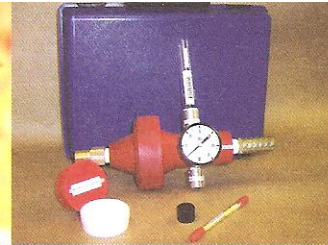




TRI AIR TESTING, INC.

**FIRST** in the Industry  
Fast and Accurate  
Instant On-site Testing  
Reports & Tracking On-line  
Superior Technology  
Thirty-one Years in Business



**Compressed Air Testing    Medical Gas Testing    Pharmaceutical Air/Gas Testing**

### **WHY TEST YOUR COMPRESSED AIR?**

Clean Dry Air is essential for many different types of applications. Air compressors draw in large volumes of air from the surrounding atmosphere containing contaminants. The air compressor itself can also add contaminants. Process air contamination found in automotive spray paint air lines, powder coating air lines, pharmaceutical processing air lines, food processing air lines, instrument air lines and in nuclear facilities can affect product quality. A major problem in compressed air systems is the presence of water, oil and solid contaminants which can affect air quality and lead to rust, scaling, instruments clogging, valves sticking and process contamination.

#### **Oil and Particulate**

Most air compressors use oil in the compression stage for sealing, lubrication and cooling which can be carried over into the compressed air system. Oil can mix with water vapor in the air and is often acidic, causing damage to your compressed air system. Particulate in compressed air systems can plug orifices of sensitive pneumatic instrumentation, wear out seals, erode system components, reduce air tool efficiency and even reduce the absorptive capacity of desiccant dryers.

#### **Condensed Water/Dew Point**

A lower dew point temperature indicates drier air. Drier air means a lower amount of water vapor or condensation is less likely to occur. The importance of dew point temperature depends on the intended use of the air. In many cases, dew point is not only important because the pipes that carry the air are exposed to freezing temperatures; but condensed water can increase maintenance costs or also cause corrosion and rust to your compressed air system and piping.

In other applications compressed air is used to operate a variety of equipment, some may malfunction if condensation forms on internal parts. Medical and pharmaceutical processes consider water vapor and other gases as contaminants that can cause damage to labeling, packaging and finished goods.

#### **Volatile Hydrocarbons**

- 1) Levels much above normal ambient air are an indicator of contamination occurring in the air somewhere. It may be the incoming air source or from within the compressor system. That's why our suggested levels especially if it's coming directly into contact with the product are low. If the air is dispensed into a room it would be diluted before coming in contact with the product and therefore a higher level may be acceptable.
- 2) Some hydrocarbons can compromise the product by imparting an unwanted odor or taste.
- 3) Some hydrocarbons may compromise the product by inhibiting biological or chemical processes or create unintended contaminate during the processing.
- 4) Some hydrocarbons may be hazardous health contaminates if inhaled or ingested.

**AIR QUALITY IS IMPORTANT**, so have your compressed air tested periodically to assure:

1. Protection of equipment and processes
2. Safety for your employees
3. Energy efficiency of compressor
4. Lower operating and maintenance costs
5. Assure product quality
6. Meet standards/regulations

Many plants can benefit from services by professional compressed air auditors. They can identify and assess leaks, overpressurization, bad piping, insufficient storage and help you understand what it truly costs to operate your compressed air system. A TRI Dealer can perform a compressed air audit and help you optimize your compressed air system and save money.

TRI recommends developing an air quality program for validation that is repeatable for verification and compliance for OSHA and FDA enforced cGMP. Compressed or process air lines should be tested on a routine or regular basis. A thorough evaluation of the application and manufacturing process is required to ensure the appropriate solution, both technically and financially.