

MEDB 2.3 Tuberculosis

3.2 Medical Requirements Overview

TABLE 3.2: MEDICAL REQUIREMENTS OVERVIEW

MEDB# and Title:	MEDB 2.3 Tuberculosis
Sponsor:	Medical Operations
Discipline:	Immunology/Infectious Disease
Category:	Medical Requirements (MR)
References:	Medical Evaluation Documents (MED) Volume B, Section 2.3
Purpose/Objectives:	Crewmembers require TB screening to rule out active or untreated latent TB. Failure to do so may result in an individual developing active TB during the mission and potentially infecting other crewmembers.
Measurement Parameters:	Tuberculin skin test or a Quantiferon-Gold (QFT-GIT) assay
Deliverables:	Pre-flight medical assessment test (MAT) report of results to Flight Surgeon
Flight Duration:	≥ 30 days
Number of Flights:	All
Number and Type of Crew Members Required:	All primary and backup ISS crewmembers.
Other Flight Characteristics:	N/A

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3.3 Preflight Training - None

3.4 Preflight Activities

TABLE 3.4: PREFLIGHT ACTIVITIES

Preflight Activity	Description:	On assignment to an ISS mission, crewmembers will undergo screening for tuberculosis with a tuberculin skin test or a Quantiferon-Gold (QFT-GIT) assay. If tuberculin skin testing is positive or if previous TST was positive, the crewmember will have a QFT-GIT. If QFT-GIT test is positive, a repeat test should be performed with a repeat sample collection. A T-SPOT.TB test may be used to validate results of a QuantiFERON test. Crewmembers who are found to be TST and QFT-G positive will require a full course of CDC approved treatment for latent tuberculosis infection (LTBI). Crewmembers previously diagnosed with LTBI and appropriately treated will require a chest x-ray to rule out active TB, but will not require TST or QFT-G.			
	Schedule:	Duration:	Schedule:	Flexibility:	Personnel Required:
	Tuberculin skin test 15 min	AME L- 21/18 m AME L- 9/6 m	If needed, as close in to schedule as possible	Crewmembers/Flight Medicine Clinic Personnel	
Ground Support Requirements Hardware/Software	Preflight Hardware:	Preflight Software:		Test Location:	
	QuantiFERON-TB (Standard) Gold In-Tube Collection Kit (if indicated)	N/A		U.S.	
Testing Facilities	Minimum Room Dimensions:	Number of Electrical Outlets:	Temperature Requirements:	Special Lighting:	
	8' x 10' (typical exam room)	N/A	Ambient	N/A	
	Hot or Cold Running Water:	Privacy Requirements:	Vibration/Acoustic Isolation:	Other:	
	Sink with hot and cold water to wash hands	Private room free from distractions.	N/A	1 table, 1 chair	
Constraints/Special Requirements:	<ul style="list-style-type: none"> • Tuberculin Skin Test must be read 48-72 hours after application at FMC • QuantiFERON samples must be incubated at 37°C for 16-24 hours (within 16 hours of collection) and then centrifuged after incubation before transport to reference laboratory. • QuantiFERON samples must be kept at 2-8°C during transport.. 				
Launch Delay Requirements:	N/A				
Notes:					
Data Delivery	A final report will be transferred to the EMR 24-72 hours following data receipt.				

3.5 In-Flight Activities - None

3.6 Postflight Activities – None

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3.7 Summary Schedule

TABLE 3.7: SUMMARY SCHEDULE

ACTIVITY	DURATION	SCHEDULE	FLEXIBILITY	BLOOD VOLUME	PERSONNEL REQUIRED	CONSTRAINTS
Preflight Training - none						
Preflight						
Tuberculin skin test or a Quantiferon-Gold (QFT-GIT) assay.	15 min	AME L- 21/18 m AME L- 9/6 m	N/A	N/A	Crewmember/Flight Medicine Clinic Personnel or Crewmember/Lab Personnel	Tuberculin Skin Test must be read 48-72 hours after application at FMC QuantiFERON samples must be incubated at 37°C for 16-24 hours (within 16 hours of collection) and then centrifuged after incubation before transport to reference laboratory. QuantiFERON samples must be kept at 2-8°C during transport.
In-Flight Activity - None						
Postflight - None						
Postflight Debrief – N/A						