

# DNA Extraction Kit (low-level)

1



If you want to do DNA extraction at home,  
this is the set for you.  
By adjusting the concentration of the solution  
with salt and breaking the cell membrane  
with a neutral detergent,  
the DNA will come out in the water.

# DNA Extraction Kit (mid-level)

2



This is a reasonable DNA extraction kit.  
It can break animal cells,  
but it may not work well for plant cells  
with cell walls...

# DNA Extraction Kit (high-level)

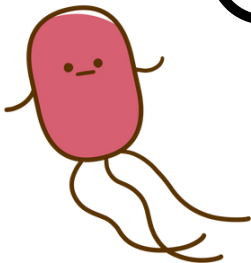
3



The best DNA extraction kit.  
It is complicated to operate,  
but it can extract DNA quite accurately.

# Bacillus coli

3



A type of intestinal bacteria  
in humans and animals.  
Most are harmless,  
but occasionally pathogenic.

# PCR

3



Amplifies specific regions of a DNA sample  
millions to billions of times.

# Famous Paper Wiper

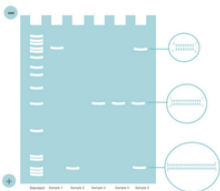
0



**Convenient.**  
You can wipe beakers, lab tables, and glasses.

# Agarose Gel

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Gel used for electrophoresis.  
it is made of a sugar called agarose.  
It is like agar.

# Latex Gloves

0



EtBr is carcinogenic,  
so gloves when working with it!



# Ethidium Bromide

1



Commonly known as EtBr.  
The one used to make electrophoresis gels.  
It is carcinogenic, so handle with care!

# Loading Dye

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**Makes the bands  
easier to see in  
electrophoresis**

# Ethanol

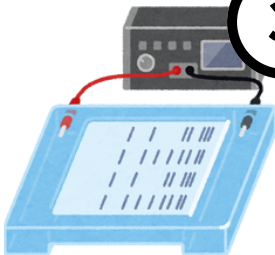
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When ethanol is added to the solution, DNA is more likely to precipitate.

# Electrophoresis

3



**Negatively charged DNA is moved under an electric field.**

**Fragments are separated according to their size.**

# Micropipette

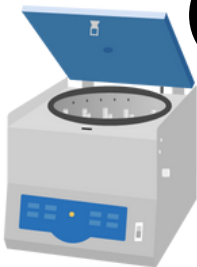


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Instrument used for  
portioning and  
transferring small volumes  
(mL,  $\mu$ L) of liquid.

# Centrifuge

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Equipment that uses centrifugal force to separate solids and liquid components in a liquid sample.

# Natto

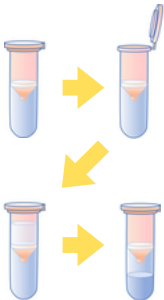
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**A superfood loved in  
Japan!  
The ingredients in natto  
are good for your body**

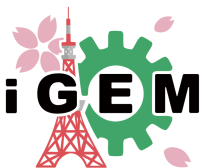
# Column Purification

2



**For DNA extraction!**  
Adjust the concentration of the solution with salt and use a neutral detergent to break the cell membrane, and the DNA will come out in the water.





**Grand Tokyo**