

Overview

Useful For

Diagnosis of *Pneumocystis jiroveci* pneumonia

Reflex Tests

Test ID	Reporting Name	Available Separately	Always Performed
TISSR	Tissue Processing	No, (Bill Only)	No

Testing Algorithm

When this test is ordered, the reflex test may be performed and charged.

Method Name

Calcofluor White Fluorochrome Stain

NY State Available

Yes

Specimen

Specimen Type

Varies

Specimen Required

Specimen source is required.

Submit only 1 of the following specimens:

Preferred:

Specimen Type: Bronchoalveolar lavage

Container/Tube: Sterile container

Specimen Volume: Minimum of 2 mL

Specimen Type: Lung or open lung tissue

Container/Tube: Sterile container

Specimen Volume: Minimum of a rice size piece

Collection Instructions:

Tissue should be placed in small amount of sterile saline or sterile water.

Alternate:

Specimen Type: Bronchial washing, sputum, or tracheal secretion

Container/Tube: Sterile container

Specimen Volume: Minimum of 1 mL

Forms

If not ordering electronically, complete, print, and send a [Microbiology Test Request](#) (T244) with the specimen.

Specimen Minimum Volume

Varies*

Brochoalveolar lavage: 2mL/Sputum, bronchial washings, and tracheal secretions: 1 mL/Lung tissue and open lung biopsy: rice-sized piece of tissue

Reject Due To

Tissue/Swabs	Fixed tissue Viral transport media (including but not limited to M4, M5, BD viral transport media, thioglycolate broth) Wood shaft or charcoal swab
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Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

Clinical and Interpretive
Clinical Information

Pneumocystis jiroveci is one of the major microbial pathogens associated with opportunistic pulmonary infections in patients receiving immunosuppressive therapy or with immune deficiencies. Presently, the most common means to diagnose *Pneumocystis jiroveci* infection is by microscopic detection of the organisms in specimens such as bronchoalveolar lavage, open lung biopsy tissue, induced sputum and transtracheal aspirate.

Reference Values

Negative

Interpretation

Negative: no cysts observed

Positive: cysts present

Cautions

Only the cyst stage of *Pneumocystis jiroveci* stains by this method

Clinical Reference

1. Olsson M, Elvin K, Linder E, et al: *Pneumocystis carinii* is still a dangerous opportunist. The infection is continuously a threat to immunocompromised patients. *Lakartidningen* 1999 Jan27;96(4):328-331
2. Shelhamer JH, Gill VJ, Quinn TC, et al: The laboratory evaluation of opportunistic pulmonary infections. *Ann Intern Med* 1996 Mar 15;124(6):585-599
3. Kim YK, Parulekar S, Yu PK, et al: Evaluation of calcofluor white stain for detection of *Pneumocystis carinii*. *Diagn Microbiol Infect Dis* 1990;13:307-310
4. Baselski VS, Robison MK, Pifer LW, Woods DR: Rapid detection of *Pneumocystis carinii* in bronchoalveolar lavage samples by using Cellufluor staining. *J Clin Microbiol* 1990;28:393-394

Performance

Method Description

A rapid Calcofluor white stain is used to detect the cysts of *Pneumocystis jiroveci* (formerly *carinii*). Calcofluor white is a nonspecific fluorochrome stain that binds with beta-configuration polysaccharides such as cellulose and chitin. Only the cyst stage of *Pneumocystis jiroveci* (formerly *carinii*) stains by this method. Both the 2 internal structures and cyst wall must be seen before calling the slide positive for *Pneumocystis jiroveci*.

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

1 day

Specimen Retention Time

Raw specimen 2-14 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

87206

87176-Tissue processing (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
SPN	Pneumocystis smear	48055-8

Result ID	Test Result Name	Result LOINC Value
SPN	Pneumocystis smear	48055-8