

## ITEM OPPORTUNITY SYNOPSIS

<b>Scouting Number:</b>	2024-206
<b>Name of the item to be scouted:</b>	Boiling/Melting Point Tester
<b>State item to be used in:</b>	Utah
<b>Describe the Item:</b>	
<p>Please describe the item application/the end use of the item.</p>	<p>A Boiling/Melting point tester is a device that determines the minimum temperature that a liquid needs to be to either start to boil, transitions from liquid to gas, or melts, transitions from solid to liquid. This information is needed to support OSHA regulations and is used to identify the properties of materials. The samples are slowly heated until they reach the transition zone for that material. This transition is recorded both empirically and visually using a video recording. This information is used to support OSHA safety citations. <a href="https://www.mt.com/us/en/home/products/Laboratory_Analytics_Browse/melting-point-apparatus/instruments/mp90-melting-point-system.html">https://www.mt.com/us/en/home/products/Laboratory_Analytics_Browse/melting-point-apparatus/instruments/mp90-melting-point-system.html</a></p>
<b>Supplier Information:</b>	
<b>Type of Supplier Being Sought (select from the list below):</b>	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
<b>Reason for Scouting Submission (select from the list below)</b>	
2nd Supplier	x
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	
Other (Please Specify)	
<b>Summary of Technical Specifications and Performance Requirements:</b>	
<b>Describe the manufacturing processes (elaborate to provide as much detail as possible)</b>	Mechanical/Electronic Assembly
<b>Provide dimensions / size / tolerances / performance specifications of the item</b>	<ul style="list-style-type: none"> <li>• An instrument to determine the boiling points and melting points of samples sent to the SLTC lab for testing.</li> <li>• Capable of interacting and transferring data to a computer (PC) for storage and processing.</li> <li>• Must be able to record, store and print data and test results, including color video recording of tests.</li> <li>• Capable of accurate and repeatable results with both boiling point and melting points accuracy of +/- 1°C.</li> <li>• Operational range from room temperature to 660°F/350°C or greater</li> </ul>
<b>List required materials needed to make the product, including materials of product components, if applicable</b>	<p>Various Please reference the following  <a href="https://www.mt.com/us/en/home/products/Laboratory_Analytics_Browse/melting-point-apparatus/instruments/mp90-melting-point-system.html">https://www.mt.com/us/en/home/products/Laboratory_Analytics_Browse/melting-point-apparatus/instruments/mp90-melting-point-system.html</a></p>
<b>Are there applicable certification requirements?</b>	
Yes	
No	x
<b>Please explain:</b>	
<b>Are there any applicable regulations that apply to the production of this item?</b>	
Yes	
No	x
<b>Please explain:</b>	
<b>Are there any other standards / requirements?</b>	
Yes	
No	x
<b>Please explain:</b>	
<b>NAICS CODES:</b>	
NAICS 1	541690 Other Scientific and Technical Consulting Services

<b>NAICS 2</b>	
<b>Additional Comments:</b>	
<b>Additional technical comments:</b>	Due to limited lab space a single unit capable of performing both tests is needed.
<b>Volume and Pricing:</b>	
<b>Estimated Potential Business Volume (i.e. #units per day, month, year):</b>	100 samples per year
<b>Estimated Target Price/Unit Cost Information:</b>	\$15,000.00 to \$20,000.00
<b>Delivery Requirements:</b>	
<b>When is it needed by? (Immediate, 30 days, 6 months, etc.)</b>	By end of 2024
<b>Describe packaging requirements (i.e. individually/group packaging, etc.)</b>	Standard package shipping
<b>Where will this item be shipped?</b>	Sandy, UT
<b>Additional Comments:</b>	
<b>Is there other information you would like to include?</b>	The following company supply boiling/melting point testers of the type and quality that is needed. This is supplied for reference and guidance.

## **REQUIREMENT SPECIFICATIONS FOR THE PURCHASE OF A BOILING POINT/MELTING POINT TESTER**

**1.0 Scope.** To obtain a Boiling/Melting Point Apparatus for use in the mission of OSHA to protect America workers as well as to help in the development of new analytical methods.

**2.0 Overview.** Flashpoint determination testing has been done at the SLTC since the formation of OSHA. Flashpoint is the temperature that a flammable liquid will first start to ignite or flash, indicating at what temperature a flammable liquid becomes hazardous. Prior to 2016 flashpoint was the only value needed for determining the classification of flammable liquids. Changes made to the standard CFR 1910.106 now require a boiling point of the flammable liquid to differentiate between Category 1 and Category 2 flammable liquids. The boiling point is the temperature that a liquid will boil and turn to a vapor. The SLTC has been using a manual boiling point apparatus to determine the boiling point but with less than satisfactory results and reproducibility. The SLTC needs a more accurate and reproducible apparatus to determine boiling point. In addition, an apparatus that can be integrated directly into the laboratory information management system (LIMS) is necessary to reduce errors in transcription and improve data integrity.

The SLTC is also in need of an instrument capable of performing melting point testing. Melting point is the temperature at which a solid change into a liquid and as all pure materials have a known melting point, determining the melting point of solid chemical can confirm the purity of a chemical solid. Having one instrument that performs both testing is needed as it will minimize limited lab space, maintenance tracking, and data tracking in the LIMS system.

**3.0 Requirements.** This instrument is used to determine the boiling/melting point of liquids and solids that are both sent to the lab for testing to support OSHA's mission to protect America works and help in the development of new analytical method that are used in the laboratory to support OSHA's mission. The instrument needs to be able to determine both the boiling point of liquids and the melting point of solids. The results must be accurate and repeatable, have sufficient working temperature range to cover the range of interest listed in the OSHA standards, and be able to report the results to the SLTC LIMS system either directly or thru a computer interface.

Support Requirements include:

- An instrument to determine the boiling points and melting points of samples sent to the SLTC for testing.
- Capable of interacting and transferring data into the LIMS system at the SLTC.
- Capable of accurate and repeatable results.
- Operational range from room temperature to 660°F/350°C or greater.

**3.1** Once the equipment is received at OTC and verified, if a problem exists with the equipment the vendor will issue a return authorization and pay to have the supplies shipped back to the vendor. The supplies will be repaired or replaced (at the discretion of the vendor) free of charge under warranty.

**4.0 Delivery.** Products will be delivered 90 days after award. Supplier is responsible for the shipping costs.

**5.0 Delivery Location**

OSHA Technical Center  
8660 S Sandy Pkwy  
Sandy, UT 84070