Record-by-Record Streaming Overhead with NEON
(Solved by block-based processing: 10K sequence blocks)

Problem: 82-86% overhead destroys NEON speedup
Solution: Process 10K sequence blocks → <10% overhead

Operation
- - - No overhead
base_counting
gc_content
quality_filter

Streaming Overhead (%)

Dataset Scale

Small (1K seqs) · Medium (10K seqs) · Large (100K seqs) · VeryLarge (1M seqs)