REF 444213

For Emergency Use Authorization (EUA) Only For *In Vitro* Diagnostic Use For use with the BD MAX™ System

P0251(05) 2020-09 English







INTENDED USE

The BioGX SARS-CoV-2 Reagents for BD MAX™ System is a real-time RT-PCR test intended for the qualitative detection of nucleic acid from the SARS-CoV-2 in nasopharyngeal, nasal, mid-turbinate, and oropharyngeal swab specimens, nasopharyngeal wash/aspirate or nasal aspirates obtained from individuals suspected of COVID-19 by their healthcare provider. Testing is limited to laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. §263a, to perform moderate and high complexity tests.

Results are for the identification of SARS-CoV-2 RNA. The SARS-CoV-2 RNA is generally detectable in upper respiratory specimens during the acute phase of infection. Positive results are indicative of the presence of SARS-CoV-2 RNA; clinical correlation with patient history and other diagnostic information is necessary to determine patient infection status. Positive results do not rule out bacterial infection or co-infection with other viruses. The agent detected may not be the definite cause of disease. Laboratories within the United States and its territories are required to report all positive results to the appropriate public health authorities.

Negative results do not preclude SARS-CoV-2 infection and should not be used as the sole basis for patient management decisions. Negative results must be combined with clinical observations, patient history, and epidemiological information.

The BioGX SARS-CoV-2 Reagents for BD MAX System is intended for use by qualified and trained clinical laboratory personnel specifically instructed and trained in the techniques of real-time PCR, *in vitro* diagnostic procedures, and use of the BD MAX System. The BioGX SARS-CoV-2 Reagents for BD MAX System is only for use under the Food and Drug Administration's Emergency Use Authorization.

EXPLANATION OF THE TEST

Total nucleic acid (TNA) is isolated and purified using BD MAX™ ExK™ TNA-3 kit from nasopharyngeal and/or oropharyngeal swabs collected in BD Universal Viral Transport System (UVT) or Copan Universal Transport Media System (UTM). Patient sample is transferred to the Sample Buffer Tube (SBT) provided with the BD MAX ExK TNA-3 kit and placed in the BD MAX System. The final eluate is used to rehydrate BioGX SARS-CoV-2 Reagents, which contains all reagents necessary for RT-PCR including primers and probes. This rehydrated master mix is subsequently transferred to a BD MAX PCR cartridge.

The BD SARS-CoV-2 Reagents for BD MAX System utilizes multiplexed primers and probes targeting RNA from the nucleocapsid phosphoprotein gene (N1 and N2 regions) of the SARS-CoV-2 coronavirus, and the human RNase P gene. The primer and probe sets are based on the United States Centers for Disease Control and Prevention (US CDC) assay for specific detection of SARS-CoV-2 by amplifying two unique regions of the N gene (i.e., N1 and N2).

An internal control targeting the human RNase P gene will be co-amplified along with N1 and N2 gene targets (if present) and will serve as an endogenous nucleic acid extraction control present in all properly collected patient samples. This control serves as both an extraction control and an internal amplification control.

PRINCIPLES OF THE PROCEDURE

A combination of lytic and extraction reagents is used to perform cell lysis and DNA/RNA extraction. Nucleic acids released from the target organisms are captured on magnetic affinity beads. The beads, together with the bound nucleic acids, are washed and the nucleic acids are eluted by a combination of heat and pH variation. The final eluate is used to rehydrate BioGX SARS-CoV-2 Reagents, which contains all reagents necessary for RT-PCR including primers and probes. After reconstitution, the BD MAX System dispenses a fixed volume of RT-PCR-ready solution containing extracted nucleic acids into the PCR Cartridge. Microvalves on the cartridge are sealed by the system prior to initiating PCR in order to contain the amplification mixture and thus prevent evaporation and contamination.

The amplified cDNA targets are detected using hydrolysis (TaqMan®) probes, labeled at one end with a fluorescent reporter dye (fluorophore), and at the other end, with a quencher moiety. Probes labeled with different fluorophores are used to detect the target analytes in different optical channels of the BD MAX System. When the probes are in their native state, the fluorescence of the fluorophore is quenched due to its proximity to the quencher. However, in the presence of target cDNA, the probes hybridize to their complementary sequences and are hydrolyzed by the 5'-3' exonuclease activity of the DNA polymerase as it synthesizes the nascent strand along the cDNA template. As a result, the fluorophores are separated from the quencher molecules and fluorescence is emitted. The amount of fluorescence detected in the optical channels is directly proportional to the quantity of the corresponding probe that is hydrolyzed. The BD MAX System monitors these signals at each cycle of the PCR and interprets the data at the end of the reaction to provide qualitative test results for each analyte.

REAGENTS AND MATERIALS

REF	CONTENTS	QUANTITY
	BioGX SARS-CoV-2 Reagents for BD MAX System Lyophilized reagents for multiplexed detection of N1 and RNase P. Each tube is sufficient for a 12.5 μL reaction, sealed in BD MAX 0.3 mL conical tubes	24 tests
444213	BioGX SARS-CoV-2 Reagents for BD MAX System Lyophilized reagents for multiplexed detection of N2 and RNase P. Each tube is sufficient for a 12.5 μL reaction, sealed in BD MAX 0.3 mL conical tubes	24 tests
	BioGX Rehydration Buffer Sealed in BD MAX 0.3 mL conical tubes. Each tube contains 25 µL of buffer	24 tests

EQUIPMENT AND MATERIALS REQUIRED BUT NOT PROVIDED

- BD MAX System (BD Cat. No. 441916)
- BD MAX Sample Rack (BD Cat. No. 441935, 443550, 443551, 444807, or 444808)
- BD MAX ExK TNA-3 (BD Cat. No. 442827)
- BD MAX PCR Cartridges (BD Cat. No. 437519)
- SARS-CoV-2 Controls
- · Copan UTM Collection Kit
- BD UVT Collection Kit
- Vortex Genie 2 (VWR Cat. No. 58815-235 or equivalent)
- Multi-Tube Vortex Mixer (VWR Cat. No. 58816-115 or equivalent)
- Rack compatible with a multi-tube vortexer (e.g., Cryogenic Vial Holder or equivalent)
- Variable Volume Calibrated Pipettor (750 μL volume capable)
- · Aerosol resistant micropipette tips
- · Disposable gloves, powderless

WARNINGS AND PRECAUTIONS

- · For in vitro diagnostic use under Emergency Use Authorization only.
- · For Prescription Use only.
- · Positive results are indicative of the presence of SARS-CoV-2 RNA.
- Laboratories within the United States and its territories are required to report all positive results to the appropriate
 public health authorities.
- All patient samples should be handled as if infectious, using good laboratory procedures as outlined in the CLSI Document M29-A4¹ and in Biosafety in Microbiological and Biomedical Laboratories.² Only personnel proficient in handling infectious materials and the use of BioGX SARS-CoV-2 and BD MAX System should perform this procedure.
- All human-sourced materials should be considered potentially infectious and should be handled with universal precautions. If spillage occurs, follow appropriate site procedures.
- Closely follow procedures and guidelines provided to ensure that the test is performed correctly. Any deviation from the
 procedures and guidelines may affect optimal test performance.
- · Do not use expired reagents and/or materials.
- Do not use the kit if the label that seals the outer box is broken upon arrival.
- Do not use reagents if the protective pouches are open or broken upon arrival.
- Do not use reagents if desiccant is not present or broken inside reagent pouches.
- · Do not remove desiccant from reagent pouches.
- Close protective pouches of reagents promptly with the zip seal after each use. Remove any excess air in the pouches prior
 to sealing.
- Protect reagents against heat and humidity. Prolonged exposure to humidity may affect product performance.
- · Do not use reagents if the foil has been broken or damaged.
- Do not mix reagents from different pouches and/or kits and/or lots.
- Do not interchange or re-use caps, as contamination may occur and compromise test results.

- Check Unitized Reagent Strips for proper liquid fills (ensure that the liquids are at the bottom of the tubes).
- · Check Unitized Reagent Strips to ensure that all pipette tips are present.
- Proceed with caution when using chemical solutions, as Extraction Tube barcode readability may be altered.
- Good laboratory technique is essential to the proper performance of this assay. Extreme care should be taken to preserve the purity of all materials and reagents.
- In cases where other PCR tests are conducted in the same general area of the laboratory, care must be taken to ensure that the BD MAX ExK TNA-3 components, any additional reagents required for testing, and the BD MAX System are not contaminated. Avoid microbial and ribonuclease (RNase)/deoxyribonuclease (DNase) contamination of reagents at all times. The use of sterile RNase/DNase-free disposable aerosol resistant or positive displacement pipette tips is recommended. Use a new tip for each specimen. Gloves must be changed before manipulating reagents and cartridges.
- To avoid contamination of the environment by amplicons, do not break apart the BD MAX PCR Cartridge after use. The seals of the BD MAX PCR Cartridges are designed to prevent contamination.
- The laboratory should routinely perform environmental monitoring to minimize the risk of cross-contamination.
- Wear protective clothing and disposable gloves while handling all reagents.
- · Wash hands thoroughly after performing the test.
- · Do not pipette by mouth.
- Do not smoke, drink, chew or eat in areas where specimens or kit reagents are being handled.
- · Dispose of unused reagents and waste in accordance with local, state, provincial and/or federal regulations.
- Consult the BD MAX System User's Manual³ for additional warnings, precautions, and procedures.

STORAGE AND STABILITY

BioGX SARS-CoV-2 Reagents for BD MAX System

BioGX SARS-CoV-2 Reagents for BD MAX System components are provided in sealed pouches and ships at ambient temperature. To protect the product from humidity, immediately re-seal after opening. Open pouch stability for similar products has been established for 1 month at ambient temperature and closed pouch for 6 months at ambient temperature.

INSTRUCTIONS FOR USE

Swab Specimen Collection/Transport

Note: Wear gloves when handling Universal Viral Transport (UVT) or Universal Transport Media (UTM) specimens. If gloves come in contact with the specimen, immediately change them to prevent contamination of other specimens.

- 1. Nasopharyngeal / oropharyngeal swab specimens should be collected and expressed directly into the BD Universal Viral Transport System or the Copan Universal Transport Media System according to their respective package insert instructions.
- 2. Transport the UVT/UTM specimen according to the manufacturer's instructions for use.

BD MAX Sample Buffer Tube Preparation

Note: Wear gloves when handling Universal Viral Transport (UVT) or Universal Transport Media (UTM) specimens. If gloves come in contact with the specimen, immediately change them to prevent contamination of other specimens.

Note: If frozen, allow Universal Transport Media (UTM) specimen to come to room temperature before proceeding.

- 1. Uncap the BD MAX TNA-3 Sample Buffer Tube and transfer (using a calibrated, variable pipette) 750 μL from the UVT/UTM specimen directly into the BD MAX TNA-3 Sample Buffer Tube.
- 2. Recap the tube with a blue septum cap and vortex or mix by inversion 5 times.
- 3. Label the BD MAX TNA-3 Sample Buffer Tube with patient information.

Note: Do not obscure the barcodes on the tube. Obscuring the barcode may result in BD MAX System catalog failure and inability to test the sample.

- 4. Repeat Steps 1 to 3 for each UVT/UTM sample that will be tested on the BD MAX System.
- 5. Proceed directly with the BD MAX System Operation.

BD MAX System Operation

Note: Refer to the BD MAX System User's Manual³ for detailed instructions (Operation section).

- 1. Power on the BD MAX System (if not already done) and log in by entering <user name> and and apassword>.
- 2. Gloves must be changed before manipulating reagents and cartridges.
- 3. Remove the required number of Unitized Reagent Strips from the BD MAX ExK TNA-3 kit. Gently tap each Unitized Reagent Strip onto a hard surface to ensure that all the liquids are at the bottom of the tubes. Remove the required number of Extraction Tube(s) from the protective pouch. Remove excess air, and close pouch with the zip seal.
- 4. From the BioGx SARS-CoV-2 kit, remove the required number of Master Mix Tube(s) and rehydration buffer tubes from the protective pouches. Remove excess air, and close pouch with the zip seal.

5. For each specimen to be tested, place one (1) Unitized Reagent Strip on the BD MAX System Rack. Assemble the strip as in Figure 1:

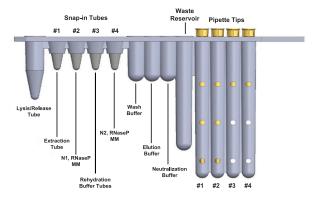


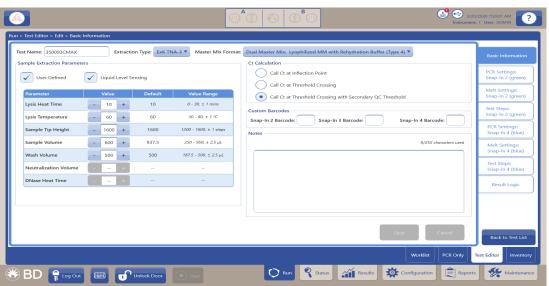
Figure 1: Snap Extraction Tubes and Master Mix Tubes into Unitized Reagent Strips

Note: Failure to add extraction tube and master mix tubes may result in instrument contamination.

Note: A conical snap-in tube is fully seated in the strip when a 'click' is heard. Refer to above for reagent placement in the Unitized Reagent Strip.

- Position 1= Snap the BD MAX TNA-3 Extraction Tube into Position 1.
- Position 2= Snap the BioGX "N1, RNaseP" lyophilized master mix into Position 2.
- Position 3= Snap the BioGX Rehydration Buffer tube into Position 3.
- Position 4= Snap the BioGX "N2, RNaseP" lyophilized master mix into Position 4.
- 6. Create the User Defined Protocol (UDP) as follows:
 - Navigate to Run > Test Editor tab.
 - Click "Create".
 - Complete each section of the user protocol as outlined in the screen shots below.

Basic Information Section



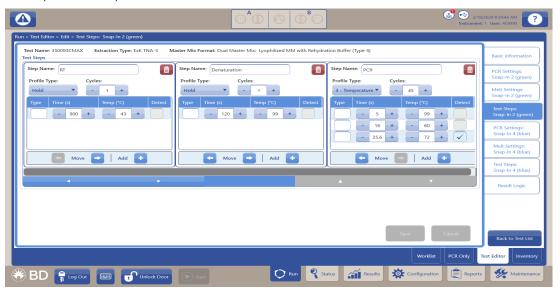
PCR Setting Section Snap2



Melt Settings Section Snap2



Test Steps Section Snap2



PCR Setting Section Snap4



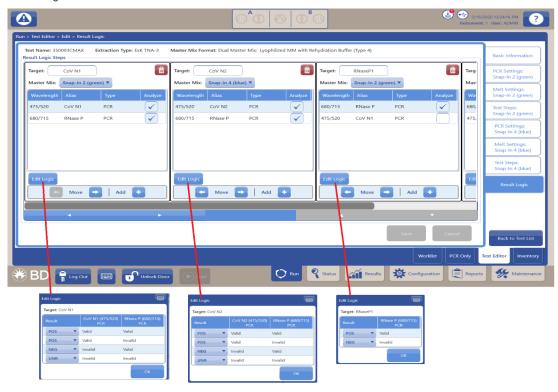
Melt Settings Section Snap4

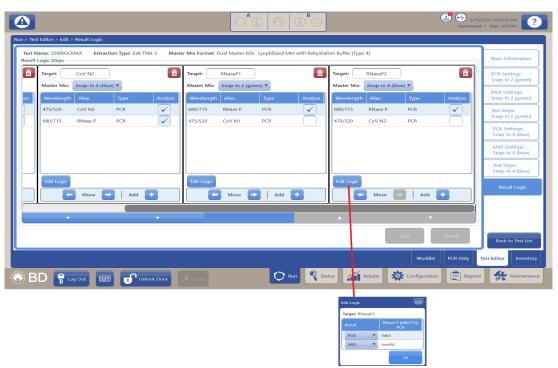


PCR Setting Section Snap4



Result Logic Section





Note: Click on the scroll bar to scroll right.

- 7. Click **<SAVE>** after all information has been entered into the Test Editor. The UDP only needs to be created once, and steps 6 and 7 do not need to be repeated for subsequent runs.
- 8. Click on the Run tab, then Inventory. Enter the kit lot number for the BD MAX ExK TNA-3 (for lot traceability) by either scanning the barcode with the scanner or by manual entry and then save.
 - Note: Repeat step 8 each time a new kit lot is used.
- 9. Navigate to the Worklist (RUN > WORKLIST). Using the pull down menu select the UDP previously created in Step 6 (example: 350093CMAX).
- 10. Enter the Sample Buffer Tube ID, Patient ID and Accession Number (if applicable) into the Worklist, either by scanning the barcode with the scanner or by manual entry.
- 11. Select the appropriate kit lot number (found on the outer box) from the pull down menu.
- 12. Repeat Steps 9 to 11 for all remaining Sample Buffer Tubes.
- 13. Place the Sample Buffer Tubes into the BD MAX System Rack(s) corresponding to the Unitized Reagent Strips previously assembled.
- 14. Place the required number of BD MAX PCR Cartridge(s) into the BD MAX System (refer to Figure 2).



Figure 2: Load BD PCR Cartridges

15. Load rack(s) onto the BD MAX System (refer to Figure 3).

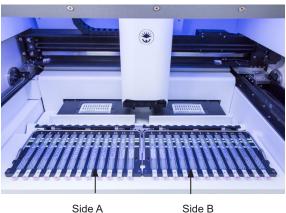


Figure 3: Load Rack(s) onto the BD MAX System

16. Close the BD MAX System lid and click **<Start>** to begin the processing.

QUALITY CONTROL

Quality control procedures monitor the performance of the assay. Laboratories must establish the number, type, and frequency of testing of control materials according to guidelines or requirements of local, provincial, state, and federal and/or country regulations or accreditation organizations in order to monitor the effectiveness of the entire analytical process. For general Quality Control guidance, the user may wish to refer to CLSI MM3 and EP12.^{1,2}

External Control materials are not provided by BD. External Positive and Negative Controls are not used by the BD MAX System software for the purpose of sample test result interpretation. External Controls are treated as if they were patient samples. (Refer to the table in the Results Interpretation section for the interpretation of External Control assay results.)

It is recommended that one (1) External Positive Control and one (1) External Negative Control be run at least daily until adequate process validation is achieved on the BD MAX System in each laboratory setting. All test controls should be examined prior to interpretation of patient results. If controls are not valid, the patient results cannot be interpreted. Reduced frequency of control testing should be in accordance with applicable regulations.

The External Positive Control is intended to monitor for substantial reagent failure. The External Negative Control is intended to detect reagent or environmental contamination (or carry-over) by target nucleic acids.

Various types of External Controls are recommended to allow the user to select the most appropriate for their laboratory quality control program.

External Negative Control: A previously characterized sample known to be negative or an SBT with RNase P external control added. BD recommends that the External Negative Control be prepared prior to the External Positive Control in order to reduce the potential for contamination as a result of control preparation.

External Positive Control: Commercially available control material from BioGX or other authorized control material may be used. For the preparation of External Control suspensions, it is recommended that RNA suspensions be prepared in the Sample Buffer Tube (SBT) according to manufacturer's instructions.

All External Controls should yield the expected results (positive for External Positive Control, negative for External Negative Control). An External Negative Control that yields a positive result is indicative of sample handling and/or contamination. An External Positive Control that yields a negative result is indicative of a specimen handling/preparation problem. Review the specimen handling/preparation technique.

An External Control that yields an Unresolved, Indeterminate or Incomplete test result is indicative of a reagent or a BD MAX System failure. Check the BD MAX System monitor for any error messages. Refer to the System Error Summary section of the BD MAX System User's Manual³ for interpretation of warning and error codes. If the problem persists, use reagents from an unopened pouch or use a new assay kit.

RESULT INTERPRETATION

Results are available on the results tab in the Results window on the BD MAX System monitor. The BD MAX System automatically interprets the test result when the SARS-CoV-2 User Defined Protocol (UDP) is used.

External Negative and Positive Controls

If the positive or negative controls are processed in the run and do not exhibit the expected performance as described in the Control Interpretations table below, the assay may have been set up/or executed improperly, or reagent or equipment malfunction could have occurred. In this case, invalidate the run and re-test all samples in that run.

The RNase P gene serves as both a sample extraction control (EC) and an internal amplification control (IAC). In the event that both N1 and N2 region results are negative, an RNase P result must be positive for the BD BioGX SARS-CoV-2 result to be a valid negative result. When either N1 or N2 target result is positive, the RNase P result is ignored.

If any of the above controls do not exhibit the expected performance as described, the assay may have been set up/or executed improperly, or reagent or equipment malfunction could have occurred. Invalidate the run and re-test.

Table 1: External Control Interpretations

			Expected Results				
Cont	rol Type	Used to Monitor		, RNase P" er mix	BioGX "N2, RNase P" master mix		
			N1	RNase P	N2	RNase P	
External Negative	Known Negative Sample	Reagent and/or environmental					
Control	RNase P Positive Control	contamination and reagent failure including primer and probe integrity	NEG	POS	NEG	POS	
External Positive Control	N1 and N2 Positive Control	Substantial reagent failure including primer and probe integrity	POS	NEG	POS	NEG	

Examination and Interpretation of Patient Specimen Results

Assessment of clinical specimen test results should be performed after the external positive and negative controls have been examined and determined to be valid and acceptable. If the controls are not valid, the patient results cannot be interpreted.

The table below lists the expected results. If results are obtained that do not follow these guidelines, re-extract and re-test the sample. If repeat testing yields similar results, collect a fresh sample from the patient for testing.

Table 2: Interpretation of Patient Specimen Results

BioGX "N1, RNase P" master mix		BioGX "N2, RNase P" master mix		Result Interpretation ^{a,b}	Actions	
N1 Target	RNase P	N2 Target	RNase P	Trocur interpretation	7 totione	
+	+/-	+	+/-	Positive	Report as Positive	
+	+/-	-	+	Positive	Report as Positive	
+	+/-	UNR	-	Positive	Report as Positive	
-	+	+	+/-	Positive	Report as Positive	
UNR	-	+	+/-	Positive Report as P		
UNR	-	-	+	UNR	Repeat Test ^c	
-	+	UNR	-	UNR	Repeat Test ^c	
UNR	-	UNR	-	UNR	Repeat Test ^c	
-	+	-	+	Negative	Report as Negative	

aln the absence of target detection in each of the master mix reactions, the external control (RNase P) must be detected in that master mix reaction in order for the result to be valid

UNRESOLVED, INDETERMINATE, AND INCOMPLETE RESULTS

When an Indeterminate (IND), Unresolved (UNR), or Incomplete (INC) result is obtained a repeat test from the Patient Sample must be performed (see Repeat Test Procedure). If an External Control fails, repeat testing of all specimens conducted on the same day using freshly prepared External Controls (see Quality Control).

Unresolved Result

Unresolved results may be obtained in the event that specimen-associated inhibition or reagent failure prevents proper target or RNase P amplification. Sample(s) can be repeated from the original Patient Sample. Uncap the BD MAX TNA-3 Sample Buffer Tube and transfer (using a calibrated, variable pipette) 750 µL from the UVT/UTM specimen directly into the BD MAX TNA-3 Sample Buffer Tube. Restart from the BD MAX System Operation section.

Indeterminate Result

Indeterminate results may be obtained in the event that a System failure occurs. Sample(s) can be repeated from the original Patient Sample. Uncap the BD MAX TNA-3 Sample Buffer Tube and transfer (using a calibrated, variable pipette) 750 µL from the UVT/UTM specimen directly into the BD MAX TNA-3 Sample Buffer Tube. Restart from the BD MAX System Operation section.

Incomplete Result

Incomplete results may be obtained in the event that Specimen Preparation or the PCR did not reach its expected time points. Sample(s) can be repeated from the original Patient Sample. Uncap the BD MAX TNA-3 Sample Buffer Tube and transfer (using a calibrated, variable pipette) 750 µL from the UVT/UTM specimen directly into the BD MAX TNA-3 Sample Buffer Tube. Restart from the BD MAX System Operation section.

^bLaboratories should report their diagnostic result as appropriate and in compliance with their specific reporting system. Laboratories within the United States and its territories are required to report all positive results to the appropriate public health authorities.

^cRepeat Test by preparing a fresh sample buffer tube from the original primary UVT or UTM sample.

External Control Failure

External Controls should yield expected results when tested. If samples have to be repeated due to an incorrect External Control result, the samples should be repeated from the original Patient Sample along with freshly prepared External Controls. Restart from the BD MAX System Operation section.

LIMITATIONS OF THE PROCEDURE

- BioGX SARS-CoV-2 Reagents for BD MAX System has been evaluated only for use in combination with the BD MAX TNA-3 kit and BD MAX System.
- Reliable results depend on proper sample collection, storage and handling procedures.
- This test is intended to be used for the detection of SARS-CoV-2 RNA in nasopharyngeal and oropharyngeal swab samples collected in BD Universal Viral Transport System (UVT) or Copan Universal Transport Media System (UTM). Testing of other sample types may result in inaccurate results.
- Nasopharyngeal wash/aspirates, nasal aspirates, and nasal/mid-turbinate nasal swabs (self-collected under supervision of a healthcare provider or healthcare provider-collected) are additional acceptable upper respiratory specimens that can be tested with BioGx SARS-CoV-2 Reagents for BD MAX System; however, performance with these specimen types have not been determined
- Detection of SARS-CoV-2 RNA may be affected by sample collection methods, patient factors (e.g., presence of symptoms), and/or stage of infection.
- As with any molecular test, mutations within the target regions of SARS-CoV-2 could affect primer and/or probe binding resulting
 in failure to detect the presence of virus.
- Due to inherent differences between technologies, it is recommended that, prior to switching from one technology to the next, users perform method correlation studies in their laboratory to qualify technology differences. One hundred percent agreement between the results should not be expected due to aforementioned differences between technologies. Users should follow their own specific policies/procedures.
- False negative or invalid results may occur due to interference. The RNase P endogenous control is included to help identify the specimens containing substances that may interfere with nucleic acid isolation and PCR amplification.
- Good laboratory practices and careful adherence to the procedures specified in this Instructions For Use document are necessary to avoid contamination of reagents.
- For the BD MAX TNA extraction: Tobramycin at 1.1 x 10⁻³ g/SBT interferes with the assay. Lower concentrations of Tobramycin have not been evaluated.
- · The effect of homeopathic medications for respiratory symptoms on the assay performance was not tested.
- BioGX SARS-CoV-2 Reagent and BD MAX TNA-3 extraction have not been evaluated for patients receiving intranasally administered influenza vaccine.

CONDITIONS OF AUTHORIZATION FOR THE LABORATORY

The BioGX SARS-CoV-2 Reagents for BD MAX System Letter of Authorization, along with the authorized Fact Sheet for Healthcare Providers, the authorized Fact Sheet for Patients, and authorized labeling are available on the FDA website: https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations

To assist clinical laboratories running the BioGX SARS-CoV-2 Reagents for BD MAX System, the relevant Conditions of Authorization are listed below, and are required to be met by laboratories performing the EUA test.

- Authorized laboratories* using the BioGX SARS-CoV-2 Reagents for BD MAX System will include with result reports of the BioGX SARS-CoV-2 for BD MAX System test, all authorized Fact Sheets. Under exigent circumstances, other appropriate methods for disseminating these Fact Sheets may be used, which may include mass media.
- Authorized laboratories using the BioGX SARS-CoV-2 Reagents for BD MAX System will perform the BioGX SARS-CoV-2
 Reagents for use with the BD MAX System as outlined in the BioGX SARS-CoV-2 Reagents for BD MAX System
 Instructions for Use. Deviations from the authorized procedures, including the authorized instruments, authorized extraction
 methods, authorized clinical specimen types, authorized control materials, authorized ancillary reagents, and authorized
 material required to perform the BioGX SARS-CoV-2 Reagents for BD MAX System test are not permitted.
- Authorized laboratories that receive the BioGX SARS-CoV-2 Reagents for BD MAX System test must notify the relevant public health authorities of their intent to run the test prior to initiating testing.
- Authorized laboratories using the BioGX SARS-CoV-2 Reagents for BD MAX System test will have a process in place for reporting test results to healthcare providers and relevant public health authorities, as appropriate.
- All laboratory personnel using the BioGX SARS-CoV-2 Reagents for BD MAX System test must be appropriately trained in RT-PCR techniques and use appropriate laboratory and personal protective equipment when handling this kit, and use the test in accordance with the authorized labeling.
- Becton, Dickinson and Company, authorized distributors, and authorized laboratories using the BioGX SARS-CoV-2
 Reagents for BD MAX System will ensure that any records associated with this EUA are maintained until otherwise notified
 by FDA. Such records will be made available to FDA for inspection upon request.

 Authorized laboratories will collect information on the performance of the BioGX SARS-CoV-2 Reagents for BD MAX System test and report to DMD/OHT7-OIR/OPEQ/ CDRH (via email: CDRH-EUA-Reporting@fda.hhs.gov) and Becton, Dickinson and Company Customer Technical Support 1.800.638.8663 any suspected occurrence of false positive or false negative results and significant deviations from the established performance characteristics of the BioGX SARS-CoV-2 Reagents for BD MAX System test of which they become aware.

NON-CLINICAL PERFORMANCE EVALUATION

Limit of Detection (LoD)

LoD studies determine the lowest detectable concentration of the SARS-CoV-2 at which approximately 95% of all (true positive) replicates test positive.

To determine the LoD, quantified genomic viral RNA from SARS-CoV-2, obtained from BEI Resources (Cat. No. NR-52285), was serially diluted into pooled negative nasopharyngeal clinical matrix, a total of 5 concentrations levels, with 2-fold serial dilutions between each level. Confirmation of the estimated LoD was performed with one reagent lot in replicates of 20 prepared in pooled nasopharyngeal swab clinical matrix. The LoD is the lowest concentration (reported as genome equivalents/mL, GE/mL) of genomic RNA from SARS-CoV-2 that can be reproducibly distinguished from negative samples ≥95% of the time. The LoD for the assay is 40 GE/mL.

	Concentration	Total Valid Results	Positives			Mean Ct.score			
RNA from strain	(GE/mL)		SARS-CoV-2	N1	N2	N1	RNase P	N2	RNase P
SARS-CoV-2 USA WA1/2020 (Stock 4 8e+07 GE/mL)	40	20	20	20	20	33.8	22.6	34.3	22.7

Table 3. LoD determination using genomic RNA from SARS-CoV-2 USA-WA1/2020 strain

Reactivity/ Inclusivity

The nCoV N1 and nCoV N2 primers and probes utilized within the BioGX SARS-CoV-2 Reagents for BD MAX System are identical in sequence to those reported in the CDC 2019-Novel Coronavirus (2019-nCoV) Real-Time RT-PCR Diagnostic Panel.

An *in silico* comparison of the N1 and N2 primer sets was performed using all 111 available SARS-CoV-2 sequences in the NCBI nt database (Genbank) as of April 1, 2020. Multiple sequence alignment revealed 100% sequence identity (0 mismatches) across the entire 72 base-pair region of the N1 primer/probe set for all sequences. Multiple sequence alignment showed 100% sequence identity (0 mismatches) across the entire 67 base-pair region of the N2 primer/probe set with one exception. Sequence accession MT159720.1 indicates a "T" instead of a "C" at the 5' end of the N2 reverse primer.

In a separate analysis on April 9, 2020, 3,634 full length SARS-Cov-2 genomes were retrieved from the GISAID EpiCoV database, only including human isolates marked as "high coverage". Multiple alignment of the N gene showed that 98.0% of the sequences were a perfect match to the N1 primer set region, and 99.5% were a perfect match to the N2 primer set region.

All variants have a perfect match to either the N1 region or the N2 region primer set.

Cross-Reactivity

The nCoV N1 and nCoV N2 primers and probes utilized within the BioGX SARS-CoV-2 Reagents for BD MAX System are identical in sequence to those reported in the CDC 2019-Novel Coronavirus (2019-nCoV) Real-Time RT-PCR Diagnostic Panel. The CDC reported an *in silico* analysis of primer and probe sequences within their IFU (CDC-006-0019, Rev 02), and has been copied below for reference:

BLASTn analysis queries of the 2019-nCoV rRT-PCR assays primers and probes were performed against public domain nucleotide sequences. The database search parameters were as follows: 1) The nucleotide collection consists of GenBank+EMBL+DDBJ+PDB+RefSeq sequences, but excludes EST, STS, GSS, WGS, TSA, patent sequences as well as phase 0, 1, and 2 HTGS sequences and sequences longer than 100Mb; 2) The database is non-redundant. Identical sequences have been merged into one entry, while preserving the accession, GI, title and taxonomy information for each entry; 3) Database was updated on 10/03/2019; 4) The search parameters automatically adjust for short input sequences and the expect threshold is 1000; 5) The match and mismatch scores are 1 and -3, respectively; 6) The penalty to create and extend a gap in an alignment is 5 and 2 respectively.

2019-nCoV N1 Assay:

Probe sequence of 2019-nCoV rRT-PCR assay N1 showed high sequence homology with SARS coronavirus and Bat SARS-like coronavirus genome. However, forward and reverse primers showed no sequence homology with SARS coronavirus and Bat SARS-like coronavirus genome. Combining primers and probe, there is no significant homologies with human genome, other coronaviruses or human microflora that would predict potential false positive rRT-PCR results.

^{*} For ease of reference, the letter of authorization refers to, "Laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. §263a, to perform moderate and high complexity tests" as "authorized laboratories".

2019-nCoV_N2 Assay:

The forward primer sequence of 2019-nCoV rRT-PCR assay N2 showed high sequence homology to Bat SARS-like coronaviruses. The reverse primer and probe sequences showed no significant homology with human genome, other coronaviruses or human microflora. Combining primers and probe, there is no prediction of potential false positive rRT-PCR results.

In summary, the 2019-nCoV rRT-PCR assay N1 and N2, designed for the specific detection of 2019-nCoV, showed no significant combined homologies with human genome, other coronaviruses, or human microflora that would predict potential false positive rRT-PCR results.

CLINICAL EVALUATION

The performance of BioGx SARS-CoV-2 Reagents for BD MAX System with retrospective collected nasopharyngeal swab clinical samples was evaluated using 30 individual negative clinical samples and 30 contrived positive clinical samples collected from patients with signs and symptoms of an upper respiratory infection.

Clinical samples were collected by qualified personnel according to the package insert of the collection device. Samples were handled as described in the package insert of the collection device and stored frozen until use.

Low positive and moderate positive contrived clinical samples were prepared by spiking quantified genomic RNA (SARS-CoV-2 USA-WA1/2020 strain) into individual negative clinical matrix to approximately ~1-2x LoD (20 samples) and ~3-5x LoD (10 samples), respectively.

All low positive and moderate positive samples were positive and all negative samples were negative in the background of individual clinical sample matrix.

		Agreement	BioGX "N1, RNase P" master mix			BioGX "N2, RNase P" master mix			
Sample Concentration	Total Valid Results	with the expected results	Mean % Positive		Ct.score	% Positive	Mean Ct.score		
		resuits		N1	RNase P		N2	RNase P	
~1–2x LoD	19/20ª	19/19	100 (19/19 ^a)	33.8	23.2	100 (19/19 ^a)	33.7	23.0	
~3–5x LoD	10	10/10	100 (10/10)	33.1	21.6	100 (10/10)	33.6	21.4	
Negativo	30	30/30	0	NI/A	22.5	0	NI/A	22.2	

Table 4. Clinical evaluation with contrived nasopharyngeal swab samples

(N/A)

N/A

22 5

N/A

(N/A)

22.3

FDA SARS-CoV-2 REFERENCE PANEL TESTING

30

30/30

The evaluation of sensitivity and MERS-CoV cross-reactivity was performed using reference material (T1), blinded samples, and a standard protocol provided by the FDA. The study included a range-finding study and a confirmatory study for LoD. Blinded sample testing was used to establish specificity and to confirm the LoD. The extraction method and instrument used were the BD MAX System. The results are summarized in Table 5.

Table 5. Summary of LoD confirmation result using the FDA SARS-CoV-2 reference panel

Reference Materials Provided by FDA	Specimen Type	Product LoD	Cross-Reactivity	
SARS-CoV-2	Na combon monoclusostnis	1,800 NDU/mL	N/A	
MERS-CoV	Nasopharyngeal matrix	N/A	ND	

NDU/mL = RNA NAAT detectable units/mL

N/A = Not applicable

Negative

ND = Not detected

REFERENCES

- 1. Clinical and Laboratory Standards Institute. Protection of laboratory workers from occupationally acquired infections; Approved Guideline. Document M29 (refer to the latest edition).
- Centers for Disease Control and Prevention, and National Institutes of Health, Biosafety in microbiological and biomedical laboratories. Chosewood L.C. and Wilson D.E. (eds) (2009). HHS Publication No. (CDC) 21-1112.
- 3. BD MAX System User's Manual (refer to the latest revision) BD Life Sciences. Sparks. Maryland 21152 USA.

During screening one retrospective nasopharyngeal swab clinical sample resulted in an UNR for N1 and as a result was removed from data analysis.

Change History

Revision	Date	Change Summary
(03)	2020-04	Updates made to reflect FDA authorization. Added additional BD MAX Sample Rack catalog numbers. Clarified Instructions For Use. Updated Result Interpretation, Limit of Detection, and Clinical Evaluation information. Added information on interfering substances. Made typographical edits.
(04)	2020-05	Updated Intended Use and Limitations of the Procedure to include details about nasal and mid-turbinate swabs. Made minor clarifications to MAX System Operation, Quality Control, and Result Interpretation. In Quality Control section the definition of external negative control was changed. Table 1 was updated. Reactivity/Inclusivity was updated.
(05)	2020-09	Added FDA SARS-CoV-2 Reference Panel Testing section.

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сонтвоц - Negative control / Отрицателен контрол / Negativní kontrola / Negativ kontrol / Negative Kontrolle / Αρνητικός μάρτυρας / Control negativo / Negativne kontroll / Contrôle négatif / Negativna kontrola / Negativ kontroll / Controllo negativo / Heraтивтік бақылау / 음성 컨트롤 / Neigiama kontrole / Negatīvā kontrole / Negatieve controle / Kontrola ujemna / Controlo negativo / Control negativ / Отрицательный контроль / Negatif kontrol / Негативний контроль / 阴性对照试剂



Method of sterilization: ethylene oxide / Метод на стерилизация: етиленов оксид / Zpüsob sterilizace: etylenoxid / Steriliseringsmetode: ethylenoxid / Sterilisationsmethode Ethylenoxid / Μέθοδος αποστείρωσης: αιθυλενοξείδιο / Método de esterilización: óxido de etileno / Steriliseerimismeetod: etüleenoksiid / Méthode de stérilisation : oxyde d'éthylène / Metoda sterilizacije: etlien oksid / Sterilizálás módszere: etilén-oxid / Metodo di sterilizzazione: ossido di etliene / Стерилизация әдісі – этилен тотығы / 소독 방법: 에 틸렌숙사이드 / Sterilizavimo būdas: etileno oksidas / Sterilizēšanas metode: etilēnoksīds / Gesteriliseerd met behulp van ethyleenoxide / Steriliseringsmetode: etylenoksid / Metoda sterylizacii: tlenek etylu / Método de esterilizacāo: óxido de etileno / Metodā de sterilizare: охіd de etilenā / Метод стерилизации: этиленоксид / Metoda sterilizacie: etylénoxid / Metoda sterilizacije: etilen oksid / Steriliseringsmetod: etenoxid / Sterilizasyon yöntemi: etilen oksit / Метод стерилізації: етиленоксидом / 灭菌方法:环氧乙烷



| Sterille R | Method of sterilization: irradiation / Метод на стерилизация: ирадиация / Způsob sterilizace: záření / Steriliseringsmetode: bestráling / Sterilisationsmethode: Bestrahlung / Μέθοδος αποστείρωσης: ακτινοβολία / Método de esterilización: irradiación / Steriliseerimismeetod: kiirgus / Méthode de stérilisation: irradiation / Metoda sterilizacije: zračenje / Sterilizálás módszere: besugárzás / Metodo di sterilizzazione: irradiazione / Стерилизация әдісі – сәуле түсіру / 소독 방법: 방사 / Sterilizavimo būdas: radiacija / Śterilizēšanas metode: apstarošana / Gesteriliseerd met behulp van bestraling / Steriliseringsmetode: bestråling / Metoda sterylizacji: napromienianie / Método de esterilização i irradiação / Metodă de sterilizare: iradiere / Метод стерилизации: облучение / Metóda sterilizácie: ožiarenie / Metoda sterilizacije: ozračavanje / Steriliseringsmetod: strálning / Sterilizasyon yöntemi: irradyasyon / Метод стерилізації: опроміненням / 灭菌方法: 辐射



Biological Risks / Биологични рискове / Biologická rizika / Biologisk fare / Biogefährdung / Βιολογικοί κίνδυνοι / Riesgos biológicos / Bioloogilised riskid / Risques biologiques / Biološki rizik / Biologiailag veszélyes / Rischio biologico / Биологиялық тәуекелдер / 생물학적 위험 / Biologinis pavojus / Biologiskie riski / Biologisch risico / Biologisk risiko / Zagrożenia biologiczne / Perigo biológico / Riscuri biologice / Биологическая опасность / Biologické riziko / Biološki rizici / Biologisk risk / Biyolojik Riskler / Біологічна небезпека



Caution, consult accompanying documents / Внимание, направете справка в придружаващите документи / Pozor! Prostudujte si přiloženou dokumentaci! / Forsigtig, se ledsagende dokumenter / Achtung, Begleitdokumente beachten / Προσοχή, συμβουλευτείτε τα συνοδευτικά έγγραφα / Precaución, consultar la documentación adjunta / Ettevaatust! Lugeda kaasnevat dokumentatsiooni / Attention, consulter les documents joints / Upozorenje, koristi prateču dokumentaciju / Figyelem! Olvassa el a mellékelt tájékoztatót / Attenzione: consultare la documentazione allegata / Абайланыз, тиісті құжаттармен танысыныз / 주의, 동봉된 설명서 참조 / Démesio, žiūrėkite pridedamus dokumentus / Piesardzība, skatīt pavaddokumentus / Voorzichtig, raadpleeg bijgevoegde documenten / Forsiktig, se vedlagt dokumentasjon / Należy zapoznać się z dołączonymi dokumentami / Cuidado, consulte a documentação fornecida / Atenţie, consultaţi documentele însoţitoare / Внимание: см. прилагаемую документацию / Výstraha, pozri sprievodné dokumenty / Pažnja! Pogledajte priložena dokumenta / Obs! Se medfoljande dokumentation / Dikkat, birlikte verilen belgelere başvurun / Увага: див. супутню документацію / 小心,请参阅附带文档。



Upper limit of temperature / Горен лимит на температурата / Horní hranice teploty / Øvre temperaturgrænse / Temperaturobergrenze / Ανώτερο όριο θερμοκρασίας / Límite superior de temperatura / Ülemine temperatuuripiir / Limite supérieure de température / Gornja dozvoljena temperatura / Felső hőmérsékleti határ / Limite superiore di temperatura / Температураның руқсат етілген жоғарғы шеті / 상한 은도 / Aukščiausia laikymo temperatūra / Augšējā temperatūras robeža / Hoogste temperatuurilmiet / Øvre temperaturgrense / Górna granica temperatury / Limite máximo de temperatura / Limită maximă de temperatură / Верхний предел температуры / Horná hranica teploty / Gornja granica temperature / Övre temperaturgräns / Sıcaklık üst sınırı / Максимальна температура / 温度上限



Keep dry / Παзете cyxo / Skladujte v suchém prostředí / Opbevares tørt / Trocklagern / Φυλάξτε το στεγνό / Mantener seco / Hoida kuivas / Conserver au sec / Držati na suhom / Száraz helyen tartandó / Tenere all'asciutto / Құрғақ күйінде ұста / 권조 상태 유지 / Laikykite sausai / Uzglabāt sausu / Droog houden / Holdes tørt / Przechowywać w stanie suchym / Manter seco / A se feri de umezeală / Не допускать попадания влаги / Uchovávajte v suchu / Držite na suvom mestu / Förvaras torrt / Kuru bir şekilde muhafaza edin / Берегти від вологи / 请保持干燥



Collection time / Време на събиране / Čas odběru / Opsamlingstidspunkt / Entnahmeuhrzeit / Ώρα συλλογής / Hora de recogida / Kogumisaeg / Heure de prélèvement / Sati prikupljanja / Mintavétel időpontja / Ora di raccolta / Жинау уақыты / 수집 시간 / Paémimo laikas / Savākšanas laiks / Verzameltijd / Tid prøvetaking / Godzina pobrania / Hora de colheita / Ora colectării / Время сбора / Doba odberu / Vreme prikupljanja / Uppsamlingstid / Toplama zamanı / Час забору / 采集时间



Peel / Обелете / Otevřete zde / Åbn / Abziehen / Аттокоλλήστε / Desprender / Koorida / Décoller / Otvoriti skini / Húzza le / Staccare / Ұстінгі кабатын алып таста / 벗기기 / Plèšti čia / Atlīmēt / Schillen / Trekk av / Oderwać / Destacar / Se dezlipeste / Отклеить / Odtrhnite / Oljuštiti / Dra isär / Ауırma / Відклеїти / 撕下



Perforation / Перфорация / Perforace / Perforering / Διάτρηση / Perforación / Perforacija / Perforacija / Perforazione / Тесік тесу / 절취선 / Perforacija / Perforacija / Perforatie / Perforacja / Perfuração / Perforare / Перфорация / Perforácia / Perforasyon / Перфорація / 穿孔



Do not use if package damaged / Не използвайте, ако опаковката е повредена / Nepoužívejte, je-li obal poškozený / Må ikke anvendes hvis emballagen er beskadiget / Inhal beschädigter Packungnicht verwenden / Μη χρησιμοποιείτε εάν η συσκευασία έχει υποστεί ζημιά. / No usar si el paquete está dañado / Mitte kasutada, kui pakend on kahjustatud / Ne pas l'utiliser si l'emballage est endommagé / Ne koristiti ako je oštećeno pakiranje / Ne használja, ha a csomagolás sérült / Non usare se la confezione è danneggiata / Erep пакет бұзылған болса, пайдаланба / 폐키지가 손상된 경우 사용 금지 / Jei pakuotė pažeista, nenaudoti / Nelietot, ja iepakojums bojāts / Niet gebruiken indien de verpakking beschadigd is / Må ikke brukes hvis pakke er skadet / Nie używać, jeśli opakowanie jest uszkodzone / Não usar se a embalagem estiver danificada / A nu se folosi dacă pachetul este deteriorat / Не использовать при повреждении упаковки / Nepoužívajte, ak je obal poškodený / Ne koristite ako je pakovanje oštećeno / Använd ej om főrpackningen är skadad / Ambalaj hasar gőrmüşse kullanmayın / Не використовувати за пошкодженої упаковки / 如果包装破损,请勿使用



Keep away from heat / Пазете от топлина / Nevystavujte přílišnému teplu / Må ikke udsættes for varme / Vor Wärme schützen / Κρατήστε το μακριά από τη θερμότητα / Mantener alejado de fuentes de calor / Hoida eemal valgusest / Protéger de la chaleur / Držati dalje od izvora topline / Óvja a melegtől / Tenere Iontano dal calore / Салқын жерде сақта / 열을 피해야 함 / Laikyti atokiau nuo šilumos šaltinių / Sargāt no karstuma / Beschermen tegen warmte / Må ikke utsettes for varme / Przechowywać z dala od źródeł ciepła / Manter ao abrigo do calor / A se feri de căldură / Не нагревать / Uchovávajte mimo zdroja tepla / Držite dalje od toplote / Fār ej utsättas för värme / Isıdan uzak tutun / Берегти від дії тепла / 请远离热源



Cut / Срежете / Odstřihněte / Klip / Schneiden / Ко́итє / Cortar / Lõigata / Découper / Reži / Vágja ki / Tagliare / Кесініз / 잘라내기 / Kirpti / Nogriezt / Knippen / Kutt / Odciąć / Cortar / Decupaţi / Отрезать / Odstrihnite / Iseći / Klipp / Kesme / Розрізати / 剪下



Collection date / Дата на събиране / Datum odběru / Opsamlingsdato / Entnahmedatum / Ημερομηνία συλλογής / Fecha de recogida / Kogumiskuupäev / Date de prélèvement / Dani prikupljanja / Mintavétel dátuma / Data di raccolta / Жинаған тізбекүні / 수집 날짜 / Paėmimo data / Savākšanas datums / Verzameldatum / Dato prøvetaking / Data pobrania / Data de colheita / Data colectării / Дата сбора / Dátum odberu / Datum prikupljanja / Uppsamlingsdatum / Toplama tarihi / Дата забору / 采集日期



μL/test / μL/t



Кеер away from light / Пазете от светлина / Nevystavujte světlu / Må ikke udsættes for lys / Vor Licht schützen / Κρατήστε το μακριά από το φως / Mantener alejado de la luz / Hoida eemal valgusest / Conserver à l'abri de la lumière / Držati dalje od svjetla / Fény nem érheti / Tenere al riparo dalla luce / Қараңғыланған жерде ұста / 빚을 피해야 함 / Laikyti atokiau nuo šilumos šaltinių / Sargāt no gaismas / Niet blootstellen aan zonlicht / Må ikke utsettes for lys / Przechowywać z dala od źródeł światła / Manter ao abrigo da luz / Feriți de lumină / Хранить в темноте / Uchovávajte mimo dosahu svetla / Držite dalje od svetlosti / Fâr ej utsăttas för ljus / İşıktan uzak tutun / Берегти від дії світла / 请远离光线



Hydrogen gas generated / Образуван е водород газ / Možnost úniku plynného vodíku / Frembringer hydrogengas / Wasserstoffgas erzeugt / Δημιουργία αερίου υδρογόνου / Producción de gas de hidrógeno / Vesinikgaasi tekitatud / Produit de l'hydrogène gazeux / Sadrži hydrogen vodik / Hidrogén gázt fejleszt / Produzione di gas idrogeno / Газтектес сутегі пайда болды / 수소 가스 생성됨 / Išskiria vandenilio dujas / Rodas ūdenradis / Waterstofgas gegenereerd / Hydrogengass generert / Powoduje powstawanie wodoru / Produção de gás de hidrogénio / Generare gaz de hidrogen / Выделение водорода / Vyrobené použitím vodíka / Oslobada se vodonik / Generara vätgas / Açığa çıkan hidrojen gazı / Реакція з виділенням водню / 会产生氢气



Patient ID number / ИД номер на пациента / ID pacienta / Patientens ID-nummer / Patienten-ID / Αριθμός αναγνώρισης ασθενούς / Número de ID del paciente / Patsiendi ID / No d'identification du patient / Identifikacijski broj pacijenta / Beteg azonosító száma / Numero ID paziente / Пациенттің идентификациялық немірі / 환자 ID 번호 / Paciento identifikavimo numeris / Pacienta ID numurs / Identificatienummer van de patiënt / Pasientens ID-nummer / Numer ID pacienta / Número da ID do doente / Numěr ID pacient / Идентификационный номер пациента / Identifikačné číslo pacienta / ID broj pacijenta / Patientnummer / Hasta kimlik numarası / Ідентифікатор пацієнта / 患者标识号



Fragile, Handle with Care / Чупливо, Работете с необходимото внимание. / Křehké. Při manipulaci postupujte opatrně. / Forsiqtiq, kan gå i stykker. / Zerbrechlich, vorsichtiq handhaben. / Εύθραυστο. Χειριστείτε το με προσοχή. / Frágil. Manipular con cuidado. / Örn, käsitsege ettevaatlikult. / Fragile. Manipuler avec précaution. / Lomljivo, rukujte pažijivo. / Törékeny! Óvatosan kezelendő. / Fragile, maneggiare con cura. / Сынғыш, абайлап пайдаланыңыз. / 조심 깨지기 쉬운 처리 / Trapu, elkitės atsargiai. / Trausis; rīkoties uzmanīgi / Breekbaar, voorzichtiq behandelen. / Ømtáliq, håndter forsiktiq. / Krucha zawartość, przenosić ostrożnie. / Frágil, Manuseie com Cuidado. / Fragil, manipulati cu atenție. / Хрупкое! Обращаться с осторожностью. / Krehké, vyžaduje sa opatrná manipulácia. / Lomljivo - rukujte pažljivo. / Bräckligt. Hantera försiktigt. / Kolay Kırılır, Dikkatli Таşıyın. / Тендітна, звертатися з обережністю / 易碎, 小心轻放



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