

## Chemical Analysis of Available Portland Cement in Libyan Market Using X-Ray Fluorescence

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**Abstract :** This study compares the quality of different brands of Portland Cement (PC) available in Libyan market. The amounts of chemical constituents like SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, CaO, MgO, SO<sub>3</sub>, and Lime Saturation Factor (LSF) were determined in accordance with Libyan (L.S.S) and American (A.S.S) Standard Specifications. All the cement studies were found to be good for concrete work especially where no special property is required. The chemical and mineralogical analyses for studied clinker samples show that the dominant phases composition are C<sub>3</sub>S and C<sub>2</sub>S while the C<sub>3</sub>A and C<sub>4</sub>AF are less abundant.

**Keywords :** Portland cement, chemical composition, Libyan market, X-Ray fluorescence

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