

Analytical Chemist

The Ted Rains Story





- Over an amazing career, Dr. Theodore (Ted) Rains has created many of the Certified Reference Standards (CRMs) and testing methodologies in use throughout the world.





- Born on a Kentucky tobacco farm in 1925, Rains helped his family weather the Great Depression. He headed off to college only to have to come back and work on the farm for four years.





- He then attended Eastern Kentucky University where he graduated in 1950.
- Jobs were hard so :



- Dr. Rains taught high school chemistry at Breathitt County High School.



- His big break came when his brother (also a chemist) told him about a job at Kentucky Synthetic Rubber (KSR) in Louisville, Kentucky.
- This was the beginning of Dr. Rains' professional career



Ted (left) and co-workers at KSR Co., developing methods for the production of cold rubber.

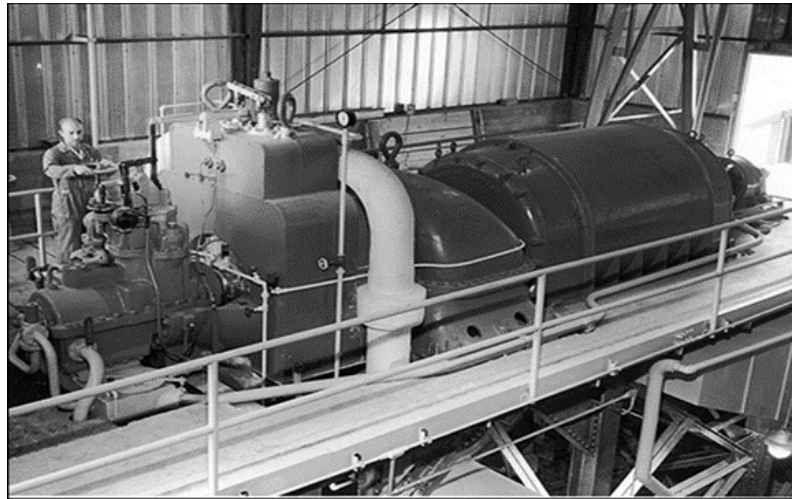


- He worked the late shift at KSR until finding an opportunity in the high-radiation laboratory at Oak Ridge, Tennessee... working with U, PU and other fission products.





- Dr. Ted Rains was part of a team developing a method for digesting thorium oxide. As part of monitoring the reactor, a sampling team would bring back samples of thorium oxide.



- The challenge was to digest the sample and analyze it in as little time as possible, then quickly adjust the reactor.



- While at Oak Ridge National Laboratory, Dr. Rains developed skills of sample dissolution.
- He was fortunate to meet and work with some incredible chemists, like Dr. Hobart Willard who taught him perchloric acid digestion methods.



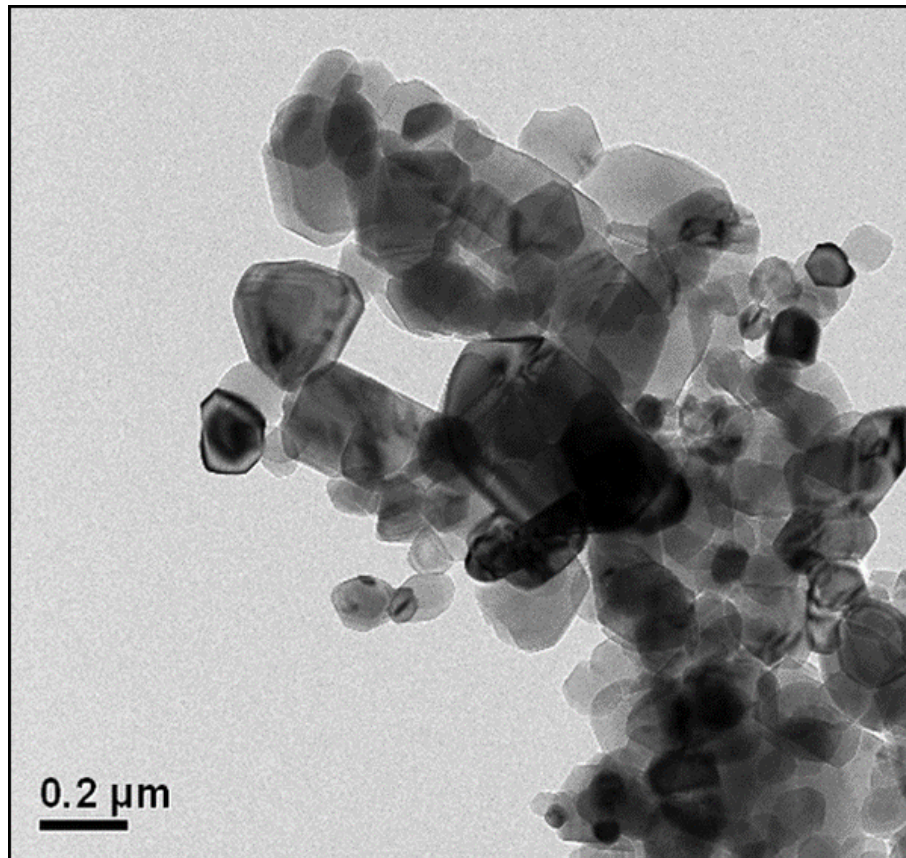


- After Dr. Oscar Menis left Oak Ridge for a position at the National Bureau of Standards (NBS), Dr. Menis invited Ted Rains to join him.





- In 25 years at NIST, Dr. Rains contributed to the certification of over 450 Standard Reference Materials!



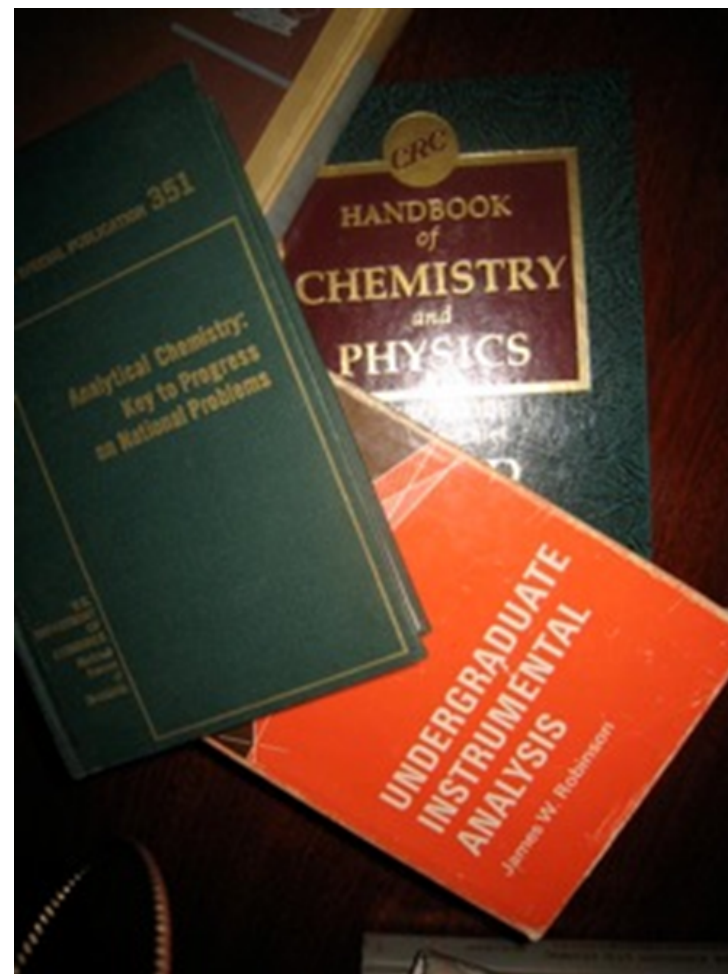


- Dr. Ted Rains has authored over 160 technical publications.





- Rains was also an international ambassador for NIST, giving lectures and courses in Scotland, Holland, Brazil, China, Mexico, Taiwan, India, England, Egypt, Vietnam, Japan and Korea.
- He also served as president of the National SAS organization, and on the editorial advisory boards of a number of journals, and was a co-chairman of the FACSS meeting.





- In 1990, Dr. Rains retired from NIST, and founded his company High-Purity Standards.





- Ted Rains was married to Mavis Rains for 70 years and had 3 daughters. His oldest daughter, Connie Hayes, is CEO of High-Purity Standards.





- Dr. Ted Rains and his daughter, Connie Hayes, now CEO of High-Purity Standards



Dr. Theodore Rains
A Chemist's Chemist

What an amazing life!

