

## **Instructions for Isohelix DNA Quality Check Kit: DQC-50**

**These instructions are specific for DQC Batch Number 0610-1**

### **Product Details**

The Isohelix DQC kit is a PCR kit designed to check the quality and presence of human DNA in your sample before you start your full research or testing program. The DQC kit can also be used to compare results of different types of DNA isolation and to show the presence of PCR inhibitors.

### **Key Benefits**

- ✓ Checks DNA quality prior to downstream testing
- ✓ Show presence of PCR inhibitors
- ✓ Compare results from different isolation protocols

### **Kit Contents**

Isohelix DQC Quality Check Kit		
Catalogue No.	DQC-50	Storage temperature
Number of preps	50	
Human Primer Mix (Synthetic Oligos)	375µl	-20°C
Amp mix (PCR components)	1ml	-20°C

### **Storage**

#### **STORE KITS AT CORRECT TEMPERATURE ON ARRIVAL**

Isohelix DQC Quality Check Kits are shipped at ambient on ice.

**Please note that on arrival the kit components should be stored according to the table above.**

The kits are stable up to the expiry date if stored as instructed. See box label for expiry date.

### **Equipment and reagents to be supplied by user**

- Pipettes with disposable tips
- Vortexer
- PCR tubes, plate or strips with sealing caps or film
- Thermal Cycler
- Agarose gel electrophoresis apparatus

### **Before Starting**

1. Check the instruction sheet which came with the kit you are using and program your thermal cycler according to these instructions.

**Please note, the precise temperatures and number of cycles may vary between different batch numbers for the kit and it is important to use the settings relating to the batch number of the kit you are using for optimal performance.**

The cycling profiles for all current and previous batch numbers may be found on the Isohelix website [www.isohelix.com/support](http://www.isohelix.com/support)

2. Thaw the tubes of Primer Mix and Amp mix.

### **Technical Assistance**

If you have any questions regarding the use of this kit or other Isohelix products please contact us by email at [info@isohelix.com](mailto:info@isohelix.com) or for further information visit the website at [www.isohelix.com](http://www.isohelix.com)

### **Safety and Use of the DQC Quality Check Kit**

The DQC Quality Check kits are intended for use by qualified professionals trained in potential laboratory hazards and good laboratory practise. If direct information is not available on any of our compounds this should not be interpreted as an indication of product safety.

**This kit has been designed solely for research use only**

## DQC Protocol:

**Cycling Profile:** **Note: This cycling profile is specific for the batch number shown on front of these instructions.**

Initial denaturation step: 95°C for 5 mins.

Then cycle 33 times.

Step 1: 95°C for 30 secs.

Step 2: 63°C for 30 secs.

Step 3: 72°C for 45 secs.

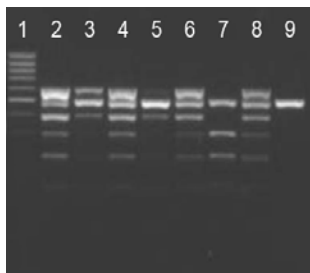
### Protocol:

1. Mix together 7.5µl of Human Primer Mix and 12.5µl of Amp mix
2. Add 5µl DNA (5 to 50ng). Adjust volume with water to 25µl total if necessary.
3. Seal plate or tubes, or overlay with mineral oil.
4. Place in thermal cycler programmed according to the cycling profile above and run program.

After cycling, load 10µl onto a 1.75% agarose gel and electrophorese alongside a 100bp ladder (not supplied). Make sure that the sample has not evaporated during cycling as this will distort the results.

### Interpretation of results:

Expected band sizes: 100, 200, 300, 400, 500 and 600 bp. If all 6 fragments are observed the DNA is not denatured. The 500 bp fragment is derived from an internal control and should always be present (even in negative controls). If not, the PCR has failed and needs repeating.



- 1 100bp ladder
- 2 Good Quality DNA – 6 bands present
- 3 Good Quality DNA – 6 bands present but lower yield so bands less intense
- 4 Good Quality DNA – 6 bands present
- 5 Poor Quality DNA – uneven amplification indicates partially degraded DNA
- 6 Good Quality DNA – 6 bands present
- 7 Poor Quality DNA – some bands missing
- 8 Good Quality DNA – 6 bands present
- 9 Negative Control – 500bp internal control shows PCR worked

- Different band intensities can represent different amounts of DNA.
- If less than 6 fragments are seen the DNA is probably partially degraded.
- If only the 500bp control fragments are seen the DNA is denatured or has not been added.

### Other Cell Projects Products

#### **Isohelix DNA Buccal Swabs.**

- High yields, blood alternative, reproducible, easy to use, different formats for various extraction methodologies.

#### **Isohelix DNA Silica Gel Capsules**

- For use with SK-1 swab kits, air-dries swab in tube giving extended storage times without loss of stability: SGC-50

#### **Isohelix DNA Isolation and Handling kits**

- DNA Stabilisation and Lysis kits for the stable storage of DNA at Room Temperature for long periods: DSK-50
- DNA Isolation kits for the isolation of pure DNA from buccal swabs: DDK-50
- DNA Release kits – quick and easy kit for PCR-ready DNA from buccal swabs in under 20 minutes: BEK-50
- Isohelix Spin+Collect™ sample recovery devices to increase yields from swabs and other materials: SC/ST-100

**PCR Products** - A range of high quality PCR plastic for 96 well format plates and cap strips

**Electroporation** - The HiMaX electroporation cuvettes and buffers maximise molecular electroporation and electrofusion efficiencies for Bacteria, Yeast, Insect, Plant and Mammalian cells.

**Isohelix is a division of Cell Projects**

For swab or DNA isolation queries email: [info@isohelix.com](mailto:info@isohelix.com) [www.isohelix.com](http://www.isohelix.com)

Molecular Biology Solutions [www.cellprojects.com](http://www.cellprojects.com)