

Autonomous equipment for separation of seeds from soil samples

CSIC, through INIA-CSIC, has developed a device with application in research and studies on soil seed banks. It is a system for the autonomous separation of seeds from soil samples that increases the efficiency in the process of extracting seeds by washing and sieving, since, until now, said extraction has been carried out manually, being a long, cumbersome and susceptible to handling errors process.

Companies from the agricultural, environmental sciences and ecology sectors interested in the development, manufacture and commercial exploitation of the device are sought

An offer for Patent Licensing

More efficient extraction of seeds from the soil

The device consists of a separating mechanism partially arranged inside a tank containing a separating liquid. Said mechanism rotates around its own axis by the action of an electric actuator and integrates tubular containers with openings at both ends, in which metal mesh filters with a certain light are incorporated so that the seeds do not escape from the container during the rotating movement.

The soil sample with seeds, plant remains and sand is housed inside the containers, so that, due to the effect of the agitation produced by the rotation together with the immersion in the separating liquid of the tank and thanks to the metal mesh filter incorporated in said containers, the seeds are separated from the rest of the inert elements of the soil sample, remaining inside the containers, while the rest of the inert elements remain at the bottom of the tank.



Plan view of the extraction device

Main innovations and advantages

- This device overcomes some problems in previous existing procedures such as the long periods of sample processing, the need for a considerable space to carry out the subsequent processing, the considerable expense of water and chemical products, as well as handling errors.
- This equipment includes wheels attached to the structure that allow it to be moved, so that it is not limited to be used in laboratories and can be moved to any desired location, thus reducing processing times.

Patent Status

Spanish patent application filed

For more information, please contact:

Rosa Rodríguez Díaz

OTRI del INIA-CSIC

Consejo Superior de Investigaciones Científicas (CSIC)

Tel.: 34 91 347 3965

E-mail: rosa.rodriguez@inia.csic.es
comercializacion@csic.es