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Study and Investigation on Cypress Tree Extract used in Concrete

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Abstract: This study focuses on using a natural plant-based material (cypress tree extract) as an ecofriendly admixture in concrete. Normally, chemical admixtures are added to concrete to improve strength and workability, but they often harm the environment and are costly. To find a better option, we tested cypress bark extract at different dosages (5%, 10%, and 15%) in M25 grade concrete. The results showed that this natural extract delayed setting time, improved workability, and increased compressive, split tensile and flexural strength, especially at 10% dosage for compressive strength and up to 15% for the other two. This suggests cypress extract can replace chemical admixtures to make concrete more sustainable and costeffective. The method also helps reduce the carbon footprint of construction while promoting the use of natural and renewable materials..

Keywords: Eco-friendly concrete, Natural admixture, Cypress tree extract, Sustainable construction etc



