

Arrayit Corporation - InnoScan



GENERAL DESCRIPTION:

0.5 micron resolution microarray scanner, fluorescence based, designed for laboratory analysis

TECHNICAL DESCRIPTION:

Next generation microarray scanning technology. World's only sub 1 µm microarray substrate slide scanner on the market. Proprietary rotary scanning architecture permits the fastest scanning speeds. 3 minutes to scan an entire 25 x 76 mm substrate slide. Scan 24 substrate slides in 100 minutes with autoloader feature. Rotary scanning architecture reduces vibrational noise and increases image quality. Much greater reliability and longevity than conventional raster scanners. High resolution acquisition system: scans spot sizes down to 5 µm diameter. Real-time image acquisition for all microarray types including but not limited to in-situ high density glass slide microarrays, spotted microarrays of all kinds, tissue and cell microarrays. Low background noise and high sensitivity system. Uniform scanning across the entire microarray surface regardless of substrate type (glass, membrane and plastic). Not sensitive to shocks, vibrations and slide deformation (portable). Delivered with Mapix® software: an easy to use data acquisition and image analysis software including automatic spot recognition and powerful image analysis. Software for various OS environments (Linux, Windows). Ethernet interface allows easy data sharing (scanner can be shared over network by several users). Affordable price, low maintenance. Lightweight, robust structure makes it portable system. Small footprint for laboratory space saving.



Tier Selection

Final tier assignment is based on overall product score.

- Top Tier ◐ Second Tier ○ Third Tier
- ◑ Fourth Tier ● Bottom Tier

RANKINGS

| | Biological | Chemical | Radiological |
|------------------------------|------------|----------|--------------|
| FIELD USE System | ○ | N/A | N/A |
| MOBILE Laboratory | ◐ | N/A | N/A |
| DIAGNOSTIC Laboratory | ◐ | N/A | N/A |
| ANALYTICAL Laboratory | ● | N/A | N/A |

CONTACT INFORMATION

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COST

- \$125,000/system
- \$100/analysis

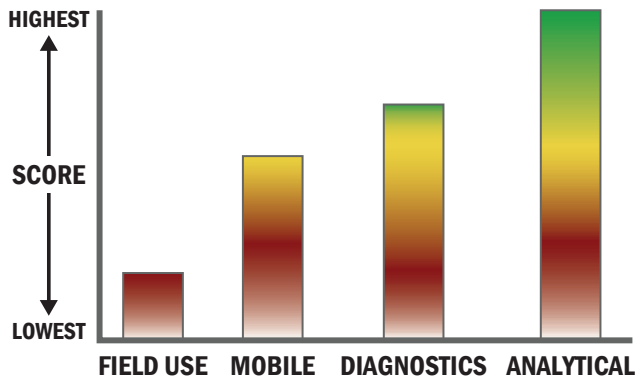
Survey Source

Vendor Supplied Information



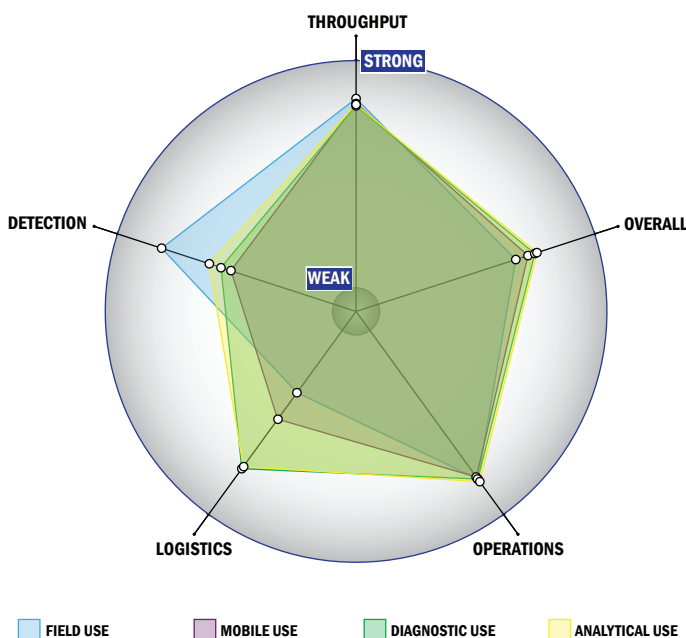
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



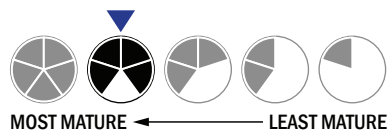
Evaluation Criteria

Throughput:

- Between 2 and 15 minutes for detection
- Multiple samples, multiple tests/sample per run
- Greater than 750 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- Less than 5 minutes is required for set-up
- 3-5 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- System or device has 110V electrical requirement



Operations:

- Can be used from 4 °C to 41 °C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- 5-10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is open and available for modification
- The system hardware is open and available for modification

Detection:

- Possible the system could receive 510K clearance, no current efforts at this time
- Possible the system could receive FDA approval, no current efforts at this time
- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- 1-100 CFU per mL
- 1-100 PFU per mL
- Less than 1 ng per mL