IAS-T Tritium Monitor Selection Guide

Iodine Air Systems
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Portable · Area · Glovebox/Process · HT/HTO · Wipe · OEM — September 2026 iodineairsystems.com/tritium-monitors/

The eight IAS-T models

Model	Type	Range	Web page
IAS-TP20 Portable Tritium-in-Air Monitor	Portable survey monitor	1 µCi/m³ to 1 Ci/m³	iodineairsystems.com/tritium-monitors/portable-tritium-air-monitor-ias-tp20/
IAS-TA20 Rack-Mount Area Tritium Air Monitor	Fixed area monitor (19-inch rack)	1 µCi/m³ to 10 Ci/m³	iodineairsystems.com/tritium-monitors/rack-mount-tritium-air-monitor-ias-ta20/
IAS-TA30 Floor-Standing Tritium Air Monitor	Fixed area monitor (cabinet)	1 µCi/m³ to 10 Ci/m³	iodineairsystems.com/tritium-monitors/cabinet-tritium-air-monitor-ias-ta30/
IAS-TG30 Glovebox & Process Tritium Monitor	Process monitor (sealed, all-metal)	1 µCi/m³ to 10 Ci/m³	iodineairsystems.com/tritium-monitors/glovebox-process-tritium-monitor-ias-tg30/
IAS-TG10 Wall-Mount Process Tritium Detector	Process detector (wall-mount, PLC-ready)	1 µCi/m³ to 10 Ci/m³	iodineairsystems.com/tritium-monitors/wall-mount-process-tritium-detector-ias-tg10/
IAS-TD20 Tritium Ion Chamber Detector Module (OEM)	OEM detector module	1 µCi/m³ to 1 Ci/m³	iodineairsystems.com/tritium-monitors/tritium-ionization-chamber-module-ias-td20/
IAS-TS40 HT / HTO Tritium Speciation Monitoring System	Multi-form (HT/HTO) monitoring system	1 µCi/m³ to 10 Ci/m³	iodineairsystems.com/tritium-monitors/ht-hto-tritium-speciation-monitor-ias-ts40/
IAS-TW10 Tritium Surface Contamination (Wipe) Monitor	Surface contamination / wipe monitor	0–1 Ci/dm² wipes, < 2 min	iodineairsystems.com/tritium-monitors/tritium-surface-wipe-monitor-ias-tw10/

Which model for which facility

Facility	Typical selection
Fusion (D-T)	TA20 rooms · TG30/TG10 gloveboxes & fuel cycle · TS40 exhaust · TP20 + TW10 surveys
Heavy-water reactor	TA20 areas · TS40 ventilation · TP20 surveys
Light-water reactor	TP20 surveys · TA20 fixed points
DOE / national lab	TG30 gloveboxes · TA20/TA30 rooms · TS40 stacks · TW10 surfaces
Tritium light manufacturing	TA30 room · TW10 wipes · TP20 survey
University / biotech	TW10 high-level screening (LSC for routine) · TP20 air checks
Decommissioning	TP20 + TW10 surveys · TA30 temporary fixed points
Instrument / skid builder	TD20 module · TG10 PLC-ready detector

Supply: 120 V / 60 Hz US versions (220–230 V export) · factory calibration certificate and certificate of conformance with every instrument · commercial-grade supply with dedication support for safety-related use · price on quotation.

Tritium unit and limit reference

Quantity	Value
1 µCi/m³	3.7×10^{4} Bq/m³ = 0.05 DAC (HTO)
HTO DAC 2×10^{-5} µCi/mL	7.4×10^{5} Bq/m³
Elemental tritium DAC (DOE)	2×10^{-1} µCi/mL (10,000 × HTO)
1 µCi/mL	3.7×10^{10} Bq/m³
Air effluent conc. H-3 (annual avg.)	1×10^{-7} µCi/mL = 3,700 Bq/m³
1 DAC-hour	≈ 2.5 mrem
1 kDPM/dm²	1,000 dpm/100 cm²

Sources: 10 CFR 20 Appendix B; 10 CFR 835 Appendices A and D. Online converter: iodineairsystems.com/tritium-monitors/tritium-dac-unit-converter/

Six questions before you buy

1. **Where is the monitoring point?** Room air, glovebox/process gas, exhaust, survey or surfaces.
2. **What are the alarm points?** The lower range limit should sit well below 1 DAC (IAS-T: 0.05 DAC).
3. **Is there a gamma field?** If so, choose gamma-compensated IAS-TP20 / IAS-TA20.
4. **Does chemical form matter?** For HT vs HTO, choose the IAS-TS40.
5. **What gas?** Air, N_2, Ar or He changes ion-chamber response.
6. **Where does the data go?** Relays, Modbus TCP/RTU, PLC, SCADA.

Request a quote

Send model(s), quantity, power version, facility type, gas, alarm points, documentation needs and delivery destination to **sales@iodineairsystems.com**, , or use the quote builder at iodineairsystems.com/tritium-monitors/#rfq.