**TIBO**
**Trends In Innovative Biotechnology Organization**

# FECONOMICS®

## FECAL HOMOGENIZATION AND CONCENTRATION KIT

**Cat. #: FCN010** **Instructions for Use** **For In Vitro Diagnostic Use**

***Product's name:***
***FECONOMICS®***

***Product's intended use:***
***FECONOMICS®*** is a fecal concentrator kit. It enables easy homogenization and concentration of fecal samples for identification of helminth eggs, protozoan trophozoites and cysts by microscopy[1]. It is intended **for in vitro diagnostic use**.

***General information:***
The most simple and the fastest way of diagnosis of intestinal parasite infections is possible with microscopic examination. Fecal materials generally contain a small amount of helminth eggs, protozoan trophozoites and cysts. It is required that the protozoan eggs, cysts and trophozoites should be concentrated and the fecal material should be homogenized with the aim of enhancing the sensitivity of diagnostic methods. Therefore the fecal materials are commonly spinned and the supernatants are discarded[2,3] . ***FECONOMICS®*** enables concentration of fecal specimens in a simple way, rapidly and efficiently. The most significant advantage of ***FECONOMICS®*** is that centrifugation is not required. Firstly, stool is homogenized with the homogenizing fluid, and then absorbent beads are added to the cup. After waiting for 3 minutes, the specimen will be ready for examination. Thus ***FECONOMICS®*** saves time and effort. Also the specimens prepared with ***FECONOMICS®*** can be stained with lugol or trichrom[1].

Limitations of the method:
Fixative and homogenizing liquid in ***FECONOMICS®***, kill protozoa; their motions can not be observed under the microscope.

***Principles of the procedure:***
The absorbent beads in ***FECONOMICS®*** absorb the fluid remaining from homogenate and they leave concentrated sample behind. While the beads absorb the liquid and the small molecules, the parasite eggs, protozoa and their cysts remain in the liquid. Shaking the beads together with stool and dilution fluid facilitates the homogenizing process. It saves time and effort by eliminating centrifugation.

***Ingredients:***
- SAMPLE CONTAINER

10mL homogenization fluid containing <5% Glacial Acetic Acid and <3% Formaldeyde.

- ABORSORBENT BEADS

One box of ***FECONOMICS®*** contains sufficient components for processing 60 specimens.

***Cautions and warnings:***
**FOR IN VITRO DIAGNOSTIC USE.**

Specimen manipulation should be done in a contained environment with controlled access. The locations should have surfaces which can be easily decontaminated using an appropriate topical disinfectant. Universal precautions and local laboratory guidelines should be followed in handling biological specimens.

***General safety precautions:***
- Always wear masks and gloves when working with potential biohazard material.
- Never use mouth pipetting.
- If the homogenizing fluid contacts skin, eyes or mucosal surfaces, wash immediately and thoroughly with water and seek immediate medical help.
- Do not give any part of the kit to children.
- Used cups should be discarded in an appropriate manner.

***Storage instructions:***
Store at room temperature, in a dry place.

***Indications of instability or deterioration:***
***FECONOMICS®*** kit should not be used if above indicated volume is not present in the sample container and the package of the absorbent beads is not intact.

***List of materials provided:***
List of materials for processing one sample:
- 90mL polypropylene container containing 10mL fixative and homogenizing liquid.
- 12 grams of absorbent beads inside packages.

Each cardboard box contains 50 sets of the materials listed above and a package insert.

***Instructions for use:***
1. Transfer 2-3cm$^3$ (as large as one or two nuts) of stool to the homogenizing fluid in the sample container.
2. Close the cap of the sample container securely. Homogenize the sample by shaking the cup with circular motions or by vortexing.
3. Cut the package containing absorbent beads with scissors and add the beads into the sample container.
4. Mix by shaking the cup with circular motions or by vortexing.
5. Wait for 3 minutes (meanwhile most of the liquid will be absorbed by the beads. While the absorption process continues, some absorbent beads may crack and leap inside the cup. Do not open the cup unless the cracking is finished).
6. Open the cap and tilt the cup sideways to move the concentrated sample to one side. Transfer the sample to a microscope slide by a pipettor or a rod.

For microscopic examination, add a drop of lugol to the sample and mix. The sample can also be stained by trichrom, Giemsa or other stains as desired.

***List of materials that are not provided:***

- Automatic pipettes, pipette tips or Pasteur pipettes

***Quality control:***

Positive control: Stool specimens including parasites.
Negative control: Stool specimens that do not contain parasites.

***Description of the amounts of reagents necessary, and the parameters of time and temperature:***

The only reagents required are those included in the kit. Whole procedure takes approximately 5 minutes. The procedure is performed at room temperature.

***Time restrictions:***

The waiting time, after the absorbent beads added to the specimen cup, must be minimum 3 minutes otherwise the fluid will not be concentrated as required. Although there is no time restriction for the analysis of specimens, the best results are expected to be obtained when concentrated samples are stored at room temperature or in a cooler temperature (at 2-8°C) for longer periods of time.

***Limitations of the procedure:***

In specimens prepared with ***FECONOMICS®***, the parasites can not be observed in their living, motile form.

***Bibliography:***

1- Kurt, O., Akyar, I., Gorgun S., Kocagoz T., Ozbilgin A. Feconomics: A simple, novel and fast technique for stool concentration in parasitology laboratory. Kafkas Univ. Vet. Fak. Derg. 2012, 18 (Suppl-A): A161-A165.
2- Smith, J. W., and M. S. Bartlett. 1985. Diagnostic parasitology: introduction and methods, p. 595-611. In E. H. Lennette, A. Balows, W. J. Hausler, Jr., and H. J. Shadomy (ed.), Manual of clinical microbiology, 4th ed. American Society for Microbiology, Washington, D.C.
3- Perry JL, Matthews JS, Miller GR. Parasite Detection Efficiencies of Five Stool Concentration Systems. J Clin Microbiology June 1990, p. 1094-1097.

***Manufacturer:***

TIBO
Trends In Innovative Biotechnology Organization
Tuzla 34959
Istanbul/Turkey
Tel: +90 538 442 0407

Catalogue number:
FCN010

CE