

Nucleic Acid Extraction Kits

"**Plus**" – larger volume of NA solution

"**Rapid**" – quick method

"**Genetics**" – human DNA extraction from whole blood

"**DBS**" – dried blood spots



Suitable for extraction of AVRI pathogens NA, including SARS-CoV-2



Quick NA extraction: from 15-30 minutes



Manual dosing



Automated dosing

Extraction time depends on biomaterial, number of samples, and equipment being used.



Advertising and information material. For detailed information about the Nucleic Acid Extraction Kit, please refer to the instructions for use

	Sample preparation reagent kit product lines	Sample preparation reagent kits	Line features
	PREP-NA	PREP-NA PREP-NA PLUS PREP-NA-ULTRA PREP-NA-FET PREP-NA-S	Lysis and further NA precipitation
Higher purification degree	PREP-GS	PREP-GS PREP-GS PLUS PREP-GS Genetics	Lysis and further NA sorption
Quick extraction (express method)	PREP-RAPID	PREP-RAPID PREP-RAPID Genetics	Thermocoagulation of impurities
	PREP-OPTIMA	PREP-OPTIMA PREP-OPTIMA MAX	Alkaline cell lysis
Automation	PREP-MB		Lysis with further sorption on paramagnetic nanoparticles
	▶ Automated extraction	PREP-MB-NA-S PREP-MB DWP	PREP-MB DWP and PREP-MB-DBS DWP are compatible with KingFisher Flex (Thermo Fisher Scientific), Auto-Pure 96 (Allsheng)
	▶ Manual or automatic dispensing	PREP-MB MAX PREP-MB RAPID PREP-MB-DBS DWP	
Extraction from whole blood		PREP-RADIP Genetics PREP-GS Genetics PREP-OPTIMA MAX PREP-MB MAX	Suitable for genetic assays
Extraction from cell cultures		PREP-CM PREP-MB RAPID PREP-OPTIMA PREP-OPTIMA MAX	Ability to extract from blood cultures – PREP-CM
Extraction from dried blood spots		PREP-CITO DBS PREP-MB-DBS DWP	Suitable for genetic assays

PREP-NA

PREP-GS

PREP-RAPID

PREP-MB

PREP-OPTIMA

PREP-CM

PREP-CITO DBS

Pre-treatment

Transport media

Bio-material

PREP-NA



Extraction of DNA and RNA (human, microbial and viral) by precipitation

Method: lysis and further NA precipitation

PREP-NA



Extraction time: from 30 min*, from 50 min

Obtained NA sample volume: 50 µl

* for nasopharyngeal and oropharyngeal swabs when using shortened extraction method for PCR detection of AVRI pathogens, including SARS-CoV-2. Details of the method are in the annex to the amplification part of the instruction for SARS-CoV-2 kit.

PREP-NA PLUS



Extraction time: from 30 min*, from 50 min

Obtained NA sample volume: 300 µl

* for nasopharyngeal and oropharyngeal swabs when using shortened extraction method for AVRI Complex. Details of the method are in the annex to the amplification part of the instruction for AVRI Complex kit.

PREP-NA-ULTRA

Viral NA extraction from blood plasma with pre-concentration

Extraction time: from 50 min

PREP-NA-FET

Fetal DNA extraction from mother's blood

Extraction time: from 2 hours

PREP-NA-S



Extraction of AVRI pathogens NA, including SARS-CoV-2

Extraction time: from 25 min

BIOMATERIAL	PREP-NA	PREP-NA-PLUS	PREP-NA-ULTRA	PREP-NA-FET	PREP-NA-S
Blood plasma					
Urine					
Feces					
Nasopharyngeal/oropharyngeal smears and swabs					
Scrapes from posterior pharynx					
Phlegm					
Saliva					
Urogenital scrapes					
Prostate fluid					
Ejaculate					
Cerebrospinal fluid					
Milk					

PREP-GS



Extraction of DNA (human and microbial) by sorption with extra purification

Method: lysis and further DNA sorption

PREP-GS

Extraction time: from 40 min

Obtained DNA solution volume: 100 μ l

PREP-GS PLUS

Extraction time: from 40 min

Obtained DNA solution volume: 300 μ l

PREP-GS Genetics

Extraction time: from 40 min

BIOMATERIAL	PREP-GS	PREP-GS PLUS	PREP-GS Genetics
Whole blood			
Blood plasma			
Urine			
Scrapes from posterior pharynx			
Phlegm			
Saliva			
Urogenital scrapes			
Prostate fluid			
Ejaculate			
Cerebrospinal fluid			
Milk			
Native tissues			

PREP-GS

PREP-RAPID



Express method of DNA extraction. Sample transportation and extraction in one tube

Method: thermocoagulation of impurities

PREP-RAPID

Microbial DNA extraction

Extraction time: from 15 min



PREP-RAPID Genetics

Human DNA extraction

Extraction time: from 20 min



BIOMATERIAL	PREP-RAPID	PREP-RAPID Genetics
Whole blood		
Urine		
Scrapes from posterior pharynx		
Saliva		
Urogenital scrapes ♀*		
Prostate fluid		
Cerebrospinal fluid		

* We do not recommend to use PREP-RAPID for DNA extraction from men's urogenital scrapes

PREP-MB

Extraction of DNA and RNA using paramagnetic nanoparticles

Method: lysis and release of NA under the action of guanidine thiocyanate with subsequent sorption on paramagnetic nanoparticles and washing from impurities

PREP-MB RAPID

DNA extraction

Extraction time: from 40 min



PREP-MB MAX

DNA extraction

Extraction time: from 60 min

Obtained DNA solution volume: 50-300 μ l



PREP-MB-NA-S

DNA and RNA extraction

Extraction time: from 40 min



BIOMATERIAL	PREP-MB RAPID	PREP-MB MAX	PREP-MB-NA-S
Whole blood			
Urine			
Feces			
Nasopharyngeal/oropharyngeal smears and swabs			
Rectal scrapes			
Urogenital scrapes			
Ejaculate			
Cerebrospinal fluid			
Milk			
Amniotic fluid			
Ascitic fluid			
Cell culture			

PREP-MB

PREP-MB

Extraction of DNA and RNA using paramagnetic nanoparticles on KingFisher (Thermo Fisher Scientific) and Auto-Pure (Allsheng) instruments

Method: lysis and release of NA under the action of guanidine thiocyanate with subsequent sorption on paramagnetic nanoparticles and washing from impurities

PREP-MB DWP



Extraction of DNA and RNA of AVRI pathogens, including SARS-CoV-2

Total time of preparation for NA extraction and NA extraction from 96 samples: from 40 min

Extraction time: from 20 min

Obtained DNA solution volume: 50-300 μ l

Compatible instruments: KingFisher Flex (Thermo Fisher Scientific), Auto-Pure 96 (Allsheng)

PREP-MB-DBS DWP



DNA extraction from dried blood spots

Extraction time: from 60 min

Compatible instruments: KingFisher Flex (Thermo Fisher Scientific), Auto-Pure 96 (Allsheng)

BIOMATERIAL	PREP-MB DWP	PREP-MB-DBS DWP
Nasopharyngeal, oropharyngeal smears, swabs		
Dried blood spots		

Example of working with a large amount of samples using **PREP-MB DWP** reagent kit



DeepWell preparation:
20 min

DTstream
(DNA-Technology)



RNA extraction:
20 min

KingFisher Flex (Thermo Fisher Scientific)
Auto-Pure 96 (Allsheng)



PREP-MB

PREP-OPTIMA



Extraction of DNA (human, microbial and viral).
Universal DNA extraction kit

Method: alkaline cell lysis occurring during thermal incubation

PREP-OPTIMA



Extraction time: from 25 min

Obtained DNA solution volume: 100-450 μ l

PREP-OPTIMA MAX



Extraction time: from 25 min

Obtained DNA solution volume: 100-450 μ l

BIOMATERIAL	PREP- OPTIMA	PREP- OPTIMA MAX
Whole blood		
Urine		
Feces		
Nasopharyngeal, oropharyngeal smears		
Phlegm		
Rectal scrapes		
Buccal epithelium		
Urogenital scrapes		
Ejaculate		
Milk		
Amniotic fluid		
Synovial fluid		
Native tissues		
Fungal culture		
Bacterial culture		
Cell culture		

PREP-
OPTIMA

PREP-CM



Bacterial and fungal DNA extraction from microbial cultures

Method: alkaline cell lysis occurring during thermal incubation

PREP-CM

Extraction time: from 40 min

Obtained DNA solution volume: 400 μ l

BIOMATERIAL	PREP-CM
Fungal culture	
Bacterial culture	
Cell culture	
Blood culture	

PREP-CITO DBS



Human DNA extraction from dried blood spots

Method: alkaline cell lysis occurring during thermal incubation. Removal of possible impurities and stripping of blood from the carrier takes place in the pre-washing stage

PREP-CITO DBS

Extraction time: from 40 min

DNA yield: 30-140 ng when extracted from 10 μ l of blood dried on three filter paper discs

Amount of obtained DNA depends on the amount of leukocytes in sample

BIOMATERIAL	PREP-CITO DBS
Dried blood spots	

PREP-CM

PREP-CITO DBS

PREP-L



Lysozyme pretreatment of biomaterial before DNA extraction

Method: enzymatic destruction of peptidoglycans that make up the cell walls of microorganisms, by lysozyme

Pretreatment time:

from 30 min at $t = 37\text{ }^{\circ}\text{C}$

from 60 min at $t = 18\text{-}25\text{ }^{\circ}\text{C}$

Biomaterial for pretreatment:

- ▶ Feces
- ▶ Meconium
- ▶ Bacterial culture from this biomaterial

Used together with PREP-MB MAX and PREP-NA PLUS NA extraction kits

PREP-FU



Biomaterial pretreatment to obtain lymphocytes from whole blood

Pretreatment time: 1 hour

Biomaterial for pretreatment: whole blood

PREP-PK



Biomaterial pretreatment by proteinase K before nucleic acid extraction

Method: proteolysis by proteinase K and elimination of inhibitory effects

Pretreatment time:

formalin-fixed, paraffin-embedded tissues: DNA — from 150 min,
RNA — from 60 min.

native tissues – 60 min;
cervical scrapes – 90 min.

Biomaterial for pretreatment:

- ▶ formalin-fixed, paraffin-embedded tissues (FFPE);
- ▶ native tissues;
- ▶ cervical scrapes taken into transport-fixating medium for liquid-based cytology

Used together with PREP-NA PLUS nucleic acid extraction kit

PREP-PK reagent kit is not intended for RNA extraction from biomaterial fixated in BD SurePath transport medium.

Pre-
treatment

STOR-F

Transport and storage of human biomaterial

Method: saline solution with the addition of a preservative that prevents the growth of microorganisms

Suitable for further DNA and RNA extraction, including SARS-CoV-2 RNA

Compatible biomaterial:

scrapes/smears of epithelial cells from urogenital tract, oropharynx, nasopharynx, rectum, eye conjunctiva, skin

Transport and storage of biomaterial:

at t = 2 °C – 8 °C for no longer than 7 days

at t = 18 °C – 25 °C for no longer than 48 hours

STOR-M

Transport and storage of human biomaterial, including those containing mucus

Method: saline solution with mucolytic.
Preservative prevents non-specific microorganisms from reproduction, mucolytic affects disulfide bonds of mucopolysaccharides to thin mucus.

Suitable for further DNA extraction

Compatible biomaterial:

scrapes/smears of epithelial cells from urogenital tract, oropharynx, nasopharynx, rectum, eye conjunctiva, skin, including those containing mucus

Transport and storage of biomaterial:

at $t = 2\text{ }^{\circ}\text{C} - 8\text{ }^{\circ}\text{C}$ for no longer than 3 months

at $t = 18\text{ }^{\circ}\text{C} - 25\text{ }^{\circ}\text{C}$ for no longer than 28 days

BIOMATERIAL	NA extraction reagent kits	DNA		RNA	
		human	microbial	human	microbial
Whole blood	PREP-GS Genetics				
	PREP-RAPID Genetics				
	PREP-MB MAX				
	PREP-OPTIMA MAX				
Blood plasma	PREP-NA				
	PREP-NA PLUS				
	PREP-NA-ULTRA				
	PREP-NA-FET				
	PREP-GS				
	PREP-GS PLUS				
Urine	PREP-NA				
	PREP-NA PLUS				
	PREP-RAPID				
	PREP-MB MAX				
	PREP-GS				
	PREP-GS PLUS				
	PREP-OPTIMA				
	PREP-OPTIMA MAX				
Feces	PREP-NA				
	PREP-MB MAX				
	PREP-OPTIMA				
	PREP-OPTIMA MAX				
Ejaculate	PREP-NA				
	PREP-NA PLUS				
	PREP-MB MAX				
	PREP-GS				
	PREP-GS PLUS				
	PREP-OPTIMA				
PREP-OPTIMA MAX					

BIOMATERIAL	NA extraction reagent kits	DNA		RNA	
		human	microbial	human	microbial
Nasopharyngeal, oropharyngeal smears	PREP-NA				
	PREP-NA-S				
	PREP-MB RAPID				
	PREP-MB-NA-S				
	PREP-MB MAX				
	PREP-GS				
	PREP-GS PLUS				
	PREP-OPTIMA				
	PREP-OPTIMA MAX				
Scrapes from posterior pharynx	PREP-RAPID				
	PREP-NA				
	PREP-NA PLUS				
Saliva	PREP-RAPID				
	PREP-NA				
	PREP-GS				
	PREP-GS PLUS				
Rectal scrapes	PREP-MB RAPID				
	PREP-MB MAX				
	PREP-OPTIMA				
	PREP-OPTIMA MAX				
Urogenital scrapes	PREP-RAPID				
	PREP-NA				
	PREP-NA PLUS				
	PREP-MB MAX				
	PREP-GS				
	PREP-GS PLUS				
	PREP-OPTIMA				
PREP-OPTIMA MAX					



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