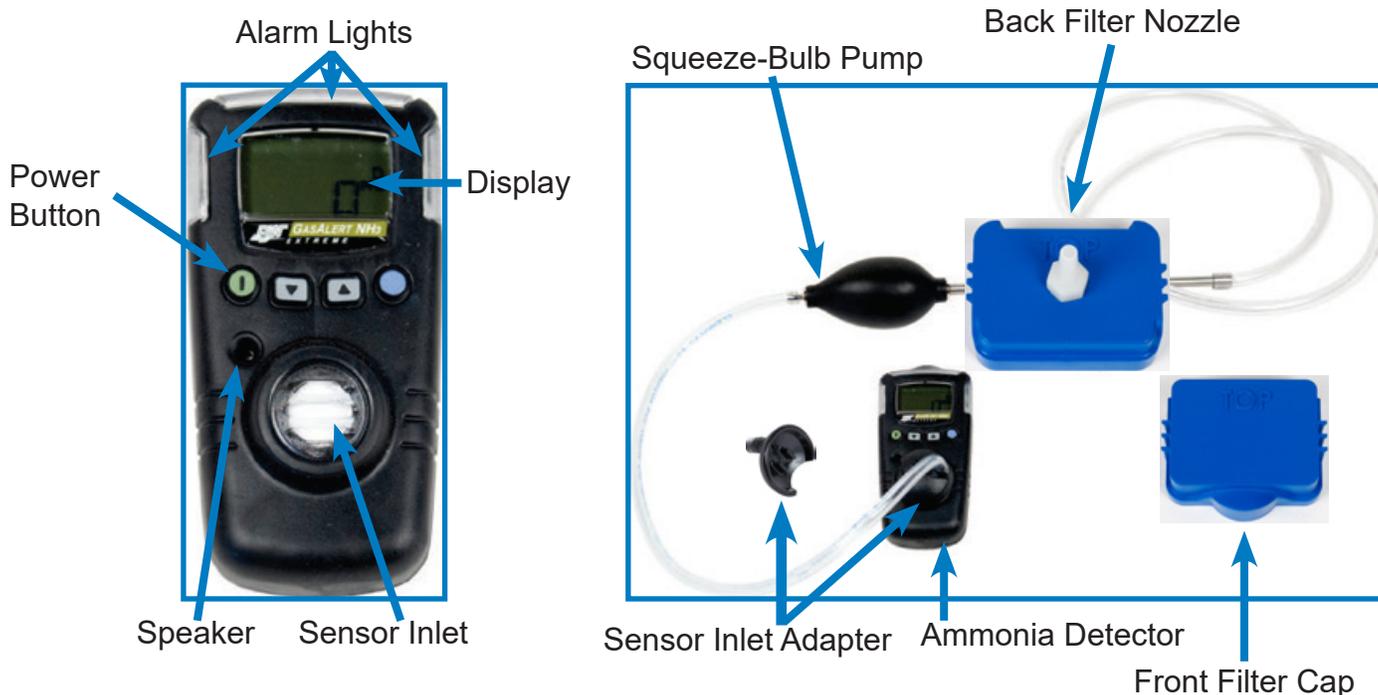


Optimice SOP - Ammonia Sampling Kit

Introduction

The Animal Care Systems ammonia sampling kit contains an electronic ammonia detector, a test bottle of ammonia solution, a squeeze-bulb pump, and the Optimice filter nozzle-cap set. The pump extracts air from the cage and pipes it into the detector for measurement.

The ammonia detector's calibration is valid for 180 days from the shipment date. Contact Animal Care Systems for information about recommended calibration providers.



Detector Preparation

1. Press and release the green button on the left to turn on the detector. The startup process includes brief alarm beeping.
2. Open the included bottle of ammonia, and position the detector's sensor inlet above the open bottle until 10 to 15 parts per million. Readings above 25 ppm will trigger the alarm, which will stop below 25 ppm.

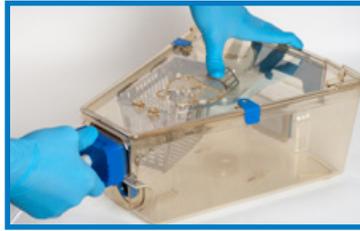


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Connecting Detector to Cage

Animal Care Systems recommends taking samples from the rear inlet because that is the air direction during normal operation and recommends keeping the lid closed for **at least 30 minutes** prior to sampling.

1. Connect the squeeze-bulb pump to the rear inlet nozzle using the longer, thicker tubing.
2. Snap the sensor inlet adapter onto the sensor inlet of the detector.
3. Remove an Optimice cage from a rack, and place it on a stable surface.
4. Brace the front of the cage, and insert the rear filter nozzle onto the rear filter inlet. Ensure the fit is tight and that there are no obvious gaps. Attach the front filter cap, if desired.



Taking Samples

Squeeze slowly and steadily for between 30 to 45 seconds until the detector's value is stable. Aim for each squeeze and release to take 1 second apiece. If the value is zero after 45 seconds, the ammonia concentration within the cage is below 4 ppm, which is the minimum detection threshold.

The margin of error equation is $\pm(1 + 5\% \text{ of total value})$.

Example: If the detector displayed 10 ppm: $1 + (0.05 \times 10) = 1 + 0.5 = \pm 1.5 \text{ ppm}$.



Nozzle Removal

1. Brace the cage with one hand.
2. Rock the nozzle from side to side while pulling away from the cage.

