

Pharmacies

Perfect Temperature / Perfect Humidity

The **HumidiFlex System (IAHS): The Future of Commercial Humidity Control**

Say goodbye to overpriced dehumidifiers. The **HumidiFlex System** is a breakthrough innovation that transforms standard off-the-shelf air conditioners into **high-performance, precision-controlled dehumidifiers**—without the premium price tag.

- **Cost-Efficient:** Achieve superior humidity control at a fraction of the cost of traditional systems.
- **Advanced Control:** Enjoy robust, customizable humidity management tailored to your commercial environment.



Controlling humidity in pharmacies is crucial for several reasons, primarily centered around maintaining integrity, efficacy, and safety of medications.

Here's why it's so important:

Preventing Medication Degradation

- **Chemical Stability:** Many active pharmaceutical ingredients (APIs) are sensitive to moisture. High humidity can accelerate hydrolysis, a chemical reaction with water that breaks down APIs, reducing their potency and potentially forming harmful byproducts. Conversely, very low humidity can cause some medications, especially powders and tablets, to desiccate (dry out), altering their physical properties and effectiveness.
- **Physical Stability:** Humidity can affect the physical form of medications. For instance, tablets might become sticky, crumbled, or dissolve prematurely in high humidity. Powder can clump, making accurate dosing difficult.

Ensuring Potency and Effectiveness

When medications degrade or their physical properties change due to humidity fluctuations, their ability to treat conditions is compromised. This can lead to:

- Reduced effectiveness: The medication may not work as intended.
- Unpredictable therapeutic outcomes: Patients might not receive the correct dose or effect.
- Increased risk of treatment failure: Especially critical for life-saving medications.

Preventing Microbial Growth

High humidity creates an environment where bacteria, mold, and fungi can thrive. These microorganisms can contaminate medications, posing a significant health risk to patients.

Maintaining Packaging Integrity

Humidity can also affect pharmaceutical packaging. Some packaging materials are not entirely moisture-proof and can allow moisture to permeate over time, compromising the protection offered to the drug. This can lead to the degradation of both the medication and its packaging.

Regulatory Compliance

Regulatory bodies, such as the U.S. Food and Drug Administration (FDA) and Health Canada, mandate that pharmacies and pharmaceutical storage areas maintain specific environmental conditions, including controlled humidity levels. Failure to comply can result in penalties, recalls, and damage to a pharmacy's reputation.

Recommended Humidity Levels

While specific requirements can vary depending on the medication and manufacturer's guidelines, general recommendations often suggest maintaining relative humidity (RH) below 60%, with an ideal range often cited around 40-50% RH for many pharmaceutical products.

In summary, controlling humidity in pharmacies isn't just about comfort; it's a fundamental aspect of quality control, patient safety, and regulatory adherence, ensuring that the medications dispensed are safe and effective.

www.InnoTekair.com

For support in the designing process contact; support@innotekair.com