

Quote: Fig 19-15. “Miller and Urey produced amino acids , which are needed to make proteins, by passing sparks through a mixture. . . .” “Evidence now suggests that the composition of Earth’s early atmosphere was different. . . more recent experiments with different mixtures of gases have **produced similar results.**”

“In fact in 1995 one of Miller’s more accurate mixtures produced **cytosine and uracil, two bases** found in RNA”

Question: Did the 1995 experiments produce any amino acids? No Aminos, no Proteins, is that right?

(Actually, no aminos were found in ‘more recent’ experiments ^{1,2}, so it cannot be claimed the results were “similar”.)

Question: Assuming all twenty amino acids were produced by lightning in a realistic atmosphere, is it possible for them to combine into proteins? (No)
Why? ³

Question: Which came first, the protein, or the proteins that make proteins?

Footnotes

(1) “Cyanoacetylene in Prebiotic Synthesis”, Sanchez, Ferris, and Orgel, *Science* New Series, Vol. 154, No. 3750 (Nov 11 1966), pp. 784-75 The more recent experiments produced cyanide and benzene, not amino acids.

(2) “An Efficient Prebiotic Synthesis of cytosine and uracil, Robertson and Miller, *Nature* **375**, 772-774 (29 June 1995)

(3) Interview with Dr. Ed Boudreaux, Professor Emeritus, retired, U. New Orleans:

The Miller experiment produces formic acid, which would poison any polypeptides before proteins could be synthesized. The pH would have to be carefully controlled in a laboratory, not available in the primordial soup.

Peptide bonds between amino acids would be destroyed by the water in the primordial soup. Proteins can only be assembled from amino acids by ribosomes in living cells, under the direction of 75 other proteins.



Stanley Miller Experiment