DEVICE FOR FILTERING FLUID SAMPLES AND METHOD FOR DETECTING CONCENTRATION OF PARTICLES IN THE FLUID SAMPLES BY FILTRATION

A research group from CIC bioGUNE centre, TEKNIKER centre, and CIBER has developed a new device capable of filtering up to 96 fluid samples and a method to quantify the particles trapped in it.

The Need

Conventional multi-well filtration assemblies only allow for a single filtration. If the samples are to be filtered more than once, they must be deposited in a new multi-well filtration assembly, and so each time the sample has to be filtered. At the same time, changing the sample from one assembly to another exposes the sample to contamination.

The Solution

The present invention provides a device for filtering several times many samples in a single step, and a method for detecting the concentration of particles in fluid samples by filtration. The device consists of a plurality of connected inlet and outlet wells through which the samples flow, and a plurality of filters at different levels that retain predefined particles.

This device has the ability to filter and collect multiple samples at the same time reducing time and cost, avoiding cross-contamination and minimizing the confusion between samples by human error.

Innovative Aspects

- The invention provides a system comprising a device that allows to filter and collect multiple samples (up to 96) at the same time.
- The device incorporates multiple filters positioned at different heights, enabling serial filtration of the sample.
- The samples flow through the device's filters from the inlet wells to the outlet wells with no cross-contamination and no filter breakage, time reducing time and cost.
- Each of the filters included allows for the simultaneous detection of all 96 samples, enabling the characterization of the retained molecules.
- The invention also provides a method for detecting the concentration of particles in fluid samples by filtration.

Intellectual Property:

- International patent (PCT) filed in May 2025

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

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