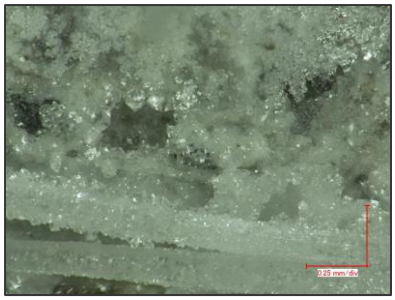
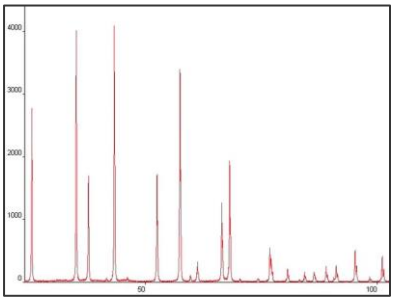
X-RAY DIFFRACTION (XRD)

A rapid analytical technique used to identify and quantify the crystalline phases present in a material. XRD analyses are most commonly applied to cementitious material such as cement (ASTM C1365), fly ash, and slag and geologic samples such as sand, raw minerals, and aggregates, but it can be applied in some capacity to nearly all materials.

SGS TEC Services experienced team of professional geologists, petrographers, and professional engineers utilize XRD analysis employing the International Centre for Diffraction Data (ICDD) PDF 4+ database within our ISO 17025, AASHTO R18, and Army Corps of Engineers accredited laboratory to determine the following:



- Mineral / Phase Identification & Quantification
- Crystallinity Percentage
- Crystallite Size and Strain
- Amorphous Content
- Lattice Parameter
- Cell Refinement



XRD can often answer the following questions:

- Is the belite and alite content of my cement typical or abnormal?
- Are contaminants in my cementitious material?
- What minerals are present in my aggregate?
- Are the mineral ratios in my aggregate prone to develop deleterious issues?
- What is the leachate coming out of my concrete?

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