Scientists from the European Bioinformatics Institute are squeezing unparalleled amounts of data into synthetic DNA, and now they’ve achieved something absolutely amazing: they can store 2.2 petabytes of information in a single gram of DNA, and recover it with 100 percent accuracy.

The researchers have encoded an MP3 of Martin Luther King’s 1963 “I have a dream” speech, along with all 154 of Shakespeare’s sonnets, into a string of DNA. Scaled up, that represents a storage density of 2.2 petabytes per gram. The achievement is notable not only because it demonstrates the potential of DNA as a storage medium, but also because it allows them to retrieve content with 100 percent accuracy.

The technique uses the four bases of DNA—A, T, C, and G—to achieve the high information density. It is, understandably, still incredibly expensive: creating synthetic DNA and then sequencing it to read off the data is getting far easier, but it’s still a time- and cash-consuming business. Keep hold of your hard drives for now, but DNA could represent a viable storage solution in the future.

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