



**LARAMIE COUNTY
COMMUNITY COLLEGE**
Cheyenne ♦ Laramie ♦ Pine Bluffs

MEMORANDUM

TO: Members of the Board of Trustees

FROM: Dr. Joe Schaffer, President

DATE: September 19, 2018

SUBJECT: Recommendation to Purchase tXRF Spectrometer for Student Use in Elemental Analysis

RECOMMENDATION:

That the Board of Trustees approves the expenditure of \$75,000 for the acquisition of an XRF Spectrometer, contingent on the ability of the College to secure \$60,000 in grant funding from the Wyoming INBRE program. The remaining \$15,000 is to be paid from currently approved FY19 departmental budgets.

Due to the combination of an unprecedented equipment RFP through the INBRE grant and the availability of a demonstration tXRF with substantial savings, we have the opportunity to purchase this cutting edge scientific instrument for our students to be trained on and use through their academics. The tXRF is a transmission X-ray fluorimeter which allows almost any sample to be analyzed for its elemental content. This is useful for a variety of applications in many disciplines including biology, chemistry, geosciences, agriculture and more. A couple advantages of this particular instrument over others that provide similar information is that this one is benchtop size (as opposed to having its own room), requires no carrier gasses to run it, has low power requirements, has minimal consumable supplies and has a simple operation. This last point, the simple operation, will allow this instrument to be used in classes ranging from geosciences to analyze rock, soil and water content to agriculture to analyze feed. Several departments across campus have provided funds to contribute toward the purchase of this instrument, so that we can make this advanced technology available to as many students as possible.

Here is the link to the webpage (with several good videos) on the instrument and its uses:

<https://www.bruker.com/products/x-ray-diffraction-and-elemental-analysis/micro-xrf-and-txrf/s2-picofox/overview.html>