



Complies with Relevant Sections of
ANSI 42.17A & N42.18



Features

- On-Board Computer
- Real Time - Automatic
- Continuous Monitoring
- Not Influenced by other Nuclides
- No Liquid Scintillant Required
- Easy Calibration
- Sensitive to 20 $\mu\text{Ci/l}$ Tritium or
Up to 30 Ci/l or More
- New Statistical Significance Display
- Data Archive and Data Retrieval
- USB / Ethernet Ports
- Rugged IP65
- Table Mounted
- **Optional** - Cart Mounted
- **IP32 - Electronics**
- **IP66 - Detector**

Tritium in Water Monitor Real-Time Continuous LIQ-X-(H3) Series; Low to High Level

Models:

- LIQ-X (H3) LO**
- LIQ-X (H3) MID**
- LIQ-X-(H3) HI**

Application

- Monitor Heavy Water Leaks in Candu Type Reactors
- Monitor Laboratory or Plant Liquid Waste Stream
- Thorium Reactor Research
- Fusion Reactor Research

Description

This system consists of a small light tight detector assembly which is interfaced with the sample via male 1/4" pipe fittings with the readout and processor assembly via two BNC connectors.

The sample is passed through a deionizer and filter and thence to the detector assembly, where it is viewed by a matched pair of photo multiplier tubes.


The table top or rack mounted processor and display portion of this system conditions and analyzes the output from the photo multiplier tubes by pulse height and coincidence, thereby permitting the system to eliminate counting most background (noise) counts.

LIQ-X (H3) includes unique statistical Significance Display

- This function rates strength of the data preventing most false positives or negatives:
 - Significance: **High, Low, or Not Significant**



TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

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 US NUCLEAR CORP

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Models: LIQ-X (H3) LO, LIQ-X (H3) MID, LIQ-X-(H3) HI

LOW END SENSITIVITIES		
LIQ-X (H3) LO Activity Mode	LIQ-X (H3) MID Activity Mode	LIQ-X-(H3) HI Activity Mode
30 µCi/l in 2 minutes	5 mCi/l in 2 seconds	
20 µCi/l in 30 minutes	1 mCi/l in 10 seconds	
10 µCi/l in 2 hours	0.2 mCi/l in 2 minutes	
Display update every 2 minutes	Display update every 1 to 3 seconds	
RANGE	RANGE	RANGE
10 µCi/l – 500 µCi/l	0.2 mCi/l – 10 mCi/l	10 mCi/l – 3 Ci/l
		100 mCi/l – 30 Ci/l

FOR LOW LEVEL TRITIUM MONITORING PLEASE SEE MODEL ~ NEX-TRITIUM

Specifications

Display Update:	User Adjustable
Tritium Sensitivity:	See chart above
Range:	OPTIONAL: Other ranges higher or lower
Flow Rate	
Minimum:	1 ml/min
Maximum:	100 ml/min
TEMPERATURE:	
Sample Temperature:	Standard: < 90°F (liquid); Optional - to 115°F
Ambient Temperature:	Detector: < 90°F Optional - to 115°F
	Readout: < 115°F
Lead Shielding:	Optional 1" thick or 2" thick
Dimensions	
	Detector: 4" Dia x 19" Long
	Electronics: 10" H x 16" L x 19" W
Weight (Standard Unit):	Detector Housing: 20 lbs.
	Electronics Housing: 40 lbs.
Shipping Weight:	90 lbs.
1" Shielding:	65 lbs.
Display:	5" color monitor
Options	
- Enhanced LIQ-X(H3)	4 Decades 10 ⁻³ Ci/l to 10 Ci/l

NEX-TRITIUM LOW Activity
2.0 µCi/l in 2 minutes
0.5 µCi/l in 20 minutes
0.2 µCi/l in 3 hours
0.1 µCi/l in 48 hours
0.02 µCi/l in 7 days
Display update every 2



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- Remote readout via ethernet
- Network reporting and communication via the ORO overdrive software
- Cart mounted


**Please Contact Us if You Have Tritium in an Oil or Gaseous Situation.
We Will Advise and / or Quote on a Suitable System to Obtain Your Objective.**



LIQ-X (H3) System



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