

Standard Operating Procedure: Stool sampling and transportation

RATIONALE FOR TESTING

The rationale of this standard operating procedure is as follows: a) safe collection of stool samples by participants in the GENIEUR (genes in irritable bowel syndrome research network) b) facilitating conditions for efficient extraction and preservation of DNA, RNA, proteins and metabolites for further microbiota diversity and functionality analysis (metagenomics, phylogenetic profiling using 16S rRNA gene amplicons, transcriptomics proteomics, metabolomics) c) adequate storing conditions in order to preserve all components of the system particularly the more fragile metabolites and proteins that could be degraded by residual enzymatic activity if stool samples are inadequately handled.

ESSENTIAL EQUIPMENT

- Fe-col stool collection device (Alpha laboratories, # FC2010, Fig. 1)
- 4 collection tubes with spoon and spatula labelled with patient ID (Sarstedt #80.623.022, Fig. 2)*
- Two cool transport containers (including coolant, Styrofoam casing and rubber band; Sarstedt #95.1123, fig. 3)
- A pair of gloves
- A sealable safety bag (fig. 4)

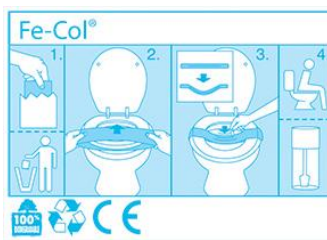


Figure 1. Fe-Col stool collection device



Figure 2. Colection tube



Figure 3. Transporting container



Figure 4. Safety bag

INSTRUCTIONS FOR PATIENTS

- A patient should get an instruction form that clearly and visually explains all steps of the sampling procedure to the participant as following:
 - Place the coolant horizontally in the home freezer at least 2 days before collecting the feces (Styrofoam casing should not be kept in the freezer).
 - Use Fe-Col device to collect the stool sample
 - Immediately after the depositing the sample, transfer one spoon (~1 gram) of the fecal sample into each of the collection tubes. Stool material can be taken off the spoon with the small plastic spatula)
 - Place the tubes into the sealable safety bag
 - Store the safety bag with collection tubes in the freezer as soon as possible (-20°C)
 - Bring the frozen stool sample to the medical staff within 1 week after collection by placing the tubes in the cooler and placing the coolers into the styrofoam casings

TIMING OF SAMPLE DELIVERY

- **for Histopathological Protein, Gene Expression and Epigenetic Analysis** Patients should bring the frozen stool sample to the medical staff within 1 week after collection
- Immediately after arrival at the clinic samples should be stored at -80°C until further processing
- Thawing of the frozen sample should be prevented at any cost

PERSONNEL

Research Nurse/ Practitioners

Clinical Research Fellows

HEALTH AND SAFETY

1. Standard precautions are required. Always wear gloves when handling stool samples.
2. Refer to the risk assessment, hazard data sheets and the Departmental policy at your site for additional safety information.

Number	Sample Labcode	Collection Date	Collection Time	Number of aliquots	Freezing Date	Shipment date	Centre	Isolation by	Signature
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