## Investigating the Impact of Plastic Waste Incorporation on the Physical and Environmental Properties of Hollow Blocks

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Published online: 28 May 2025	This research proposal aims to investigate the strength of plastic
Open access	wastes as additive material for hollow block production. The hollow
	block with plastic wastes was machine made incorporated with
	shredded plastic wastes gathered from the community. The hollow
	block with different drying days were tested in terms of maximum
	load test (kN), compressive strength (Mpa) and strength test (psi).
	Also as comparison, the machine made commercial hollow block was
	tested to its maximum load test (kN), compressive strength (Mpa)
	and strength test (psi). The tests were performed at TERMS
	Concrete and Materials Testing Laboratory, Inc. Data were analyzed
	using mean and Mann-Whitney U Test. Results revealed that hollow
	blocks with plastic wastes dried in 10 days gained the best test results
	to be used for masonry, especially for tall buildings that require great
	strength. For commercial hollow block dried in 81 days gained the
	best test results to be used for masonry works. Hollow block with
	plastic wastes can be a good substitute for commercial hollow blocks
	and can also give more strength to the hollow block made. The
	hollow block with plastic wastes and commercial hollow block does
	not significantly differ in terms of maximum load test (kN),
	compressive strength (Mpa) and strength test (psi), therefore, hollow
	block with plastic wastes can be a good substitute for commercial
	hollow blocks. Explore other consumer wastes that can be
	incorporated into hollow blocks to improve the compressive strength of the material and environment-friendly methods.