BASIL V.R. GREATREX
PTY LTD

APPEARANCES CAN BE DECEIVING WHEN IT COMES TO AIR QUALITY!

The food packaging company appeared to tick all of the boxes. They had new compressed air equipment (compressor, filters, dryer, pipework) less than two years old and it was well maintained. The oil lubricated compressor had seemingly appropriate air treatment installed which included a well sized refrigerant dryer. However, when we looked inside at the air quality...!

Basil VR Greatrex conducted the comprehensive on-site test - which featured our exclusive-to-Australia electronic equipment - at the point of use and direct contact.

It was here that the compressed air was used to open bags before they were filled with product. If we did discover any contaminants they were being sprayed directly into the packaging.

In accordance with the ISO 8573:1-2010 air quality standard we focused primarily on identifying solid particles, water and oil content. The news was not good.

Solid particle readings (these can be particles ingested into the system from the surrounding air which manage to pass through the filter, or particles of corrosion being removed from the pipework) in the 0.1µm to 0.5µm range measured 573,144 per cubic metre of air. These are incredibly microscopic in size when you consider that the smallest bacteria is 1 micron or larger in size. Basil VR Greatrex is the only compressed air quality testing specialist in Australia with the ability to identify particles that small.

Quantities of larger particles (from 0.5µm to 1.0µm and 1.0µm to 5.0µm) were also detected: 18,021 and 353 respectively.

We found 0.238 mg of oil vapour per cubic metre of air and the microbial test showed that there were Colony Forming Units (CFU's) in the system and therefore the system was not sterile.

The only satisfactory reading was for moisture. The dew point of 3.8°C PDP (Pressure Dew Point) was considered acceptable for this specification.

Basil VR Greatrex installed point of use treatment which included filters and a carbon bed (not a carbon filter). Having done this we re-ran the tests and the differences were dramatic. Our equipment eliminated all solid particles. Every test came up with a zero reading. We had created a sterile environment. Oil vapour dropped to 0.004 mg/m^3 which meant it climbed from the ISO class 3 to the best level possible, ISO Class 1.

Overall, we were able to transform the compressed air system from an original ISO8573.1:2010 classification of ISO Class -/5/3 (particles/water/oil) to ISO Class 1/5/1. The - reading meant it was unable to be classified.

For more information on finding out what's growing in your compressed air contact Richard Mort on 0418 674 042 or Warwick Rampley on 0448 138 807.