

**NEW YORK STATE OFFICE OF TEMPORARY AND DISABILITY ASSISTANCE
Division of Disability Determinations**

**REPORTING REQUIREMENTS FOR TESTING FOR
DIFFUSING CAPACITY FOR CARBON MONOXIDE**

1. General:

- a. Individual should be seated and relaxed.
- b. The report must include a statement of the individual's ability to follow directions and perform the test properly.

2. Mixture:

- a. At sea level, the inspired gas mixture should contain:
 - 0.3% carbon monoxide (CO)
 - 10.0% helium (He)
 - 21.0% oxygen (O₂)
 - and the balance nitrogen.
- b. Above sea level, oxygen concentration may be raised to provide inspired oxygen tension of approximately 150mm Hg. Sea level mixture may be employed at altitude and measured DLCO corrected for ambient barometric pressure.
- c. Helium may be replaced by another inert gas at appropriate concentration.

3. Technique:

- a. Measure by single breath technique.
- b. Inspired volume (VI) during DLCO maneuver should be at least 90% of previously determined vital capacity (VC).
- c. The inspiratory time for the VI should be less than 2 seconds and the breath-hold time should be 9-11 seconds.
- d. Washout volume should be 0.75 – 1.00L, unless VC is less than 2L. In this case, washout volume may be reduced to 0.50L; any such change should be noted in the report.
- e. Alveolar sample volume should be between 0.5 – 1.0L and be collected in less than 3 seconds.
- f. **Two acceptable** measurements should be performed.
- g. At least 4 minutes should be allowed for gas washout between repeat studies.

(continued)

4. Calculations to be Reported:

- a. Report DCLO in units ml CO, standard temperature, pressure, dry (STPD)/min/mmHg uncorrected for hemoglobin concentration.
- b. Report DLCO based on single-breath alveolar volume determination.
- c. The DLCO value reported should be the mean of **at least two acceptable** measurements.
 - The two tests should be within 10% of each other, **or** 3ml CO (STPD)/min/mmHg, whichever is larger.
 - The percent difference should be calculated as: $100 \times (\text{test 1} - \text{test 2}) / \text{average DLCO}$.
- d. Abnormal hemoglobin or hematocrit values, and/or carboxyhemoglobin levels should be reported along with diffusing capacity.
- e. Provide the percentage of concentrations of inspired oxygen (O₂), inspired and expired carbon monoxide (CO) and helium (He) for each of the maneuvers; report the algorithm used to calculate the test results.

5. Tracings:

- a. Report should include tracings of VI, breath-hold maneuver, and VE appropriately labeled with the name of the individual and date.
- b. Time axis should be at least 20mm/sec and volume axis at least 10mm/L.

(continued)

TEST RESULTS

Claimant: _____ **SSN:** _____ **Date:** _____

Vital Capacity: _____

Blood Tests: _____ (specify test(s) administered and results)
 Is this considered a normal value? [] Yes [] No

Claimant was seated and relaxed and was able to follow instructions and perform the test properly. [] Yes [] No

If no, please indicate reasons: _____

	O2	CO		He	
Test 1	Inspired	Inspired	Expired	Inspired	Expired
ml CO (STPD)/min/nmHg					
% concentration					
Test 2					
ml CO (STPD)/min/nmHg					
% concentration					
DLCO					

The algorithm used to calculate the results:

The above test was performed and reported according to the criteria specified above.

Signature:	Date:
Printed name & title:	