# FECAL MICROBIOME: IMPROVING STOOL SAMPLE PRESERVATION, NUCLEIC ACID EXTRACTION AND QUANTIFICATION

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**A study of seven healthy individuals demonstrates that the Chemagic DNA Stool Extraction kit can successfully extract both DNA and RNA simultaneously from stool samples, with frozen storage in DNA stabilizer yielding the highest concentrations.**

## KEY POINTS

- Samples stored at -80°C in tubes with DNA stabilizer produced the highest mean DNA (70±52 ng/µl) and RNA (51±42 ng/µl) concentrations, while room temperature storage without stabilizer yielded significantly lower concentrations.
- The Perkin Elmer Chemagic DNA Stool Extraction kit, originally validated only for DNA extraction, successfully extracted both DNA and RNA when the protocol was modified, with higher RNA yields obtained without RNase treatment (150±123 vs 51±42 ng/µl).
- Whole viral genome sequencing confirmed the ability to extract and categorize viral material using the modified protocol.
- Application of these protocols to samples from patients with gastrointestinal conditions, particularly inflammatory bowel disease, is underway.

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