

Ghiberti's pronouncement on my analyses

Raymond N. Rogers

Fellow, University of California,
Los Alamos National Laboratory, Los Alamos, NM, USA

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It is interesting that Msgr. Ghiberti thinks I am supporting the Benford and Marino hypothesis that the radiocarbon sample was taken from an "invisible reweave." Much to the contrary: I believed that it would be easy completely to refute them. It is highly embarrassing that I could not.

This is the first time I have had to present information that seemed to support what I consider to be the "lunatic fringe." However, an ethical scientist absolutely must publish accurate information no matter what the emotional implications.

The fact that there is any controversy over my results shows how dangerous it is implicitly to trust visual observations without any confirmation and to accept the unconfirmed testimony of "experts." The importance of the sampling operation should have shown the necessity for careful independent observations and confirmation before cutting.

I received some of the 1973 Raes threads from Luigi Gonella on 14 October 1979. If they were spurious, a person I consider to be a good scientist, Luigi, lied to me. The fact that they agreed with Raes' observations seems to confirm their validity. Their location on the Shroud shows that they must share at least some yarn segments with the radiocarbon sample. They proved to my satisfaction that the radiocarbon sample was spurious.

I then received samples of the authentic radiocarbon sample on 12 December 2003. Their composition was identical to that of the Raes threads, proving the relationship between the samples.

AM*STAR received the authentic radiocarbon samples from Luigi. Unless he lied again, they are authentic samples. The fact that they show identical compositions to the Raes samples seems to confirm their provenience. Incidentally, I am not a member of AM*STAR, they did not fund my work, and they did not have any control over my methods or conclusions.

I also have many fibers from different parts of the Shroud and the Holland cloth that I took with adhesive tape in 1978. I marked them in Turin, and I know they are authentic. The radiocarbon sample can be compared against real fibers from the Shroud as well as real samples from the Holland cloth, which certainly has a known age.

Given valid samples that show obvious chemical differences from the Shroud, does Msgr. Ghiberti believe that I have made a mistake? There is absolutely no question that the composition of the radiocarbon sample is unique. Almost every proof of that statement has been confirmed by independent analyses with different methods.

Msgr. Ghiberti does not have to rely on my chemistry to observe a difference between the radiocarbon sample and the main part of the Shroud. He can look at the ultraviolet fluorescence photographs taken by Vern Miller in 1978. They show the sampling area as a dark zone, proving that its chemical composition was not the same as the main cloth. The dark area is not a result of dirt or a shadow. I can explain fluorescence in great detail, but it is based totally on chemical composition.

I do not make any claims about how the radiocarbon sampling area became spurious. I am not a textile expert, but I did find a strange end-to-end splice among the Raes threads (macro photograph and photomicrograph attached). Anna Maria Donadoni, a conservator in Turin, showed me how separate lengths of yarn were overlaid in weaving the main Shroud cloth. The splice is totally different. It is also obvious that the two ends of the splice are different: one is fluffy and white, the other is stained and tightly twisted.



Although I am not a textile expert, I am a recognized expert in chemistry, and my paper in *Thermochimica Acta* (not a US journal but published in the Netherlands) withstood peer review. Few persons believed that the radiocarbon age determination could be in error: it was hard to convince the doubters. I have known Paul Damon, lead author on the 1989 dating paper, for many years, and I trust his honesty totally. I also originally believed that the age determination proved that the Shroud could not be the Shroud of Jesus.

Why do the persons in Torino support nonsense with regard to the age determination? Contamination could not be the problem (it would take too much), and the papers about isotope fractionation were complete nonsense. I have written peer-reviewed papers on kinetic isotope effects, and I know the fundamentals. Indeed, I have published dozens of peer-reviewed papers on chemical kinetics, the same methods I used to show that the Shroud had to be between 1300 and 3000 years of age. I am not suggesting that anyone rely on the words of another "expert." I would suggest that any interested person study the facts.



I understand how many persons can be upset by the proof that the radiocarbon sample was spurious. Honest science can accept such bruises.