

# COL-NA

FOR UNIVERSAL NUCLEIC  
ACID EXTRACTION

COL-NA is a RNA/DNA extraction kit for isolation and purification of nucleic acids from tissues, whole blood, serum, plasma and nasopharyngeal swabs.

Kit Components	Volumes for 50 reactions	Storage Conditions
Lysis Buffer (LB) (Shake before use)	30 ml	Room Temperature
Binding Buffer (BB)	30 ml	Room Temperature
Silica-Columns with Collection & Elution tubes	50 Columns & tubes	
Washing Buffer 1	38 ml	Room Temperature
Washing Buffer 2	38 ml	Room Temperature
Elution Buffer	12 ml	Room Temperature

## Extraction Protocol

**(NB: For nucleic acid extraction from tissues, 200 mg tissue is homogenised in 1000  $\mu$ l lysis buffer, then add 400 ul BB, moving directly to step 3)**

- 1- Add 400  $\mu$ L of BB to 400  $\mu$ L of LB (shake before use).
- 2- Add 200  $\mu$ L of sample to Tube 1 and mix by pipetting 3–5 times.
- 3- Transfer the contents of Tube 1 to a silica spin column that has been pre-fitted into a collection tube.
- 4- Centrifuge spin columns for 4 minutes at high speed 13-14K rpm. Discard the flow through from the collection tube and re-use the collection tube. **(Repeat steps 3 & 4 in case of large sample mixture volumes) (If the lysate has not completely passed through the column, centrifuge for 1 min at max. speed until the column is empty).**
- 5- Add 500  $\mu$ L of washing buffer 1. Centrifuge for 1 minute at 13-14K rpm. Discard the flow through and reuse the collection tube.
- 6- Add 500  $\mu$ L of washing buffer 2. Centrifuge for 1 min at 13-14K rpm. Discard the flow through and reuse the collection tube.
- 7- Centrifuge for 4 minutes at 13-14K rpm to eliminate traces of washing buffer 2. Discard the collection tube, then fit a new tube to the spin column to serve as the elution tube.
- 8- Add 50  $\mu$ L of elution buffer **(Elute in 150  $\mu$ L in case of Genomic DNA tests)** in the centre of the silica-column. Incubate for 4 minutes. Then, centrifuge for 1 minute at 13-14K rpm.
- 9- Discard Silica spin column. The RNA/DNA is ready for downstream applications.

## Equipment needed

- 1- Centrifuge



LB+BB+Sample



Centrifugation for 4 min at 13-14K rpm



Washing Buffer 1



Centrifugation for 1 min at 13-14K rpm



Washing Buffer 2



Centrifugation for 1 min at 13-14K rpm



Centrifugation for 4 min at 13-14K rpm



Elution Buffer + Incubation for 4 min



Centrifugation for 1 min at 13-14K rpm



**Extracted DNA/RNA**