

FACILITY DRINKING WATER SAFETY MONITOR

设施饮用水安全监测器系列

Model Series - NEX-BETA-ABG SERIES

NEX-BETA-ABG ~ NEX-BETA-ABG-9 ~ NEX-BETA-ABG-9TT

PROTECT VULNERABLE –
HOSPITALS – SCHOOLS – GOVERNMENT FACILITIES

保护易受攻击的-医院-学校-政府机关

FEATURES: 特点

- DETECTS ALPHA, BETA AND GAMMA RADIATION
探测 α , β , γ 辐射
- **NEX-BETA-ABG-9TT – TEST & TREAT**
此型号探测并处理
 - BIOLOGICAL SENSORS –生物传感器-
 - OXIDATION REDUCTION POTENTIAL (ORP) 氧化还原电位
 - TOTAL ORGANIC CARBON (TOC) 总有机碳
 - TREATMENT OF ISOTOPES & BIOLOGICAL CONTAMINATION
核素&生物污染处理
- ON-BOARD COMPUTER - NEX-BETA-ABG-9 & NEX-BETA-ABG-9TT
机载电脑-- NEX-BETA-ABG-9 & NEX-BETA-ABG-9TT
- **NEX-BETA-ABG SERIES 此系列**
 - 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
无试剂添加, 无废水流
 - EASY CALIBRATION 容易校准
 - PREVENT ACUTE HEALTH EFFECTS; 防止急性健康影响
REDUCE RISK OF CHRONIC EXPOSURE 减少慢性辐射危险
 - MEASURES AT OR BELOW EPA/DHS **PAG LEVELS**
Protective Action Guideline Levels and Military Drinking Water Limits
测量符合或低于美国环保/国土安全局保护标准和军队饮用水标准

NOTE:注

- TA MAKES THE WORLD'S ONLY PAG-LEVEL WATER MONITORS
TA是世界上唯一生产符合水保护标准的生产商
- ALSO DETECTS SOME ISOTOPES DOWN TO LOWEST EPA LEVELS
也是唯一一家对某些核素测量达到环保部门最低测量限生产商



NEX-BETA-ABG & LAM-10
ELECTRONICS ASSEMBLY



NEX-BETA-ABG 9 & NEX-BETA-ABG-
9TT ELECTRONICS



TECHNICAL ASSOCIATES
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TICKER UCLE

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APPLICATION: 应用

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

将此系统安装在入水管处自动连续24小时监测饮用水中辐射污染。NEX-BETA-ABG-9TT监测并处理核辐射&生物染。

Facilities with multiple water inlets may wish to install multiple **Nex-Beta-ABG**

多条进水管设施可安装多台Nex-Beta-ABG

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.

专为保护易感人群，如医院、学校及政府机构设计，鲜有城市或水批发商连续监测辐射。

ALTERNATIVE USES: 还可用于...

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

可用来监测核电站或实验室排出的液态污水流以符合有关规定。

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

如果水源是河流或水库则推荐使用带辐射探测器的前过滤装置。

PROBLEM:

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:

• For the first time in a **Continuous Real Time** monitor the **Nex-Beta-ABG 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
探测器信息进行分析并用皮居/升单位显示。

• 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-Beta-ABG-9 & Nex-Beta-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:

Model **NEX-BETA-ABG Series** monitors are radiation detecting 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器，测量辐射核素发射物发射出的 α β γ ；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 α β γ 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 for the Nex-Beta-ABG-9TT.** Nex-Beta-ABG-9TT配备生物传感器

The Alpha-Beta pulse analysis portion of this system conditions and analyzes the output from the photo-multiplier tubes by pulse height, duration and coincidence; thereby permitting the system to exclude most background and noise counts. Sensitivity is enhanced by the use of stochastic resonance plus high gain, low noise PM tubes and pre-amps. 系统 α - β 脉冲分析根据脉高脉宽和符合事件分析并修正光电倍增管输出信息，以便系统排出本底，加上高增益低本底PM管和前置放大器，因此增加了灵敏度。



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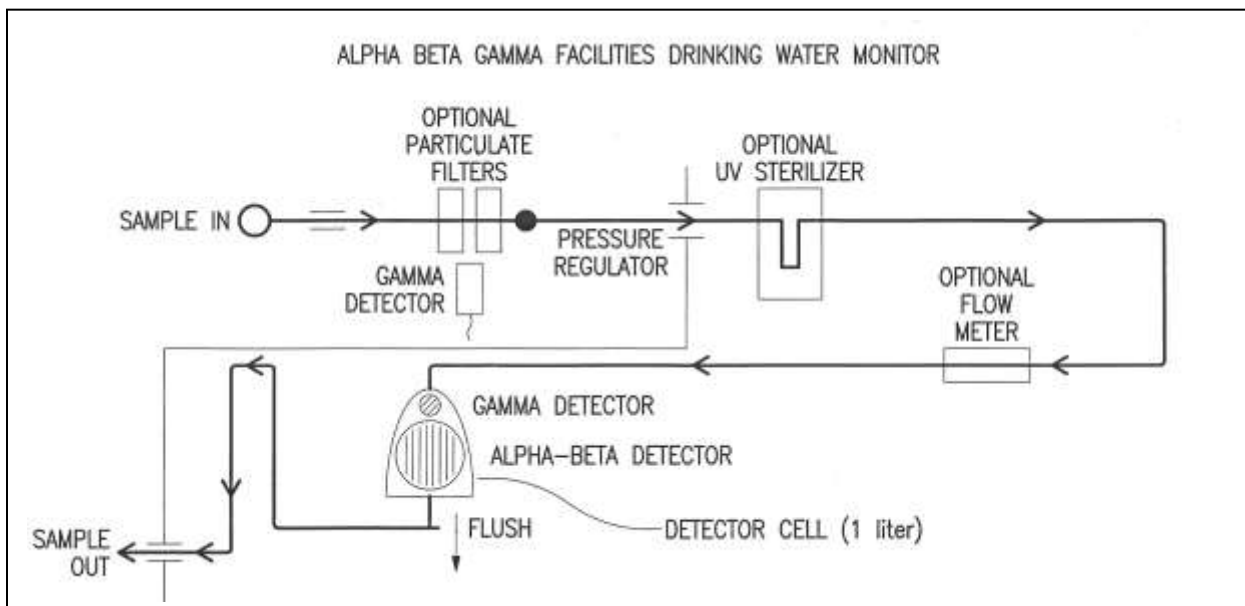
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FLOW PATH ~~ NEX-BETA-ABG & NEX-BETA-ABG-9:

- Water Inlet port 进水口
- Pressure Regulator 水压调节器
- Particulate Pre-Filter (with optional additional Gamma Detector) 粒子前置过滤器 (可选带伽马探头)
- Ultra Violet Sterilizer (Optional) 紫外线杀菌
- Mass Flow Meter (Optional) 流量计
- Flow chamber with alpha-beta and gamma detectors 安装了 α β γ 探测器的流室
- Tested water is clean and returns to the drinking water line. 经过测量水清洁则流回管路
 - No liquid scintillate or reagents are added 无液闪或试剂
 - No toxic or radioactive waste of any kind. 无毒或其它辐射废物

FLOW PATH



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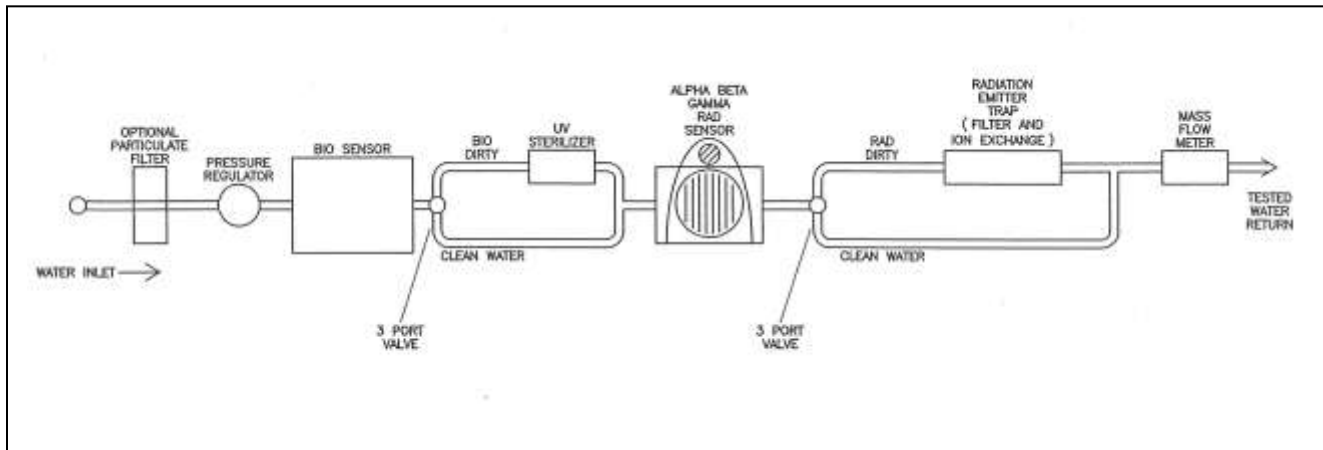
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FLOW PATH ~~ NEX-BETA-ABG 9TT (Test & Treatment System)

- 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 α β γ 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

NexBeta-ABG-9 & NexBeta-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:

- **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 40° to 85° F. Instrument is still operational up to higher temperatures
样品温度：测量最精确的温度范围40° - 85° 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 尺寸重量及发货信息

NEX-BETA-ABG Lam-10 Electronics: 电子学 7" W x 10" H - **Weight:** 8 lbs
(Electronics may be positioned separate from detector)

Dimensions NEX-BETA-ABG Assembly: 10" H x 10" D x 29" W - **Weight:** 37 lbs
(excluding optional shielding)

NEX-BETA-ABG-9 & NEX-BETA-ABG-9TT Electronics: 11" W x 11" W x 14" H - **Weight:** 12 lbs

Dimensions NEX-BETA-ABG-9 or NEX-BETA-ABG-9TT Assembly: 10" H x 10" D x 29" - **Weight:** 45 lbs
(excluding optional shielding)

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。

**NEX-BETA-ABG 9 & NEX-BETA-ABG-9TT
ELECTRONICS**



**NEX-BETA-ABG LAM-10
ELECTRONICS**



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DETECT 探测	PAG LEVEL 饮用水标准	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 3,000 pCi/l			5" dia. Dual PM Tube crushed scintillation bed of crystals 双光电倍增管, 闪烁晶 体探头	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	2×10^7 pCi/l			
Beta	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	2×10^7 pCi/l	1100 cm ² Beta Scintillator		
Gamma	Co-58 30,000 pCi/l			Standard: Single Channel Energy Analyzer Optional: Multi- Channel Analyzer 标准: 单道分析仪 可选: 多道分析仪	3--6 mo	Simple MCA check 检测多道分析仪
30 min 24 hr		20,000 pCi/l 5,000 pCi/l	2×10^7 pCi/l	75x75mm NaI(Tl) Crystal		
OPTIONS: 可选		LOWER LIMIT 下限	TOP OF RANGE 上限			
DETECT						
Tritium		20,000 pCi/l	1×10^6 pCi/l	Crushed scintillation bed of crystals 闪烁晶体		Replace ion exchange cartridge 更换离子交换器
Radon		100 pCi/liter	2000 pCi/liter		1-3 mo	Clean or replace vapor trap 清洗/更换捕水器
PRE- CONDITION						
Expel Radon						Clean or replace vapor trap



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FEATURES 特点

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
Installed Version 安装式	NEX-BETA-ABG		NEX-BETA-ABG-9	Inline/Installed only NEX-BETA-ABG-9TT



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