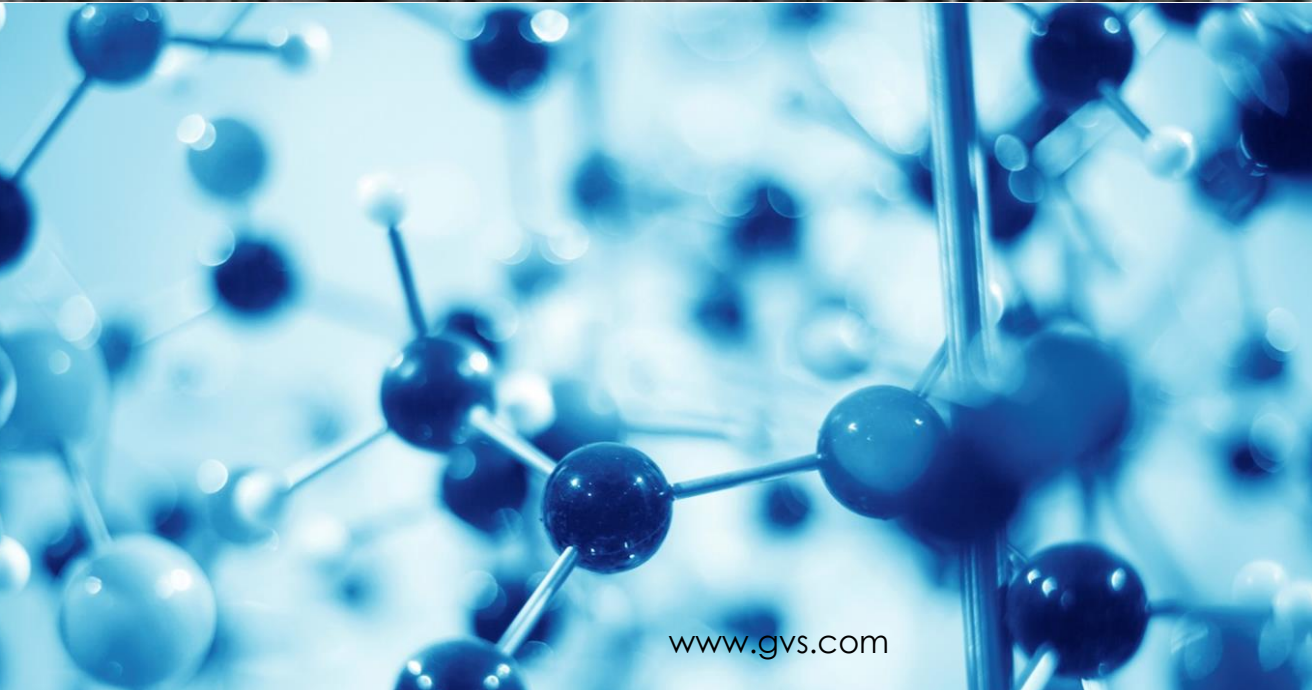


## GVS Carbon Testing



# Carbon Testing

## Molecular Filtration Product Life Testing

GVS can conduct residual life testing on the filters you have installed to allow you to judge the safest and most economical change schedule.

To do this one of the panels or complete filters is removed and a small sample of the carbon is checked in the lab. GVS can supply a replacement filter or panel which can be substituted to ensure the system remains functional.

Tests Available:

### CTC Activity

Traditionally carbon was tested using Carbon Tetrachloride gas. CTC testing is used for vapour phase carbons to assess the effect of the adsorbate on the pore structure of the carbon. A more modern test method has now universally been adopted using butane – a safer gas. The butane test can be directly correlated to the old CTC value.

When the CTC value of carbon has reduced to 25% then the carbon is considered to be exhausted.

### Moisture Content

High levels of moisture on the carbon surface reduce the performance. This test measures the moisture content as well as the presence of any low boiling point contaminants. A further D&S test can be made to separate out the water from other contaminants.

For most applications an overall result of 10% or less is acceptable.

### Apparent Density and Particle Size Classification

As the carbon loads with moisture and organic contaminant, the apparent density increases. Normally a carbon that has increased in density by more than 10% but with less than 5% of water content has reached the end of its useful life.

Particle size has a significant effect on the resistance of a system. If carbon has degraded and particles have reduced in size then energy required to pass air through the carbon increases. In some cases carbon dust can also be exhausted from the system. GVS have equipment that can measure samples of carbon and classify the particle size distribution.



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