Claims:

1. A method of processing a gas to remove hydrogen peroxide from the gas, the method comprising:

providing the gas that contains hydrogen peroxide,

contacting the gas with carbon adsorbent that includes caustic agent and reducing agent, to reduce a concentration of the hydrogen peroxide in the gas.

2. The method of claim 1, wherein the caustic agent comprises potassium hydroxide, and the reducing agent comprises potassium iodide.

3. The method of claim 1 or 2, wherein the adsorbent contains up to 5 weight percent caustic agent based on weight carbon adsorbent.

4. The method of claim 1 or 2, wherein the adsorbent contains from up to 5 weight percent reducing agent based on weight carbon adsorbent.

5. The method of claim 1 or 2, comprising reducing the concentration of hydrogen peroxide by at least 50 percent.

6. The method of claim 1 or 2, wherein the gas is exhaust air of a sterilization chamber attached to the inlet.

7. The method of claim 6, wherein the sterilization chamber performs a sterilization method that comprises:

placing an item to be sterilized in the sterilization chamber,

closing the sterilization chamber,

dispensing hydrogen peroxide into the sterilization chamber.

8. The method of claim 7, wherein the item comprises cannabis.

9. The method of claim 7, wherein the item is a medical device or a medical instrument.

10. The method of claim 1 or 2, wherein the gas is static air at an interior of a hospital room, the method comprising:

dispensing hydrogen peroxide vapor into an air atmosphere within the room,

allowing the hydrogen peroxide to contact surfaces in the room to sterilize the surfaces, and

contacting the air atmosphere with the carbon adsorbent to allow the air atmosphere to contact the carbon adsorbent and reduce a concentration of hydrogen peroxide in the air atmosphere.

11. A system for processing a gas that contains hydrogen peroxide to remove hydrogen peroxide from the gas, the system comprising:

a housing that includes an inlet, an outlet, and an interior between the inlet and the outlet,

at the interior, carbon adsorbent that comprises porous carbon adsorbent base that includes caustic agent and reducing agent, between the inlet and the outlet.

12. The system of claim 11, wherein the caustic agent comprises potassium hydroxide and the reducing agent comprises potassium iodide.

13. The system of claim 11 or 12, wherein the adsorbent contains up to 5 weight percent caustic agent based on weight carbon adsorbent.

14. The system of claim 11 or 12, wherein the adsorbent contains from up to 5 weight percent reducing agent based on weight carbon adsorbent.

15. The system of claim 11 or 12, comprising a pleated filter membrane that contains the carbon adsorbent.

16. The system of claim 11 or 12, comprising a sterilization apparatus attached to the inlet, the sterilization apparatus adapted to produce exhaust air that contains hydrogen peroxide.