

## TOOL FOR THE MANUAL EXTRACTION OF TUBES HOUSING IN A CONTAINER

### INNOVATION AND DESCRIPTION OF THE TECHNOLOGY

Tubes containing biological samples are placed in commercial containers for storage and freezing. In order to save space, these containers are organised with minimum distances among tubes. This is a problem when the tubes need to be selected and removed from the container. Normally, thin tweezers are used to extract the tubes, but they usually do not have good grip and can cause a change in the tube position or spilling its content. This problem is especially serious when the small tubes are not marked or encoded, and their identification is only defined by their position in the container.

### MARKET AND ADVANTAGES OF THE TECHNOLOGY

This invention proposes a simple solution to the above problems, by using a device designed for the manual extraction of tubes. It consists of two pieces with the shape of an “H”, one to rise tubes organised in rows (row-up base) and the other to rise tubes organised in columns (column-up base), as shown in the following images:



Row-up base

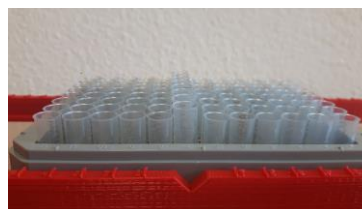


Column-up base

The piece shown in the left image allows extracting 12 samples simultaneously, whereas the one shown in the right allows extracting up to 8 samples. Both pieces allow accessing tubes with specific coordinates. When placing a container on these devices, the tubes that need to be extracted remain in a higher position with respect to the rest, as shown in the following images, allowing manual extraction, and preventing spills. These tools are compatible with most containers that are currently available in the market.



Row-up base



Column-up base

## IPRS

This technology has been developed by CIBERESP and Universidad Autónoma de Madrid research groups:

<http://www.ciberesp.es/>

<http://www.uam.es/>

**Utility model application filed on 1 December 2017.**

## CONTACT

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