

Idaho Technology RAZOR[®] Instrument

Information Sheet



The RAZOR system detects and identifies biological agents using cutting edge technology. Made for field use, the RAZOR is compact, lightweight, and easy to use. It is a field PCR unit that is fast, with ultra-reliable DNA based results. Created for first responders and front line military troops, it is easily operated while working in protective equipment under extreme conditions. Battery powered with a simple user interface, the system has post-mission PC software for data archiving and post-mission reporting.

The RAZOR uses ITI's patented pouch system—integrated freeze-dried reagents and special packaging for an easy-to-use system. It has a selection of pre formatted pouch configurations for the most common bioterror threats as well as the ability to custom formulate the pouches for individual needs (for a complete list, see the RAZOR reagent pouches information sheet).

U.S. Patent Nos: 6,387,621; 6,730,501; 6,787,338; foreign counterparts and pending patents

The Following Tests are Available for These Markets:

Hazmat	Food	Water Testing	Environmental
Anthrax	<i>Listeria</i>	<i>Cryptosporidium</i>	Avian Influenza
Ricin	<i>E. coli</i> O157	<i>Salmonella</i>	Botulism
Smallpox	<i>Salmonella</i>	<i>Y. pestis</i>	Marburg
Plague	<i>Campylobacter</i>		

- Simultaneously tests up to twelve real time PCR samples
- Works in less than 30 minutes
- Performs five runs on one battery charge
- Small, hand-portable
- Rugged and field hardened design
- Weight: 9 lb 1 oz/4.1 kg
- Size: 6.6 x 4.4 x 9.1 inch
17 x 11 x 23 cm (H x D x W)
- Minimal sample preparation

Approved Product

The RAZOR has been added to the Approved Product List for Homeland Security.



See <http://www.safetyact.gov> for details.



Innovative solutions for pathogen identification and DNA research

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RAZOR Instrument

The compact unit comes loaded in a durable Pelican case with the instrument, battery, and recharger. The system is 110/220V compatible and has passed rigorous environmental testing. It was designed to operate as a stand-alone unit (without PC).

- Automatic analysis (Yes/No answer)
- Battery powered—Rechargeable (5 runs/charge)
- Light weight
- Built-in display
- Hot swappable power



User Interface

Internal calibration and diagnostics ensure the instrument is functioning within tolerances before and during operation.

Automatic analysis software runs “on-the-fly,” presenting simple present or absent readouts.

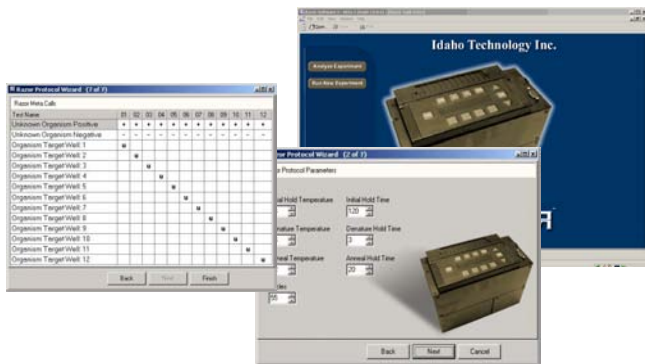
- Designed for use in personal protective equipment.
- Large intuitive push-buttons
- Bright backlit LED screen.
- Step-by-step operating instructions for instrument and reagent use are built into the instrument.

Software

The software is an additional tool to expand the stand-alone RAZOR capabilities. The PC software allows pre-deployment protocol uploads, advanced mission monitoring, and post-mission support and reachback.

Software features include:

- Real-time conventional PCR run mode
- After incident data analysis
- Data archiving



Training

The system comes with a training DVD with all the necessary multimedia tools for sampling, pouch loading, machine operation, maintenance, and software. On site training is available by special arrangement.

To learn more about how the RAZOR can benefit your program as well provide a reliable method for testing pathogens, visit us at www.idahotech.com or call 1-800-735-6544

Ordering Information

Catalog No	Instrument Options
RAZR-ASY-0001	RAZOR Instrument
RAZR-ASY-0013	690 Filter Set (HP)
RAZR-ASY-0012	510 Filter Set (TQ)

Instrument Specifications

Sample Description

- 12 reaction per sample pouch containing freeze-dried reagents. Positive and negative controls are included with each pouch.
- Reaction Volume: 100 μ L
- 5–20 μ L volume size

Fluorescence Acquisition

- One color optics modules
- Excitation wavelengths 470 \pm 20 nm
- Emission wavelengths 530 \pm 10 nm—TaqMan[®]
- Emission wavelengths 690 \pm 60 nm—HybProbe[™]

Power Supply

- Rechargeable battery pack (included with instrument)
- External Power Supply: 24 V DC, 4 A Output, 110–220 V AC, 50–60 Hz, 3 A Input

Instrument Dimensions and Weight (w x d x h)

- Size: 6.6" x 4.4" x 9.1" (17 x 11.2 x 23.1 cm)
- Weight: 9 lb 1 oz (4.1 kg) including battery

Performance Parameters

- Instrument set-up time \leq 2 min.
- Sample run time \leq 25 minutes (average)

Temperature Control

- Lower Heater: 56 $^{\circ}$ C to 64 $^{\circ}$ C/Upper Heater: 86 $^{\circ}$ C to 94 $^{\circ}$ C
- Accuracy: \pm 1.0 $^{\circ}$ C from target temperature
- Uniformity: 0.5 $^{\circ}$ C in a single sample—Intersample
1.0 $^{\circ}$ C across sample area—Intersample
- Operating: 0 $^{\circ}$ C to 40 $^{\circ}$ C
- Storage: 0 $^{\circ}$ C to 55 $^{\circ}$ C

Desktop Software

- Windows[®] 2000 Software Application
- Upload protocols to the RAZOR and download data for real-time or offline analysis
- Simple push-button *Detector* software
- Automatically analyze fluorescence amplification curves
- Reports results as “+” or “-” on the RAZOR screen

Instrument Certifications

- CE Mark
- Manufactured under cGMP
- Homeland Security Safety Act approved product*

*See Department of Homeland Security web site for safety certificate

Parts List

The following items are included with the instrument

Instrument

RAZOR Instrument, Battery Recharger, 24 V 4A Power Supply, Battery Pack, Serial Null-Modem Data Cable, DB9, Air Filter Assembly, Desktop Software, Users Manual, Quick Guides, Hard Carrying Case

Tool Kit

5 1/2" Needle Nose Pliers, Lens Cleaning Solution, Lens Cleaning Tissue