



RNeasy® PowerFecal® Pro Kit

It's time to go pro – for high yields and low inhibitors

Go Pro

Overview

RNA Purification

Stabilization

Workflow

Performance

Inhibitor Removal Control

RNA Quality

Ordering Information



Sample to Insight



RNA Purification

For the isolation of total RNA from stool and gut material

Overview

RNA Purification

- High quality RNA for metatranscriptomic analysis
- Lysis using PowerBead Pro and optimized chemistry for increased RNA yields
- Improved, second generation Inhibitor Removal Technology (IRT)
- Repeatable and reproducible results

Stabilization

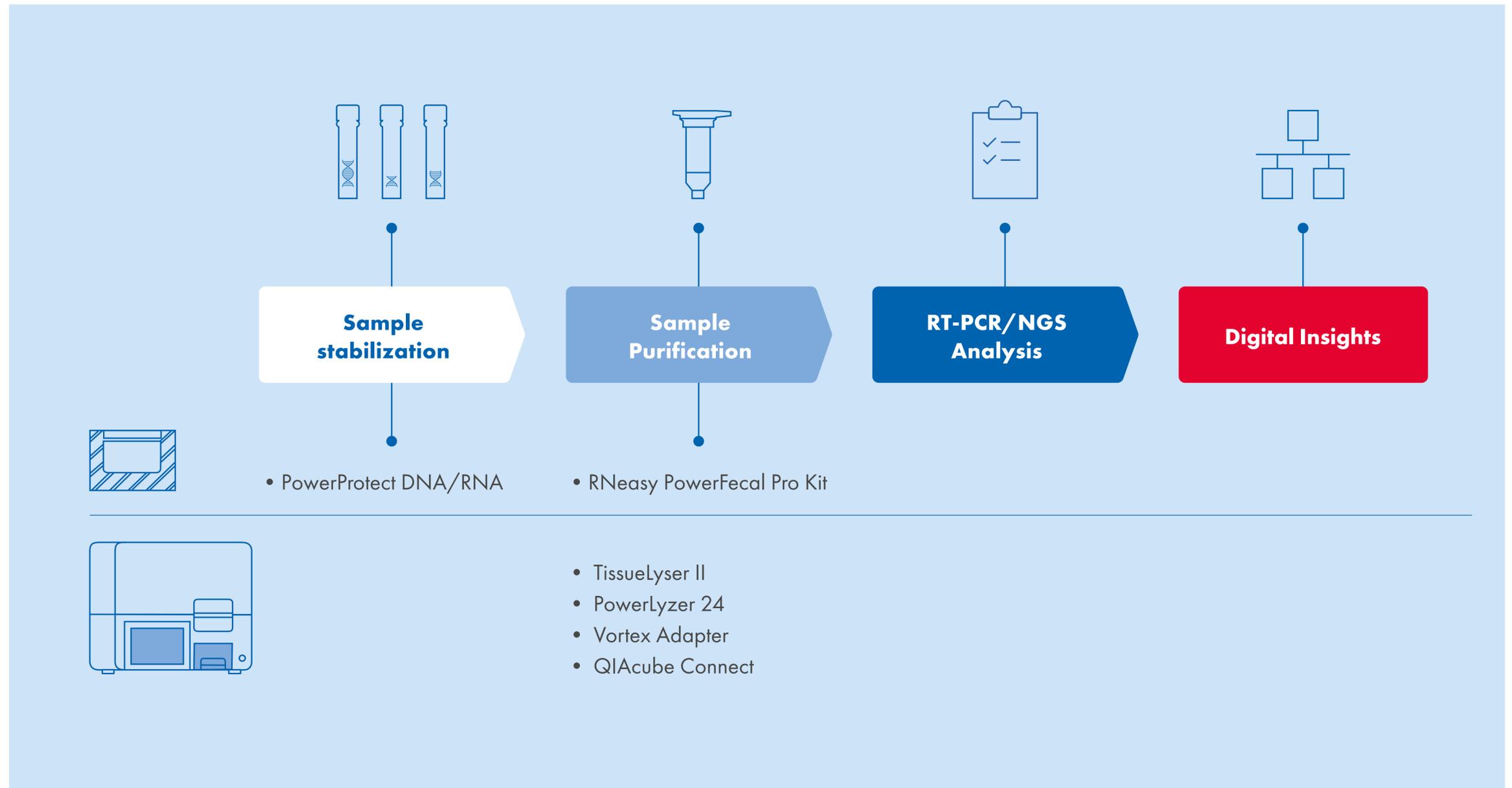
Workflow

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Stabilization

Sample stabilization and RNA extraction from stool samples – Workflow

Overview

With PowerProtect DNA/RNA and RNeasy PowerFecal Pro Kit

RNA Purification

Stabilization

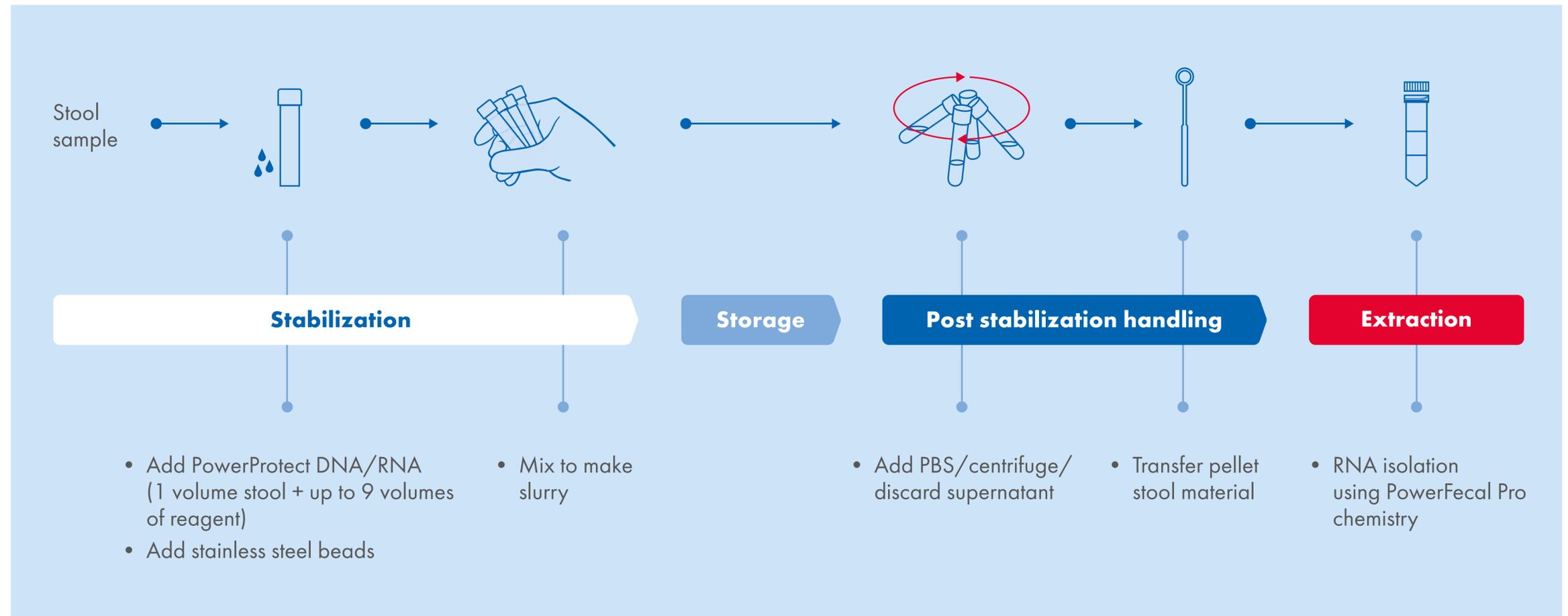
Workflow

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- Add PowerProtect DNA/RNA (1 volume stool + up to 9 volumes of reagent)
- Add stainless steel beads

- Mix to make slurry

- Add PBS/centrifuge/discard supernatant

- Transfer pellet stool material

- RNA isolation using PowerFecal Pro chemistry



PowerProtect DNA/RNA.

[Learn more about stabilization](#)



Workflow

RNA extraction workflow with RNeasy PowerFecal Pro

Overview

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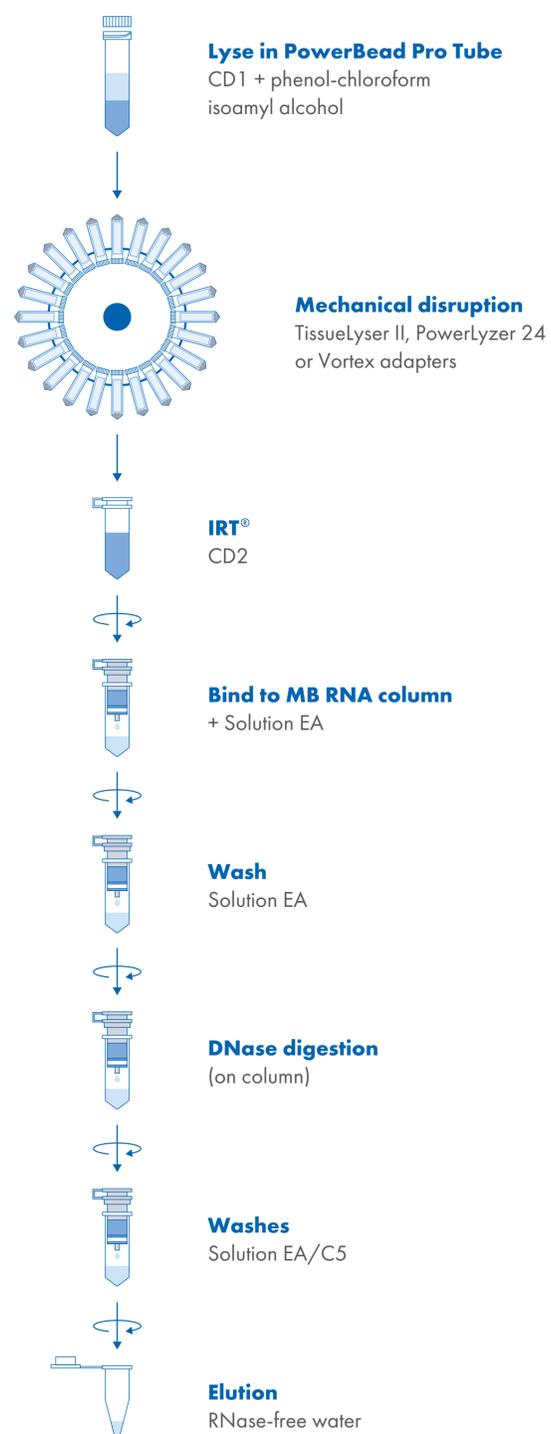
RNA Quality

Ordering Information

Elution volume:
50-100 μ l

Recommended starting material:
50-200 mg of stool

RNeasy PowerFecal Pro Procedure



[Visit Product Webpage](#)



Performance

Highest yield and purity for all four stool samples

Overview

The legacy kit and competitor kits were used for the comparison. The kits were used according to the manufacturer's instructions. Four frozen stool samples in triplicates; two samples from adults and two of children.

RNA Purification

Stabilization

Workflow

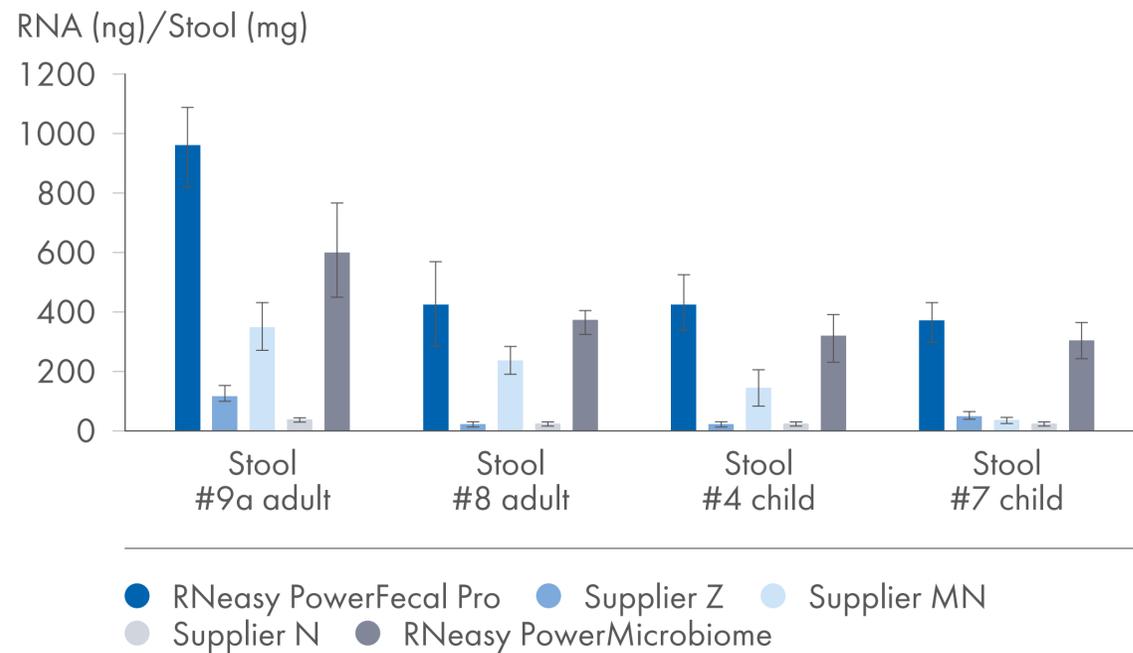
Performance

Inhibitor Removal Control

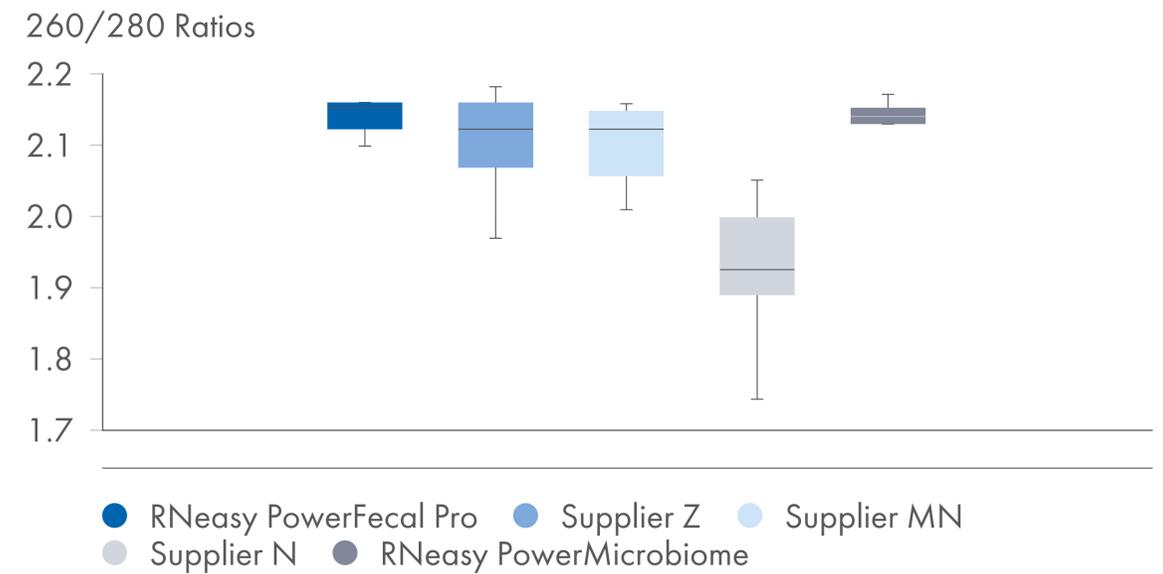
RNA Quality

Ordering Information

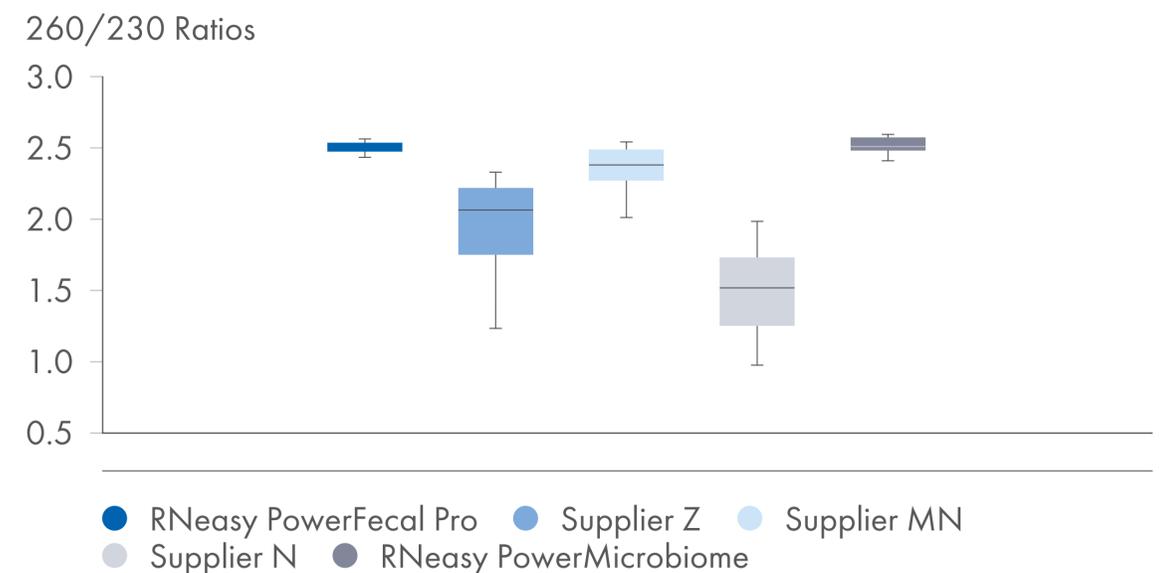
RNA Yields



RNA Purity – 260/280 Ratios



RNA Purity – 260/230 Ratios





Inhibitor removal control

High-quality RNA due to good depletion of inhibitors

Overview

RNA Purification

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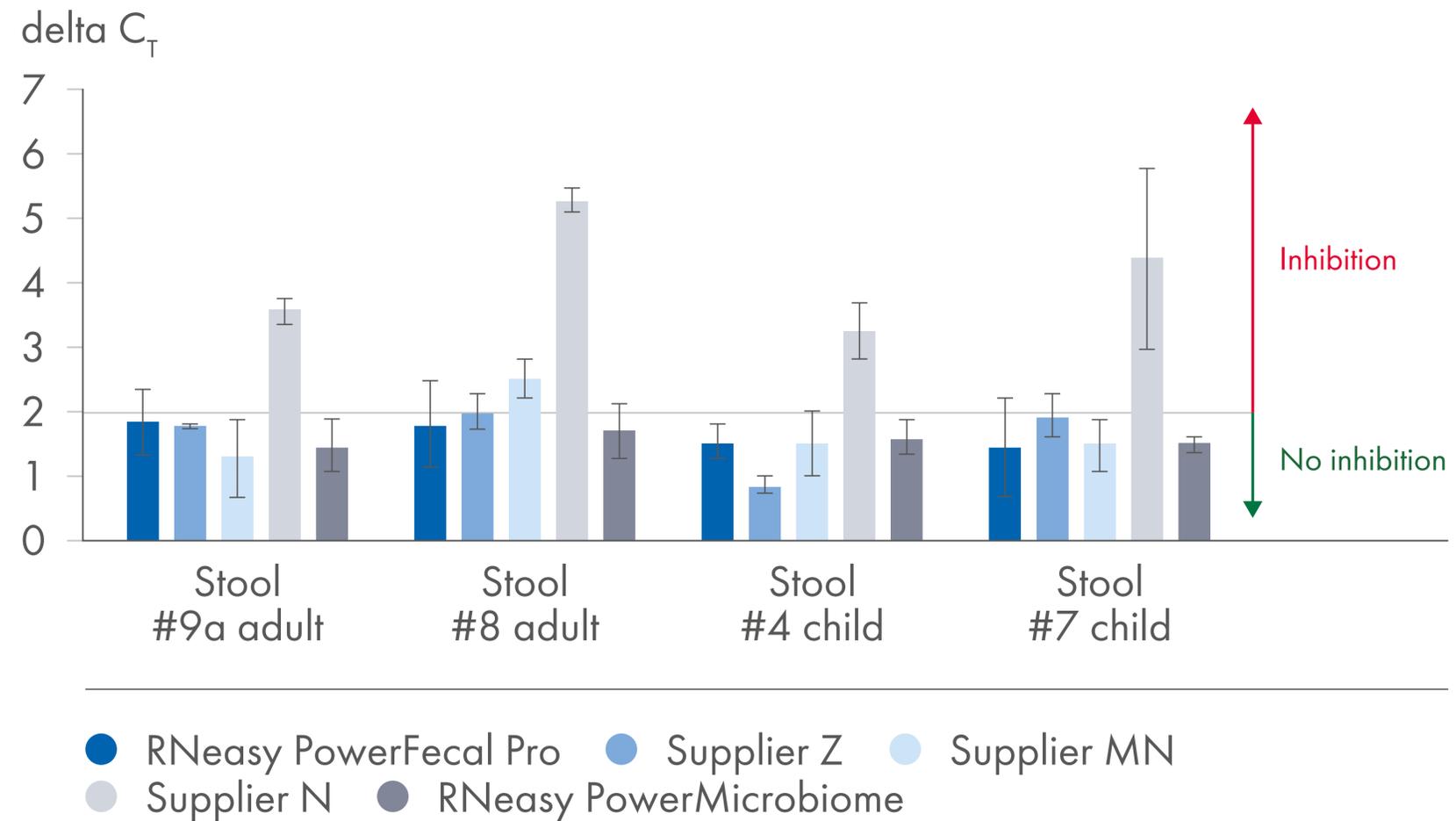
Performance

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RNA Quality

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RNA quality - PCR Inhibition



Pure RNA with low inhibitor co-isolation.

Efficient removal of PCR inhibitors was demonstrated by processing samples isolated with the RNeasy PowerFecal Pro Kit, competitor kits and the legacy kit RNeasy PowerMicrobiome protocols. In combination with the QuantiNova[®] SYBR[®] Green RT-PCR MM + QuantiNova IC Probe Assay. RNA amounts not higher than 500 ng were added to reaction mixtures that contained internal control RNA. Amplification of this control RNA was quantified by qPCR. The C_T value of water control, which does not inhibit amplification of the internal control RNA, was compared to samples containing eluates. Determined delta C_T values higher than 2 show the presence of inhibitors in the eluates. Each vertical bar represents triplicates.



RNA Quality 1

RNA Quality 2

High-quality RNA

Overview

RNA quality was determined by capillary electrophoresis (Agilent Bioanalyser 2100).

RNA Purification

Electropherograms show a big difference in the RNA quality isolated with different kits. While RNeasy PowerFecal Pro Kit leads to higher RNA integrity, the competitors kits show a significantly higher level of fragmented RNA.

Stabilization

Workflow

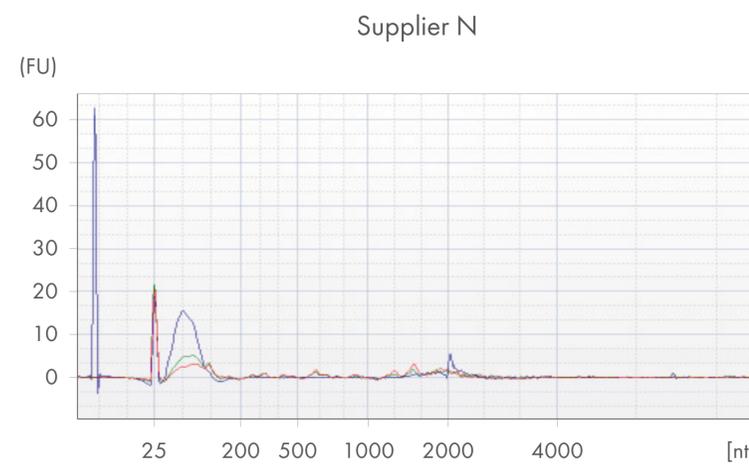
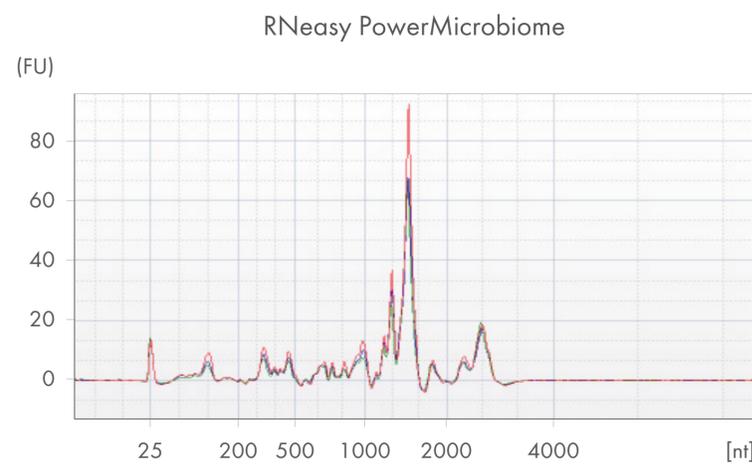
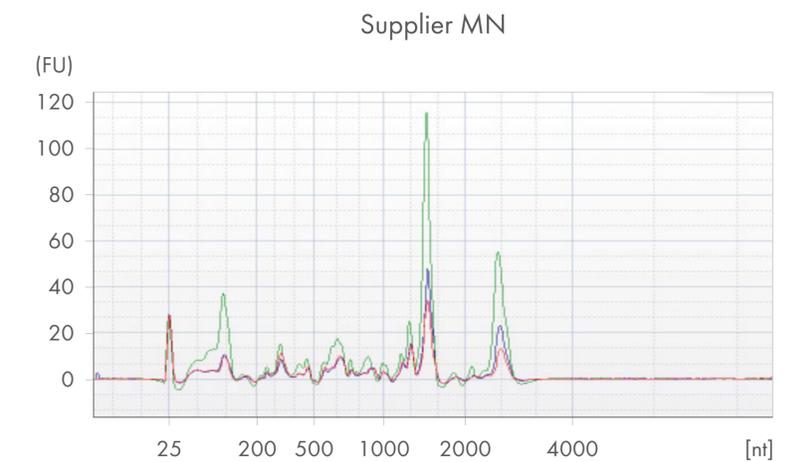
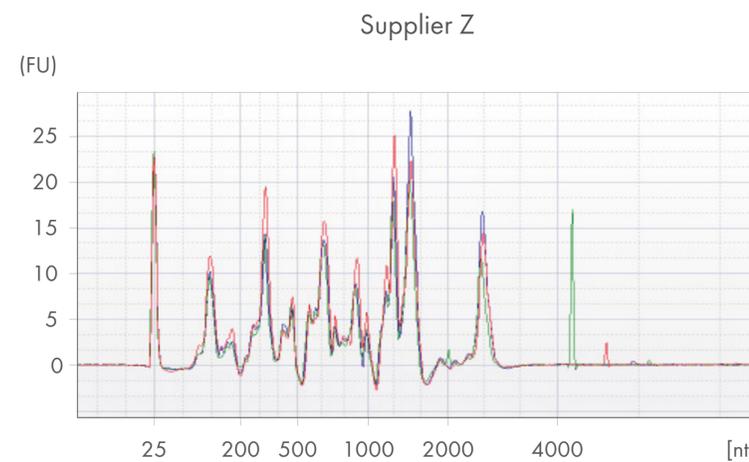
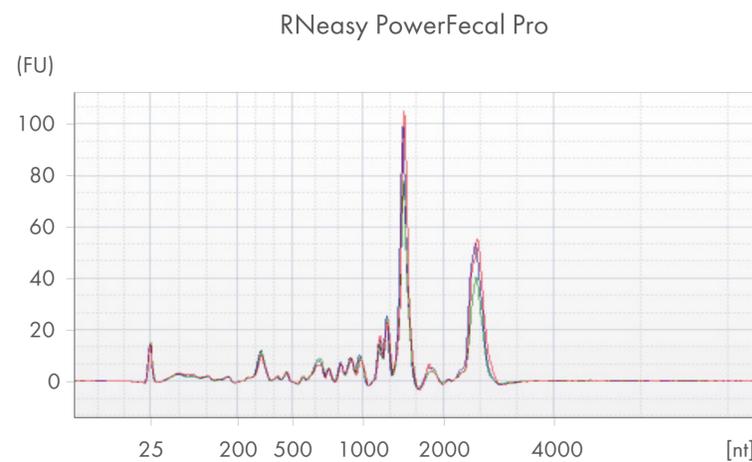
Performance

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RNA Quality

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Results of stool #9a adult as example





RNA Quality 1

RNA Quality 2

High-quality RNA

Overview

The RNeasy PowerFecal Pro Kit achieves the highest RIN value and 23S/16S ratio compared to the commercially available kits and the RNeasy PowerMicrobiome.

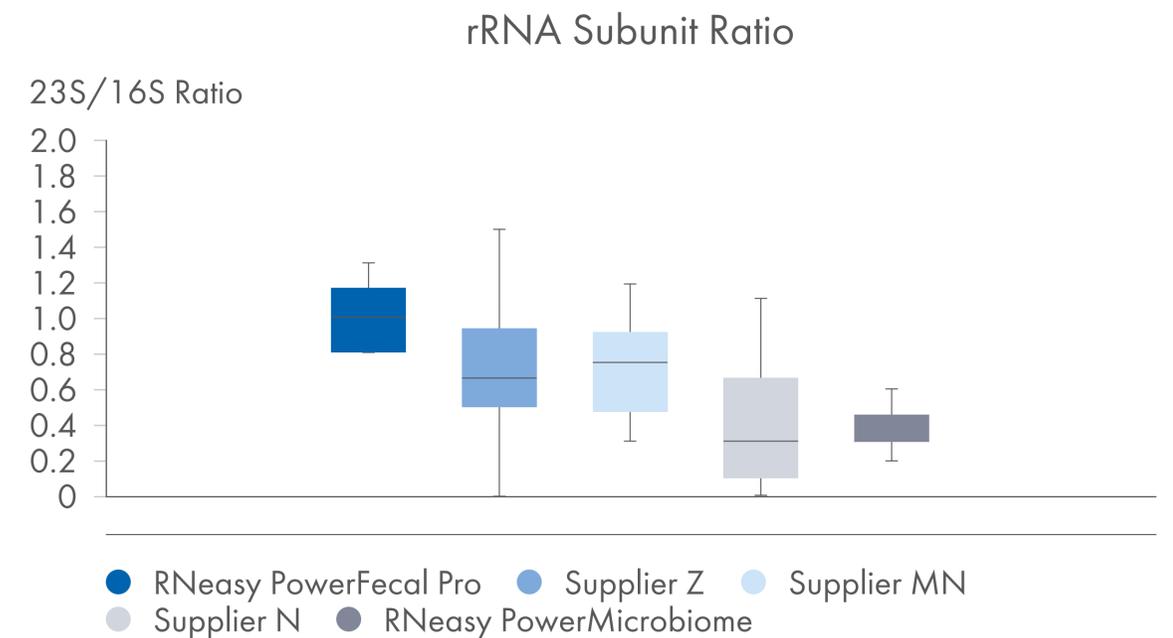
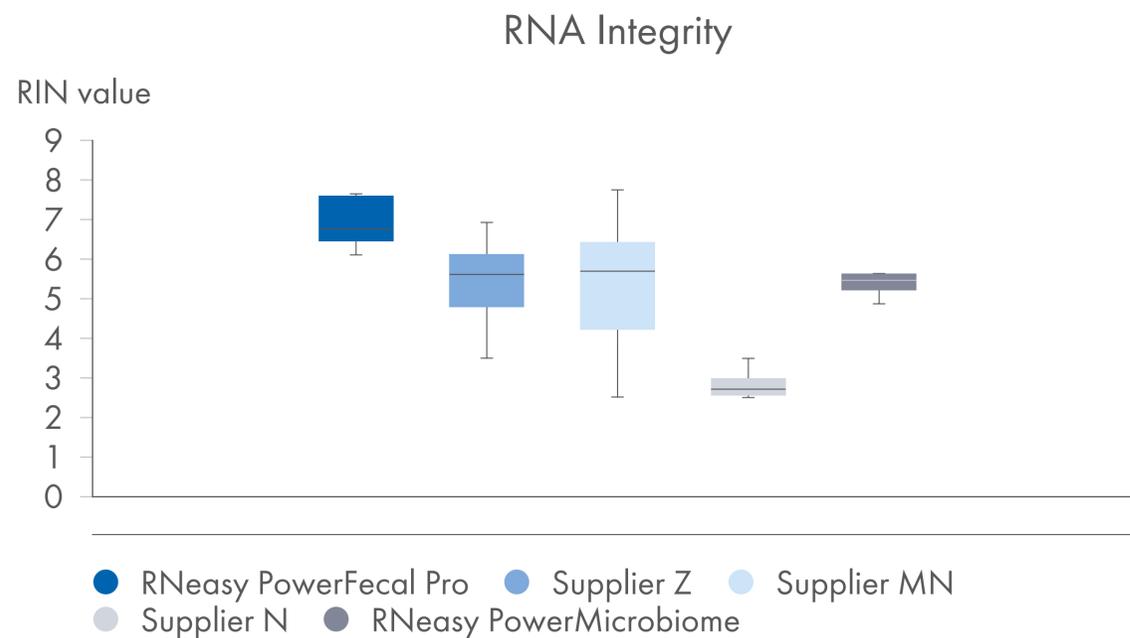
RNA Purification

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The RNA Integrity Number (RIN)

RIN is a tool designed to estimate the integrity of total RNA samples. RIN determination is based on:

- The ratio of ribosomal bands
- Electrophoretic trace of RNA sample
- Presence or absence of degradation products

RIN facilitates interpretation of an electropherogram, enables a comparison of samples and ensures repeatability of experiments.

RNA Quality

Ordering Information



Ordering Information

Overview

| Product | Contents | Cat. no. |
|--|--|----------|
| RNeasy PowerFecal Pro Kit (50) | For the isolation of total RNA from stool and gut material (50) | 78404 |
| PowerProtect DNA/RNA (500 ml) | For the stabilization of the microbial community profile and expression profile in stool samples | 14800 |
| PowerProtect DNA/RNA (1000 ml) | For the stabilization of the microbial community profile and expression profile in stool samples | 14810 |
| QuantiNova [®] SYBR [®] Green RT-PCR Kit (100) | For highly sensitive and specific one-step qRT-PCR and multiplex qRT-PCR or one-step qPCR | 208152 |

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For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit instructions for use or user operator manual. QIAGEN instructions for use and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services (or your local distributor).

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