



chemagic Food Basic Kit

for 100 reactions

for general purposes

Kit Components

Magnetic Beads	3 ml
RNase A (10 mg/ml)	1 ml
Lysis Buffer 1	75 ml
Precipitation Buffer 2	30 ml
Binding Buffer 3	80 ml
Wash Buffer 4	90 ml
Wash Buffer 5	90 ml
Wash Buffer 6	100 ml
Elution Buffer 7	10 ml

The **Elution Buffer** is 10 mM Tris-HCl pH 8.0.

This kit contains enough materials for 100 isolations from 200 mg food material and is optimized for use with **chemagic** Magnetic Separators.

The kit is scalable for sample preparation using 2g starting material (see protocol below).

To extend the food kit the required chemicals are available as reagent set (01-01-161)

Required Materials

- 70 % Ethanol

Storage Conditions and Safety Information

This kit may be stored at room temperature (15 - 25°C) and is stable for at least 1 year following delivery. The kit buffers contain irritant substances. Take appropriate laboratory safety measures and wear gloves when handling.



UV Measurements

In some cases there may be traces of the magnetic beads left in the eluate after removal from the tube. Such particles will not interfere with PCR and most downstream applications but may increase the background in UV measurements. In such a case, prior to UV analysis, we recommend an additional application of the magnet to the eluate for 3 minutes in order to separate any traces of particles. For pure DNA the expected A_{260}/A_{280} ratio is between 1.8 - 1.9. The A_{260} value should fall between 0.1 and 1.0 for accurate readings.



Purification Protocol for DNA from 200 mg food

1. Place 200 mg of well homogenized food material in a 2 ml microfuge tube. Add 750µl **Lysis Buffer 1** and 10µl **RNase A**, mix by vortexing and incubate for 10 minutes at 37 °C.
2. Add 300 µl of **Precipitation Buffer 2** and vortex to mix.
3. Centrifuge for 5 minutes at high speed (14000 rpm) in a standard tabletop microcentrifuge.
4. Transfer the supernatant to a fresh 2 ml microfuge tube. Avoid pipetting floating material from the top of the liquid phase.
5. Add 30 µl resuspended **Magnetic Beads** and 0,8 volume of **Binding Buffer 3** (e.g., for 1000 µl supernatant, add 800 µl of **Binding Buffer 3**). Mix with 6 pipetting strokes and incubate 5 minutes at room temperature.
6. Following incubation, place the tube in a Magnetic Separator to draw the beads to the side of the tube for 2 minutes. Pipette off the supernatant and then remove the tube from the magnet.
7. Add 900 µl **Wash Buffer 4** to the tube. Resuspend the beads in the wash buffer by pipetting the bead pellet up and down 15 times and leave 1 minutes. Separate the beads using the Magnetic Separator and discard supernatant.
8. Repeat the washing procedure using **Wash Buffer 5**.
9. Repeat the washing procedure using 70% ethanol.
10. Separate the beads magnetically and remove the supernatant. Then, while leaving the tube in the Magnetic Separator, and the beads attracted to the side of the tube, gently add 1 ml **Wash Buffer 6**, being careful not to disrupt the pellet. Pipette off all **Wash Buffer 6** minute after addition.
11. Add 100 µl (or another suitable volume) of **Elution Buffer 7** to the tube and resuspend the beads by pipetting.
12. Incubate the suspension for 10 minutes at 55°C, with gentle agitation to facilitate complete DNA elution.
13. Following DNA elution place the tube in the Magnetic Separator for 1 minute to separate all the beads from solution. Remove the eluate containing the purified Nucleic Acids to a clean tube.



Purification Protocol for DNA from 2 g food

1. Place 2 g of food material in a 15 ml (50 ml) tube. Add 5 ml **Lysis Buffer 1** and 50 µl **RNase A**, mix by vortexing and incubate for 10 minutes at 37°C.
2. Add 2 ml of **Precipitation Buffer 2** and vortex to mix.
3. Centrifuge for 5 minutes at 4000 rpm.
4. Transfer 1 ml of the supernatant to a fresh 2 ml microfuge tube and proceed with step 4 in the purification protocol for 200 mg sample.