TEST & TREAT
DRINKING WATER SAFETY SYSTEM
检测&处理饮用水安全系统
Model ~ NEX-ABG-9TT

PROTECT VULNERABLE –
HOSPITALS – SCHOOLS – GOVERNMENT FACILITIES
保护易受影响单位-医院-学校-政府机关

FEATURES: 产品特点

- DETECTS ALPHA, BETA AND GAMMA RADIATION 检测 α β γ 辐射
- **NEX-ABG-9TT – TEST & TREAT** 此系统检测& 处理
  - BIOLOGICAL SENSORS –
    生物传感器
    - OXIDATION REDUCTION POTENTIAL (ORP)
      氧化还原电势
    - TOTAL ORGANIC CARBON (TOC)
      总有机碳
  - TREATMENT OF ISOTOPES & BIOLOGICAL CONTAMINATION
    处理辐射&生物污染
  - ON-BOARD COMPUTER
    机载电脑
  - PORTABLE OR INSTALLED
    便携或安装式
  - REAL TIME CONTINUOUS WATER MONITOR
    实时连续水监测
  - HIGH SENSITIVITY
    高灵敏度
  - NO REAGENT TANKS TO FILL; NO WASTE STREAM
    无需添加试剂，不产生污水
  - EASY CALIBRATION
    易于标定
  - ALARMS – AUDIO / VISUAL
    报警-声/光
  - PREVENT ACUTE HEALTH EFFECTS; REDUCE RISK OF CHRONIC EXPOSURE
    防止急性健康影响，减少慢性辐射暴露风险
  - MEASURES AT OR BELOW EPA/DHS **PAG LEVELS**
    测量达到或高于军队饮用水指南标准
    Protective Action Guideline Levels and Military Drinking Water Limits

NOTE: 注

- TA MAKES THE WORLD'S ONLY PAG-LEVEL WATER MONITORS
  TA公司生产的水监测器是唯一达到PAG标准的水监测器
- ALSO DETECTS SOME ISOTOPES DOWN TO LOWEST EPA LEVELS
  一些核素检测可达到环保部门最低限。

NEX-ABG-9TT DUAL DETECTOR ASSEMBLY
双探头组件系统

NEX-ABG-9TT ELECTRONICS
电子学部分

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APPLICATION: 应用

Install **NEX-ABG-9TT monitor** on your water inlet pipe to automatically and continuously monitor drinking water 24/7 for any radioactive contamination. The **NEX-ABG-9TT monitors & treats radionuclide & biological contamination**.

将此系统安装在入水管上，24小时自动连续监测任何辐射污染物。此系统监测并处理核污染与生物污染。

Facilities with multiple water inlets may wish to install multiple **NEX-ABG-9TT**

具有多条进水管路设施的则需要装多个台此设备。

Specifically designed to protect populations vulnerable to contaminants, such as in hospitals, schools, and government facilities. Very few cities or water wholesalers monitor water continuously for radiation.

专为保护易受污染影响的群体设计，如医院、学校、政府机构。鲜有城市或水批发商连续监测辐射污染。

ALTERNATIVE USES: 其它用途：

•**Monitor Liquid-Waste-Stream** from plant or laboratory **to maintain regulatory compliance**.

监测核电站或实验室流出的污水流以便使排放符合规定标准

•**If water source is river or reservoir** the particulate pre-filter with its own RAD Detector is recommended.

如果水源为河或水库，则需要配备自带辐射探头的前过滤装置。

PROBLEM: 问题：

Drinking water sources are vulnerable to accidental or knowing contamination by individuals, groups, industry, medical labs, terrorists, and from naturally occurring radioactive materials (NORM). As yet very few water districts have real-time radiation monitors in place to protect the water and the public.
饮用水源易于遭受个人、团体、工业、医疗实验室、恐怖分子或自然界辐射物事故或有意污染，然而鲜有供水部门进行现场实时辐射监测以保护水源和公众。

SOLUTION: 措施

- For the first time in a **Continuous Real Time** monitor the **Nex-ABG-9TT series** solves this problem by continuously monitoring water using ultra-sensitive, radiation detectors.
  首次，实时连续监测器NEX-AGB-9TT系列使用超级灵敏辐射探测器通过连续监测解决了这个问题

- The information from these detectors is analyzed and displayed in units of picoCuries per liter.
  探测器信息进行分析并用皮居/升单位显示。

- Monitors drinking water against most radioactive contaminants except H-3, C-14, S-35, Fe-55.
  监测器监测除氚，碳14，硫35，铁55以外的所有辐射污染物。

Nex-ABG-9TT:

- The count times are user settable. Calculations are automatically updated every 2 minutes, every hour and every day. Measurements of radiation concentration are logged 24 hr/day, 7 day/week in. The longer update times correspond with greater precision and increased sensitivity.

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计数时间用户设定，计算每2分钟，每小时和每天自动更新，辐射浓度测量每周7天录入，更新时间越长，越精准灵敏度越高。

- Sensitivities in the daily updates meet or exceed the DHS **PAG** (Protective Action Guideline Levels) for drinking water.

  灵敏度每日更新，这符合或超出国土安全局饮用水标准指南标准。

- The **Nex-ABG-9TT system is a Test & Treat system removing biological contaminations and reducing radioisotopes.**

  Nex-ABG-9TT是检测&处理系统，清除生物污染并减少辐射核素污染。

DESCRIPTION: 描述

Model **NEX-ABG-9TT** monitor is a radiation detection & treatment water monitor /controllers for measuring of Alpha, Beta & Gamma emitting radio nuclides. The electronics are microprocessor with LED/LCD display. The system is covered by TA's full one year warranty. On-site service contracts available in many areas.

此系统是水辐射监测与处理监测器，测量辐射核素发射物发射出的αβγ；微处理电子学，LED/LCD显示，一年TA公司质保，许多地区提供现场服务。

The Alpha, Beta flow cell & Gamma detector are easily changed via disconnect fittings. All connections are sealed against leaks. The standard water moving system is based on a high precision pump. It has a 10 liter per minute capacity. System can also be operated using city water pressure in which case no pump is required.

通过断开装置可轻松更换αβγ探头。高精度泵决定了标准水动系统， 10升/分钟流量。可无需泵，使用城市水压操作。

A wide range of pump capacities are available to meet users' specific needs. The system detectors and electronics are ruggedly built. It comes complete with all cabling tubing and connectors in place and is ready to operate. 115 Volt 60Hz is standard; 220 Volt 50/60 Hz or battery operations are optional.

可根据用户需要提供宽量程泵，系统探头和电子学坚固，带所需线缆和连接件，标准115v 60Hz, 可选220v 50/60Hz，或可用电池操作

Detectors in this system: 系统探头

1. **Alpha-Beta Detector:** Consists of a light-tight detector assembly which interfaces with the sample via quick disconnect coax cables and medical grade hoses. The sample is viewed by a matched pair of 5" diameter photo-multiplier tubes.

   α-β探头：密光探头组件通过快速断开同轴线缆及医用级软管与样品接触，样品由一对直径5" 光电倍增管观察。

2. **Gamma Scintillation detector** has a sensitive 2" diameter crystal.

   γ闪烁体探头，直径2"灵敏晶体组成。

3. **BioSensor.** 生物传感器

   OXIDATION REDUCTION POTENTIAL (ORP)

   氧化还原电势

   TOTAL ORGANIC CARBON (TOC)

   总有机碳

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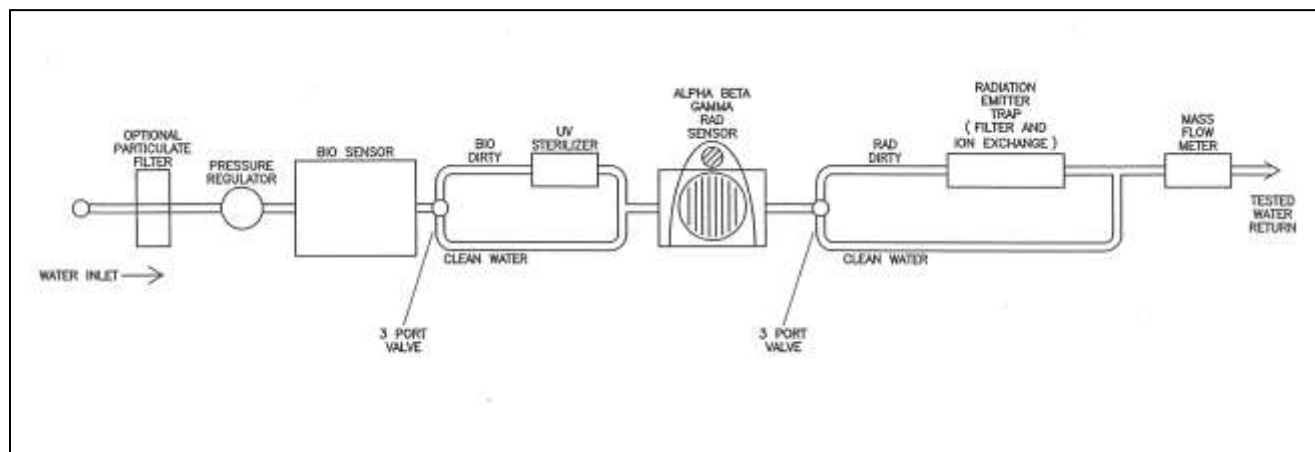## 检测&处理饮用水安全系统
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FLOW PATH ~~ NEX-ABG 9TT (Test & Treatment System) 系统流程图

- Water Inlet port 进水口
- Optional Particulate Pre-Filter 可选微粒前过滤装置
- Pressure Regulator 压力调节
- Bio Sensor 生物传感器
- Valve to Direct Clean or Dirty Water 干净水/脏水导水阀
- Ultra Violet Sterilizer for Dirty Water 脏水紫外线杀菌
- Valve to Direct Clean or Dirty Water 干净水/脏水导水阀
- Flow chamber with Alpha Beta & Gamma Detectors 安装了αβγ探测器的流室
- Valve to Direct Clean or Dirty Water 干净水/脏水导水阀
- Filter & Ion Exchange for Dirty Water 脏水过滤与离子交换
- Mass Flow Meter 流量计
- Tested & Treated Water is Clean & Returns to the Water Line. 经过测量&处理过的水清洁后流回管路
    - No liquid scintillate or reagents are added 无液闪或添加剂
    - No toxic or radioactive waste of any kind. 无毒或其它任何辐射废物产生

FLOW PATH

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DATA:-Analysis-Display-Data Stored Flash Drive Archive 数据分析-显示 闪存卡
Nex-ABG-9TT:

- The concentration and total activity released and MDA levels are continuously calculated and recorded.
  浓度和总活度及最小检出值连续计算并记录

- On Board Data Storage 机载数据存储

- USB / Ethernet Ports 接口

- Data can be saved to the optional flash drive in spreadsheet format.数据可以以电子表形式选择存在闪存卡上

SPECIFICATIONS: 配置

- **Alarms:** Each alarm activates a relay. Relay alarms are available to the user.
  报警：每次报警激活继电器，可提供继电器报警

- **Sample temperature:** measurements are most accurate in range 40º to 85º F. Instrument is still operational up to higher temperatures
  样品温度：测量最精确的温度范围40º - 85º F，更高温度下仪器仍旧可以工作。

- **Optional:** Cooler model Cool-33 for detector & sample is used in case of higher sample or ambient temperatures.
  选项：较高样品温度或环境温度下可选择型号Cool-33

DIMENSIONS, WEIGHT, SHIPPING INFORMATION 尺寸，重量，发货信息

NEX-ABG-9TT Electronics:	11" W x 11" W x 14" H - **Weight:** 12 lbs
电子学部分：	
Dimensions NEX-ABG-9TT Assembly:	10" H x 10" D x 29" - **Weight:** 45 lbs
探头部分：	**(**excluding optional shielding) 不含屏蔽

NOTE: Optional thin Lead Sheet for shielding can be shipped with or shipped separately. Overseas customers may wish to buy the lead sheet locally.
注：可选择薄铅屏蔽一并邮寄或单独邮寄，海外用户可在当地选购铅屏。

TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY
7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) 818-883-6103 (Fax)

Divisions of US Nuclear Corp

tago   **NEX-ABG-9TT ELECTRONICS**   COM   **TICKER UCLE**

CBRN
Real - Time
Air & Water
Specialists

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DETECTION EXAMPLES 探测样品	PAG LEVEL 饮用水 保护标准	LOWER LIMIT of SENSITIVITY 灵敏度下限	TOP OF RANGE 上限	SENSOR / METHOD USED 传感器类型		MAINTENANCE for finished water 维护
					TIME 时间	ACTION 维护项目
Alpha U-238	U-238 3,000 pCi/l			5" dia. Dual PM Tube crushed scintillation bed of crystals	3--6 mo 3-6 个月	Replace particulate filter cartridge 更换过滤器
30 min 24 hr		25,000 pCi/l 3,000 pCi/l	2 x 10^7 pCi/l			
Beta K-40	K-40 30,000 pCi/l			5" dia. Dual PM Tube 1000 ml chamber	3--6 mo	Replace particulate filter cartridge
30 min 24 hr		30,000 pCi/l 10,000 pCi/l	2 x 10^7 pCi/l	1100 cm^2 Beta Scintillator		
Gamma Co-58	Co-58 30,000 pCi/l			Standard: Single Channel Energy Analyzer Optional: Multi-ChannelAnalyzer	3--6 mo	Simple MCA check 检查多道分析仪
30 min 24 hr		20,000 pCi/l 5,000 pCi/l	2 x 10^7 pCi/l	75x75mm NaI(Tl) Crystal		
OPTIONS: 选项		LOWER LIMIT 低限	TOP OF RANGE 上限			
DETECT 监测						
Tritium 氚		20,000 pCi/l	1 x 10^6 pCi/l	Crushed scintillation bed of crystals		Replace ion exchange cartridge 更换过滤器
Radon 氡		100 pCi/liter	2000 pCi/liter		1-3 mo	Clean or replace vapor trap 清理或更换捕水器
PRE-CONDITION 前提条件						
Expel Radon 驱除氡						Clean or replace vapor trap 清理或更换捕水器

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FEATURES ~ NEX-ABG SERIES COMPARISON 对比表

FEATURES 特点	NEX-BETA-ABG	NEX-BETA-ABG User's PC 用户电脑	NEX-BETA-ABG-9 All-in-One 一体	NEX-ABG-9TT All-in-One 一体
Read–Out Units (Typical) 单位	Bq/m^3 pCi/l User Selectable	Bq/m^3 pCi/l User Selectable	Bq/m^3 pCi/l User Selectable	BIO – ppm RAD - Bq/m^3 or pCi/l User Selectable
Measures 测量	Waterborne Concentration	Waterborne Concentration	Waterborne Concentration	Waterborne Concentration
Electronics 电子学	LAM-10 Ratemeter	User PC switches units, subtracts background data logging, electronic data transmissions	Calculations by embedded processor	Calculations by embedded processor
Software Functions Data Logger 软件 数据录入器	N/A	Optional WIN-W Data Logger Software for PC users	On board data logger	On board data logger
Assisted Calibration 辅助标定	N/A 不适用	Optional 可选项	Included 包括	Included 包括
Report Generator 生成报告	N/A	Optional	Included	Included
Advanced Data Analysis (for low radiation levels and long measurements) 高级数据分析（用于低辐射和长期测量）	N/A	Optional	Included	Included
Available Options 可选项		Optional WIN-W Data Logger Software for PC users	Optional Overhoff Networking Overview (ORO)	Optional Overhoff Networking Overview (ORO)
Portable Version 便携式	NEX-BETA-ABG-P		NEX-BETA-ABG-9P	在线安装 Inline/Installed only NEX-BETA-ABG-9TT
Installed Version 安装式	NEX-BETA-ABG		NEX-BETA-ABG-9	