



## Side-by-side: comparing the Omni Bead Ruptor 96 and Omni Bead Ruptor 96+

The Omni Bead Ruptor 96+ (BR96+) is a cutting-edge homogenizing device designed to efficiently mill and homogenize soft, fibrous, hard, and brittle materials. This updated version of the Omni Bead Ruptor 96 (BR96) retains the same exceptional homogenizing capabilities while featuring a more programmable user interface and quieter operation for a more modern laboratory experience.

With identical processing capabilities to the BR96, the BR96+ is compatible with a variety of sample formats, including well plates and tubes, ensuring it remains a versatile choice for any laboratory. By utilizing the same accessories and consumables as the BR96, it provides seamless integration into your existing workflow.

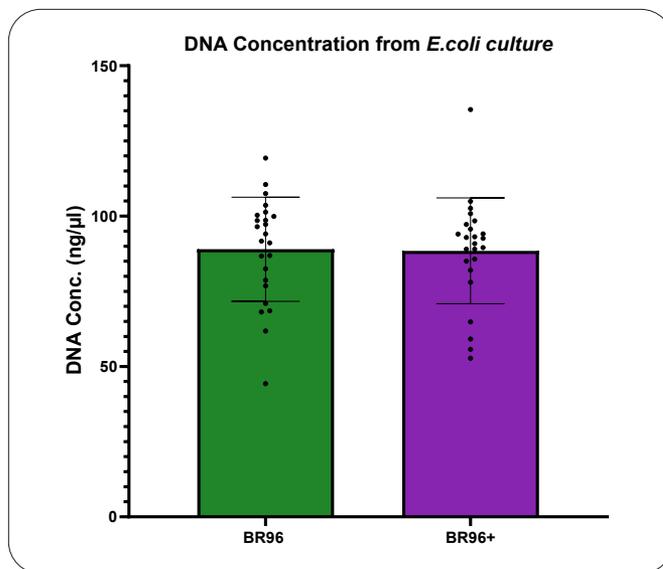


| Omni Bead Ruptor™ 96+

In side-by-side comparisons, the BR96+ demonstrated equivalency with the BR96 in homogenizing tissue and bacterial samples, targeting two of the most common downstream analytes: protein from tissue samples and DNA from bacterial cells. The BR96+ delivers the same high-quality results as the BR96, with improved usability and flexibility, making it the ideal choice for researchers seeking reliable performance with added convenience.

An *E. coli* culture was pelleted and resuspended in lysis buffer containing Proteinase K and RNase. Equal aliquots were added to pre-filled well plates containing 0.1 mm ceramic bead media (Revvity, Cat # 27-6007), sealed, and processed at 30 Hz for two 1.5 min cycles with a 180° rotation between cycles on both the BR96 and BR96+. After centrifuging, aliquots were transferred to well plates and DNA was extracted using the chemagic™ 360. Extracted DNA was quantified, and the analysis yielded a **p-value of 0.92**, indicating no significant difference in nucleic acid concentrations between the BR96+ and BR96 instruments.

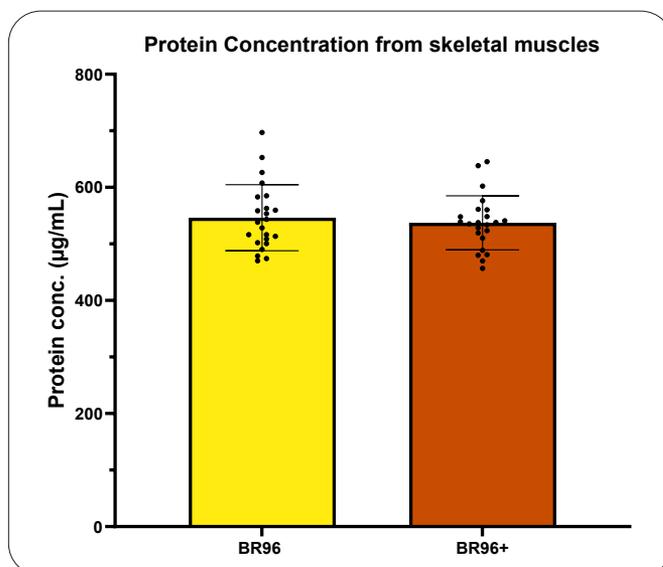
Instrument	Avg. Nucleic Acid Conc. (ng/μl)	Standard Deviation	P-value
BR96+	88.46	17.60	0.92
BR96	88.98	17.32	



Distribution of DNA concentrations (ng/μl) extracted from *E.coli* using BR96 and BR96+.

Skeletal muscle samples were placed into 2 mL Hard Tissue Homogenizing Mix tubes pre-filled with 2.8 mm ceramic bead media (Revvity, Cat # 19-628) containing PBS. Homogenization was performed on the BR96+ at 30 Hz for 2 minutes, with the adapter rotated 180° after 1 minute to ensure uniform processing. The samples were centrifuged, and supernatant was collected and diluted with PBS. Protein concentrations were then quantified using a BCA Assay. This procedure was replicated with the BR96 under identical conditions. Statistical analysis via t-test revealed a **p value of 0.44**, showing no significant difference in protein yields between the BR96 and BR96+ instruments.

Instrument	Average Protein Conc. (μg/mL)	RSD%	P-value
BR96	546.32	13.90	0.44
BR96+	537.52	10.11	



Distribution of protein concentrations(μg/mL) extracted from skeletal muscle using BR96 and BR96+.

