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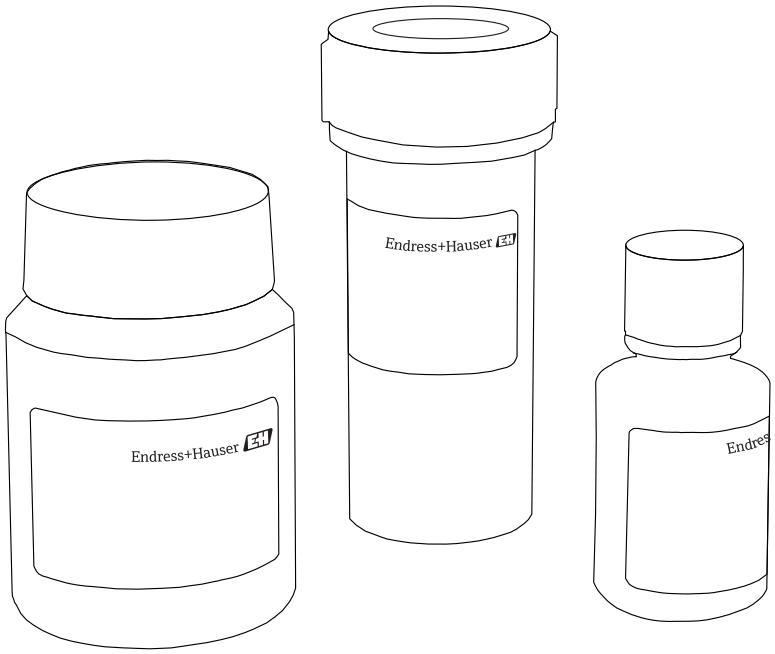
Special Documentation
COY8

Use of the zero-point gel



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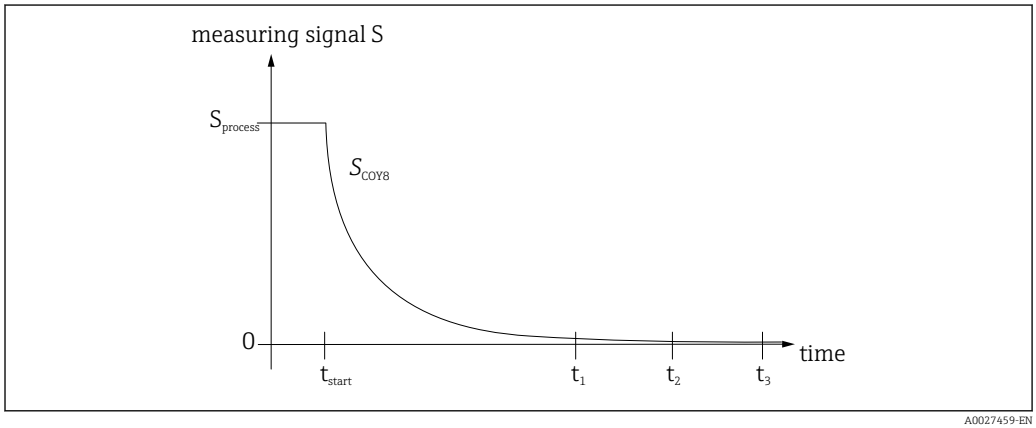
1 Usage

The zero-point gel is used to check the quality of the zero point of an oxygen and disinfection sensor. The oxygen-depleting and reducing zero-point gel enables straightforward and reliable verification, calibration and adjustment of the zero point of oxygen and disinfection sensors.

2 Operating principle

When the sensor is operated in the process, such as air or the medium, for example, it returns the corresponding $S_{process}$ measuring signal. After the sensor has been inserted into the zero-point gel, the signal S_{COY8} starts to drop from the t_{Start} point. The value approaches the zero point:



1 *Sensor signal*

Sensor verification, calibration and adjustment meet the increasingly strict requirements regarding the quality of the zero point:

t_1: Verification of sensor signal
The residual signal is in the range of < 5 % of $S_{process}$

t_2: Calibration of sensor signal
The residual signal is in the range of < 2 % of $S_{process}$

t_3: Adjustment of sensor signal
The residual signal is in the range of < 1 % of $S_{process}$

The sensor signal should be in a suitably stable and steady state.

The percentages shown are drawn from practical experience and can vary based on customer or application requirements.

	Verification	Calibration	Adjustment
Time to reach residual signal	$t_1 \geq 1$ min	$t_2 \geq 30$ min	$t_3 \geq 60$ min
Rate of change of $S_{process}$ measuring signal	high	average	low
Residual signal	< 5 % of $S_{process}$ measuring signal	< 2 % of $S_{process}$ measuring signal	< 1 % of $S_{process}$ measuring signal
Definition	Checking the general function of the measuring point.	Comparing the actual value to the expected value.	Adjusting the zero point after a sufficiently long stabilization period.

3 Preparation

Prepare the following materials and tools:
- Zero-point gel COY8
- Cleaned sensor
- Stand
- Transmitter, e.g. CM44, or in the case of oxygen sensors: notebook with Memobase
- Running water
- Cloth for drying

Once the aluminum pouch has been opened, the gel must be used within 24 hours.

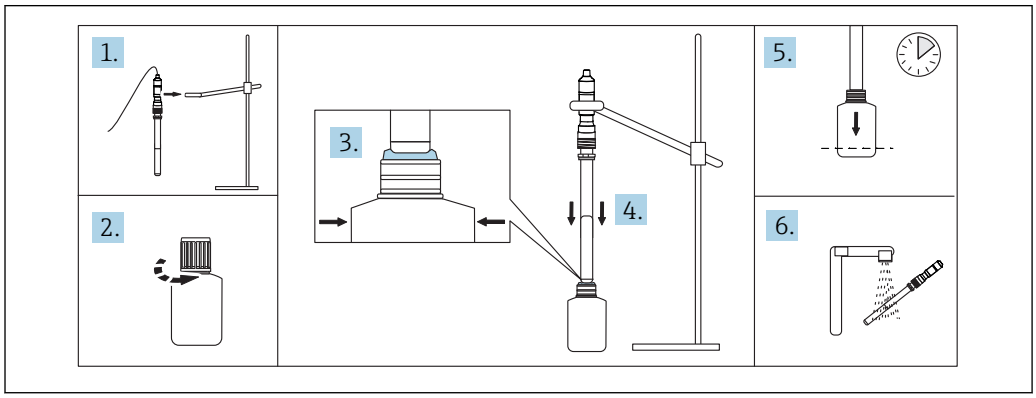
4 Setup

NOTICE

In the case of oxygen sensors, air entering the gel results in a time delay in approaching the zero point. The reliability of the time information up to the point when the residual signal in question is set, is no longer guaranteed.

- ▶ Coat the surface of the sensor completely with the zero-point gel.
- ▶ The sensor must remain in contact with the gel.

Using oxygen sensors



2 *Using the zero-point gel*

1. Secure the sensor to the stand.
2. Open the vial containing the zero-point gel.
3. Carefully squeeze the gel out of the opening and coat the surface of the sensor completely with the gel.
4. Slowly reduce the pressure on the vial while inserting the sensor into the vial until it is positioned approx. 10 to 15 mm above the base of the vial. The zero-point gel and the surface of the sensor must remain in constant contact during this process.
   ↳ The sensor values approach the zero point.
5. Verify, calibrate or adjust the sensor. To do so, use the time data from the table until the residual signal in question has been set→ 2.
6. Clean the sensor in running water for approx. 30 seconds and then dry it off.
   ↳ The sensor is now ready for use.

Using disinfection sensors

1. Clean the sensor with water and dry it.
2. Open the vial containing the zero-point gel.
3. Insert the sensor into the vial until it touches the base of the vial.
   ↳ The sensor values approach the zero point.
4. Verify, calibrate or adjust the sensor. To do so, use the time data from the table until the residual signal in question has been set→ 2.
5. Clean the sensor in running water for approx. 30 seconds and then dry it off.
   ↳ The sensor is now ready for use.

5 Disposal

The zero-point gel can be disposed of as regular household waste in accordance with the official regulations.

6 Safety

This product is not classified as a hazardous material. Additional information can be found on the MSDS safety data sheet. According to our experience and the information available to us, this product is not damaging to health if used correctly and in the designated manner.

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