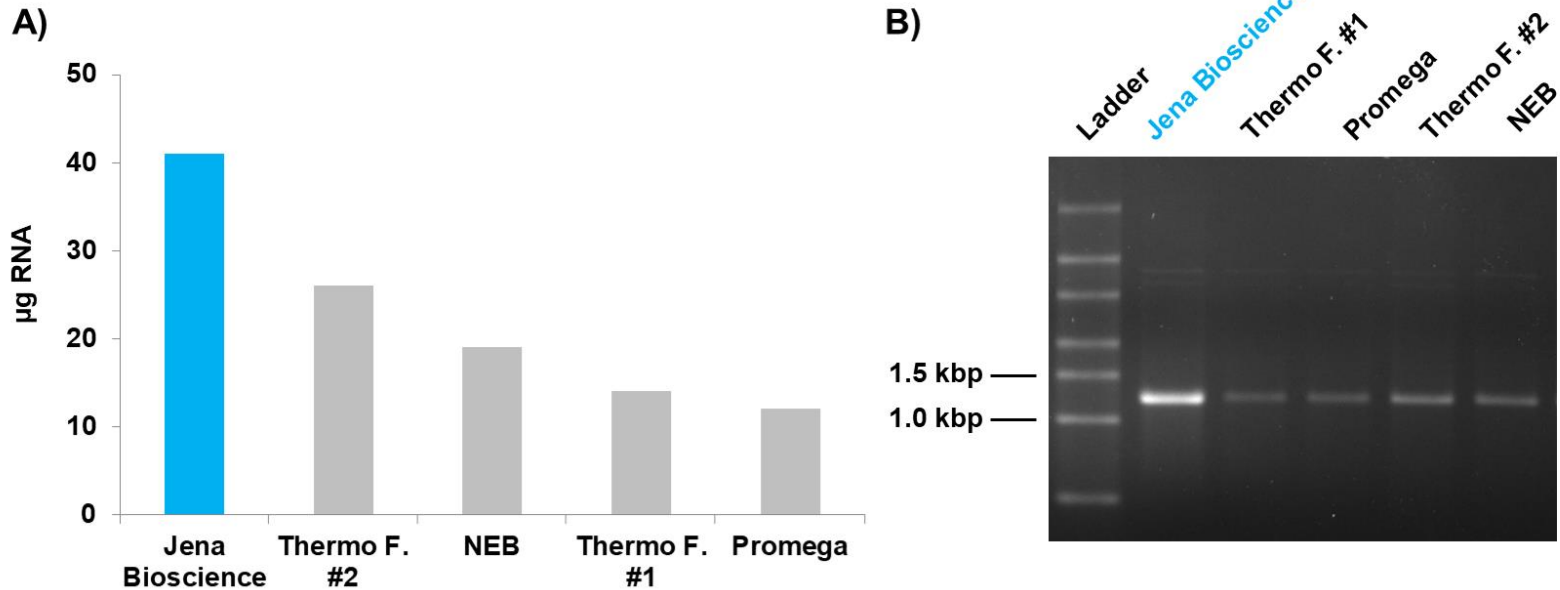


High yields of ARCA, 5-methylcytidine & pseudouridine-modified mRNA are synthesized within 30 min using HighYield T7 ARCA mRNA Synthesis Kit (5mCTP/Ψ-UTP)



Jena Bioscience: HighYield T7 ARCA mRNA Synthesis Kit (5mCTP/Ψ-UTP)

NEB: HiScribe™ T7 High Yield RNA Synthesis Kit

Promega: RiboMAX™ Large Scale RNA Production Systems – T7

Thermo F. #2: TranscriptAid T7 High Yield Transcription Kit

Thermo F. #1: MEGAscript™ T7 Transcription Kit

Figure 1 1.4 kbp RNA was generated using Jena Bioscience's or competitor's *in vitro* transcription kits supplemented with **ARCA, 5-Methyl-CTP and Pseudo-UTP** (1 µg DNA template, 20 µl reaction, 30 min at 37°C). Total NTP concentrations were used according to manufacturer's instructions. Jena Bioscience/Thermo F. #2/Promega: 30 mM NTPs (6 mM ARCA, 1.5 mM GTP, 7.5 mM each ATP/UTP/CTP); Thermo F. #2/NEB: 40 mM NTPs (8 mM ARCA, 2 mM GTP, 10 mM each ATP/UTP/CTP). **A)** RNA yield was determined by fluorescence measurement (100-fold dilution of transcription reactions, Quant-it™ RNA Assay Kit, broad range (Thermo F.)). **B)** RNA integrity was analyzed by agarose gel electrophoresis (20-fold dilution of transcription reactions, equal volumes of each probe were run on a 1% agarose/TAE gel supplemented with EtBr).

Overview on ARCA, 5-methylcytidine & pseudouridine-based mRNA Synthesis Kit portfolio

Product	Application	Alternative to
<u>HighYield T7 RNA Synthesis Kit</u>	Synthesis of unmodified RNA	<ul style="list-style-type: none"> • HiScribe™ T7 High Yield RNA Synthesis Kit • TranscriptAid T7 High Yield Transcription Kit • MEGAscript™ T7 Transcription Kit • RiboMAX™ Large Scale RNA Production Systems – T7
<u>HighYield T7 ARCA mRNA Synthesis Kit</u>	Synthesis of ARCA-capped RNA	<ul style="list-style-type: none"> • HiScribe™ T7 ARCA mRNA Kit • mMESSAGE mMACHINE™ T7 ULTRA Transcription Kit
<u>HighYield T7 ARCA mRNA Synthesis Kit (m5CTP/Ψ-UTP)</u>	Synthesis of ARCA-capped, 5-mC & Ψ-U–modified RNA	n/a
<u>HighYield T7 mRNA Synthesis Kit (m5CTP/Ψ-UTP)</u>	Synthesis of 5-mC & Ψ-U–modified RNA	n/a