

DEVELOPMENT OF A HIGH THROUGHPUT VACUUM SPECTROMETER

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The UC Davis Air Quality Group has developed an automated single sample vacuum interlock chamber for the X-ray fluorescence analysis of thin film and aerosol samples. This system shows significant improvement in the detection limits and quantification of the lower energy X-ray region. In this paper we will present and discuss the development of the electrical and mechanical systems required for this spectrometer as well as the results of our studies and comparisons to the previous methods of low energy X-ray quantification.