ExtractNow™ Meat ID

Fast and reliable DNA extraction from meat products

INSTRUCTIONS FOR USE

FOR USE IN RESEARCH AND QUALITY CONTROL

Symbols

Lot No.

Cat. No.

Expiry date

Storage temperature

Number of reactions

Manufacturer

INDICATION

The ExtractNow™ Meat ID kit is a fast tool for rapid and efficient isolation of genomic DNA from meat. The procedure is based on spin column purification. Up to 40 mg of starting material can be used to obtain up to 60 µg of DNA. The purified DNA is free of contaminants and suitable for many downstream applications such as PCR.

TEST PRINCIPLE

The method is simple and consists of four general steps:
(1) tissue homogenization and cell lysis,
(2) selective binding of DNA to spin columns,
(3) removal of residual contaminants and inhibitors, and
(4) elution of purified DNA.
The procedure does not require phenol/chloroform extraction and needs minimal handling time. After tissue homogenization (ca. 2 hours), the kit's chemistry facilitates fast purification of genomic DNA in less than 15 minutes. Please consider that the overall duration of this procedure heavily depends on the experimental design and on the type and number of samples.

CONTENT

Each kit contains reagents for 10 or 50 extractions. The expiry date of the unopened package is marked on the package label. Store the lyophilized Proteinase K at +2 - +8 °C and all other components at room temperature (+15 to +30 °C). Dissolve any precipitates in the solutions by moderate warming.

Component	Quantity	
	10 extractions Cat. No. 608-1010	**50 extractions Cat. No. 608-1050**
Spin Columns (blue)	10 units	50 units
Collection Tubes	20 units	2 × 50 units
Lysis Buffer C	10 ml	25 ml
Binding Buffer C	16 ml	16 ml
Wash Buffer E	6 ml (add 14 ml ethanol (>96%) before first use)	24 ml (add 56 ml ethanol (>96%) before first use)
Elution Buffer A	2 × 2 ml	25 ml
Proteinase K	1 × 6 mg (add 0.3 ml of ddH_2O)	1 × 30 mg (add 1.5 ml of ddH_2O)

The lot-specific quality control certificate (Certificate of Analysis) can be downloaded from our website (www.minerva-biolabs.com / www.minervabiolabs.us).

USER-SUPPLIED CONSUMABLES AND EQUIPMENT

The ExtractNow™ Meat ID kit contains reagents for isolating DNA from meat. Additional consumables and equipment are supplied by the user:

- Ethanol > 96 % abs. (molecular biology grade)
- 1.5 ml tubes
- 2 ml tubes (optional)
- Microcentrifuge and heat block or thermomixer for 1.5 ml reaction tubes
- Pipettes with corresponding filter tips (100 and 1000 µl)
- RNase A, 100 mg/ml (optional)
- ddH_2O to dissolve the Proteinase K

SPECIMEN

Best results are obtained with fresh or freshly frozen material. Repeated freeze-thaw cycles of the starting material must be avoided, as this is detrimental to DNA integrity.

For a successful DNA extraction, it is also essential not to overload the spin columns. The maximum amount of starting material corresponds to 40 mg of meat.

PRECAUTIONS

The ExtractNow™ Meat ID kit is for research use only. The kit should be used by trained laboratory staff only.

All samples should be considered as potentially infectious and handled with all due care and attention. Always wear suitable lab coat, disposable gloves, and protective goggles.

In case of eye or skin contact, flush eyes or skin with water. Do not swallow components of the kit. Clean with suitable laboratory detergent and water, if any liquid is spilt.

This kit can be disposed of as municipal waste according to local guidelines.

IMPORTANT NOTES

⟹ Dissolve the Proteinase K with the given volume of ddH_2O and mix thoroughly by pipetting. The dissolved Proteinase K must be stored at ≤ –18 °C. Repeated freeze-thaw cycles will reduce the enzyme activity. We therefore recommend to prepare aliquots.

⟹ Set up the heat block at 50 °C.

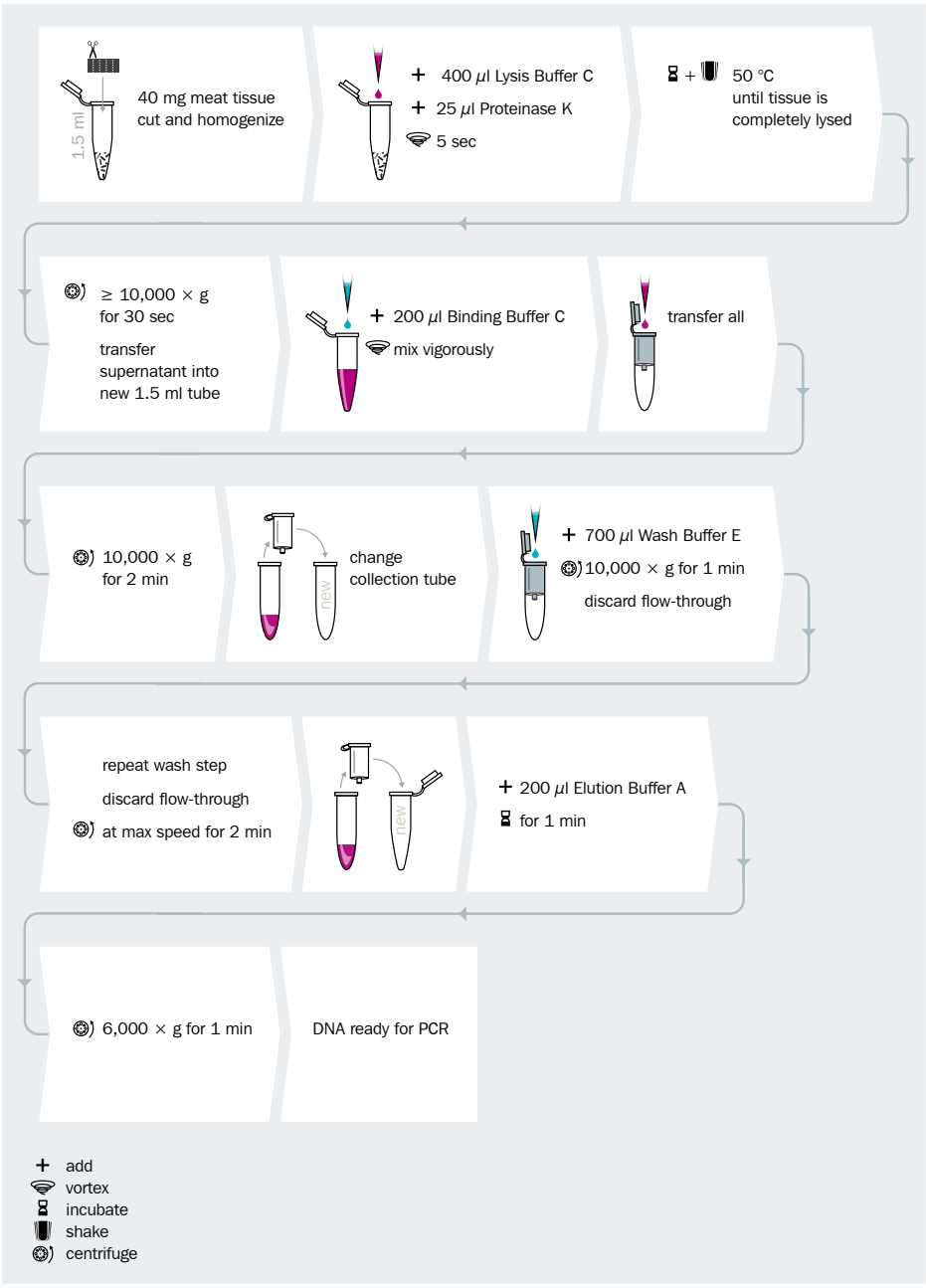
⟹ Ensure that ethanol was added to Wash Buffer E. Do not use any alcohol other than ethanol as it will lead to inconsistent yields.

⟹ The centrifugation steps should be carried out at room temperature.

⟹ The reagents supplied should not be mixed with reagents from different lots but used as an integral unit. The reagents of the kit must not be used beyond shelf life.

⟹ Follow the exact protocol. Any deviation may affect the results.

PROCEDURE – OVERVIEW



+ add
vortex
incubate
shake
centrifuge

MB_SI_ExtractNow_Meat-ID_01_EN

PROCEDURE - STEP BY STEP

⟹Before first use, reconstitute Wash Buffer E with absolute ethanol

⟹Rehydrate the Proteinase K with water as indicated in the „Content“ table. Please read also the chapter „Important Notes“.

⟹Set the temperature of the heat block at 50 °C

1.	Cut up to 40 mg of the meat tissue into small pieces and place the sample in a 1.5 ml reaction tube.
2.	Add 400 µl Lysis Buffer C and 25 µl Proteinase K, mix vigorously by pulsed vortexing for 5 sec. Optional: Add 3 µl RNase A (from stock solution 100 mg/ml; not included in the kit) to remove RNA.
3.	Incubate at 50 °C until the sample is completely lysed (it takes up to 2 hours for most types of meat tissues). We recommend continuous shaking during this step to increase the DNA yield. Alternatively, vortex the samples several times during the incubation. Note: The incubation must be stopped when the tissue is completely dissociated as further incubation will be detrimental for DNA integrity.
4.	Centrifuge the tube at 10,000 × g for 30 sec to pellet any unlysed material. Transfer the supernatant into a new 1.5 ml tube.
5.	Add 200 µl Binding Buffer C to the lysate, mix by vortexing or by pipetting up and down several times. Note: It is important that the sample and Binding Buffer C are mixed thoroughly and that a homogeneous solution is obtained.
6.	Transfer the sample to a Spin Column placed on a Collection Tube. Close the cap and centrifuge at 10,000 × g for 2 min. Note: If the column still contains some liquid after centrifugation, it may be necessary to prolong the centrifugation or centrifuge at a higher speed.
7.	Discard the Collection Tube and place the Spin Column on a new Collection Tube.
8.	Add 700 µl Wash Buffer E and centrifuge at 10,000 × g for 1 min. Discard the flow-through and reassemble Spin Column and Collection Tube.
9.	Repeat the wash step once more. Discard the flow-through and reassemble Spin Column and Collection Tube.
10.	Centrifuge at max. speed for 2 min to remove all traces of ethanol. Discard the Collection Tube and place the Spin Column on a new 1.5 ml tube.
11.	Add 200 µl Elution Buffer A and incubate at room temperature for 1 min.
12.	Centrifuge at 6000 × g for 1 min. A second elution step will increase the yield of extracted DNA. Note: The DNA can be eluted with a lower or a higher volume of Elution Buffer A (depending on the expected yield of genomic DNA). Elution with lower volumes of Elution Buffer A will increase the final DNA concentration. Store the extracted DNA at +4 °C or below –18 °C for long time storage.

APPENDIX

Limited Product Warranty

This warranty limits our liability for replacement of this product. No warranties of any kind, express or implied, including, without limitation, implied warranties of merchantability or fitness for a particular purpose, are provided. Minerva Biolabs shall have no liability for any direct, indirect, consequential, or incidental damages arising from of the use, the results of use, or the inability to use this product.

Trademarks

Venor, Onar and AquaScreen are registered trademarks and PCR Cycler Check, ConviFlex, SwabUp, Mycoplasma Off, Food Control, Meat ID, Vegan Control, ExtractNow, LabClean and PCR Clean are trademarks of Minerva Biolabs GmbH, Germany.

RELATED PRODUCTS

qPCR Kits for Meat Identification		
370-1025/-1100	Meat ID™ Halal	25/100 reactions
qPCR Kits for Food Contamination Testing		
360-1025	Food Control™ qPCR *Salmonella enterica*	25 reactions
360-2025	Food Control™ qPCR *Yersinia enterocolitica*	25 reactions
360-3025	Food Control™ qPCR *Shigella spp.*	25 reactions
360-4025	Food Control™ qPCR *Campylobacter spp.*	25 reactions
360-5025	Food Control™ qPCR *Clostridium perfringens*	25 reactions
360-6025	Food Control™ qPCR *Shiga Toxin 1*	25 reactions
360-7025	Food Control™ qPCR *Shiga Toxin 2*	25 reactions
360-8025	Food Control™ qPCR *Escherichia coli O157*	25 reactions
360-9025	Food Control™ qPCR *Escherichia coli O104*	25 reactions
361-1025	Food Control™ qPCR *Listeria spp.*	25 reactions
361-2025	Food Control™ qPCR *Listeria monocytogenes*	25 reactions
361-3025	Food Control™ qPCR *Salmonella spp.*	25 reactions
qPCR Kits for Vegan Control		
370-2025/-2100	Vegan Control™	25/100 reactions
qPCR Kits for Water Contamination Testing		
33-2025/-2100/-2250	AquaScreen® *Legionella* species	25/100/250 reactions
34-2025/-2100/-2250	AquaScreen® *Legionella pneumophila*	25/100/250 reactions
34-6025/-6100/-6250	AquaScreen® *Pseudomonas aeruginosa*	25/100/250 reactions
34-7025/-7100/-7250	AquaScreen® *Escherichia coli*	25/100/250 reactions
DNA Extraction kits		
56-1010/1050/1200	Venor®GeM Sample Preparation Kit	10/50/200 extractions
601-1010/1050/1200	ExtractNow™ DNA Mini Kit	10/50/200 extractions
602-1010/1050/1200	ExtractNow™ Blood DNA Mini kit	10/50/200 extractions
603-1010/1050/1200	ExtractNow™ RNA Mini kit	10/50/200 extractions
604-1010/1050/1200	ExtractNow™ Cleanup kit	10/50/200 extractions
605-1010/1050/1200	ExtractNow™ Plasmid Mini kit	10/50/200 extractions
606-1010/1050/1200	ExtractNow™ Virus DNA/RNA kit	10/50/200 extractions
607-1010/1050	ExtractNow™ Vegan Control	10/50 extractions
609-1010/1050	ExtractNow™ Food Control	10/50 extractions
PCR Cycler Validation		
57-2102	PCR Cycler Check™ Advance	6 strips, 8 vials each
57-2103	PCR Cycler Check™ OneStep	100 reactions
57-2202	qPCR Cycler Check™	100 reactions
Lab Monitoring Kits		
181-0010/-0050	SwabUp™ Lab Monitoring, For sample collection and DNA extraction	10/50 samples
PCR Mix		
191-0025/-0100/-0250	ConviFlex™ DNAmp Mix, PCR Mix with Taq polymerase for conventional and qPCR	25/100/250 reactions
192-0025/-0100/-0250	ConviFlex™ RT-Taq Mix, RT-PCR Mix with Taq polymerase and retrotrascriptase for conventional and RT-qPCR	25/100/250 reactions
PCR Clean™		
15-2025/-2200/-2500	DNA Decontamination Reagent, spray bottle/refill/canister	250 ml/4×500 ml/5 l
15-2001	DNA Decontamination Reagent, Wipes in dispenser box	50 wipes
15-2002	DNA Decontamination Reagent, Wipes, refill pack	5×50 wipes
LabClean™		
15-4100	Molecular Microbiology Lab Cleaner	1 liter
Mycoplasma Off™		
15-1000/-5000	Surface Disinfectant Spray, spray bottle, refill canister	1 l/5 l
15-1001	Surface Disinfectant Wipes in dispenser box	50 wipes
15-5001	Surface Disinfectant Wipes in refill pack	5×50 wipes

PCR Quantification Standards, 10^8 genomes / vial

52-0116	*Acholeplasma laidlawii*
52-0129	*Mycoplasma arginini*
52-0117	*Mycoplasma fermentans*
52-0115	*Mycoplasma gallisepticum*
52-0130	*Mycoplasma hyorhinis*
52-0112	*Mycoplasma orale*
52-0119	*Mycoplasma pneumoniae*
52-0103	*Mycoplasma salivarium*
52-0124	*Mycoplasma synoviae*
52-0164	*Spiroplasma citri*
52-5571	*Bordetella pertussis*
52-0083	*Escherichia coli*
52-0101	*Legionella pneumophila*
52-0071	*Pseudomonas aeruginosa*

See MB homepage for further available species

Genomic DNA Extracts, 10±2 ng/vial

51-7058	*Salmonella enterica*
2140-04780	*Yersinia enterocolitica*
2137-04782	*Shigella flexneri*
2138-05570	*Shigella sonnei*
2102-04688	*Campylobacter jejuni*
2108-00756	*Clostridium perfringens*
51-0083	*Escherichia coli*
2115-08579	*Escherichia coli 0157:H*

See Minerva homepage for further available species

Minerva Biolabs GmbH
Schkopauer Ring 13
D-12681 Berlin, Germany

www.minerva-biolabs.com
Ordering: order@minerva-biolabs.com
Support: support@minerva-biolabs.com

USA & Canada

Minerva Biolabs Inc.
1 Jill Ct., Building 16, Unit 10
Hillsborough, NJ 08844
USA

www.minervabiolabs.us
Ordering: order@minervabiolabs.us
Support: help@minervabiolabs.us

Made in Germany

HB30.06EN

minerva biolabs®