

INTRODUCTION

The hepatitis B virus (HBV) is a global human pathogen that causes transient and chronic infections of the liver. The virus can be transmitted by contact with blood or other body fluids from an infected patient. Accurate detection and quantification of HBV DNA plays a vital role in diagnosing HBV infection and monitoring the efficacy of antiviral therapy. The Clarity™ HBV quantification kit is developed for sensitive detection and quantification of HBV DNA from human blood samples, and targets the S region of all HBV genotypes (A-H).

KIT CONTENTS

The Clarity™ HBV quantification kit provides ready-to-use reagents for the detection and quantification of HBV DNA on the Clarity™ digital PCR system (Cat. No. 10001). Each kit includes reagents (Table 1) sufficient to perform 96 reactions.

Reagents Supplied	Volume (µL)
HBV Primer and Probe Mix	34
HBV dPCR Master Mix (2x)	830
PCR grade Water	470
HBV Positive Control ^	85

^Sufficient for at least 24 reactions

STORAGE AND STABILITY

The Clarity™ HBV quantification kit should be stored at -20°C upon receipt. Avoid repeated freezing and thawing of kit contents. The kit is stable through the expiry date indicated on the kit label.

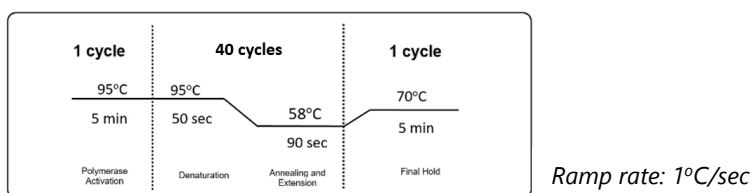
EXPERIMENTAL PROCEDURE

1. Thaw reagents at room temperature. When reagents are completely thawed, mix contents by gentle vortexing and centrifuge to collect contents at the bottom of the tubes.
2. Prepare each reaction mix according to the following:

No.	Reagents	Volume (μL)
1	JN Solution (20X)*	0.75
2	HBV Primer and Probe Mix	0.3
3	HBV dPCR Master Mix (2x)	7.5
4	DNA sample or control	3
5	PCR grade Water	3.45
Total vol		15

*Part of Clarity™ 10K consumables package (Cat. No. 10011). Not provided in this kit.

3. Mix thoroughly by pipetting up and down. Centrifuge to collect contents at the bottom of the tubes.
4. Load sample onto Clarity™ Tube-strips and perform sealing according to instructions provided in the Clarity™ Digital PCR System User Manual.
5. Perform PCR using a deep-well (0.2 ml) thermal cycler using the recommended conditions as shown.



4. Proceed with data acquisition and analysis on FAM channel only (default setting). Refer to the Clarity™ Digital PCR System User Manual for detailed data acquisition and analysis instruction.

For research use only. Not intended for any animal or human therapeutic or diagnostic use.