



When receiving results back from the laboratory, the task for the food manufacturer is to understand what, if any, impact these results have on product quality and safety. Assessing product safety is relatively straight forward because the causes of food poisoning are well understood and publicised, so a glance at a test certificate will quickly ascertain if any pathogens are present and if so, at what level and whether this should be a cause for concern.

The Health Protection Agency (HPA) has produced an excellent standard for ready-to-eat foods which is widely used in the food industry.

So far as quality is concerned, understanding what is important and what is not can be more taxing. Microbiologists seldom talk about bacterial numbers in the same manner as lay people because of the size of the counts often involved. As an example, when looking at Total Viable Count of 27,000cfu/g it will often be simplified to “in the region of tens of thousands”. Where food microbiology is concerned, we do not often have to be overly precise because in terms of bacterial numbers 27,000 is not all that much different from 54,000 although on paper it is twice as much. When comparing results from distinct test samples, microbiologists typically only begin to raise an eyebrow when there is tenfold difference in numbers, i.e. 320,000 compared to 32,000. Trending results over a period of time is of great help when concerned about product quality. Fluctuations between counts from one sample to the next can be purely random events and are a reflection on the product microbiology, sampling, and laboratory test techniques. It is important to appreciate why results can vary from one sample to the next and at Fitz Scientific we seek to qualify this through estimating uncertainty.

Over time, sample to sample differences will cancel each other out and a true trend may emerge, helping the Food Manufacturer steer quality improvement programmes in the right direction. Trend analysis is a vital part of data analysis, after all food testing is a significant overhead for manufacturers so getting the most information out of the results is common sense.

For example, trend analysis can show unwashed raw material may be dirtier but the end product is maintaining standards therefore identifying the problematic areas of production.

For more information or a quotation on micro analysis call us today at 041 9845440 ext 1