

### Testing of RNA isolation kits preserved with Blood RNA stabilizer (Inogene, Russia)

Six different RNA isolation kits were used (see Table) For each set,  $\geq 4$  blood samples were preserved with *Blood RNA Stabilizer* (Inogene, Russia).

RNA quality was assessed using a capillary electrophoresis system "2200 TapeStation Instrument" ("Agilent Technologies", USA), using "RNA ScreenTape" chips and reagents "RNA ScreenTape Sample Buffer", "RNA ScreenTape Ladder" ("Agilent technologies", USA).

Results of RNA quality testing from the samples treated with *Blood RNA Stabilizer*.

No	Kit	Cat. No	Producer	Total RNA	Small RNA
1	TRIzol™ Reagent	15596026	Thermo Fisher Scientific Inc. USA	yes (RIN>4)	yes
2	TriZ Reagent	IG-TRZ-60	Inogene, Russia	yes (RIN>4)	yes
3	PureLink™ RNA Mini Kit	12183018A	Thermo Fisher Scientific Inc., USA	yes (RIN>5)	
4	PureLink™ miRNA Isolation Kit	K157001	Thermo Fisher Scientific Inc., USA	yes (RIN>5)	yes
5	GeneJET Whole Blood RNA Purification Mini Kit	K0761	Thermo Fisher Scientific Inc., USA	no	no
6	GeneJET RNA Purification Kit	K0731	Thermo Fisher Scientific Inc., USA	no	no

The best quality and quantity results were obtained with the PureLink™ RNA Mini Kit and PureLink™ miRNA Isolation Kit. Sufficient RNA samples were isolated from all the tested blood samples. The GeneJET kits were found to be unfit, i.e., RNA was not detectable by electrophoretic assay in a half of the samples.

The isolated RNA samples were used for preparation of cDNA libraries by means of Ion Total RNA-Seq Kit v2 (Thermo Fisher Scientific Inc., USA, small-RNA protocol) or TruSeq Stranded mRNA Prep Kit (Illumina, USA).

The resulting libraries were successfully sequenced, using Ion Torrent S5 (Thermo Fisher Scientific Inc., USA), or HiSeq2500 (Illumina, USA) methodologies, respectively.