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# **LAMPIRAN**

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<b>LAMPIRAN</b>		<b>Tgl Percobaan : September 2023</b>

<p>Persiapan material</p>	
<p>Pengujian karakteristik material</p>	


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Pengujian karakteristik material



Penimbangan material yang akan digunakan (Air, semen, agregat kasar (batu pecah dan limbah batu bata tahan api), agregat halus)




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Menggunakan *mixer* berkapasitas 75 liter.

1. Pertama, agregat limbah batu bata tahan api, batu pecah, pasir dan semen dimasukkan ke dalam mixer dan dicampur selama 60 detik.
2. Selanjutnya, air ditambahkan secara bertahap ke dalam mixer, dan pencampuran dilanjutkan selama 120 detik.
3. Kemudian, campuran beton diaduk secara manual agar bahan – bahan yang menempel pada bagian bawah dan dinding mixer tercampur rata.
4. Pencampuran menggunakan mixer dilanjutkan selama 60 detik hingga diperoleh kombinasi campuran beton segar yang merata.






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Pengujian slump beton dengan target nilai desain slump yaitu  $20 \pm 2$  cm



Memasukkan campuran ke ke dalam cetakan silinder besi berdiameter 100 mm dan tinggi 200 mm, lalu dipadatkan selama 60 detik menggunakan mesin vibrator.




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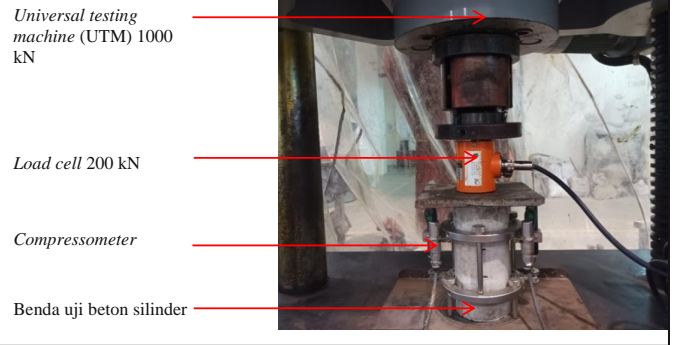
Selanjutnya, campuran beton didiamkan selama 24 jam sebelum cetakan dibuka.



Proses perawatan (*curing*) benda uji beton semua variasi di *curing* menggunakan air pada suhu 20°C selama 7 dan 28 hari.



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<p>Pengujian kuat tekan beton</p>	
<p>Pengujian modulus elastisitas</p>	 <p> <i>Universal testing machine (UTM) 1000 kN</i>  <i>Load cell 200 kN</i>  <i>Compressometer</i>  <i>Benda uji beton silinder</i> </p>
<p>Hasil beton yang telah diuji</p>	