DIAGNOTIS

FECONOMICS®

FECAL HOMOGENIZATION AND CONCENTRATION KIT

Catalogue #: FCN010 **Instructions for Use** **For In Vitro Diagnostic Use**

Product' s name:

FECONOMICS®

Product' s intended use:

FECONOMICS® is a fecal concentration 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:

Microscopy is the simplest and fastest method to diagnose intestinal parasite infections. Fecal materials generally contain a small amount of helminth eggs, protozoan trophozoites and cysts. Concentrating the helminth eggs, protozoan trophozoites and cysts and homogenizing the fecal material is necessary to obtain reliable results. Therefore, the fecal materials are commonly spun and the supernatants are discarded[2,3]. ***FECONOMICS®*** enables concentration of fecal specimens in a simple, rapid, and efficient way. The most significant advantage of ***FECONOMICS®*** is that centrifugation is not required. Thus ***FECONOMICS®*** saves time and effort. Specimens prepared with ***FECONOMICS®*** can be stained with lugol or trichrom[1].

Limitations of the method:

The fixative and homogenizing liquid in ***FECONOMICS®*** inactivates protozoa; their motions cannot be observed under the microscope.

Principles of the procedure:

The fixative and homogenizing liquid homogenizes the fecal sample and preserves the original shape of parasitic objects. The absorbent beads in ***FECONOMICS®*** absorb the fluid in the homogenate, yielding the concentrated sample containing the parasite eggs, protozoa and cysts if present. ***FECONOMICS®*** saves time and effort by eliminating the need for centrifugation.

Ingredients:

Fixative and homogenizing liquid containing 1.5% sodium acetate, 2% glacial acetic acid, and <1.48% formaldehyde.

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.
- Used cups should be discarded in an appropriate manner.

Storage instructions:

Store at room temperature, in a dry place.

List of materials provided:

List of materials for processing one sample:

- One 50mL empty polypropylene sample cup.
- One polypropylene tube containing 10mL of fixative and homogenizing liquid.
- One plastic bag containing absorbent beads.

Each cardboard box contains 40 sets of the materials listed above and a package insert.

Indications of instability or deterioration:

FECONOMICS® should not be used if above indicated volume is not present in the polypropylene tube or if the package of the absorbent beads is not intact.

Instructions for use:

1. Transfer the contents of the homogenizing fluid tube to the sample cup.
2. Transfer 2-3cm^3 (as large as one or two nuts) of stool to the homogenizing fluid in the sample cup.
3. Close the cap of the sample cup securely.
4. Homogenize the sample by shaking the cup with circular motions or by vortexing.
5. Add the beads into the sample cup.
6. Mix by shaking the cup with circular motions or by vortexing.
7. 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 has finished.)
8. 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 microscopy, add a drop of lugol to the sample and mix. The sample can also be stained by trichrom, Giemsa or other stains as desired.

FECONOMICS®

List of materials that are not provided:

Automatic pipettes, pipette tips or Pasteur pipettes, stains

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 required amounts of reagents for processing each sample are included in the kit. The entire procedure takes approximately 5 minutes. The procedure is performed at room temperature.

Time restrictions:

After adding the absorbent beads to the sample cup, the waiting time must be a minimum of 3 minutes to ensure concentration of the sample. Although there is no time restriction for the analysis of specimens, best results are expected to be obtained when concentrated samples are stored at room temperature, or at a cooler temperature (at 2-8°C) for longer periods of time.

Limitations of the procedure:

In specimens prepared with ***FECONOMICS®***, the parasites cannot 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.

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