MicroGEM

PDQeX *prep*GEM Universal HC (XUH)

QUICK START CARD

Component	Shipped at	Storage Temperature
***prep*GEM**	RT	-20°C
10X BLUE buffer	RT	4°C
10X RED+ buffer	RT	4°C
10X ORANGE+ buffer	RT	4°C
Histosolv	RT (shipped as a powder)	-20°C

Once *Histosolv* has been rehydrated, it is stable for 7-12 months at -20°C. If you do not plan to use all of the *Histosolv* immediately, it is recommended that you aliquot *Histosolv* into smaller volumes and store at -20°C immediately after rehydration.

For the Safety Data Sheet, please scan this QR Code.

For the most up-to-date information, troubleshooting guides, and detailed instructions based on your sample type, please see the PDQeX Handbook using this QR code before starting.

For technical assistance:
techsupport@microgembio.com

Instructions before starting:

Read the Handbook

The full PDQeX operating instructions can be found in the PDQeX Handbook. It is important to make sure you are familiar with the operating instructions before starting to prevent errors and possible loss of sample.

Additional Protocols

This Quick Start Card includes protocols for extracting DNA using the PDQeX Nucleic Acid Extractor from liquid saliva samples, liquid blood samples and solid tissue samples.

For protocols on how to extract DNA from blood on storage cards, blood on swabs, blood stain samples, saliva on storage cards, saliva on buccal swabs, saliva stain samples as well as DNA extraction from tissue culture samples, mousetails and insects, please refer to the PDQeX handbook for additional protocols.

Resuspend *Histosolv*

The *Histosolv* is delivered as a dry powder. Add nuclease-free water based on your kit size and mix.

Kit size (# of reactions)	Volume of water
50	0.55 ml
100	1.1 ml
500	5.5 ml
1000	11.0 ml

Precautions

1. Do not load the PDQeX machine if the control screen indicates a temperature above 40°C.
2. Ensure the collection drawer and heating block are clean and DNA-free.
3. Ensure the collection drawer is inserted as far as possible, and that it is level.
4. If fewer than 24 reactions are planned, make sure that the PCR tubes are placed in drawer wells corresponding to the channels to be used in the heating block.

List of Pre-Programmed PDQeX Protocols

"Buccal" Program
75°C for 5 min
95°C for 2 min

"Insect" Program
75°C for 15 min
95°C for 2 min

"Blood" Program
75°C for 10 min
95°C for 2 min
105°C for 2 min

"Gram Pos Bacteria" Program
37°C for 10 min
75°C for 10 min
95°C for 2 min

"Plant" Program
37°C for 10 min
75°C for 10 min
95°C for 2 min

"Soil and Stool"
not pre-programmed
37°C for 15 min
75°C for 15 min
95°C for 2 min

"Tissue" Program
52°C for 5 min
75°C for 10 min
95°C for 2 min

"Gram Neg Bacteria" Program
75°C for 10 min
95°C for 2 min

Protocol

1. Prepare extraction mixture and add to PDQeX extraction cartridge.
2. Add sample to the PDQeX extraction cartridge.
3. Put the cap on the PDQeX cartridge by completely inserting the tapered column into the cartridge.
4. Load 24-well plate, 8 strip tubes or individual tubes into the collection drawer and put the drawer in place.
5. Insert PDQeX cartridges into the heating block.
6. Cover the cartridges with the hinged flap and close the sliding door.
7. Select the appropriate program from the PDQeX menu and press **RUN**.
8. When the program has ended, the extracted DNA will be in PCR collection tubes.

DNA Extraction from Liquid Saliva

1. Prepare

This protocol can process up to 20 µl of liquid saliva. For larger volumes of saliva, please read the PDQeX Handbook for an adapted protocol.
Mix the following reagents with your sample in a PCR tube,

2 µl *prep*GEM
10 µl 10X **BLUE** buffer
20 µl liquid saliva
68 µl Nuclease-free water

Vortex the mixture and add to a PDQeX cartridge.
Put the cap on the PDQeX cartridge by completely inserting the tapered column into the cartridge.

2. Load

Load the PDQeX with collection tubes and the PDQeX extraction cartridges containing your sample.

Close the PDQeX sliding door.

3. Run

Select the "Buccal" program from the PDQeX menu and press **RUN**.

When the program has ended, the extracted DNA will be in PCR collection tubes.

For protocols on how to extract DNA from saliva on storage cards, saliva on buccal swabs, saliva stain samples as well DNA extraction from tissue culture samples, mouse tails and insects, please read the PDQeX handbook for additional protocols.

DNA Extraction from Liquid Blood

1. Prepare

This protocol can process 2-5 µl of liquid blood. For larger volumes of blood, please read the PDQeX Handbook for an adapted protocol.
Mix the following reagents with your sample in a PCR tube,

2 µl *prep*GEM
10 µl 10X **RED+** buffer
2-5 µl liquid blood sample
Nuclease-free water up to a total volume of 100 µl (this will depend on what volume of blood was used).

Vortex the mixture and add to a PDQeX cartridge.

Put the cap on the PDQeX cartridge by completely inserting the tapered column into the cartridge.

2. Load

Load the PDQeX with collection tubes and the PDQeX extraction cartridges containing your sample.

Close the PDQeX sliding door.

3. Run

Select the "Blood" program from the PDQeX menu and press **RUN**.

When the program has ended, the extracted DNA will be in PCR collection tubes.

For protocols on how to extract DNA from blood on storage cards, blood on swabs as well as blood stain samples, please read the PDQeX handbook for additional protocols.

DNA Extraction from Solid Tissue

1. Prepare

Cut or punch the tissue (fat, muscle, ear tags, scrapings, etc) into cubes of approximately 1- 2 mm^3 and add to a PDQeX cartridge.
Mix the following reagents in a PCR tube and add to a PDQeX cartridge

2 µl *prep*GEM
10 µl 10X **ORANGE+** buffer
10 µl *Histosolv*
78 µl Nuclease-free water

Make sure the sample is completely submerged in the extraction reagents.

Put the cap on the PDQeX cartridge by completely inserting the tapered column into the cartridge.

2. Load

Load the PDQeX with collection tubes and the PDQeX extraction cartridges containing your sample.

Close the PDQeX sliding door.

3. Run

Select the "Tissue" program from the PDQeX menu and press **RUN**.

When the program has ended, the extracted DNA will be in PCR collection tubes.

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