

specified in Tables 5, 6, and 7 of this subpart.

(2) Three canisters will be removed from containers and tested as received from the applicant.

(3) Two canisters, other than those described in paragraph (a)(2) of this section, will be equilibrated at room temperature by passing 25 percent relative humidity air through them at 64 liters per minute for 6 hours.

(4) Two canisters, other than those described in paragraphs (a) (2) and (3) of this section, will be equilibrated at room temperature by passing 85 percent relative humidity air through them at 64 liters per minute for 6 hours.

(5) The equilibrated canisters will be resealed, kept in an upright position at

room temperature, and tested within 18 hours.

(b) Front-mounted and back-mounted gas mask canisters will be tested and shall meet the minimum requirements set forth in Table 5 of this subpart.

(c)(1) Front-mounted, and back-mounted, and chin-style canisters designated as providing respiratory protection against gases, ammonia, organic vapors, carbon monoxide and particulate contaminants shall have a window or other indicator to warn the gas mask wearer when the canister will no longer satisfactorily remove carbon monoxide from the inhaled air.

(2) Other types of front- and back-mounted canisters may also be

equipped with a window or other indicator to warn of imminent leakage of other gases or vapors.

(3) The window indicator canisters will be tested as regular canisters, but shall show a satisfactory indicator change or other warning before the allowable canister penetration has occurred.

(d) Chin-style gas mask canisters shall meet the minimum requirements set forth in Table 6 of this subpart.

(e) Escape gas mask canisters shall meet the minimum requirements set forth in Table 7 of this subpart.

#### Tables to Subpart I of Part 84

TABLE 5.—CANISTER BENCH TESTS AND REQUIREMENTS FOR FRONT-MOUNTED AND BACK-MOUNTED GAS MASK CANISTERS

[42 CFR part 84, subpart I]

| Canister type                                     | Test condition | Test atmosphere  |                                     |                               | Number of tests | Maximum allowable penetratin (parts per million) | Minimum service life (minutes) <sup>1</sup> |
|---|----------------|------------------|-------------------------------------|-------------------------------|-----------------|--|---|
|   |                | Gas or vapor     | Concentra- tion (parts per million) | Flow rate (liters per minute) |                 |  |   |
| Acid gas .....                                    | As received    | SO <sub>2</sub>  | 20,000                              | 64                            | 3               | 5  | 12  |
|   | Equilibrated   | Cl <sub>2</sub>  | 20,000                              | 64                            | 3               | 5  | 12  |
|   |                | SO <sub>2</sub>  | 20,000                              | 32                            | 4               | 5  | 12  |
|   |                | Cl <sub>2</sub>  | 20,000                              | 32                            | 4               | 5  | 12  |
| Organic vapor .....                               | As received    | CCl <sub>4</sub> | 20,000                              | 64                            | 3               | 5  | 12  |
|   | Equilibrated   | CCl <sub>4</sub> | 20,000                              | 32                            | 4               | 5  | 12  |
| Ammonia .....                                     | As received    | NH <sub>3</sub>  | 30,000                              | 64                            | 3               | 50   | 12  |
|   | Equilibrated   | NH <sub>3</sub>  | 30,000                              | 32                            | 4               | 50   | 12  |
| Carbon monoxide .....                             | As received    | CO               | 20,000                              | <sup>4</sup> 64               | 2               | ( <sup>3</sup> )                                 | 60  |
|   | Equilibrated   | CO               | 5,000                               | <sup>2</sup> 32               | 3               | ( <sup>3</sup> )                                 | 60  |
|   |                | CO               | 3,000                               | <sup>2</sup> 32               | 3               | ( <sup>3</sup> )                                 | 60  |
| Combination of 2 or 3 of above types <sup>5</sup> |                |                  |                                     |                               |                 |  |   |
| Combination of all above types <sup>6</sup>       |                |                  |                                     |                               |                 |  |   |

<sup>1</sup> Minimum life will be determined at the indicated penetration.

<sup>2</sup> Relative humidity of test atmosphere will be 95±3pct; temperature of test atmosphere will be 25±2.5° C.

<sup>3</sup> Maximum allowable CO penetration will be 385 cm<sup>3</sup> during the minimum life. The penetration shall not exceed 500 p/m during this time.

<sup>4</sup> Relative humidity of test atmosphere will be 95±3pct; temperature of test atmosphere entering the test fixture will be 0±2.5°C – 0°C.

<sup>5</sup> Test conditions and requirements will be applicable as shown in this table.

<sup>6</sup> Test conditions and requirements will be applicable as shown in this table, except the minimum service lives for acid gas, organic vapor, and ammonia will be 6 min instead of 12 min.

TABLE 6.—Canister Bench Tests and Requirements for Chin-Style Gas Mask Canisters

[42 CFR part 84, subpart I]

| Canister type         | Test condition              | Test atmosphere  |                                   |                               | Number of tests | Maximum allowable penetration (parts per million) | Minimum service life (minutes) <sup>1</sup> |
|-----------------------|-----------------------------|------------------|-----------------------------------|-------------------------------|-----------------|---|---|
|                       |                             | Gas or vapor     | Concentration (parts per million) | Flow rate (liters per minute) |                 |   |   |
| Acid gas .....        | As received<br>Equilibrated | SO <sub>2</sub>  | 50,000                            | 64                            | 3               | 5   | 12  |
|                       |                             | Cl <sub>2</sub>  | 5,000                             | 64                            | 3               | 5   | 12  |
|                       |                             | SO <sub>2</sub>  | 5,000                             | 32                            | 4               | 5   | 12  |
|                       |                             | Cl <sub>2</sub>  | 5,000                             | 32                            | 4               | 5   | 12  |
| Organic vapor .....   | As received<br>Equilibrated | CCl <sub>4</sub> | 5,000                             | 64                            | 3               | 5   | 12  |
|                       |                             | CCl <sub>4</sub> | 5,000                             | 32                            | 4               | 5   | 12  |
| Ammonia .....         | As received<br>Equilibrated | NH <sub>3</sub>  | 5,000                             | 64                            | 3               | 50  | 12  |
|                       |                             | NH <sub>3</sub>  | 5,000                             | 32                            | 4               | 50  | 12  |
| Carbon monoxide ..... | As received                 | CO               | 20,000                            | <sup>2</sup> 64               | 2               | ( <sup>3</sup> )                                  | 60  |
|                       |                             | CO               | 5,000                             | <sup>4</sup> 32               | 3               | ( <sup>3</sup> )                                  | 60  |