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azooka



# AZUL DNA EXTRACTION KIT FOR DIFFICULT SAMPLES

DNA IN 60 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

## PRODUCT BROCHURE



Cat No-DE109

ISO 13485 CERTIFIED

**PRODUCT DESCRIPTION**

AZUL DNA Extraction Kit for Difficult samples is an easy and efficient system for the isolation of genomic DNA from difficult samples like stool, body fluids, teeth, bones. This kit uses a silica-based spin column technology for isolating DNA from biological samples, thereby eliminating toxic phenol-chloroform extractions. The eluted DNA is suitable for all sensitive downstream applications such as qPCR and Next-Generation sequencing.

**KIT COMPONENTS**

Components	For 50 preps	For 25 preps
Extraction Buffer	50mL	25mL
Lysis Buffer(LB)	5mL	3mL
Binding buffer(BB)	30mL	15mL
Proteinase K	1 mL	0.5 mL
Wash Buffer 1(WB1)	30mL	15mL
Wash Buffer 2(WB2)	25mL	13mL
Elution Buffer(EB)	4mL	2mL
Spin Column	50 (Pouch pack)	25 (Pouch pack)
AZUL Bashing beads	The quantity of beads varies based on their size.	

## SPECIFICATIONS

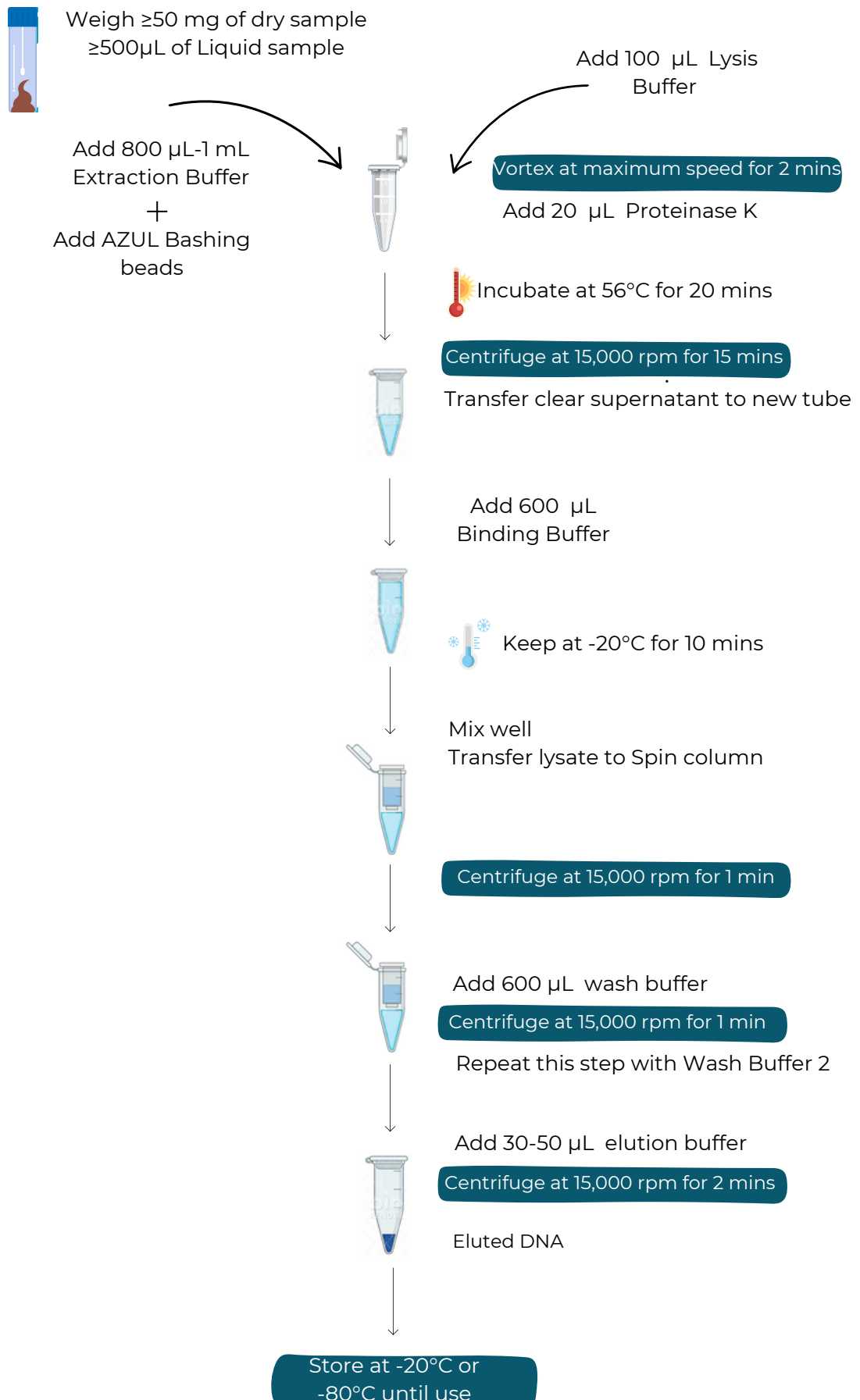
Format	Spin column
Sample type	Sputum, urine, body fluids, rumen liquor, stool, teeth, bones
Equipment	Microcentrifuge
Processing time	<60 mins
Sample amount/vol	$\geq 50$ mg or $\geq 500\mu\text{L}$
Type	Total DNA
Sample storage	Eluted DNA should be stored at $\leq -20^{\circ}\text{C}$
Yield	1-30 $\mu\text{g}$
Purity	$A_{260}/A_{280} \geq 1.8$
Kit Storage	Room Temperature
Kit Validity	Viable for 1 year if stored at appropriate conditions

**NOTE:** Check the Extraction Buffer, Binding Buffer and Lysis Buffer for any salt precipitation before every use. Re-dissolve any precipitate by warming the solution to  $37^{\circ}\text{C}$ , then cool it back to room temperature before use.

## DNA EXTRACTION PROTOCOL

1. Collect samples (may be fresh or stored in a mWRAPR tube) in a 2 mL microfuge tube. If the sample is dry, use <50mg. If liquid, use  $\geq 500\mu\text{L}$  of sample.
2. Add 800 $\mu\text{L}$ -1mL of Extraction Buffer and 100 $\mu\text{L}$  lysis buffer, vortex for 30 secs. Add 3-5 AZUL bashing beads (3.5-4.5mm) or 0.5g of beads (0.5-1mm, optional, may or may not be provided depending on the sample type & varies according size of the beads) and vortex the tubes briefly again.
3. Then add 20  $\mu\text{L}$  of Proteinase K. Incubate the samples in 56 °C water bath for 20 minutes.
4. Then centrifuge the tube at 15,000 rpm for 15 minutes. Transfer the supernatant to a new microfuge tube.
5. Add 500-600  $\mu\text{L}$  Binding Buffer (BB) to this suspension and mix by inverting the tube briefly. Place the tube at -20 °C for 10 minutes. Then transfer the suspension to a spin column and centrifuge the tube at 15,000 rpm for 2 min.
6. Discard the flow-through and place the purification column back into the collection tube. Repeat this step until complete lysate has been transferred into the column and centrifuged.
7. Wash the spin column with 600  $\mu\text{L}$  Wash Buffer (WB 1) at 15,000 rpm for 1 min and discard the flow through.
8. Wash the spin column with 500  $\mu\text{L}$  Wash Buffer (WB 2) at 15,000 rpm for 1 min and discard the flow through.
9. Keep the purification column in a clean, sterile 1.5 mL microfuge tube and add 30  $\mu\text{L}$ - 50 $\mu\text{L}$  of Elution Buffer or DNase/RNase-free water to the center of the column and allow the tube to stand for 2-4 minutes at room temperature. Centrifuge the column for 15,000 rpm for 2 min.
10. Discard the purification column and store the eluted DNA at -20°C or -80°C until use.

## FLOW DIAGRAM OF DNA EXTRACTION PROTOCOL



## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low DNA Yield	<b>Sample input:</b> Too much input or incomplete lysis/homogenization can cause cellular debris to clog or overload the column and leech salts into DNA eluate.	Use less input material or increase the volume of the Lysis Buffer and grind thoroughly.
	Incomplete Debris Removal or incomplete lysis	Increase the volume of Lysis Buffer to ensure complete lysis/homogenisation. Be sure to centrifuge and pellet any cellular debris and transfer the supernatant while avoiding any pellet debris.
Low DNA Purity(A260/A280)	Improper sample handling results in ethanol or salt contamination	Make sure lysate and wash buffers have passed entirely through the matrix of the column. This may require centrifuging at a higher speed or longer time.
RNA Contamination	Too much sample used	<b>To remove RNA:</b> Perform in-column RNase I treatment or perform RNase I treatment post-purification (not provided in the kit), then re-purify the treated sample.
DNA Degradation	Use of old samples not stored at appropriate conditions	<b>To prevent DNA degradation:</b> Immediately collect and lyse fresh samples into a Lysis Buffer.  Collect and store the fresh tissues in mWRAPR Solution to ensure stability & integrity of DNA and process later.

## ORDERING INFO

CATALOG NO	PRODUCT	PREP
DE101	AZUL Tissue DNA Extraction Kit	25/50 preps
DE102	AZUL Animal Cell Culture DNA Extraction Kit	25/50 preps
DE103	AZUL Bacterial DNA Extraction Kit	25/50 preps
DE104	AZUL Plasmid DNA Extraction Kit	25/50 preps
DE105	AZUL Plant DNA Extraction Kit	25/50 preps
DE106	AZUL Soil DNA Extraction Kit	25/50 preps
DE107	AZUL Blood DNA Extraction Kit	25/50 preps
DE108	AZUL Cell-free DNA Extraction Kit	25/50 preps
DE109	AZUL DNA Extraction Kit- Difficult samples	25/50 preps
DE110	AZUL Saliva DNA Extraction Kit	25/50 preps
DE111	AZUL Stool DNA Extraction Kit	25/50 preps
DE112	Quick AZUL Bacterial/Fungal DNA Extraction Kit	25/50 preps
DE113	AZUL Microbiome DNA Extraction Kit	25/50 preps
DE114	AZUL Gel DNA Extraction Kit	25/50 preps
DE115	AZUL FFPE DNA Extraction Kit	25/50 preps
DE116	AZUL Chloroplast DNA Extraction Kit	25/50 preps
DE117	AZUL Mitochondrial DNA Extraction Kit	25/50 preps
DE118	AZUL Pollen DNA Extraction Kit	25/50 preps
DE119	AZUL Fungal DNA Extraction Kit	25/50 preps
DE120	AZUL Sperm DNA Extraction Kit	25/50 preps
DE121	AZUL Skin DNA Extraction Kit	25/50 preps

## FEEDBACK

## How did this kit perform?

Did AZUL Extraction Kit fulfill expectations required for your research?

Let us know by filling out the feedback form [here](#)

Or scan the QR code:



## CONTACT US



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