

Louisiana Office of Public Health Laboratories						
Test Name	Measles Virus rRT-PCR					
PHL Location	Office of Public Health Laboratory Baton Rouge					
CPT Code	87798 - Infectious agent detection by nucleic acid (DNA or RNA), not otherwise specified; amplified probe technique, each organism					
Synonyms	Measles, Rubeola					
Brief Description of Test	<p>Prior authorization required. Contact Infectious Disease Epidemiology at 800-256-2748.</p> <p>The Measles Real-Time RT-PCR assay is used on the ABI 7500 Fast Dx Real-Time PCR Instrument. The primer and probe sets are designed for the detection of the N Gene mRNA of Measles and Human RNase P mRNA (a cellular reference gene).</p> <p>The Measles Real-Time RT-PCR assay consists of oligonucleotide primers and dual-labeled hydrolysis probes which may be used in real-time RT-PCR assays for the in vitro qualitative detection of measles virus RNA in respiratory or urine specimens from patients presenting with rash illness.</p> <p>The primer and probe sets in the assay are designed for the detection of the measles virus N gene and the human RNase P gene.</p>					
Possible Results	<table border="1"> <thead> <tr> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Positive – Measles RNA detected</td> </tr> <tr> <td>Indeterminate for Measles RNA. Consider collecting a serum specimen for Measles serology.</td> </tr> <tr> <td>Indeterminate for Measles RNA Consider collecting a second specimen for PCR and a serum specimen for Measles serology.</td> </tr> <tr> <td>Negative – Measles RNA not detected.</td> </tr> </tbody> </table>	Result	Positive – Measles RNA detected	Indeterminate for Measles RNA. Consider collecting a serum specimen for Measles serology.	Indeterminate for Measles RNA Consider collecting a second specimen for PCR and a serum specimen for Measles serology.	Negative – Measles RNA not detected.
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Negative – Measles RNA not detected.						
Reference Range	Negative					
Specimen Type	<ul style="list-style-type: none"> • Throat swab • Nasopharyngeal (NP) swab • For Epidemiology resulting only, Urine may be submitted with a patient matched swab 					

Specimen Container(s):	Viral Transport Media (VTM) tubes for swabs Screw-cap tube for urine	
Minimum volume accepted:	Request 1 mL 100 µL per extraction	
Collection Instructions	If	Then
	Nasopharyngeal or Throat swab	Swab should be placed and mixed well VTM tube immediately after collection. Swab specimens should be collected only on swabs with a synthetic tip (such as polyester or Dacron) and an aluminum or plastic shaft.
	Urine samples	About 10-50 mL of urine should be collected in a sterile container.
<p>Specimen Container – VTM or Screw Cap Aliquot</p> <p>Label specimen with Patient Name and a 2nd unique identifier such as a chart number or medical record number. DOB is not considered unique.</p> <p>Complete a Lab Form 96 to accompany the sample. Lab submission form must be thoroughly completed with patient's first and last name, 2nd patient identifier, gender, date of birth, date of collection, time of collection, test requested, and submitter's name, address, and contact number.</p> <p>The same two unique identifiers MUST be recorded on the tube AND the Lab 96 form.</p> <p>Transport specimen to laboratory as soon as possible after collection. Keep submission forms insulated from specimens.</p>		
Storage and Transport Instructions	2-8°C for 1 day	
Causes for Rejection	<ul style="list-style-type: none"> • Received outside acceptable transport conditions • Incorrect source • Incorrect labeling • Expired collection tubes • Not approved for testing by Infectious Disease Epidemiology 	
Limitations of the Procedure	This assay is very dependent on the timing of specimen collection. Specimens collected within 3 days of rash onset will yield the best results for PCR. Detection of measles RNA by RT-PCR may be successful as late as 10-14 days post rash onset.	
Interfering Substances	Synthetic swabs are recommended over cotton.	
References	CDC Procedure – Real-time (TaqMan® RT-PCR Assays for the Detection of Measles Virus (MeV) N Gene mRNA and Human RNase P mRNA (a cellular reference gene) using the ABI 7500 Real-Time Thermocycler (PAR 7/20/11)	

Additional Information	Before shipping, notify the Infectious Disease Epidemiology or the Immunization Program
Release Date	08/16/2018
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