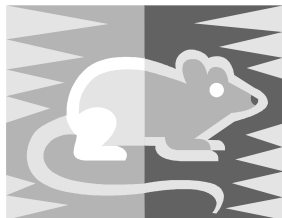


3. How Much Ammonia is Too Much? Part 1

There are a lot of guidelines for the amount of ammonia that people can safely be exposed to.

These guidelines are educated guesses - not absolute facts.



Guidelines for safe ammonia exposure are based on animal studies, accident investigations, and a few human studies. Each of these types of studies gives us some good information, but also leaves us with some unanswered questions.

For example, a study that exposed pigs continuously to 103 to 145 ppm ammonia found that the pigs stopped eating as much and lost weight. One organization interpreted this to mean that long term exposure to ammonia caused damage to the pigs' systems. OSHA interpreted the study differently, believing instead these pigs stopped eating because they were experiencing too much respiratory and eye irritation to be interested in their food. These different interpretations influenced the guidelines set by the two organizations.



Different agencies disagree on the effect of long-term, low-level exposure to anhydrous ammonia. OSHA says there are no long term effects from exposure to ammonia, but the ATSDR says that repeated exposure to ammonia may cause chronic irritation of the respiratory tract. Chronic cough, asthma and lung fibrosis have been reported. Chronic irritation of the eye membranes and dermatitis have also been reported.

Discussion Question:

What are some things that could make data from accident investigations or human studies difficult to interpret?

You have seen two examples of different views on the safety of ammonia. Which approach should the union take?