

June 6, 1961

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Dear Ted,

Thank you again for sending us the 3' isomer of pseudo-U. I'm glad to have the information you sent about the possibility of a uridylic contaminant in the pseudo-U, but I'm not sure that this contaminant is ribothymidylic. It's true that on paper electrophoresis at pH 3.5 the UV contaminant migrates ahead of the pseudo-U in the position of uridylate and ribothymidylate. However, we have chromatographed the pseudo-U preparation along with C¹⁴ 5-methyl uridylate (a mixture of 2', 3', and 5' isomers) in the isobutyrate-ammonia solvent and in no case does the radioactivity coincide with the UV absorption of either of the components in the pseudo-U preparation. In another solvent (isopropanol-butanol-HCl) the C¹⁴ of the ribothymidylate migrates ahead of both components in the pseudo-U preparation. The R_f of the minor component of the pseudo-U was the same as uridylic acid. A similar situation was found using isopropanol-acetic acid-H₂O as the solvent. The possibility you raised of it being the 5' isomer of uridylic acid has not yet been tested.

I was supposed to write an article for Methods in Enzymology dealing with the preparation of amino acyl RNA. I pulled out of that responsibility some time ago. I can enclose a copy of our most recent method for the preparation of acceptor RNA. It is extremely reproducible in our hands and has given us very nice preparations with high amino acid acceptor activity. Our recovery of RNA is about 10 milligrams per gram dry weight. Perhaps this could be increased by another 50% by accepting fractions of lower specific activity. We have not tried phenol extraction since the procedure described gives us satisfactory preparations.

With best regards.

Sincerely yours,

Paul Berg

PB:cm
Encl.