



# Gas Detection For Life

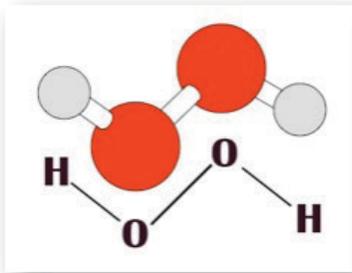
## Application Brief

May 26, 2020

### Monitoring a Hydrogen Peroxide Sterilization Process

#### H2O2 Sterilization Applications

Hydrogen Peroxide is widely utilized as an antiseptic solution to disinfect areas and equipment. With the COVID-19 pandemic there has been an increase in disinfecting or sterilizing processes worldwide, and hydrogen peroxide has become more widely used for this. Most of these processes include conditioning an area or an item with a desired concentration to perform the sterilization phase. Once the sterilization phase is complete, there is typically an aeration phase where the hydrogen peroxide vapor is removed and the area is verified to be safe for people to enter. A hydrogen peroxide gas monitor is an ideal way to verify if it is safe for people to be in or around the disinfected area.



#### What is Hydrogen Peroxide?

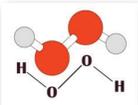
Hydrogen peroxide is a colorless liquid at room temperature with a bitter taste. Small amounts of gaseous hydrogen peroxide occur naturally in the air. Hydrogen peroxide is unstable, decomposing readily to oxygen and water with release of heat. Although nonflammable, it is a powerful oxidizing agent that can cause spontaneous combustion when it comes in contact with organic material. Hydrogen peroxide is found in many households at low concentrations (3-9%) for medicinal applications and as a bleach for hair and clothing. In other industries, hydrogen peroxide is used in higher concentrations as a bleach for textiles and paper, as a rocket fuel component, and for producing foam rubber and organic chemicals.

#### Exposure Symptoms

Irritation of eyes, nose & throat; corneal ulcer; skin redness, blistered skin.

#### Respirator Recommendations

Begin at 10ppm

Exposure Limits	NIOSH   ACHIH   OSHA	
	8 Hours	IDLH
Hydrogen Peroxide H2O2 	1 ppm	75 ppm

# Monitoring a Hydrogen Peroxide Sterilization Process

## RKI Solutions

RKI offers portable and fixed system solutions for hydrogen peroxide depending on the need. For sampling areas and spot checking locations for H<sub>2</sub>O<sub>2</sub> levels, RKI offers two portable options.



### SC-8000

The SC-8000 is a single gas portable monitor with an internal sampling pump and a range of 0 – 3.00 ppm and 0.02 resolution.



### EAGLE

The EAGLE is a 6-channel sample-drawing portable monitor that can be configured to detect hydrogen peroxide and additional gases if needed. The H<sub>2</sub>O<sub>2</sub> range on the EAGLE is 0 – 3 ppm and 0.01 resolution.



### GD-70D

The GD-70D smart transmitter has the ability to continuously monitor for hydrogen peroxide as a fixed system. It has alarm indications and alarm relays that can be used for ventilation or other automated responses. The range for H<sub>2</sub>O<sub>2</sub> on the GD-70D is 0 – 3.00 ppm and 0.02 resolution.

# Monitoring a Hydrogen Peroxide Sterilization Process

## Ordering Information

Part#	Description	Group	Subgroup	List Price
73-0053-H2O2	SC-8000 toxic gas detector, Hydrogen Peroxide (H2O2), 0 - 3.00 ppm, Li-ion type	Portables	SC-8000	2,455.00
72-5124RK	EAGLE for Hydrogen Peroxide (H2O2), 0 - 3.0 ppm, (no probe)	Portables	Eagle	2,350.00
GD-70D-H2O2	Smart transmitter, GD-70D for Hydrogen Peroxide, 0 - 3.00 ppm	Fixed Head	GD-70D	1,495.00

## More Information

[https://www.rkiinstruments.com/product/hydrogen\\_peroxide/](https://www.rkiinstruments.com/product/hydrogen_peroxide/)

**References:** The National Institute for Occupational Safety and Health (NIOSH); Agency for Toxic Substances and Disease Registry

## Resources

[SC-8000 Datasheet](#)

[SC-8000 Price List](#)

[EAGLE 1 Datasheet](#)

[EAGLE 1 Price List](#)

[GD-70D Datasheet](#)

[GD-70D Price List](#)