

Designed to develop your laboratory by increasing your productivity, quality and homogenization of ground remains at reduced costs



You perform **plant varietal selection by molecular markers from seeds**; you could be astonished at the performances and at the versatility of the **μ -Grinder μ -Sampler 96 robot**.

Grinding dry pieces of leaf with hard balls in a shacked micro plate is very efficient.

But what are the results, with dry hard grains, like corn, cotton, peas, soya bean... and with 15 grains of wheat, barley in each well of the micro plate? We can't answer, but we will demonstrate what **μ -Grinder μ -Sampler 96** can do for you, to **cut cost of sample preparation, increase analysis accuracy** and finally **improve the profitability of your research**.

μ -Grinder 96 Ready

First it's a high throughput robot that increases analysis accuracy:

- 96 hard samples are perfectly ground in less than 3 minutes, in the case of a single grain per well.
- For about 15 grains of wheat or barley per well, a perfect homogeneous ground remains is obtained in less than 15 minutes.
- Up to 120 micro plates can be ground in a working day and as much can be sampled in another day, with the same robot.
- The yield of DNA from ground remains is at least five times higher, than from crushed seeds.
- Grains and leaves can be ground and homogenized in a few hundred of μ l of buffer, if necessary.



Once the grinding process has been completed, the grinding head is readily replaced by the patented sampling head in the robot that becomes **μ -Sampler 96**.

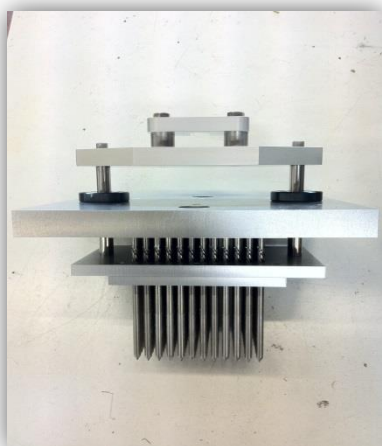
The **μ -Sampler 96** allows to transfer 96 samples of up to 20mg of flour, from the « mother » 96 wells micro plate to one or several « daughters » 96 wells micro plates in less than 2 minutes, for DNA extraction, with an absolute traceability (a bar code or “datamatrix” reader is connected to the **μ -Sampler 96**) and without cross contamination.

μ -Sampler 96 Ready

But why to grind 15 seeds (wheat, corn...) per well?

- For diluting off type, i.e. if one of the 15 seeds has not the expected genotype, there is no impact on the genotyping results.
- To get a good representation of the allele frequencies in F2 or F3 generation of the strain, for example.

After this sampling step, the small quantity of flour, representative of the 15 kernels previously ground, is directly used for DNA extraction in the 96 wells support « daughters », by dispensing reagents into the wells.



Grinding head



Sampling head

Moreover, this robot brings you the following advantages:

Safe robot: μ -Grinder μ -Sampler 96 is European law on machine safety and EU standard, compliant.

Always available: It has been proven that thanks to the precise and rigorous design, μ -Grinder μ -Sampler 96 is extremely reliable and robust, even in intensive use.

User Friendly: The μ -Grinder μ -Sampler, due to the user interface, is mastered in a few minutes. Up to 10 protocols can be stored in its memory. Programing a protocol is very easy, for authorized person.

No risk of contamination: Between the samples of one batch and between successive batches. The grinding tool is easily removable from the grinder, for thorough cleaning and decontamination. It can also be cleaned in position.

Easy cleaning of the heads: Optional, a built in compressed air cleaner device efficiently cleans grinding head as well as sampling head in one minute.

As the heads can be easily removed from the robot, they can be thoroughly cleaned in ultrasound bath for instance, once a day.

An incredible adaptability: Several version of grinding tools can be fitted to the grinder for adapting it to various matrixes and various kinds of micro plates.

We would be pleased to tell you more about μ -Grinder μ -Sampler 96 and our range of high throughput grinders for your sample preparation.