



Practical Health and Safety Solutions

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Air Quality Testing in Food and Beverage Industry

Compressed air is used in a broad range of applications in the food processing industry, such as mixing of ingredients, cutting, sparging, drying of product or containers, transporting/propelling product through processing systems and packaging of final product. In many of these applications, compressed air is in direct contact or indirect contact with food product. The impurities in the compressed air may contaminate the food product which can result in change of color and taste, reduced shelf life, in addition to exposure to bacteria and other micro-organisms, can result in product recalls.

Particulate Loading Test

This test tests for debris and is measured in mass per volume of air. The test can typically see levels as low as 0.05 milligrams per cubic meter (mg/m³). This test includes oil and particulates (dirt, rust, although they are reported as a single combined number).

Cultured Yeast and Mould Testing



A sample can be taken which deposits airborne particles in the compressed air stream onto sterile media. The sample is transferred to an agar plate and cultured. Yeasts and moulds that grow on the agar are counted. An example of the findings is provided below.

| Sampling Date | | 2020/06/28 12:00 | 2020/06/28 12:15 | 2020/06/28 10:40 |
|---------------|----------|---------------------|------------------------|---------------------------|
| | UNITS | SIZING LINE | AIR CHILL MAIN LINE | TRAY PACK AMV - MIDDLE |
| Enumeration | | | | |
| Yeast | CFU/SWAB | 30 | 20 | > 4,500 |
| Mould | CFU/SWAB | ND | ND | > 4,500 |

Other Tests are Available

