MECHANICAL PNEUMATIC SYSTEM FOR THE TRANSFER OF FLUIDS BETWEEN TWO BIOREACTORS	
Offering Organization:	Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A.C.
Type of Organization:	Public Research Center
Development Stage:	Commercial Concept Tests
Desired Relationship:	– Technological research and development financing (technological partner) – Specialized application tests – Creation of a new company (Joint Venture) for the commercialization of the products outlined herein – Licensing of patents
Sector:	Biotechnology
Area of knowledge:	Medicine
Key words:	Fluid transfer, bioreactors, human digestive system

DETAILED DESCRIPTION:

Problem to be solved:

Fluid transfer between two containers is used in the laboratory analysis of liquid samples originating from containers or bioreactors. Each type of analysis and fluid transfer depends on the type of analysis performed and requires special treatment conditions as they cannot all be executed under the same system or procedure.

Solution:

The objective of the present invention is to provide an automated apparatus for extracting, from a closed container, fluid samples, particularly biological fluids such as those generated by the human digestive system, such as those produced by the stomach, small intestine or large intestine.

New and Innovative Aspects:

- Allows for the resolution of problems that arise from the transfer process when differential pressures exist inside the bioreactors hindering the transfer of liquids.
- Enables fluid extraction and introduction from one reactor into another, while fulfilling the established process conditions.
- Allows for the possibility of periodic sterilization.

TECHNICAL CHARACTERISTICS:

There exists a need to transfer fluids from one bioreactor to another, at intervals and amounts that vary according to each specific process, all while in well controlled temperature and acidity conditions, without contamination and where there is a generation of pressure on account of gases generated inside the bioreactors. From this need comes the invention of a device and process that draws fluid from a reactor and introduces it into another, following the conditions required by the process, such as the possibility of periodic sterilization. This device is composed of a pneumatic system, a collction chamber and a selection valve. This system resolves transfer problems arising

from the differential pressures that exist within the bioreactors preventing the transfer of liquid when using traditional systems.

Main advantages derived from its utilization:

- This invention allows for the transfer of liquid content from one bioreactor to another without contaminating external agents.
- Allows for the possibility of periodic sterilization.

Applications:

- Chemistry and Biotechnology

INTELLECTUAL PROPERTY

- Patent filed in 2013
- MX/a/2013/015018

ABOUT THE OFFERING ORGANIZATION

Presentation:	El Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A.C. (CIATEJ) is a public research center that belongs to the national technology development and innovation network, the National Council for Science and Technology (CONACyT). CIATEJ is focused on the agricultural, food, health, and environmental sectors with an emphasis on the application of innovative biotechnology.
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