dissolved Solids (TDS) - APHA-2540-C  
Total Suspended Solids (TSS) - APHA-2540-D  
Total Solids (TS) - APHA-2540-B  
Biochemical Oxygen Demand (BOD) - APHA-2510-B  
Chemical Oxygen Demand (COD) - APHA-5220-B, USEPA 410.1 & 410.2  
Total Oil & Grease - USEPA 413.1  
Total Phosphate - ASTM 4500-P  
Nitrate - ASTM 4500-NO<sub>3</sub>-B



### Micro-biology - SLS 614:Part 2 -83

Fecal Coliforms (e.coli)  
Total Coliforms

### Air Quality

Particulate Matter PM10 - ASTM D 4096-91 (2009)  
Particulate Matter PM2.5 - ASTM D 4096-91 (2009)  
Ozone Content - ASTM D 5156-02 (2008)  
Carbon Monoxide Content - ASTM D 3162-12 (2012)  
Sulfur Dioxide Content (SO<sub>2</sub>) - ASTM D 2914-01 (2007)  
Nitrogen Dioxide Content (NO<sub>x</sub>) - ASTM D 1607-91 (2011)  
ASTM D 3608-95 (2011)

Including.....

Atmospheric Temperature,  
Atmospheric Pressure, Humidity, Wind Speed,  
Wind Direction



### Noise & Vibration

Noise Level Monitoring  
- ISO 1996(part1,part2) & BS 4142:1997  
Vibration Level Monitoring - ISO 4866:1990

### Cement - SLS 107 :Part 2 :2008 / ASTM C 114-10

Loss on Ignition  
Insoluble Residue  
Silicon Dioxide Content (SiO<sub>2</sub>)  
Aluminum Oxide Content (Al<sub>2</sub>O<sub>3</sub>)  
Iron Oxide Content (Fe<sub>2</sub>O<sub>3</sub>)  
Calcium Oxide Content (CaO)  
Magnesium Oxide Content (MgO)  
Chloride Content (Cl<sup>-</sup>)  
Sulphate Content (SO<sub>4</sub><sup>2-</sup>)  
Lime Saturation Factor  
C3A, C2A, C4AF, C3S

### Flyash - BS 3892-Part 1, BS EN 196-2:1995

Moisture Content  
Loss on Ignition  
Insoluble Residue  
Silicon Dioxide Content  
Aluminum Oxide Content  
Iron Oxide Content  
Calcium Oxide Content  
Magnesium Oxide Content  
Sulphur Trioxide  
Sodium Oxide Content  
Potassium Oxide Content  
Available Alkali

