

Tannins

What are tannins?

Tannins are natural organic compounds with large molecular weights formed from the decomposition of plants and animals. Tannins are generally found in surface waters or shallow wells. Water in low-lying or coastal areas are also known to contain elevated levels of tannins.

Tannins, being large molecular weight compounds, fall into two primary categories, humic and fulvic acid, which are simplified structures of these very large molecules. Building blocks of Humic and fulvic acid include gallic acid, guaiacyl, syringyl and cresylic moieties. Structures of tannins differ depending on the vegetation in which they are found.

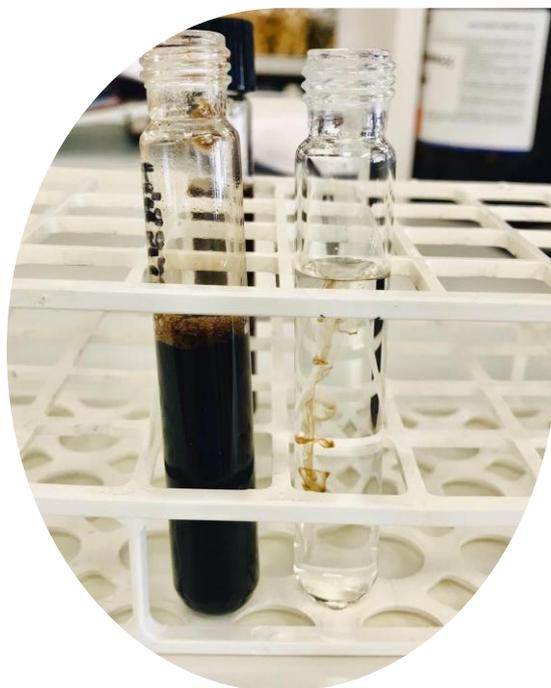
What are the health effects of tannins?

There are no health concerns associated with the presence of tannins in water. Tannins are purely an aesthetic problem as when present in household or drinking water they may alter the taste, colour or odour of water.

Should I get my water tested for tannins?

If you notice your water is a faint yellow to tea-like colour, with a musty or earthy odour and a bitter aftertaste elevated levels of tannins may be present. Tannins may not pose a risk to human health, but it is an important water quality parameter as it may cause yellow discolouration of fabrics, fixtures, china and laundry.

If you suspect your water may contain tannins, filling a glass with water and allowing it to settle overnight can provide some clarification. If the colour settles to the bottom, the faint yellow to tea-like colour is most likely caused by iron and/or manganese. However, if the colour remains intact tannins are most likely the cause.



Are there any other tests I should perform with tannins?

Water containing tannins will undergo various treatments in order to remove these tannins from the water. Testing for alkalinity, hardness, iron, sulfates and total dissolved solids (TDS) with tannin testing will aid in determining which treatment method will be most effective. Unlike the rest of the above-mentioned tests, it is imperative to test for iron when testing for tannins as iron may result in false positives. Iron concentrations are, therefore, subtracted from tannin results in order to determine the true tannin concentration.

