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Comparative studies of two methods for miRNA isolation from milk whey

Key words: Method, Milk whey miRNA, Spike-in miRNA

Research Route:

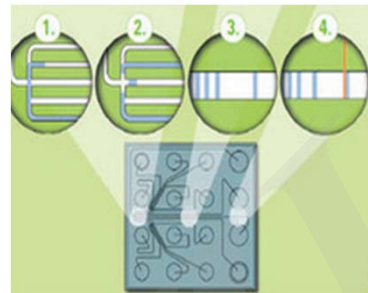


4 cows, 3 milk sample /cow , 1ml raw milk /sample)

Phenol based techniques
(Trizol LS)

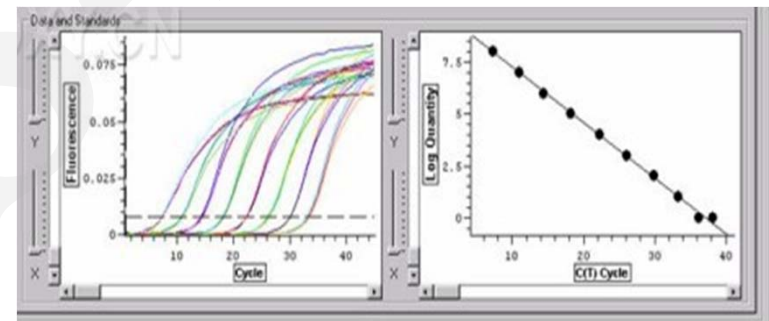
Column based approaches
(Trizol LS-miReasy)

Total RNA Yield & Quality



- ✓ NanoDrop ND-1000 spectrophotometer
- ✓ Bioanalyzer 2100 instrument (RNA6000 PicoKit)

Small RNA Recovery



- ✓ Examine a spiked-in synthetic RNA
- ✓ Compare the apparent recovery of specific endogenous miRNAs

Validate the repeatability of the better method

20 cows, 2 milk sample /cow , 1ml raw milk /sample)

The Consistency of recovery of spiked-in synthetic RNA

The repeatability of recovery of specific endogenous miRNAs

Innovation findings:

- **Combined phenol and column-based approach (Trizol LS® followed by cleanup using the miRNeasy) is optimal choice for miRNA isolation from milk whey, compared with modified phenol-based technique (Trizol LS® followed by phenol precipitation)**

