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## **Study of Ecofriendly Admixture in Concrete**

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Abstract: To enhance workability and strength, water-reducing chemicals are commonly used, but their production emits CO2 and poses environmental and cost concerns. The research explores the potential of plant extract, specifically cypress extract, as an eco-friendly and cost-effective alternative admixture for concrete. Previous studies have shown positive effects of organic admixtures, including polysaccharides and bio-admixtures from water hyacinth, on concrete rheology and strength.

This research aims to determine the viability of cypress extract as a sustainable admixture, offering an environmentally friendly solution to reduce reliance on imported, patented chemicals and mitigate the environmental impact of the cement industry.

Keywords: Concrete admixtures, Cypress, extract, Organic admixture, Eco-friendly alternatives

## REFERENCES

[1]. Utilization of Pervious Concrete in Rainwater Harvesting with Partial Addition of Glass powder 2017 AnithaSelvasofia\*, Raj Kannan.R, Sivashankaran.R, Venkadesh.K, Lakshmi Narayanan.M, Lawrence.PJ. Breckling, Ed., The Analysis of Directional Time Series: Applications to Wind Speed and Direction, ser. Lecture Notes in Statistics. Berlin, Germany: Springer, 1989, vol. 61.

[2]. Cypress tree extract as an eco-friendly admixture in concrete 2014 Abraham M. Woldemariam1, Walter O. Oyawa, Silvester O. AbuodhaM. Wegmuller, J. P. von der Weid, P. Oberson, and N. Gisin, "High resolution fiber distributed measurements with coherent OFDR," in Proc. ECOC'00, 2000, paper 11.3.4, p. 109.

[3]. Experiment study on self-curing concrete using biomaterials as admixtures M.Vidhya1, S. Gobhiga2 & K. Rubin
[4]. https://www.sciencedirect.com/science/article/pii/S0958946514001930

[5]. https://www.sika.com/en/about-us/sustainability/sustainable-solutions/projects/concrete/biobased-admixtures.html [6].https://www.researchgate.net/publication/279637800\_Green\_Admixture\_for\_Sustainable\_C

 $oncrete\_Implemented\_to\_Subsidized\_Apartmen$ 

