

SK-Mill (Freeze-Crush Apparatus)

Are you in difficulty for freeze-crush?

New type apparatus is introduced .

It is simple ! ...Only shake by hand.

This apparatus has been developed for the purpose of crushing various frozen tissues easily. The conventional methods is to crush tissues in mortar using liquid nitrogen, which are really troublesome. In contrast, Our SK-Mill can now freeze-crush them easily.

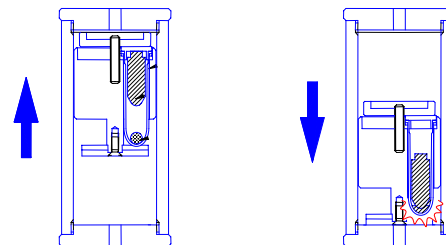
You can now prevent your samples from scattering and also from contamination because our SK-Mill is designed to use disposable closed type plastic Sample Tubes.

Improved efficiencies will speed up your entire process!

SUCCESSFULLY APPLIED FOR (as of :2003.9.30)

- Plant leaves (tobacco plant, rice plant and *adzuki* bean)
- Yeasts
- Rice stalks and roots
- Mouse liver, cortex and hippocampus
- Mushroom
- Nematode
- Fungi (hyphae and spores)
- Filamentous fungi
- Placenta
- *Arabidopsis thaliana*
- Rat skeletal muscle

STRUCTURE



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Insert your sample and Crusher into Sample Tube. Close it.
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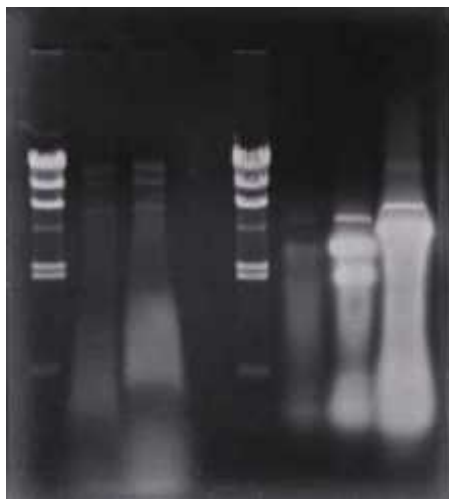
Set the tubes into Tube Holder. You can set three Sample Tubes at once.
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Dip Tube Holder in liquid nitrogen and freeze it at ultra low temperature.
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Up
Down
Insert the frozen Tube Holder into Outer Case, shake it up and down by hand, consequently crush your sample.

Example 1 : Freeze-crush of yeast

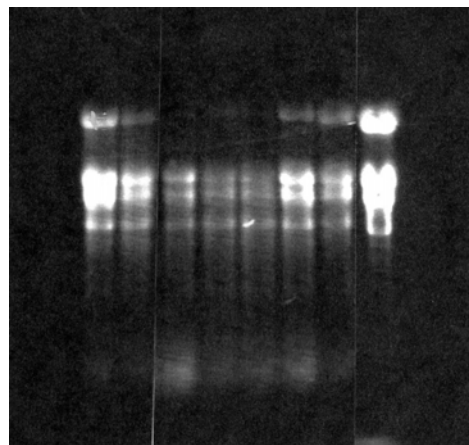
1. Grow *S.cerevisiae* to log phase at YPD medium.
2. Collect cells by centrifugation from 1 ml culture using 2 ml tube.
3. Freeze-crush by SK-Mill.
4. After removing cell debris, recover nucleic acids utilizing phenol treatment and ethanol precipitation.
5. Electrophorese nucleic acids.



Lane 1 Size marker (λ -Hind III digest)
 Lane 2 RNase treated sample
 Lane 3 the same as above
 Lane 4 -----
 Lane 5 Size marker (λ -Hind III digest)
 Lane 6 Sample without RNase treatment
 Lane 7 the same as above
 Lane 8 the same as above

Example 2 : RNA extracted from green leaves of rice plant

1. Cut finely green leaves of rice plant (about 1 g) with scissors.
2. Freeze-crush by SK-Mill.
3. Extract RNA by CTAB method.
4. Electrophorese nucleic acids.



Specification of SK-Mill

Code number	SK-100
Tube	2 ml Round bottom closed type Sample Tube. Recommended Sample Tube : "Safe-Lock Tube"(Eppendorf Co.,Ltd.) No.0030120094. The other sample tubes may not fit to this apparatus because of the difference in shape and material : please confirm your local distributor.
Sample quantity	Below 0.5 ml per tube (Different in samples)
Materials	Crusher : Stainless steel Tube Holder : Aluminum alloy and Silicone rubber Outer Case : Clear Acryl and Delrin

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