

Blue Cube Portable Test Unit



The Blue Cube portable test unit is a tool to assess the effectiveness of Blue Cube technology for real-time measurements on new sites.

The tool is used to determine the feasibility of each real-time measurement and, to a limited extent, the error range and detection limits. Note: the equipment is generally less precise and does not replace the Blue Cube Slurry Analyser.

HOW IT WORKS

Operation of the portable test unit requires that samples are taken manually by the operator and loaded individually into the portable test unit for scanning. This process is repeated for 30 samples per stream.

Sample requirements

- 250 - 700ml sample volume
- 10 to 60% solids
- Uses reconstituted and process samples
- 2000µm maximum particle size
- Washing water required

Site requirements

- A representative sampler on the stream
- The equipment can be set-up in the lab.
- A minimum of 2m² working area.
- Water access
- Power: 110 or 220 VAC
- A lab for the preparation and analysis of samples (carried out by the client)

OPERATION OF TEST UNIT

Step	Action	Details
1	Assemble test unit	Work next to stream intended for installation
2	Start up the test unit	Requires at least 40 minutes
3	Capture sample stream	Manual sample capture from stream
4	Load sample	Pour sample in removable sample cuvette
5	Activate pump	Sample recirculated past the spectral scanner
6	Spectral scanning	Optical data transferred to laptop
7	Remove sample	Decant sample into bucket and send to laboratory
8	Lab testing	Chemical assay
9	Evaluate new samples	Laptop with Blue Cube software

CONSUMABLES REQUIRED

- Sieve at 2 mm aperture - to be used if coarse particles are present in the samples.
- Slurry sample splitter (2 or 3 nozzles) - to be used if the sample volume exceeding the maximum volume which can be used for the PTU run.
- Measuring cup (1 l volume) in the amount of 2 pieces.
- Buckets (or other sampling vessels) to be available in the amount of 7-10 pieces.
- Tissue for cleaning the unit and any possible spillages.
- Paper labels for the samples labelling.