



**DEPARTMENT OF THE ARMY
UNITED STATES MILITARY ACADEMY
Department of Chemistry and Life Science
West Point, New York, 10996**

MADN-CLS

December 07, 2022

MEMORANDUM FOR MICC-Fort Drum

SUBJECT: Brand Name Exact Match Memo for Unison Buy DRUMUSMACLSLER071

1. The Department of Chemistry and Life Science conducts cadet independent study and research projects that investigate battery design and the synthesis and use of metal aerogels. The properties relating to battery design and aerogels of a material are often investigated using scanning electron microscopy which requires special sample preparation. An automated critical point drying (CPD) system is used for this purchase. Samples are carefully dried using repeated cycles of ethanol and liquid carbon dioxide displacement at extremely high pressures and very low temperatures. Although the CPD system is automated, knowledge of time and pressure settings as well as instrument usage are critical for sample integrity and safety.
2. There are other CPD systems offered from manufacturers such as Denton, Quorum and Tousimis. These systems do not offer the same ease of use and general safety for use by unskilled undergraduate students (cadets), staff, and faculty.
3. Currently, CLS has a Leica EM CPD300 system. A new one will allow for an increased capability for research. The funding of this equipment is tied to a specific research project funded by U.S. Army Combat Capabilities Development Command (DEVCOM). The researcher wants to maintain commonality across both instruments for safety and to allow for commonality in software, procedures, and consumable supplies.
4. For the reasons listed above, the Department of Chemistry and Life Science, United States Military Academy requests a brand name purchase of a Leica EM CPD300 automated critical point dryer system.
5. If there are any questions, please contact the Contracting Officer at usarmy.drum.acc-micc.mbx.micc@army.mil

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Contracting Officer
US Army, Mission and Installation
Contracting Command
Fort Drum, NY

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