

PORTABLE TRITIUM AIR SAMPLER

Model Series~ TRIT-TRAP-TA

TRIT-TRAP-TA-LF ~ TRIT-TRAP-TA-HF

FEATURES:

TRITIUM DETECTION SAMPLER

- TWO MODELS
 - TRIT-TRAP-TA-LF (Low Flow)
 - TRIT-TRAP-TA-HF (High Flow)
- PORTABLE
- DRAWS AIR FROM ROOM OR OTHER SOURCE
- EASY CHANGE FILTER TRAP BOTTLE AND FLUID
- **OPTIONAL** PRS-7-DSC ELECTRONICS IF SSS-22-PAL IS NOT SELECTED

AC PUMP AP-5020E

- AC OPERATION
- EASY CHANGE FILTER'
- FLOW METER
- **OPTIONAL:** RECHARGEABLE BATTERIES / CHARGER

SAMPLER SYSTEM SSS-22PAL – ALL-IN-ONE UNIT

- PRS-7-DSC ELECTRONICS
- DUAL PM TUBES
- THREE VIAL SAMPLE HOLDER
- SETTABLE WINDOW CAN BE SET FOR ANY ISOTOPE

FULL TRIT-TRAP-TA SYSTEM INCLUDES:

- TRIT-TRAP-TA
- AIR PUMP
- SSS-22P SAMPLER SYSTEM



TRIT-TRAP-TA
AIR PUMP WITH FLOW METER



PRS-7-DSC
ELECTRONICS



SSS-22PAL
ELECTRONICS AND
DUAL PM TUBES
ALL-IN-ONE UNIT

APPLICATION:

- TRITIUM AIR SAMPLE

DESCRIPTION:

Technical Associates model series *Trit-Trap-TA* is easy to remove and clean. It is a no leak trap. Any airborne Tritium is captured in the fluid filled trap. Measurement is by Technical Associates model *SSS-22P*.

SSS-22P is a liquid scintillation instrument. *SSS-22P* has a **3 Vial Capacity** providing faster thru-put and easy comparison of sample to calibration standard or to background – **2 PM Tubes**

SSS-22PAL is an **ALL-IN-ONE** *SSS-22P* in a suitcase with electronics, detectors, and sample holders for your convenience.

OPTIONALLY: The *Trit-Trap-TA* traps the contaminated sample in fluid which can also be sent to a lab or other assay facility for analysis.



TECHNICAL ASSOCIATES

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

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DIVISION OF



OTCOB-UCLC

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PRINCIPLE OF OPERATION:

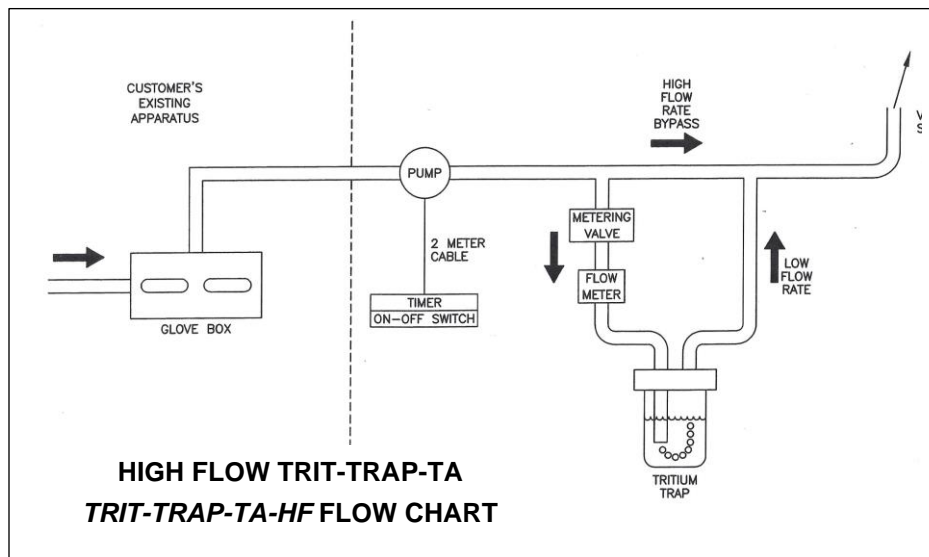
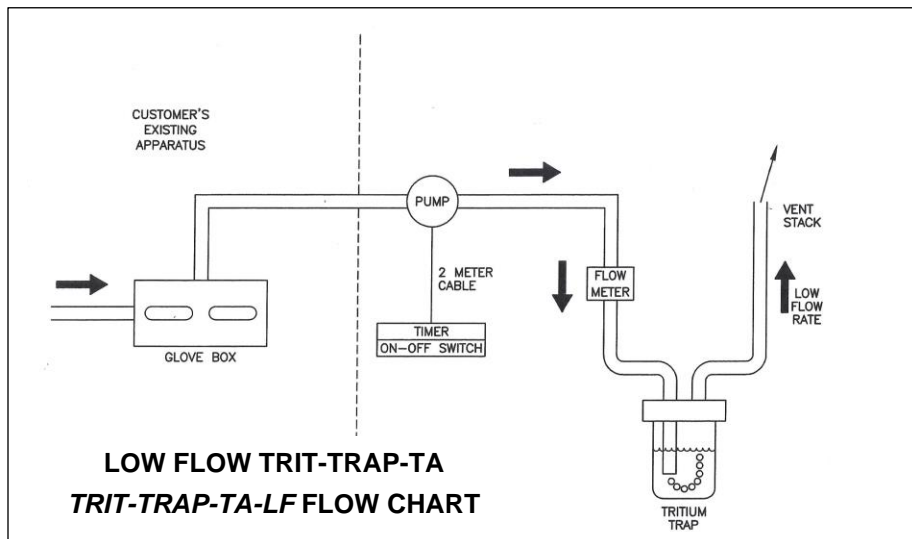
The air pump pulls air through Tritium trapped fluid.

Flow Rate: Calibrated at factory per customer's request. Positive displacement pump.

SPECIFICATIONS:

Trit-Trap-TA Series:

Samples Airborne Tritium radioactivity.



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AC PUMP

Dimensions AC Pump: 5" W x 7" H x 10"L (12.7 cm x 17.8 cm x 25.4 cm (Fold Down Handle)

Weight AC Pump: 6 lbs. (2.7 kg)

SYSTEM OPTIONS:

Inlet hose to allow monitoring of closed spaces.

PUMP SPECIFICATIONS:

PUMP	Model #	Flow Rate	Weight
STANDARD: AC Operated	AP-5020E	0.5ft³/minute	6 lb
OPTIONAL: Battery Operated	MINI-AIR-15	4ft³/hour (2 lpm)	1 lb

OPTIONS:

- Flow Regulator Serial Output
- High Alarm Flow Meter
- Extended Life Pump
- Unit Fitted With Inlet Hose to Allow Monitoring Of Hoods

SSS-22PAL SAMPLER SYSTEM

FEATURES:

- MEASURES TRITIUM
- DUAL PM TUBE DESIGN FOR COINCIDENCE VERIFICATION
- SSS-22P – THREE VIAL SAMPLE HOLDER
- ALL IN ONE UNIT–INCLUDES PRS-7-DSC ELECTRONICS
- **R-232** PC INTERFACE

Tritium is captured in the fluid filled trap. Measurement is by Technical Associates model SSS-22P.

SSS-22P is a liquid scintillation instrument. SSS-22P has a **3 Vial Capacity** providing faster thru-put and easy comparison of sample to calibration standard or to background – **2 PM Tubes**

SSS-22PAL is an **ALL-IN-ONE** SSS-22P in a suitcase with electronics, detectors, and sample holders for your convenience.

A User Manual is provided.



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GAMMA BACKGROUND RADIATION REJECTION FEATURES:

- Energy analyzer window rejects pulses with energies outside the window setting
- Optional Lead Shielding around detector.

COUNTING ASSEMBLY FEATURES:

- Excellent repeatability
- Fully light tight system
- Fail safe interlock to protect PM tubes
- High transmission optical coupling to PM tube

PM TUBE & PRE-AMP NOISE ELIMINATION FEATURES:

- Coincidence Verification with High quality Dual PM tubes and preamps.
- Fully adjustable energy analyzer window rejects low energy pulses.
- **SSS-22P:** 3 Vial capacity for faster thru-put and easy comparison of sample to calibration standard or to the background – 2 PM Tubes
- **SSS-22P:** 3 Vial capacity provides less wait time for dark adaption of phosphor.

DATA ANALYSIS & PRESENTATION:

- Scintillation counts detected by PM tubes are processed by a fully adjustable single channel analyzer which is centered on the Tritium energy peak. This deletes both higher energy pulses from background radiation and lower energy counts from the PM tube or circuit noise. The pulses feed to a digital scaler.
- This is also essential to background rejection requirement. The dual PM tubes operate in coincidence thereby each pulse is verified.
- This process allows long count times for measurement of very minute samples.
- USB interface to computers or data stations.

PRS-7-DSC ELECTRONICS:

- Dual Single Channel Analyzer
- Detects: Tritium
- Power: AC & Rechargeable Battery And Charger
- Three Presettable Window Positions
- Six Decades
- Computer Interface: RS-232, USB
- Crystal Controlled
- 2 Independent Detector Inputs
- Coincidence Circuit Signals: If both detectors see a pulse at the same time the pulse can be verified.
- **IP65**



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SPECIFICATIONS:

H-3 Gross Efficiency:	>50% Gross, Coincidence efficiency >10% Verified.
Count Times:	1 sec. thru 99 sec. (1 sec. increments), and 1 min. thru 99 min. (in 1 min. increments).
Voltage:	0-1500 Volts - fully user settable.
Readout:	Digital - 6-digit LCD, (LED optional).
Outputs:	Standard: Serial pulse output and R-232.
Power:	Rechargeable Lithium batteries and AC adapter
Sample Size:	Accepts standard Liquid Scintillation vials 20-25 ml.
SSS-22 PAL Case:	Weather-tight NEMA rated tough, durable, lightweight. A "tongue-in-groove" continuous O"-ring system makes the case water, moisture, and dust tight. Plus a low profile pressure release valve.
OPTIONAL:	SSS-22P: Accepts 6-7 ml vials with Optional adapter.
Scintillation Fluors:	Accepts most scintillation fluors. Perkin-Elmer Ultima Gold-LLT is recommended for H-3 counting



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