

HELIUM LEAK TESTING FIELD & LAB CHECKLIST

Standard Verification Form per DIN EN 1779 / ISO 20485 — Form CHK-LEAK-2021-18

Work Order #: WO-2021-8842	System / Asset ID: VAC-UHV-04	Inspection Date: Dec 28, 2021
Lead Tech: Kadeem Manning	MSLD S/N: MSLD-7741-X	Cal Standard: 1.2e-8 mbar.L/s

#	Inspection Step & Safety Criteria	Target Spec / Tolerance	Measured Value	Status
1	PPE & Safety: 6 mil nitrile gloves, chained He bottle	Regulator $\leq$ 0.5 bar delivery	0.35 bar	PASS
2	MSLD Calibration: Mass tuning & internal leak check	m/z = 4.0 amu; factor $\pm$ 10%	1.21e-8 mbar.L/s	PASS
3	Background Stabilization: Signal cleanup check	< 1.0e-9 mbar.L/s	4.2e-10 mbar.L/s	PASS
4	Bottom-to-Top Spray Execution: Sequence audit	Lowest point to top flange	Verified	PASS
5	ConFlat (CF) Flange Seals: Copper gasket spray	< 5.0e-9 mbar.L/s	1.1e-10 mbar.L/s	PASS
6	ISO-KF Viton Flanges: O-ring spray audit	< 1.0e-7 mbar.L/s	2.8e-8 mbar.L/s	PASS
7	Feedthroughs & Bellows: Electrical/water pins	< 5.0e-9 mbar.L/s	3.0e-10 mbar.L/s	PASS
8	Viewport Seals & Valves: Stem packing check	< 5.0e-9 mbar.L/s	5.5e-10 mbar.L/s	PASS
9	Integral Hood Test (If Applicable): Poly envelope	< 5.0e-9 mbar.L/s overall	8.2e-10 mbar.L/s	PASS
10	Background Recovery: Clean-out time check	< 3 min to baseline	1.5 min	PASS
11	ALCOA+ Hardbound Logbook: Single-line entry	Quantified leak rates recorded	Logged Page 48	PASS
12	CMMS WO Upload: 300 DPI PDF attachment	Uploaded within 24 hours	Attached	PASS

Technician Field Observations & Notes: All CF copper gasket joints tested leak-free. Background helium cleared rapidly. System meets UHV operational specification.

Inspected By: Kadeem Manning Tier II Vacuum Lab Technician	QA Approved By: Genevieve Lariviere QA Program Manager
Signature: <i>Kadeem Manning</i>	Signature: <i>Genevieve Lariviere</i>
Date: Dec 28, 2021	Date: Dec 29, 2021