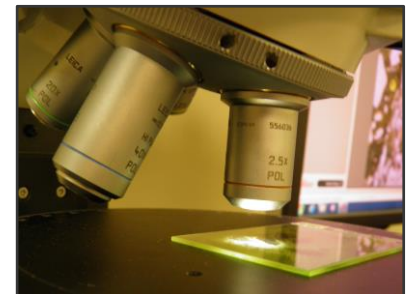
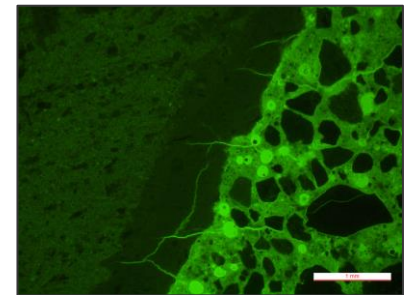
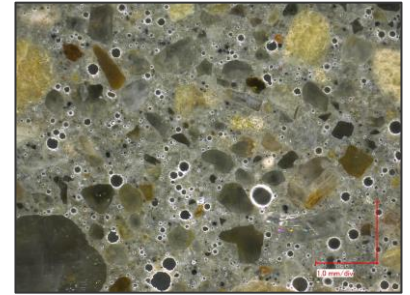
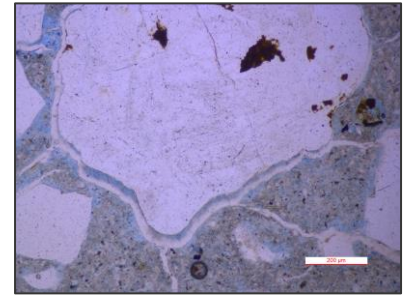
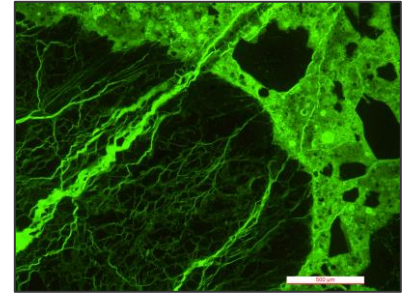
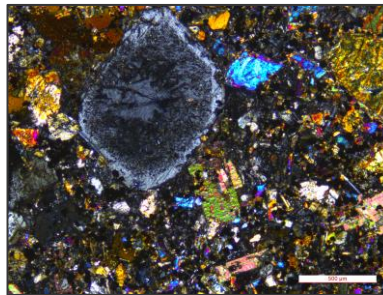
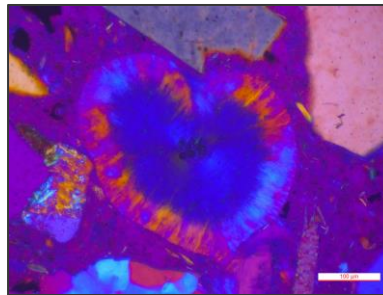


## PETROGRAPHIC EVALUATION

The most frequently used and effective forensic analysis technique for building materials. Used for evaluating building material quality, deterioration causes, current condition, and material properties. Petrography is most commonly applied to concrete but can also be used to evaluate mortar, grout, plaster, stucco, terrazzo, building stone, and the raw materials such as cement and aggregate.

SGS TEC Services experienced team of petrographers, professional engineers, and professional geologists utilize our advanced petrographic and chemical analysis equipment within our ISO 17025, AASHTO R18, and Army Corps of Engineers accredited laboratory to determine the following material information:

- Water Content
- Air Content
- Chemical Attack
- Alkali Silica Reactions (ASR)
- Freeze Thaw Damage
- Paste Carbonation
- Corrosion of Rebar
- Fire Damage
- Cause of Cracking
- Sulfate Attack
- Improper Finishing
- Fly Ash, Slag, Silica Fume
- Aggregate Lithology
- Specification Compliance
- Service Life



### Petrography can often answer the following questions:

- Why are my compressive strength values less than the design?
- How do I know the provided concrete matches the mix design?
- Was too much air entrainment added to the concrete?
- Is it time to remove and replace the existing concrete slab?
- Why do I have so much efflorescence on my concrete?
- Did the material quality contribute to the building collapse?
- What is the condition of the concrete in the old building?
- What is the probable future performance of my concrete?
- Why is my slab surface color blotchy?
- How much surface preparation is required?
- Why are there so many cracks in my slab?
- Why did the surface of the concrete flake off?
- What materials were used in the historic mortar?

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