

High-performance Nunc F96 white plates for luminescence assays

The data show superior performance and consistency compared with other suppliers

The Thermo Scientific™ Nunc™ F96 MicroWell™ White Polystyrene Plate is the recommended choice for luminescence assays because it offers maximum signal reflection while helping minimize background self-luminescence. The Nunc F96 MicroWell White Polystyrene Plate is engineered to enhance assay sensitivity, improve signal detection, and help deliver high-quality, reliable data. Since plate selection plays a critical role in luminescence performance, choosing the Nunc F96 white plate can help significantly improve both sensitivity and overall data quality. Optimal luminescence measurements require:

- Low background signal
- High signal retention
- Reduced well-to-well crosstalk

Key results from comparative performance evaluation

To evaluate performance, Thermo Fisher Scientific benchmarked Nunc F96 MicroWell White Polystyrene Plates against four leading competitor plates (A, B, C, and D) using the highly sensitive Invitrogen™ ATP Determination Kit. This luminescence assay quantitatively detects ATP through the luciferin/luciferase reaction and serves as a robust model for assessing plate performance. Key parameters measured included background signal, signal-to-noise ratio (S/N), and well-to-well crosstalk, providing a comprehensive comparison of assay sensitivity and data quality.

The Nunc F96 MicroWell white plate shows the lowest background signal (Figure 1), the highest S/N (Figure 2), and low crosstalk for reliable high signals (Figure 3).

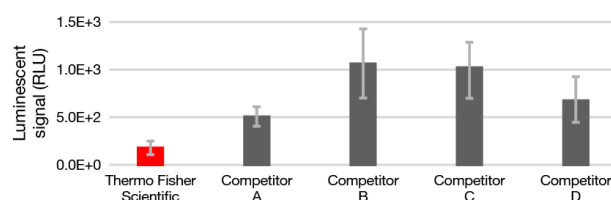


Figure 1. Background luminescence signal for the different benchmarked plates. (n=10), Standard error of the mean.

Our plate shows:

- Up to 50% lower background signal
- Better detection at low ATP concentrations

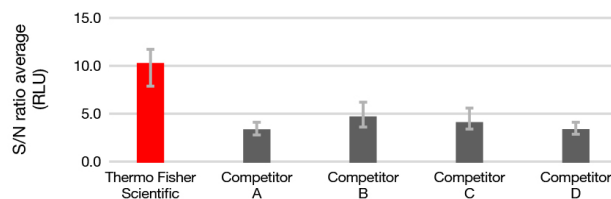


Figure 2. Signal-to-noise ratio average for the different benchmarked plates. (n=10), SEM

Our plate shows:

- ~2–3x higher signal-to-noise vs. competitors at low signal intensities
- The strongest signal discrimination
- More confident signal detection across wells
- Improved detection for low-abundance targets

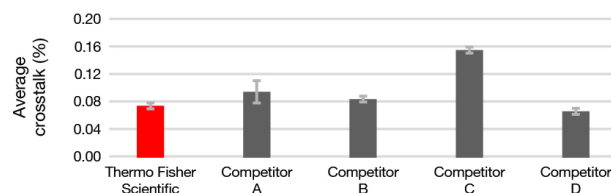


Figure 3. Average crosstalk results for the different benchmarked plates. Most of the plates have very low crosstalk, <0.1%. (n=10)

Our plate shows:

- Reduced signal contamination between wells
- Better performance in high intensity assays

Table 1. Comparison of parameters from ATP assays using the benchmarked plates.

Parameter	 Background signal	 Signal-to-noise ratio	 Crosstalk
Nunc F96 MicroWell white plate			
Competitor A			
Competitor B			
Competitor C			
Competitor D			



#1 Overall performer across all key luminescence metrics

The Nunc F96 MicroWell plate enables more sensitive detection, higher confidence, and reproducible results.

Rating legend:



Great performance
Exceeds expectations



Average performance
Meets expectations



Low performance
Below expectations

Why Nunc F96 MicroWell plates offer better luminescence data

Nunc F96 MicroWell plates demonstrated:

- Increase signal reflection (with minimal background noise) for stronger luminescence readouts
- Reproducible results across experiments and batches
- Suitability for sensitive luminescence workflows
- Robust performance at low analyte concentrations
- Reduced signal contamination between wells



Ordering information

Product	Cat. No.
Nunc MicroWell 96-Well, Nunclon Delta-Treated, Flat-Bottom Microplate	136101
Nunc MicroWell 96-Well, Nunclon Delta-Treated, Flat-Bottom Microplate	136102
Nunc F96 MicroWell White Polystyrene Plate (Non-treated, White, Flat Bottom)	236105
Nunc F96 MicroWell White Polystyrene Plate (Non-treated, White, Flat Bottom)	236107

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